REMEDIAL INVESTIGATION REPORT

CPB – Property
Block 15950, Lot 29
Far Rockaway, New York

Prepared For:

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Executive Summary

This report presents a summary of the findings of a Remedial Investigation (RI) conducted at the CPB Site, located in Far Rockaway, Queens, New York, from January 5, 2015 to March 27, 2015. The work entailed the collection of surficial soil, groundwater and soil gas samples at and around the perimeter of the site. The work was conducted in accordance with the New York State Department of Environmental Conservation (NYSDEC) approved Brownfields Clean-up Program (BCP) RI Work Plan (March 5, 2014).

Significant remedial actions have been completed at the site to date, under the oversight of the NYSDEC Spills Group (Spill #0207599). These remedial actions consisted of several excavations and the operation of an In-Situ Thermal Treatment (ISTT) system from November 1, 2010 through August 25, 2011. The ISTT work was conducted in accordance with the ISTT Work Plan approved by the NYSDEC on November 25, 2009. The results of the groundwater and soil gas investigation demonstrate that the ISTT remedial action was successful in remediating soil and groundwater impacts related to trichloroethylene (TCE) and its associated breakdown products cis-1,2 dichlorethlyene (DCE) and vinyl chloride (VC). A full description of the ISTT work was provided in the ISTT Remedial Action Report, dated August 24, 2012.

The groundwater water flow direction in both the Shallow and Intermediate Zones were re-assessed during the RI. The flow direction in the Shallow Zone was observed to generally be from southeast to northwest, with a more northerly flow component towards the eastern half of the site. Intermediate Zone groundwater was observed to be to the north, with a radial component suggesting a northerly and westerly flow direction.

A summary of the sampling procedures, data usability and results are provided in this report. A qualitative risk assessment is also included, as wells as conclusions. The sampling results indicate that site-wide volatile organic compound (VOC) concentrations in groundwater has been substantially reduced, with a maximum on-site TCE concentration of 50.5 μg/L. The highest contaminant concentration was observed in off-site sample location SG-11, which had a TCE concentration of 241 μg/L. This sample was collected south of the site, in the Rockaway Freeway, approximately 40 feet up-gradient from the site's southern property line. The higher concentrations in this well are likely not related to the site, as dissolved contamination would be expected to migrate in the direction of groundwater flow.

Soil vapor samples collected from the site and surrounding area displayed a similar trend as the groundwater. The highest on-site concentrations of total VOCs in soil gas was observed at sample locations SG-2 (near the former source area) and SG-8 at concentrations of 0.4 and 0.3 parts per million by volume (ppmv), respectively.

Significantly higher concentrations in soil gas were observed at off-site location SG-11, which had a total VOC concentration of 22.5 ppmv (115,000 $\mu g/m^3$) .

Surficial soil samples collected from the site demonstrated that VOCs, polychlorinated biphenyls (PCBs) and pesticide concentrations do not exceed the restricted soil cleanup objectives (RSCO) restricted residential use standards. Exceedances of the RSCO were observed at three locations, SS-3, SS-8 and SS-9. When compared to the RSCO for commercial use, only the benzo(a)pyrene detection at SS-9 (12"-24") would exceed the commercial RSCO.

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1.0 INTRODUCTION

TRC Environmental Corp. (TRC) has prepared this Remedial Investigation Report (RIR) on behalf of the Corporation of the Presiding Bishop (CPB) of The Church of Jesus Christ of Latter-day Saints, a Utah corporation sole, for the CPB site located in Far Rockaway, New York. The RIR presents the results of the Remedial Investigation (RI) work conducted in accordance with the New York State Department of Environmental Conservation (NYSDEC) approved Remedial Investigation Work Plan (RIWP), dated July 2014.

The RI was conducted as a requirement of the Brownfields Clean-up Program (BCP), and assessed the current state of soil gas and groundwater at the site, after the successful implementation of an *In-Situ* Thermal Treatment Program (ISTT) program, conducted at the site in 2010 and 2011. The ISTT work was conducted to address petroleum and chlorinated volatile organic compound (CVOC) impacts in the soil and groundwater. This RIR also presents surface soil sampling data, as well as an updated groundwater flow direction assessment and a qualitative risk assessment.

1.1 Background Information

The site is located between Far Rockaway Boulevard and the Rockaway Freeway (near Beach 32nd Street) in Far Rockaway, New York. Figure 1 provides a Site Location Map. The site is located approximately 580 ft. southwest of the Norton Basin of Jamaica Bay and approximately 2,100 ft. (0.4 miles) north of the Atlantic Ocean. The property is currently vacant, approximately 1.3 acres in size and has been designated on local tax maps as Block 15950, Lot 29. A site plan is provided as Figure 2. The CPB purchased the property on December 12, 2002.

1.2 Site Geology

The site geology has previously been characterized to a maximum depth of 90 ft. Lithologic information was collected during the advancement of soil borings conducted across the site in April 2008. Three distinct geologic units have been encountered at the site, as described below. A more complete description of the site geology is provided in the ISTT Work Plan. A generalized cross section is provided as Figure 3.

Shallow Zone
The Shallow Zone is approximately 20 ft. thick. Fill material occurs from the ground surface to approximately 5 to 8 ft. below ground surface (bgs). This fill material consists of brown fine to coarse sand and gravel with varying portions of wood, metal and concrete debris.

The fill material is underlain by loose fine gray sand with small amounts of coarse sand. The thickness of this layer ranges from approximately 5 to 10 ft.

Discontinuous, organic silty clay to clayey silt lenses (1 to 4 ft. thick) occur at the base of the Shallow Zone, below the fill and sand units. These clay lenses separate the Shallow and Intermediate Zones and locally act as a semi-confining unit. These silty clay lenses contain small amounts of fibrous organic material (peat) in thin laminations. Trace amounts of shell fragments are also found within these silty clay lenses. While these clay layers have been observed in all soil borings conducted at the site, the depth, composition and thickness of the individual clay lenses vary greatly across the site. The depth at which the clay lenses are encountered ranges from 11 and 20 ft. bgs.

Intermediate Zone

The Intermediate Zone consists of two lithologic units. A light brown-green coarse to fine sand with gravel and varying amounts of silt and clay is encountered at a depth of approximately 20 ft. bgs. The silt and clay content increases with depth at 30 ft. bgs. A clay unit (approximately 17 ft. thick) occurs at a depth of approximately 37 ft. bgs and consists of dark gray soft clay with interbedded sand or silt laminations and trace shell fragments. The lower clay layer serves as an aquitard or confining/semi-confining unit that separates the Intermediate and Deep Zones. This clay layer appears to be continuous and consistent throughout the site.

Deep Zone

The Deep Zone consists of a brown-gray, fine to medium sand layer with a thickness greater than 40 ft. and occurs below the second clay unit at a depth of approximately 54 ft. bgs. The sand layer was observed to be loose to medium dense.

1.3 Site Hydrogeology

Three water-bearing units have been identified at the site and are described below. The ISTT Work Plan (TRC 6) and the In-Situ Chemical Oxidation Pilot Test Report (TRC 3) contain a more complete discussion of site hydrogeology, including monitoring well logs. Updated groundwater flow direction maps for the Shallow and Intermediate Zones are provided as Figures 4 and 5, respectively. These maps present groundwater elevations measured on April 3, 2015.

Shallow Zone

The Shallow Zone is a thin water bearing unit that is unconfined. The depth to water in this zone is approximately 6 to 8 ft. bgs. The water table is present within the fill or sand. Groundwater elevations in the Shallow Zone typically ranged from approximately 3.42 to 2.68 ft. above mean sea level (AMSL). The lateral groundwater flow direction within this unit is northwesterly towards Jamaica Bay with local variations due to local surface water features (*i.e.*, drainage swale). The results of a tidal study conducted by TRC indicate groundwater level fluctuations were only observed in the intermediate wells (MW-1i and PZ-3), and water levels at the Shallow Zone wells exhibited no response to tidal fluctuations during the study (TRC 3). The silty clay lenses at the base of the Shallow

Zone locally act as a semi-confining unit and retard the downward vertical groundwater flow and hydraulic connectivity between the Shallow and Intermediate Zones.

The lateral hydraulic gradient varied from approximately 0.00178 ft./ft. to 0.0055 ft./ft., with an average of 0.002 ft./ft. The lateral hydraulic conductivity in the Shallow Zone was estimated to vary locally from approximately 44 to 87 ft./day.

Intermediate Zone

Groundwater in the Intermediate Zone is considered to be under confined/semi-confined conditions due to the presence of the organic clay lenses. Groundwater elevations in the Intermediate Zone typically range from approximately 1.49 to 1.34 ft. AMSL. The horizontal groundwater flow direction in this unit has been observed to vary between westerly and northerly. The overall flow direction observed during the April 3, 2015 well gauging event was predominantly to the north with some potential for radial flow to the east from a mound observed at MW-8i. The lateral hydraulic gradient ranged from approximately 0.00147 to 0.00063 ft./ft., with an average of approximately 0.0015 ft./ft.

Groundwater levels within this unit appear to be influenced by tidal fluctuations in nearby surface water bodies. Groundwater elevations in monitoring wells MW-1i and PZ-3 were observed to fluctuate by approximately 0.1 ft. to 0.3 ft. during a tidal cycle, during the previous TRC tidal study. These observed fluctuations did not seem to cause a change in the overall westerly groundwater flow direction.

The lateral hydraulic conductivity in the Intermediate Zone varied locally from approximately 3 to 10 ft./day, with an average of approximately 7 ft./day.

The vertical groundwater flow potential between the Shallow and Intermediate Zones on-site appears to be predominantly downward from the Shallow Zone to the Intermediate Zone. This trend may vary locally due to a combined effect of tidal fluctuations and water level changes in response to precipitation. Available data suggest that the Shallow and Intermediate Zones are not hydraulically connected locally.

Deep Zone

The lower clay layer serves as an aquitard separating the Intermediate and Deep Zones and appears to act as a confining/semi-confining unit between both Zones. No hydraulic assessment has been conducted for the Deep Zone.

1.4 Previous Remedial Investigations and Actions

Previous Site Investigations (SI) indicated that a structure or building was formerly located in the southwestern portion of the Site (Anson 2). The structure was reportedly used as a garage and plumbing supply house. In connection with its pre-purchase due diligence in 2002 the CPB uncovered evidence of a pre-existing release of petroleum product (heating oil) on-site. The petroleum release was reported to the NYSDEC. As a result, NYSDEC assigned Spill # 02-07599 to the site.

In March 2003, the CPB submitted a corrective action plan (CAP), to NYSDEC to address the on-site impacts (CPB 1). The March 2003 CAP proposed the excavation and disposal of impacted soils and subsequent groundwater monitoring. NYSDEC approved the March 2003 CAP on April 25, 2003 (NYSDEC 1).

Between June and November 2004, Anson Environmental, Ltd. (Anson) of Huntington, New York implemented the NYSDEC approved soil excavation at the site. During the soil excavation, two underground storage tanks (USTs), 1,500 and 300 gallons in capacity, were uncovered and removed. Upon inspection, the USTs were determined not to be leaking (Anson Feb 2005 Soil Remediation Report). However, based on observations of petroleum stains and odor, the excavation area was expanded to an area of approximately 11,000 square feet ($ft.^2$) and to a depth of approximately 8 ft. bgs. An impacted area of CVOCs was observed during the excavation near the southwestern property quadrant. The CVOC impacted soils were also excavated. In 2004, CPB excavated and disposed a total of 13,882 tons of petroleum impacted soils, 12,430 gallons of an oil-water mixture, and 418 tons of CVOC impacted soils. A report summarizing the 2004 excavation work was submitted to NYSDEC (Anson, 2).

On October 6, 2005, CPB submitted a CAP addendum for the following activities: (1) installation of three additional monitoring wells, (2) soil and groundwater post-excavation sampling, (3) on-site soil gas survey, (4) off-site soil gas survey, and (5) a long term monitoring plan (CPB 2). NYSDEC approved the CAP Addendum on October 12, 2005 (NYSDEC 2). A report summarizing the 2005 CAP Addendum work was submitted to NYSDEC on July 5, 2006 (CPB 3). The post-excavation sampling around the perimeter of the excavation indicated that soil impacts were below the NYSDEC RSCO. Groundwater petroleum and CVOC impacts, however, remained above NYSDEC standards.

On October 4, 2006, NYSDEC and the CPB met to discuss the next steps for addressing the remaining environmental impacts at the site (Anson 3). As a result of this meeting, NYSDEC requested that the CPB prepare a Work Plan to further investigate on-site and off-site groundwater CVOC impacts. A Work Plan was submitted by Anson on October 26, 2006 (Anson 4), which NYSDEC subsequently approved.

On-site ground water samples were collected on November 28 and 29, 2006 and off-site groundwater samples were collected on January 24 and 25, 2007. The sampling results indicated groundwater impacts on-site to a depth of 60 ft. bgs, and groundwater impacts off-site to a depth of 10 ft. bgs (Anson 3).[1] A report summarizing the 2006-2007 groundwater investigation was submitted to the NYSDEC on March 14, 2007.

On May 7, 2007, NYSDEC requested that the CPB focus the remediation on the removal of the CVOC source (NYSDEC 3). As explained by NYSDEC: "Once the source is gone, the processes of dilution, dispersion and biodegradation that are already evident at

[1] Anson, TRS, and TRC have not conducted an investigation of potential sources on the off-site properties to determine whether there are independent sources of contamination.

this site should attenuate the aqueous plume that has developed downgradient of the soil contamination." (NYSDEC 3). The CPB agreed to comply with NYSDEC's request (CPB 4).

On September 11, 2007, the CPB submitted a CAP Addendum to NYSDEC. This CAP Addendum proposed addressing groundwater impacts using a combination of in-situ chemical oxidation (ISCO) and enhanced in-situ bioremediation (EISB) (Anson 3). NYSDEC approved the 2007 CAP addendum on November 16, 2007 and required the installation of a monitoring well on the adjacent property to the west by December 3, 2007 (NYSDEC 4). On November 29, 2007, the adjacent property owner denied the CPB access to his property, which prevented the installation of the required monitoring well. Access was not granted to the adjacent property until October 16, 2008.

In February 2008, TRC proceeded to characterize the site lithology, delineate the extent of TCE impacts in the groundwater and assist in the implementation of the remedial program proposed in the 2007 CAP Addendum. To evaluate the suitability of ISCO and collect design parameters for a full-scale program, TRC submitted an ISCO Pilot Test Work Plan to NYSDEC on May 30, 2008 (TRC 2; NYSDEC 5). NYSDEC approved the Work Plan on July 3, 2008 (NYSDEC 5).

In August 2008, TRC conducted the ISCO pilot test using percarbonate (Regenox™) and activator compounds provided by Regenesis in an area of approximately 200 $ft.^2$. Two temporary points were used to inject the activated percarbonate into an area upgradient of the elevated CVOC impacts within the Shallow and Intermediate Zones. Groundwater extraction was conducted from two wells downgradient from the treatment area to establish hydraulic control during the testing program. The pilot test results demonstrated that the effectiveness of ISCO was limited due to the high and variable oxidant demand and short active oxidation timeframe. These limitations did not allow for complete degradation of CVOC, despite the relatively high oxidant dosage within the treatment area. This limitation was manifested by the transient increase in TCE concentration at downgradient well PZ-3 following the cessation of hydraulic control. As a result, TRC concluded that a combination of ISCO and EISB would potentially be the most effective way to remediate groundwater impacts. A report detailing the pilot test results and a Work Plan to implement the ISCO/EISB remedy were submitted in December 2008 (TRC 3, 4). NYSDEC approved the ISCO/EISB Work Plan on January 26, 2009 (NYSDEC 6).

Also in 2008, an investigation program was implemented to determine the extent of on-site petroleum impacts observed in shallow monitoring well PZ-2 during the ISCO pilot test. This observation was noted in the December 2008 Work Plan, along with the acknowledgement that the apparent minor residual product would have to be addressed prior to the implementation of the Work Plan (TRC 4).

In March and April 2009, TRC conducted additional investigation activities to further evaluate and address the petroleum impacts in the area of well PZ-2. As a result of these activities, TRC observed petroleum accumulations in shallow monitoring well PZ-2 and

intermediate monitoring well MW-4i in thicknesses of up to 2.12 ft. and 0.15 ft., respectively (March 2009). In response, in March 2009, TRC excavated 80 tons of petroleum impacted soils and removed approximately 445 gallons of a petroleum/water mixture. In April 2009, TRC excavated 20 tons of petroleum impacted soils and removed 1,830 gallons of a petroleum/water mixture. In May 2009, TRC completed a supplemental soil boring program to delineate the spatial extent of petroleum hydrocarbons within and below the Shallow Zone. A letter report detailing the 2009 investigation and remediation of petroleum impacts was submitted to NYSDEC on May 22, 2009 (TRC 5).

The results of the product investigation and delineation program prompted a reconsideration of the proposed December 2008 ISCO/EISB In-Situ Treatment Work Plan. As discussed in Section 2.0, an alternative approach consisting of an electrical resistive heating (ERH) ISTT system was discussed and submitted to NYSDEC.

The ISTT program was conducted at the site from November 2010 to August 2011. The program was successful in removing VOC contamination from the soil and groundwater, as described in the Remedial Action Report, dated August 24, 2012 (TRC 14). As described in the report, approximately 3,200 lbs. of VOCs were removed, of which 2,800 lbs. were TCE. This TCE mass is equivalent to approximately 230 gallons of pure TCE. Concentration decreases in monitoring wells were observed to be over 99.99% in the source area wells (MW-4s and MW-4i).

2.0 RI Sample Collection

As described in the Brownfield Program RIWP, four types of samples were collected as part of the RI. These samples included (1) soil gas samples, (2) shallow soil samples, (3) temporary well point groundwater samples and (4) groundwater samples from permanent monitoring wells. A discussion of each sample type is provided below.

The sampling events were conducted in several mobilizations, with monitoring well samples collected on January 5 and 6, 2015; temporary well point groundwater samples and soil gas samples collected between January 23 and 30, 2015; and surface soil samples collected between January 19 and May 27, 2015. One off-site temporary well point sample and soil gas sample, SG-11 located south of the property, was collected on March 27, 2015, due to access conflicts. A separate contractor was conducting geotechnical borings in the area, preventing sample collection at SG-11 during the same mobilization as the remainder of the soil gas and temporary well point groundwater samples.

2.1 Soil Gas Sample Collection

According to the vapor intrusion guidance (VIG), four types of samples are necessary to assess the VI pathway: (1) subsurface vapor samples (soil gas or sub-slab), (2) crawl space air samples, (3) indoor air samples, and (4) outdoor air samples (VIG p.9). Because there are no buildings on the site, sub-slab, crawl space and indoor air samples could not be collected.

In accordance with the RIWP, a total of fifteen (15) soil gas samples were collected from on- and off-site. Summit Drilling, of Bridgewater, New Jersey conducted the drilling and obtained the necessary permits and utility clearances. Figure 6 shows the approximate on-site sampling locations, while Figure 7 shows the approximate off-site sampling locations. A description of the sampling locations is provided below.

Soil Gas/Ambient Air Sampling Locations

- One sample was collected near the midpoint of the northern property line (SG-7);
- One sample was collected near the midpoint of the southern property line (SG-4);
- One sample was collected from each corner of the property (SG-1, SG-3, SG-5, and SG-6, noting that SG-3 is within the ISTT zone);
- Four samples were collected from central locations: one point in the treatment (SG-10) area and three points outside of treatment area (SG-2, SG-8, and SG-9);
- One ambient air sample was collected at surface level within the sampling area.

The sample locations were selected to evaluate current soil gas concentrations throughout the site. To that end, sample locations placed in the area of MW-4i and MW-4s were intended to represent the worst case scenario for soil gas concentrations since these location coincide with the highest historical groundwater VOC levels.

A summary of the sample locations is presented below.

Off-Site Soil Gas Sampling Locations

- SG-11: South of the site towards the Sea View Towers;
- SG-12: East of the site towards residences on Beach 32nd Street;
- SG-13 and SG-14: North of the site towards the shopping center;
- SG-15: West of the site towards the traffic island.

These samples were located within street right of ways and were accessed with a New York City Department of Transportation (NYC DOT) permit. The drilling contractor obtained the permits for these locations. Prior to sample collection, an independent private utility locating company, NOVA Geophysical, of Forest Hills, New York, conducted a utility survey to ensure no unmarked utilities were located in the sample collection area.

2.1.1 Sample Point Construction

The soil gas and groundwater sampling points were installed separately. The points were located within 2-3 ft. of each other to assess the correlation between the groundwater and soil gas concentrations.

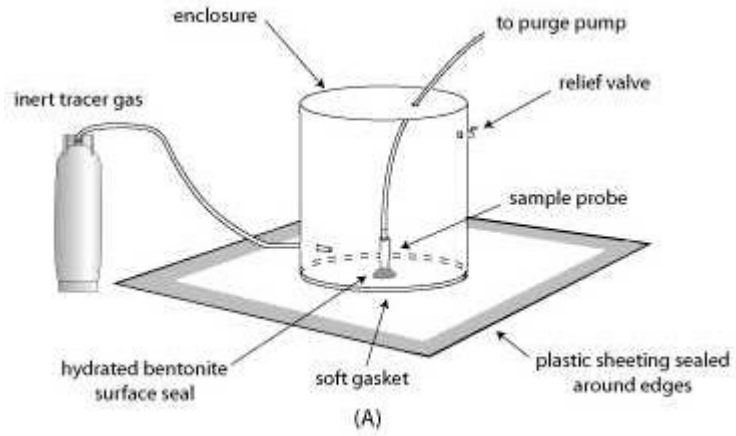
To install the soil gas sampling points, Summit Drilling advanced soil borings using direct push techniques leaving an open-hole bore diameter of 3 inches. Using the direct push method, a Geoprobe™ type system was used to push drill rods to the desired depth of approximately 5 ft. bgs. Summit then, placed a 1-inch PVC casing and screen to a total depth of 5 ft., which did not encounter the groundwater surface. The bottom 3 ft. of the sample point was constructed with well screen, and the top 2 ft. was constructed with solid pipe. The PVC riser was set approximately 1 ft. above the ground surface. No PVC primer or glue was used in the sample point construction to prevent interference from the volatile components in the primer and glue.

The bottom of the boreholes were filled with 20/40 mesh silica sand, from the bottom of the boring to approximately 1 ft. above the screen. The annulus above the filter pack was sealed with cement/bentonite grout.

The sampling points were removed after the soil gas sampling was completed and the open holes were filled with clean sand. Figure 5 presents typical construction details of the soil gas sampling points.

2.1.2 Leak Testing

Pursuant to the VIG, helium was used to test the surface seal at each temporary sampling location (VIG p26). The schematic included as Figure 2.4a in the VIG (shown below) was used as the basis for the tracer gas testing.



(Reference: Figure 2.4a from the NYS DOH VIG)

A sheet of polyethylene liner was placed over the ground surface at the sampling point, with a perforation to allow the sampling point riser to extend above the liner. An enclosed container, consisting of an approximately one gallon stainless steel container, was placed over the top of the sampling point. It included a perforation to allow sample tubing to exit the container and one to allow helium tracer gas to be injected into the container. A relief valve was installed to allow for venting of the container before removal, after tracer gas sampling was completed.

A portable helium detector, provided by Pine Environmental Services, was used to check the purge gas for the presence of helium. As described in the VIG, minor leaking at the probe seal should not materially affect the usability of the soil gas sampling results and therefore, the mere presence of helium in the sample or purge gas should not affect data quality. However, helium concentrations greater than 10% or 100,000 ppmv in the purge gas would indicate a substantial surface leak. Helium concentrations greater than 100,000 ppmv were not detected in the purge gas at any sample locations. A photograph of the soil gas sampling set-up is provided in Appendix A.

2.1.3 Sample Collection

A maximum flow rate of 0.2 L/min. was used during purging and sampling to limit VOC stripping from soil, prevent the short-circuiting of ambient air and increase confidence in the soil gas data (VIG p. 20). Prior to sample collection, the soil gas probe was purged using a peristaltic pump. A one liter Tedlar bag was used to assess the purge flow rate. A total of four liters were purged from each soil gas probe prior to sampling. Gas measurements, including VOC, CO, H_2S and O_2 were recorded at each sample point during purging. Additionally, helium concentrations were recorded at each point to assess the effectiveness of the surface seal.

After purging was completed, a six liter SUMMA Canister was used to collect the sample over two hours using a laboratory-provided flow controller. A PVC slip-cap fitted with a barbed connection connected the sampling point to the flow controller using silicone tubing. PVC glues and primers were not used to avoid the potential for cross

contamination. In addition to the ten soil gas sampling locations, one ambient air sample was collected on-site to establish background conditions. The ambient air sample was collected from the northern end of the site using a SUMMA canister with a 2-hour flow controller.

2.1.4 Sample Analysis

The soil gas and ambient air samples were sent to Accutest Laboratories of Dayton, NJ and were analyzed for VOCs using EPA method TO-15 (VIG p.30). The laboratory is certified by NYSDEC (certification # 10983). All sample containers and flow controllers were provided by Accutest.

2.2 Soil and Groundwater Samples

In addition to the soil gas samples described above, groundwater and surface soil samples were collected from the locations depicted on Figure 6. A description of each sampling medium is provided below.

2.2.1 Soil Sample Collection

In accordance with DER-10, Section 3.5.1(b), surface soil samples were collected from a depth of 0 to 2 inches below the vegetated cover. The samples were collected to assess potential human exposure to soil through incidental soil ingestion. The human exposure pathway is applicable, although not complete and there are no current receptors, because the lot is vacant. The area is zoned for residential use (R6), with a commercial use overlay (C2-4).

The soil samples were be analyzed for the Target Compound List (TCL) VOCs, and SVOCs, Target Analyte List (TAL) Metals, and PCBs/pesticides. The VOC analysis also included the following compounds: n-butylbenzene, sec-butylbenzene, tert-butylbenzene, isopropylbenzene, p-isopropyltoluene, n-proplybenzene, 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene.

The samples were collected by hand clearing a location to the 2 ft. target depth and collecting discrete samples from the side wall of the excavation. VOC samples were collected directly into Encore samplers. Samples for other parameters were collected with laboratory provided scoopulas from several locations on the exposed side walls from each depth horizon, composited in a steel bowl and placed directly into laboratory provided sample jars.

A total of 27 soil samples were collected from nine locations. The approximate locations of the sample collection points are provided on Figure 6.

2.2.2 Temporary Well Point Sampling

Groundwater samples were collected from temporary well points installed in close proximity to each soil gas sampling location. The temporary well point samples were collected to provide a correlation between the groundwater concentration at a location

and the soil gas composition. The temporary wells were also used to gain a better understanding of groundwater quality at locations where permanent wells had not been installed, including off-site locations. The well points were constructed with 5 ft. of PVC screen, connected to 5 ft. of PVC riser. No PVC primers or glues were used in the well point construction. The well points were sampled using a narrow diameter bailer.

While temporary well points offer a more convenient method for collecting groundwater data at multiple locations, temporary well points are typically less indicative of actual groundwater quality than samples collected from monitoring wells. The loss of accuracy can be attributed to the inclusion of suspended solids in the groundwater samples (due to the inability to construct an adequate filter pack) and from the limited ability to purge a significant amount of groundwater prior to sampling. The use of permanent monitoring wells also provides a benefit in the reproducibility of a sample from a specific location.

A total of ten on-site and five off-site temporary well points were installed and sampled between January 23 and January 30, 2015. A second groundwater sample was collected at an off-site location approximately 5 feet from SG-10. The off-site location was installed due to a very turbid sample from the original location. As described above in the soil gas sampling discussion, one off-site location, SG-11 was installed and sampled on March 27, 2015, due to access limitations and conflicts at the sample location. Figure 6 presents the approximate location of the temporary well point locations.

The samples were collected as grab samples. Purging of the wells was not conducted due to the limited yield of the temporary points; however geochemical parameters were collected from each well point. The initial sampling plan had included collecting samples for VOCs, SVOCs, PCBs/pesticides and TAL metals analyses. The SVOCs, PCBs/pesticides and TAL metal analyses were inadvertently omitted. However, analyses for these parameters was conducted on the monitoring well samples, as described below.

Geochemical parameters were measured prior to sample collection, using calibrated field instrumentation. The geochemical parameters are presented in Table 3.

2.2.3 Monitoring Well Sampling Locations

Groundwater samples were collected at five monitoring well locations, as shown in Figure 6. Samples were collected from MW-4s, MW-4i, MW-6s, MW-8s, and MW-9s. These wells were be sampled for TCL VOCs, SVOCs, TAL metals, PCBs/pesticides, natural attenuation (NA) parameters and dissolved gases (including methane, ethane and ethene).

In addition to VOCs, samples collected from monitoring wells MW-4s and MW-4i were analyzed for the presence of the Dehalococcoides (DHC) bacteria. The analysis of biological samples and NA parameters is best suited for samples collected within the treatment zone, as the concentrations of the DHC bacteria are likely to be very low in areas without CVOC contamination. The DHC bacteria has been confirmed to potentially

completely degrade PCE and TCE to ethene and provides strong evidence that biodegradation is on-going.

Each well was purged in accordance with standard low-flow technique. Following purging, groundwater samples were be obtained from each targeted well using low flow techniques.

3.0 Quality Assurance Project Plan and Data Usability Summary

A quality assurance project plan (QAPP) was included as part of the RIWP. The QAPP included requirements for the decontamination of sampling equipment, sampling documentation, sample handling and custody procedures, the collection of trip and field blank samples as well as duplicate sample collection. TRC followed the procedures outlined in the QAPP, and collected 1 trip blank sample, 1 field blank sample and a total of 5 duplicate samples. A summary of the duplicate samples is provided below:

Sample Location	Sample Matrix	Analytical Parameters
SS-7 (0-2"), SS-7 (2-12")	Soil Samples	VOCs, SVOCs, Pesticides, PCBs, TAL Metals
SG-10-Air	Soil Gas Samples	VOCs
SG-10	Temporary Well Groundwater Samples	VOCs
MW-4i	Monitoring Well Samples	VOCs, SVOCs, Pesticides, PCBs and TAL Metals

A data usability summary report (DUSR) is included as Appendix B. The report provides an assessment and narrative of the laboratory analytical results and assesses the impact of any non-conformance issues on the validity of the data. The DUSR indicates that no significant problems were found which would question the usability of the data.

4.0 RI Results

A summary of the RI results is presented below. A discussion of the soil gas, soil and groundwater analytical parameters is included, as well as an assessment of the groundwater flow direction in the Intermediate and Shallow geologic units. The results substantiate that significant remediation of the CVOC contamination has been achieved at the site, with only minimal contaminant levels present in each medium.

4.1 Soil Gas Results

As described in Section 2.1 above, soil gas samples were collected from the site during several mobilizations. The results of the soil gas sampling are presented in Table 1, and site figures with significant detections provided as Figure 9 (on-site results) and Figure 10 (off-site results). As described in Section 2.1, there are no applicable standards for assessing soil gas results. No structures are currently present on-site, and as such, there is no potential for vapor intrusion on-site and no ability to collect sub-slab soil gas samples or indoor air samples.

4.1.1 On-Site Soil Gas Samples

Analytical results from on-site soil gas sampling locations SG-1 through SG-10 are presented on Figure 9. Off-site sample location SG-11 is also presented on the figure, due to its proximity to the southern property boundary. Total VOC concentrations ranged from 0.023 ppmv (56 $\mu g/m^3$) at sample location SG-6, located near the northeast property boundary, to a high of 0.404 ppmv (2,047 $\mu g/m^3$) at sample location SG-2, located north of the former source area. All total VOC detections on-site were found to be less than 1 ppmv in the soil gas.

The highest detection found on-site was for TCE at sample location SG-2, with a concentration of 0.338 ppmv (1,820 $\mu g/m^3$). TCE concentrations in SG-2 accounted for nearly 90% of all VOC mass in that sample. Duplicate samples were collected from location SG-10, approximately 10 ft. from former source area well MW-4s, returning TCE concentrations of 0.0332 ppmv (178 $\mu g/m^3$) and 0.0312 ppmv (168 $\mu g/m^3$). The average TCE concentration in on-site samples was found to be 0.039 ppmv (209 $\mu g/m^3$). The data indicates that significant TCE impacts to soil gas are relatively limited to the former source area, represented by sample locations SG-2 and SG-10.

Multiple compounds were detected in the soil gas samples; however, most compounds were detected at very low concentrations. TCE was detected at the highest concentrations, as described above. Other compounds detected in the on-site soil gas include propylene, cis-1,2 DCE, benzene and acetone. Propylene was detected at a maximum concentration of 0.171 ppmv (294 $\mu g/m^3$) at location SG-7, by the northern property line. The maximum concentration of cis-1,2 DCE was 0.0233 ppmv (92.4 $\mu g/m^3$) found at sample location SG-2, north of the former source area. Benzene was detected at a maximum concentration of 0.0214 ppmv (68.4 $\mu g/m^3$) at location SG-8, near the center of the property. Acetone was detected at concentrations ranging from 0.0076 ppmv (18 $\mu g/m^3$) at location SG-3 to 0.0293 ppmv (69.6 $\mu g/m^3$) at location SG-1.

4.1.2 Off-Site Soil Gas Samples

Off-site soil gas samples were collected east (SG-12) north (SG-13, SG-14), west (SG-15) and south (SG-11) of the site. The results of the off-site are presented in Table 1 and are depicted on Figure 10. Concentrations of TCE were found to be below detection limits at all locations, except for south of the site at SG-11. No significant concentrations of other VOCs were found at locations SG-12, SG-13, SG-14 and SG-15.

Results from location SG-11 were found to be three orders of magnitude higher than any on-site samples, with a TCE concentration of 18.5 ppmv (99,400 μg/m^3). Elevated concentrations of cis-1,2 DCE, trans-1,2 DCE, 1,1-DCE, chloroform and acetone were also found at SG-11.

4.2 Temporary Well Point Sample

Temporary well point groundwater samples were collected from within five feet of every soil gas sampling location. The temporary wells were sampled for VOC analysis and can be used to assess the distribution of VOCs both on- and off-site, and to assess the relationship between soil gas concentrations and groundwater contaminant concentrations.

4.2.1 On-Site Temporary Well Samples

Groundwater samples were collected from on-site locations SG-1 through SG-10. The samples were collected as described in Section 2.2.2. The NYSDEC Technical and Operational Guidance Series (TOGS), Class GA Groundwater Quality Standards (GWQS) were used as a conservative standard to assess groundwater quality. The groundwater in the vicinity of the site is not used as a source of potable water and, as such, the standards should be considered conservative. The on-site temporary well sampling results are provided in Table 2, and are depicted on Figure 11.

Several VOCs were detected above the GWQS, including benzene, cis-1,2 DCE, VC, TCE and toluene. Benzene was observed to marginally exceed the GWQS of 1 μg/L in one sample location, SG-10, at a concentration of 1.4 μg/L; however concentrations at an off-site location approximately five feet from SG-10 were below the GWQS. Only one temporary well sample, SG-2, contained cis-1,2 DCE concentrations above the GWQS, at a concentration of 14.8 μg/L. VC concentrations were observed to exceed the GWQS at one on-site location, SG-10, at a concentration of 4.1 μg/L. TCE was found to exceed the GWQS at one location, SG-2, at a concentration of 50.5 μg/L. Toluene exceedances of the GWQS were observed at locations SG-6 and SG-8 at concentrations of 23.4 and 32.7 μg/L.

The pH of the on-site temporary well samples were all near neutral. Oxidation-Reduction potential readings collected at the on-site temporary wells were positive, indicating

oxidizing conditions in the most shallow groundwater at all locations, except for SG-9 and SG-7, which were found to be reducing. Dissolved oxygen readings were relatively high, ranging from 9.97 µg/L at SG-2 to 3.71 µg/L at SG-9. The elevated dissolved oxygen readings are not unexpected, due to the shallow depth of the samples (near the water table) and the unpaved surface across the site allowing for a free exchange of soil gas and atmospheric air and the infiltration of rain water. The turbidity of all temporary wells samples, except for SG-1, were beyond the range of the water quality meter, indicating that the samples were very turbid.

4.2.2 Off-Site Temporary Well Samples

Groundwater samples were collected from five off-site temporary well locations, SG-11 through SG-15. The sample results are presented in Table 2, and are depicted on Figure 10. The sample results were compared to the NYSDEC TOGS, Class GA Groundwater Quality Standards (GWQS), as described in Section 4.2.1. Geochemical parameters collected during the sampling event are presented in Table 3.

No exceedances of the GWQS were observed at locations SG-12, located east of the site, SG-13 and SG-14, located north of the site and SG-15, located west of the site. The only exceedances of the GWQS in the off-site temporary well samples were found at location SG-11, south of the site. Concentrations of VOCs, specifically TCE and its breakdown products cis-1,2 DCE and VC, were found at elevated concentrations. Concentrations of TCE, cis-1,2 DCE and VC were found to be 241 µg/L, 354 µg/L and 44.3 µg/L, respectively at this location. Results from SG-11 are significantly higher than any on-site temporary well samples, with TCE concentrations two orders of magnitude higher than any on-site results.

The pH of the off-site temporary well samples ranged from near neutral to basic conditions, with the highest pH recorded at SG-11 at 11.53 standard units. Oxidation-Reduction potential readings collected at the off-site temporary wells ranged from mildly reducing conditions at SG-12 and SG-15 (-44 and -86 mV respectively) to strongly oxidizing conditions at SG-13 (204 mV). Dissolved oxygen readings were relatively high, ranging from 3.5 µg/L at SG-15 to 9.1 µg/L at SG-14. The turbidity of all temporary wells samples collected off-site were beyond the range of the water quality meter, indicating that the samples were very turbid.

4.3 Monitoring Well Sampling

A total of four on-site shallow monitoring wells were sampled during the RI, including MW-4s, MS-6s, MW-8s and MW-9s. One Intermediate Zone sample was also collected from monitoring well MW-4i during the RI. The samples were collected using low-flow sampling procedures at all wells. Geochemical parameters were logged during purging,

sampling and post-sampling. The geochemical results are presented in Table 5. Monitoring well samples were analyzed for VOCs, SVOCs, PCB/pesticides, TAL metals, dissolved methane, ethane and ethene, and NA parameters. The NA parameter analysis included alkalinity, chloride, nitrate, nitrite, phosphorus, sulfate and sulfide. Biological samples for the DHC bacteria were also collected for former source area wells MW-4s and MW-4i.

4.3.1 VOC Analysis

The NYSDEC Technical and Administrative Guidance Memorandums (TAGMs) GWQS were used to assess the VOC results. As discussed above, these standards are conservative as the local groundwater is not used as a source of drinking water. VOC analysis indicated that several compounds exceeded the GWQS in monitoring wells MW-4i, MW-6s and MW-9s. These compounds included benzene, cis-1,2 DCE, trans-1,2 DCE, TCE and VC. Concentrations of TCE only exceeded the GWQS at one well, MW-6, at a concentration of 6.5 µg/L. Benzene was present in two wells, MW-4i and MW-9s at concentrations of 3.6 and 1.7 µg/L, marginally exceeding the GWQS. Concentrations of cis-1,2 DCE exceeded the GWQS in MW-4i and MW-9s. The cis-1,2 DCE exceedance in MW-9s was found to be 5.4 µg/L, slightly above the GWQS of 5 µg/L for this compound.

While TCE was not detected in MW-4i, the daughter breakdown products cis-1,2 DCE and VC were detected at concentrations of 167 µg/L and 151 µg/L, respectively. The presence of these breakdown products suggests that natural bioremediation is still occurring in this area. The absence of any VOCs at concentrations above the GWQS in MW-4s also substantiates that NA/bioremediation is occurring at the site.

4.3.2 TAL Metals Analysis

The NY TAGM Groundwater Quality Standards/Criteria were used to assess the TAL metals results. Exceedances of the GWQS for iron and sodium were noted in all on-site wells. Exceedances of the GWQS for manganese were also observed in MW-4i. These compounds are typically associated with saline or brackish water and given the site's proximity to both the Atlantic Ocean and Jamaica Bay, are not indicative of contamination. Filtered samples were also analyzed for iron and manganese, to determine if these compounds were dissolved in the water, or were present as suspended solids. The filtered sample results indicate that both iron and manganese are present, predominantly as dissolved metals. Generally, the presence of dissolved iron and manganese in groundwater indicate that reducing conditions are prevalent, as the reduced valence state of these metal compounds are more soluble than the oxidized valence states.

4.3.3 SVOC, PCB and Pesticide Analysis

The monitoring well samples were analyzed for SVOCs, PCBs and pesticide compounds. The NY TAGM Groundwater Quality Standards/Criteria were used to assess these

results. No SVOCs, PCBs or pesticide compounds were detected above the GWQS in any of the sampled wells.

4.3.4 Dissolved Gases and NA Analysis

The monitoring well samples were analyzed for alkalinity, chloride, nitrate, nitrite, phosphorus, sulfate and sulfide to assess the potential for continued NA of chlorinated solvents in the on-site groundwater. Concentrations of dissolved methane, ethane and ethene were also assessed in the sampled wells, as a potential line of evidence for reducing conditions or active reductive dechlorination.

The alkalinity levels measured at all wells were observed to be greater than 300 μg/L (as CaCO3), indicating that the groundwater has a moderate buffering capacity and should remain at near neutral pH conditions, which are most conductive for reductive dechlorination. Chloride was detected in all wells, with the highest concentration observed at MS-4i, in the former source area. Additionally, the highest concentration of methane, ethane and ethene were detected at MW-4i indicating that reductive dechlorination is either on-going or that appropriate geochemical conditions are present at the well to support reductive dechlorination. The presence of ethene at 25 μg/L is a strong indication of on-going reductive dechlorination in the vicinity of MW-4i.

Concentrations of sulfate, sulfide, nitrate and nitrite observed at these wells are inconsistent with a reducing environment. The oxidized forms of sulfur and nitrogen (nitrate and sulfate) were found at higher concentrations than the reduced forms of these compounds (nitrite and sulfide). This would indicate that the geochemical conditions favor an oxidizing state; however, the presence of high dissolved iron and manganese concentrations suggest that the geochemical state is more reducing and favorable for continued NA of the CVOC compounds. The low concentrations of TCE remaining on-site support that NA and reductive dechlorination continued after the ISTT operations ceased and is further supported by the presence of cis-1,2 DCE and VC in the former source area wells.

4.3.4 Microbial Community Evaluation

Quantitative polymerase chain reaction (QPCR) is a quantitative analysis that tracks specific Deoxyribonucleic Acid (DNA) targets of single species or groups of microorganisms. It is utilized to monitor the microbial consortium purportedly involved in CVOC degradation through specific DNA targets. Many dechlorinating organisms have been recently discovered and research is ongoing to identify the full capabilities of these organisms to remediate other contaminants. The DHC species of bacteria are the only "known" group of bacteria capable of dechlorinating PCE and/or TCE completely to ethene. Consequently, DHC was analyzed as the QPCR target.

Monitoring wells MW-4s and MW-4i were analyzed for the presence of DHC by Microbial Insights, of Knoxville, Tennessee. The results indicate that DHC is present in MW-4s and MW-4i at concentrations of 6.6×10^4 and 3.1×10^4 cells/mL. Both concentrations are greater than the 1×10^4 concentrations suggested by the lab as the

threshold that will result in "generally useful" reductive dechlorination rates. These concentrations are higher than the pre- and post-thermal treatment results for the same compounds, indicating that a microbial population capable of degrading the chlorinated compounds has effectively been re-established at the site.

4.4 Surface Soil Sampling

Surface soil samples were collected from three depth horizons at nine on-site locations, SS-1 through SS-9, resulting in 27 samples. The depth horizons sampled ranged from 0-2", 2-12" and 12-24" bgs. The samples were analyzed for VOCs, SVOCs, PCBs, pesticides and metals. The RSCOs for restricted residential use (DER Table 375-6.8(b)) were used to assess the results. The surface soil sampling results are presented in Table 6 and Figure 12.

The results for all VOC, pesticide and PCB compounds were below the RSCO concentrations. Metal compounds were found to exceed the RSCOs at two sample locations, SS-3 and SS-8. Manganese was detected at location SS-3 at the 2-12" depth interval at a concentration of 2,250 mg/kg, marginally exceeding the RSCO criteria of 2,000 mg/kg. The results from the 0-2" and 12-24" depth horizon were significantly below the RSCO, at concentrations of 122 and 153 mg/kg, respectively, indicating that the manganese contamination is isolated. Mercury was detected at sample location SS-8 at the 2-12" and 12-24" depth horizon at concentrations of 1.5 and 1.9 mg/kg, respectively, exceeding the RSCO criteria of 0.81 mg/kg.

SVOC compounds were detected at sample location SS-9, at concentrations marginally exceeding the RSCOs, at the 12-24" sample horizon. The compounds that exceeded the restricted residential use RSCO included benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, indeno(1,2,3-cd)pyrene and dibenzo(a,h)anthracene.

4.5 Groundwater Flow Assessment

A comprehensive round of groundwater level measurements was collected on April 3, 2015. The depth to water measurements were collected after a re-survey of all on-site monitoring wells was conducted by a TRC surveyor on March 24, 2015. Groundwater contour maps for the Shallow and Intermediate Zone groundwater elevations and general flow directions are presented as Figures 4 and 5.

The groundwater flow direction for the Shallow Zone is generally to the west and northwest. The highest groundwater elevation was noted at monitoring well MW-3s, with an elevation of 3.42 ft. AMSL. The average hydraulic gradient is approximately 0.002 ft./ft.

The groundwater flow direction for the Intermediate Zone is generally to the north. The highest groundwater elevation was noted at monitoring well MW-8i, with an elevation of 1.49 ft. AMSL. The average hydraulic gradient was approximately 0.00105 ft./ft.

5.0 Exposure Assessment

A qualitative exposure assessment was conducted based on the data described above for the current and potential future site use and the land use surrounding the site. The site is currently vacant, with no operations occurring on the property. The site is currently zoned in an R6 residential zone, with a C2-4 commercial overlay. The CPB is considering construction of a meeting house on the property; however, the development plans are not finalized.

The exposure assessment considered the RSCO Restricted Residential Use criteria since the property is zoned for residential use. However, a determination of the exposure scenarios will be needed when a development decision is made. If the use of the property as a meeting house more closely matches a commercial use, none of the soil samples would exceed the RSCO Commercial Use criteria of 10,000 mg/kg for manganese and 2.8 mg/kg for mercury.

The exposure assessment considered all sampled media, including surface soils, groundwater and soil gas. The following exposure pathways have been considered:

- Direct contact to contaminated soils (<2' below grade),
- Exposure to contaminated groundwater (ingestion);
- Exposure to contaminated soil gas (inhalation).

The qualitative exposure assessment for each exposure pathway is presented below.

5.1 Direct Contact Pathway

The shallow on-site soils have been compared to restricted residential RSCOs for assessment. The presence of two metal compounds, manganese and mercury, have been found at concentrations exceeding the restricted residential RSCO at sample locations SS-3 (manganese) and SS-8 (mercury). SVOC compounds were detected at sample location SS-9, at concentrations marginally exceeding the RSCOs, at the 12-24" sample horizon. The SVOCs that exceeded the restricted residential use RSCO included benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, indeno(1,2,3-cd)pyrene and dibenzo(a,h)anthracene.

These exceedances have been noted at a depth greater than 2" below grade. The shallow on-site soil is mainly comprised of historic fill, except in areas where remedial excavations have been conducted. The site is currently inactive; however, there is the potential for on-site workers and trespassers to be exposed to these metal compounds. The likelihood of exposure is low, as only two of the nine samples contained metal compounds at concentrations above the restricted residential RSCO. Were the site to be used for residential purposes, the impacted soils would need to be removed or a protective cap placed over the soils. If a soil, asphalt or structural cap was placed over the impacted soils, an institutional control would need to be established to ensure that the cap remained protective. Procedures would also need to be established to provide protection of workers and the environment and to ensure that any disruption of the cap

over the shallow soils would not result in the impacted soils being incorrectly characterized and/or subsequently mismanaged.

If the site were to be used for commercial purposes, then the contaminant levels would be below the Commercial Use RSCO and no engineering controls would be necessary, except at SS-9, where benzo(a)pyrene would still marginally exceed the standard. An assessment of zoning rules and the likely exposure scenario for such a commercial use would need to be conducted to assess if the Commercial Use RSCO was appropriate.

5.2 Ingestion Pathway

The shallow groundwater at the site would be the most likely media to contribute to an exposure from the ingestion pathway. The groundwater is impacted with relatively minor levels of VOCs, with areas of higher concentrations of TCE breakdown products cis-1,2 DCE and VC found in the former source well MW-4i. No other VOCs were found at concentrations significantly above the GWQS. The off-site sample location SG-11, south of the site, contained high levels of TCE and its breakdown products cis-1,2 DCE and VC. While the primary contaminant at the wells is the same as was found on-site, there is a separation between the groundwater plumes, indicating that this contamination is likely from a different discharge.

No SVOC, PCB or pesticide compounds were detected in the on-site wells at concentrations greater than the GWQS. The only metal compounds detected in the monitoring wells were iron, manganese and sodium and are likely not related to contamination, but rather the result of proximity to Jamaica Bay and the Atlantic Ocean.

The local groundwater is not used at a source of drinking water. The site's proximity to Jamaica Bay and the Atlantic Ocean would likely preclude the groundwater being used as a source of potable water, due to the high dissolved metals concentrations, related to brackish water.

Therefore, the local groundwater does not present a significant exposure.

5.3 Inhalation Pathway

The soil gas ambient air sampling results and have been used to assess the potential for contaminant exposure through the inhalation pathway. The ambient air sample results indicate that benzene, toluene and PCE were detected at very low concentrations. Toluene and TCE concentrations were below their respective NYSDEC Division of Air Resources DAR-1 criteria for Annual Guideline Concentrations (AGC)/Short-Term Guideline Concentrations (SGC).

The concentration of benzene was detected at 0.73 $\mu g/m^3$, slightly above the AGC of 0.13 $\mu g/m^3$. The detection of benzene is likely not related to the site, as benzene concentrations in groundwater are very low, with a maximum concentration of 3.5 $\mu g/L$ at MW-4i. The maximum shallow groundwater concentration for benzene was observed

to be 1.7 μg/L at MW-9s. It should be noted that benzene was detected above the AGC during the baseline sampling of the ISTT system and throughout operation, despite minimal benzene removal from the treatment system. The presence of benzene in the ambient air is likely an area-wide problem, not related to on-site contamination.

The soil gas investigation found concentrations of TCE, associated breakdown product cis-1,2 DCE and VC, and other VOC compounds, at low concentrations across the site. Elevated concentrations, up to 1,820 μg/m^3 of TCE were observed at location SG-2, north of the former ISTT area. Concentrations at other on-site sampling points were significantly lower, with the next highest on-site TCE concentration observed to be 178 μg/m^3 at SG-10. All other on-site soil gas samples contained TCE at concentrations less than 100 μg/m^3. The potential for vapor intrusion would exist if a structure is built in the area of SG-10 and SG-2. A vapor intrusion mitigation system should be installed if any building is subsequently erected on-site in this area.

Off-site soil gas sample concentrations, except for SG-11, did not return measurable concentrations of TCE. Other VOC compounds, including benzene, PCE and toluene were detected in samples SG-12 through SG-15, at concentrations less than 10 μg/m^3. Therefore, there is no potential for contaminant exposure due to vapor intrusion east, north and west of the site.

Soil gas sample SG-11 contained elevated concentrations of TCE, cis-1,2 DCE, VC and trans-1,2 DCE with concentrations of 99,400 μg/m^3, 14,900 μg/m^3, 350 μg/m^3 and 207 μg/m^3, respectively. They correspond closely to the predicted soil gas concentrations based on the VOC concentrations in the groundwater at SG-11 and Henry's Law (Table 7). A large residential building, the Sea View Towers, is located south of the site, across Rockaway Freeway. The high soil gas concentrations observed at SG-11 could impact Sea View Towers, which is located approximately 150 feet south of SG-11. However, the impact on indoor air from the site is unlikely, given that on-site sample locations SG-3, SG-4 and SG-5 are located approximately 110, 55 and 115 ft. downgradient from SG-11, respectively, and contain significantly lower concentrations of these VOC compounds. See Figure 9.

5.4 Qualitative Exposure Assessment Conclusions

Based on the RI data, there are potential contaminant exposures at, and around the site. If the site is used for residential purposes, the shallow soils near SS-3 and SS-8 could present an exposure risk and may require a protective cap to prevent exposure (Figure 12).

The soil gas in the southwestern portion of the site contains elevated levels of chlorinated solvents, in the vicinity of SG-2 and SG-10 (Figure 9). If a structure is built in this area the inclusion of vapor intrusion mitigation measures would be warranted. Soil gas concentrations south of the site are very elevated and may pose an exposure risk for the Sea View Towers.

6.0 CONCLUSIONS

The RI activities were successful at characterizing the current state of the on- and immediately off-site environmental conditions. Groundwater samples were collected from the on-site monitoring well network to assess the status of the soil and groundwater remediation after the thermal treatment system operation. On-site and off-site soil gas and groundwater samples were collected to assess the distribution of the chlorinated solvent contamination around the site and any potential off-site impacts to local receptors. Surface soil samples were also collected from on-site to assess the potential for direct contact exposure to any site occupants.

Groundwater samples from the monitoring well network confirmed that the ISTT program was successful in remediating the contamination source area and greatly reducing contaminant mass. The concentration of VOC compounds in the on-site groundwater was shown to be significantly reduced below the pre-ISTT levels and have shown further improvement to groundwater quality, likely from bioremediation. Samples collected to assess the potential for NA generally indicated that favorable conditions persist for continued biodegradation. Microbial samples collected from the former source area wells (MW-4s and MW-4i) show that the presence of the dechlorinating bacteria, DHC, have increased since the ISTT operations ceased. NA, including bioremediation will continue to reduce contaminant levels at the site.

Groundwater samples to the east, north and west of the site show that off-site groundwater in these directions has not been impacted by the on-site contamination. One off-site sample, SG-11, collected south of the site in the Rockaway Freeway, contained high levels of CVOCs. This sample is located upgradient of the site and the contamination there has likely not migrated from the site. Groundwater flow directions and contours for the shallow groundwater, developed from measurements taken during the RI, show a northwesterly flow path and are generally consistent with previous observations. The contamination at SG-11 is likely distinct from the on-site contamination, as monitoring well MW-8s, and on-site samples SG-3, SG-4 and SG-5 are located between the former source area and SG-11 and do not contain any VOCs at concentrations exceeding the GWQS.

The results of the soil gas sampling program also indicate a limited area of soil gas containing elevated levels of TCE and breakdown products at elevated concentrations. On-site, the high concentration of TCE is limited to the area of SG-2 and SG-10, near the former source area. SG-2 was found to have the highest on-site TCE concentration of 1,820 $\mu g/m^3$. Off-site, to the east, west and north, there were no detections of TCE in the soil gas. Soil gas results from southern off-site location SG-11 returned the highest TCE result, with a concentration of 99,400 $\mu g/m^3$. This area is isolated, and is not contiguous with the elevated concentrations at SG-2 or SG-10, as results from SG-3, SG-4 and SG-5 were significantly lower (<100 $\mu g/m^3$).

Surface soil samples collected from 0” to 24” below the on-site surface have generally indicated only minor exceedances of the RSCO Restricted Residential use standards.

Manganese was found at concentrations exceeding the RSCO in the 2" to 12" depth horizon at SS-3. Mercury was detected above the RSCO at SS-8 in the 2" to 12" and the 12" to 24" depth horizons. SVOCs were detected above the RSCO at SS-9, in the 12-24" depth horizon. It should be noted that if the RSCO Commercial use standards were applied, then no compounds would exceed the standards, other than benzo(a)pyrene at SS-9.

A qualitative exposure assessment was conducted based on the results of the RI. The exposure assessment revealed that some exposure risks exist at, and around the site. The shallow soils at SS-3 and SS-8 contain metals at concentrations above the RSCO Restricted Residential use standards and would need to be removed or capped if the site was used for residential purposes. Soil gas concentrations in the area of SG-2 and SG-10 contain elevated concentrations of TCE and cis-1,2 DCE. A vapor mitigation control system (such as a vapor barrier or sub-slab depressurization system) should be included on any structures built in this area. Soil gas concentrations near SG-11 were found to be significantly higher than any on-site locations. A large residential building, the Sea View Towers, is located south of the site, approximately 150 feet from SG-11. The high soil gas concentrations in this direction may pose a threat to the indoor air at the Sea View Towers.

The results and scope of the RI were adequate to characterize the extent of contamination on-site and to assess for the potential for off-site migration of contamination. While the results at SG-11 show elevated concentrations of TCE, the RI results have shown that this area is not directly connected to on-site contamination. No further investigation is needed for the site.

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TRC 4, TRC Environmental, Inc. In Situ Chemical Oxidation Full Scale Design, CPB-Property, Edgemere, New York- December 2008.

TRC 5, TRC Environmental, Inc. Memorandum for Free-Phase Floating Product Distribution and Proposed Actions SP # 0207599, May 22, 2009.

TRC 6, TRC Environmental, Inc. In-Situ Thermal Treatment (ISTT) Work Plan, CPB-Property, Edgemere, New York- August 31, 2009.

TRC 7, TRC Environmental, Inc. Response to NYSDEC Comments, In-Situ Thermal Treatment (ISTT) Work Plan, CPB Edgemere Site (SP#02-07599) 3229 Far Rockaway Boulevard (Block 159950, Lot 29) Edgemere, Queens, New York- October 6, 2009

TRC 8, TRC Environmental, Inc. In-Situ Thermal Treatment (ISTT) Work Plan- revised Figure 7, CPB-Property, Edgemere, New York- November 7, 2009.

TRC 9, TRC Environmental, Inc. Email to CPB for Approval from NYSDEC to Operate System, CPB- Property, Edgemere, New York- November 22, 2010.

TRC 10, TRC Environmental, Inc. Memorandum for Suspension of Heating at Shallow Electrodes, CPB- Property, Edgemere, New York- March 28, 2011.

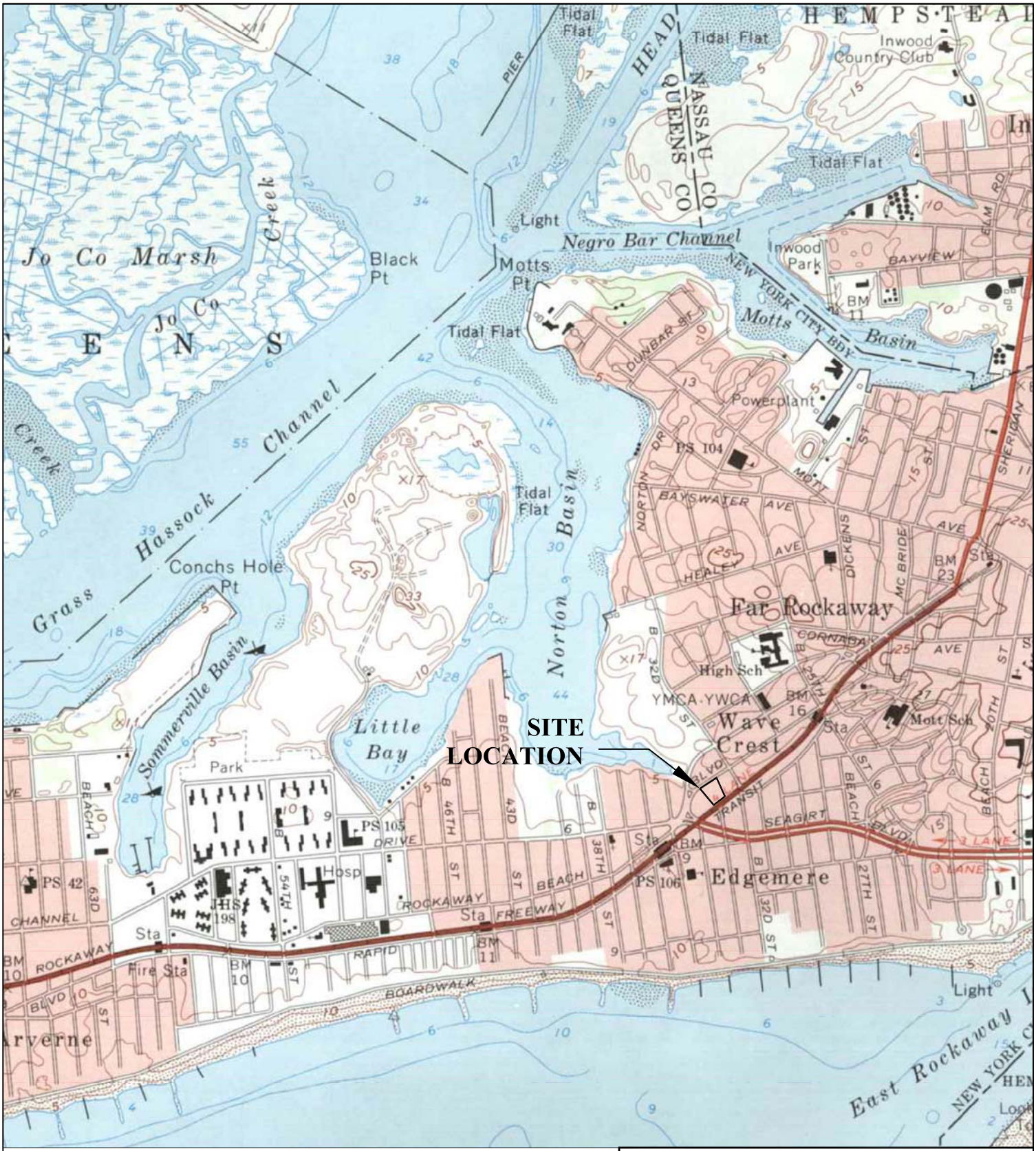
TRC 11, TRC Environmental, Inc. Letter requesting the Suspension of Heating at Shallow Electrodes, CPB- Property, Edgemere, New York- April 20, 2011.

TRC 12, TRC Environmental, Inc. Phone Call to NYSDEC: 30 Day Post Treatment Ground Water Samples – November 14, 2011.

TRC 13, TRC Environmental, Inc. Phone Call to NYSDEC: 90 Day Post Treatment Ground Water Samples – January 19, 2012.

TRC 14, TRC Environmental Inc. In-Situ Thermal Treatment (ISTT) Remedial Action Report – August 24, 2012

FIGURES



TRC ENVIRONMENTAL CORP.
57 East Willow Street
Millburn, New Jersey 07041

SITE LOCATION MAP

CPB – EDGEMERE, NEW YORK

JOB NO.: 159807

HN	DATE: AUGUST 2009	FIGURE: 1

FAR ROCKAWAY BOULEVARD

CURB

SIDEWALK

TO BAY
32ND STREET

P.O.B.

12' GATE

8' CHAIN LINK FENCE

8' CHAIN LINK FENCE

6' CHAIN LINK FENCE

8' CHAIN LINK FENCE

MW-1i

MW-1s

MW-2

BLOCK 15950
LOT 24

BLOCK 15950
LOT 29

MW-6s*

MW-6i

MW-9s*

MW-9i

MW-3s

MW-3i

MW-4s*

MW-10s

PZ-3

MW-4i*

MW-8s*

MW-8i

PROPERTY LINE

BLOCK 15950
LOT 55

CAPPED
RE-BAR SET

8' CHAIN LINK FENCE

BEACH 32

ROCKAWAY FREEWAY

0 30
APPROXIMATE SCALE

LEGEND

MW-1 MONITOR WELL LOCATION

TRC ENVIRONMENTAL CORP.
41 Spring Street
New Providence, New Jersey 07974

SITE PLAN

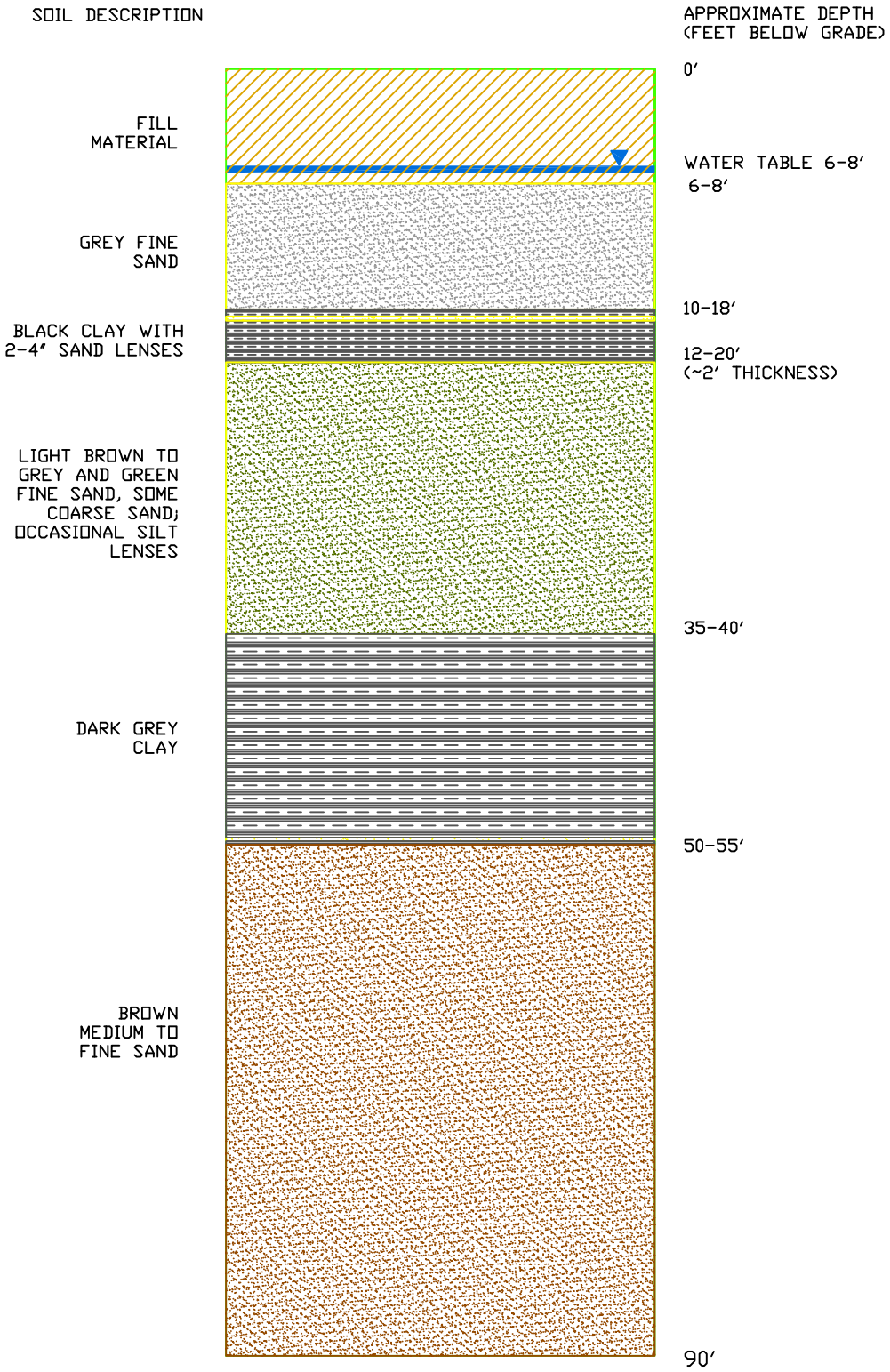
CPB – FAR ROCKAWAY, NEW YORK

JOB NO.: 174788

HFN	DATE: JULY 2015	FIGURE: 2

FILE: M:\CAD FILES\VISION PROJECTS\174788\SOIL GAS SAMPLING\JULY 2015 RIR FIGURES.DWG, DATE: 07/27/2015 05:34:09PM

GENERALIZED CROSS SECTION
BLOCK 1599, LOT 29



SCALE: NOT TO SCALE

TRC ENVIRONMENTAL CORP.
41 Spring Street
New Providence, New Jersey 07974

GENERALIZED CROSS SECTION

CPB – FAR ROCKAWAY, NEW YORK

JOB NO.: 174788

HFN	DATE: JULY 2015	FIGURE: 3

FILE: \\MILLBURN-FP2\DRAFTINGFILES\CAD FILES\VISION PROJECTS\174788\SOIL GAS SAMPLING\JULY 2015 RIR FIGURES.DWG, DATE: 07/27/2015 05:18:10PM

FAR ROCKAWAY BOULEVARD

CURB

SIDEWALK

TO BAY
32ND STREET

P.O.B.

12' GATE

8' CHAIN LINK FENCE

8' CHAIN LINK FENCE

8' CHAIN LINK FENCE

6' CHAIN LINK FENCE

MW-1i

MW-1s
2.68

MW-2
5.66

BLOCK 15950
LOT 24

BLOCK 15950
LOT 29

3.0

3.1

3.2

3.3

3.4

3.08
MW-6s*
MW-6i

MW-9s*
MW-9i
3.17

3.42
MW-3s
MW-3i

3.20
MW-4s*
PZ-3
MW-4i*

MW-10s
3.27

3.22
MW-8s*
MW-8i

PROPERTY LINE

BLOCK 15950
LOT 55

CAPPED
RE-BAR SET

8' CHAIN LINK FENCE

ROCKAWAY FREEWAY

BEACH 2

0 30
APPROXIMATE SCALE

LEGEND

MW-1 — MONITOR WELL LOCATION

MW-1* — MONITOR WELL LOCATION FOR MNA GW SAMPLES

3.08 — GROUNDWATER ELEVATION

GROUNDWATER FLOW DIRECTION

TRC ENVIRONMENTAL CORP.
41 Spring Street
New Providence, New Jersey 07974

SHALLOW GROUNDWATER ELEVATIONS
APRIL 3, 2015

CPB – FAR ROCKAWAY, NEW YORK

JOB NO.: 174788

HFN	DATE: MAY 2015	FIGURE: 4

FILE: \\MILLBURN-FP2\DRAFTINGFILES\CAD FILES\VISION PROJECTS\174788\SOIL GAS SAMPLING\JULY 2015 RIR FIGURES.DWG, DATE: 07/27/2015 05:14:47PM

FAR ROCKAWAY BOULEVARD

CURB

SIDEWALK

TO BAY
32ND STREET

P.O.B.

12' GATE

8' CHAIN LINK FENCE

8' CHAIN LINK FENCE

8' CHAIN LINK FENCE

6' CHAIN LINK FENCE

MW-1i
1.34
MW-1s

MW-2

1.35

BLOCK 15950
LOT 29

BLOCK 15950
LOT 24

MW-6s*
MW-6i
1.37

MW-9s*
MW-9i
1.37

1.4

1.45

1.47
MW-4s*

MW-10s

PZ-3
1.46
MW-4i*

MW-3s
MW-3i
1.39

MW-8s*
MW-8i
1.49

PROPERTY LINE

BLOCK 15950
LOT 55

CAPPED
RE-BAR SET

8' CHAIN LINK FENCE

ROCKAWAY FREEWAY

0 30
APPROXIMATE SCALE

BEACH

LEGEND

MW-1	MONITOR WELL LOCATION
MW-1*	MONITOR WELL LOCATION FOR MNA GW SAMPLES
1.39	GROUNDWATER ELEVATION
	GROUNDWATER FLOW DIRECTION

TRC ENVIRONMENTAL CORP.
41 Spring Street
New Providence, New Jersey 07974

INTERMEDIATE GROUNDWATER ELEVATIONS
APRIL 3, 2015

CPB – FAR ROCKAWAY, NEW YORK

JOB NO.: 174788

HFN	DATE: MAY 2015	FIGURE: 5

FILE: \\MILLBURN-FP2\DRAFTINGFILES\CAD FILES\VISION PROJECTS\174788\SOIL GAS SAMPLING\JULY 2015 RIR FIGURES.DWG, DATE: 07/27/2015 05:15:17PM

FAR ROCKAWAY BOULEVARD

CURB

SIDEWALK

TO BAY
32ND STREET

P.O.B.

12' GATE

8' CHAIN LINK FENCE

8' CHAIN LINK FENCE

8' CHAIN LINK FENCE

6' CHAIN LINK FENCE

8' CHAIN LINK FENCE

BLOCK 15950
LOT 24

BLOCK 15950
LOT 29

SG-1

MW-1i

MW-1s

SG-7

SS-4

AMBIENT AIR
SAMPLE LOCATION

MW-2

SG-6

SS-1

SS-7

MW-6s*

MW-6i

SG-8

SS-2

MW-9s*

MW-9i

SG-2

SS-5

SS-8

SG-9

SG-10
OFFSET

SG-10

MW-3s

MW-3i

MW-4s*

MW-10s

PZ-3

MW-4i*

SS-3

SS-9

SG-3

SS-6

SG-5

SG-4

MW-8s*

MW-8i

PROPERTY LINE

BLOCK 15950
LOT 55

CAPPED
RE-BAR SET

8' CHAIN LINK FENCE

ROCKAWAY FREEWAY

SG-11

0 30
APPROXIMATE SCALE

LEGEND

MW-1 — MONITOR WELL LOCATION

MW-1* — MONITOR WELL LOCATION FOR MNA GW SAMPLES

SG-1 — SOIL GAS SAMPLING LOCATION

SS-1 — SURFACE SOIL SAMPLING LOCATION

TRC ENVIRONMENTAL CORP.
41 Spring Street
New Providence, New Jersey 07974

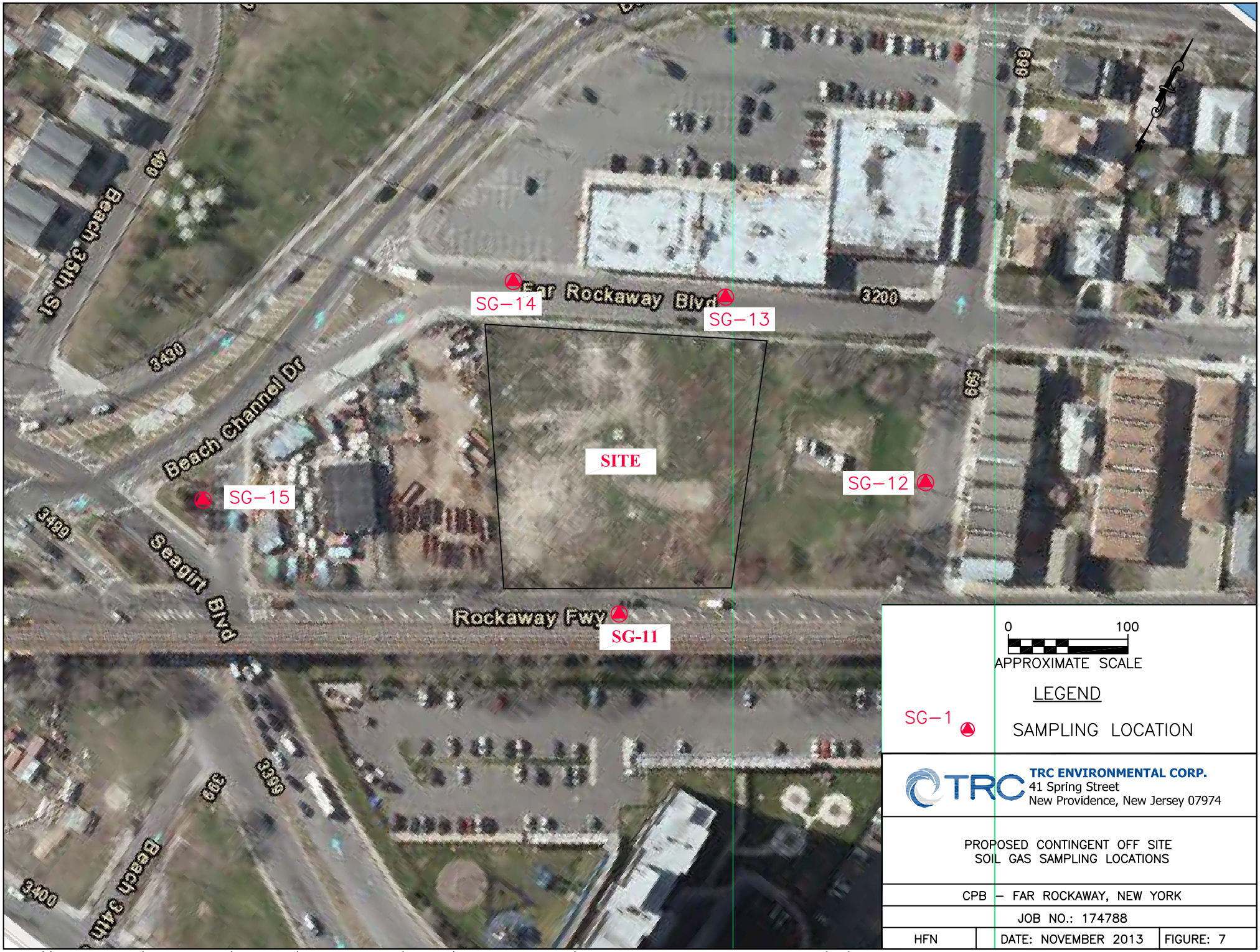
ON-SITE SAMPLE LOCATIONS
SOIL, GROUNDWATER AND SOIL GAS

CPB – FAR ROCKAWAY, NEW YORK

JOB NO.: 174788

HFN	DATE: JULY 2014	FIGURE: 6

FILE: \\MILLBURN-FP2\DRAFTINGFILES\CAD FILES\VISION PROJECTS\174788\SOIL GAS SAMPLING\JULY 2015 RIR FIGURES.DWG, DATE: 07/27/2015 05:15:28PM



0 100

APPROXIMATE SCALE

LEGEND

SG–1 SAMPLING LOCATION

TRC ENVIRONMENTAL CORP.
41 Spring Street
New Providence, New Jersey 07974

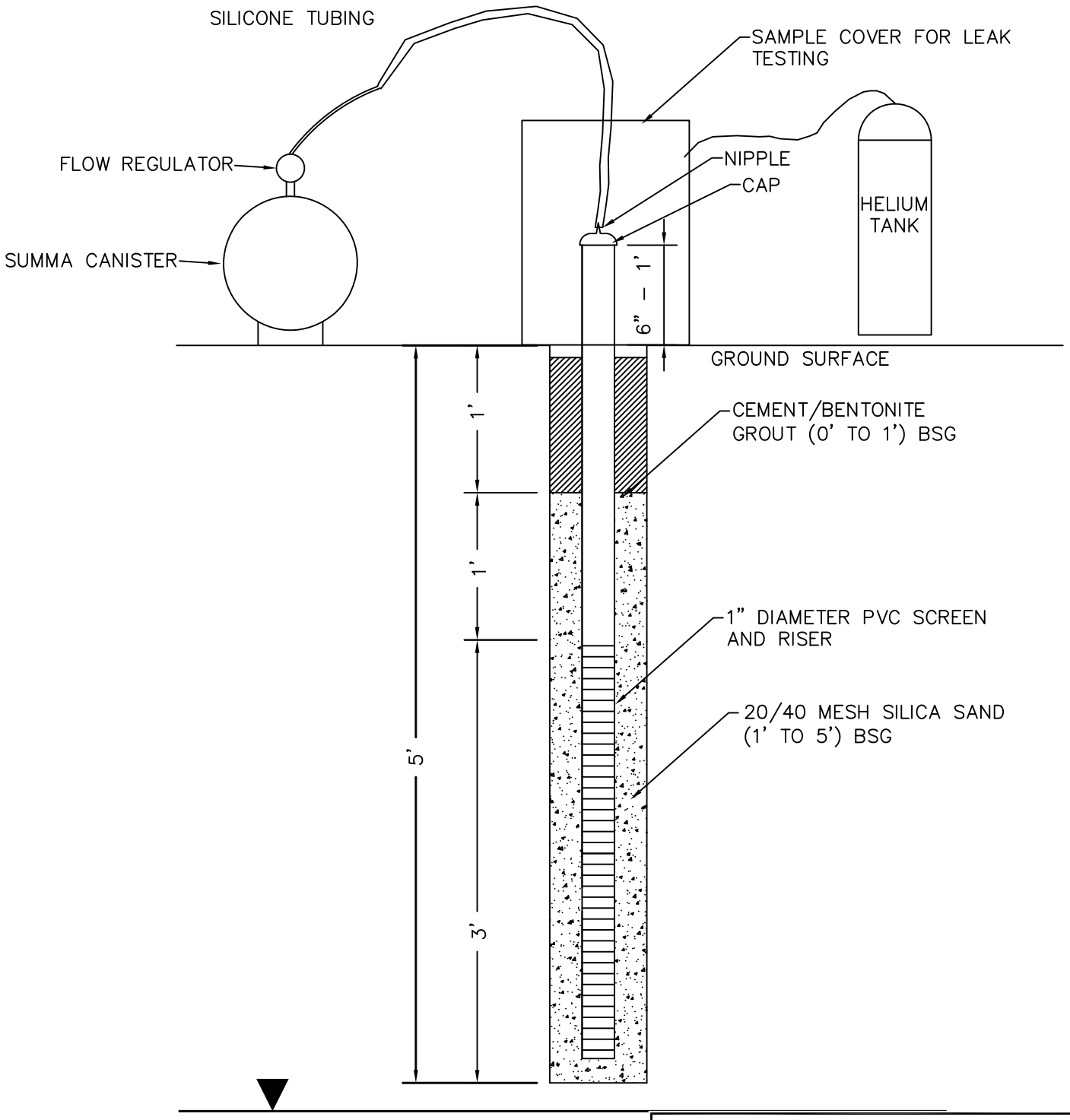
PROPOSED CONTINGENT OFF SITE
SOIL GAS SAMPLING LOCATIONS

CPB – FAR ROCKAWAY, NEW YORK

JOB NO.: 174788

HFN	DATE: NOVEMBER 2013	FIGURE: 7

FILE: \\MILLBURN–FP2\DRAFTINGFILES\CAD FILES\VISION PROJECTS\174788\SOIL GAS SAMPLING\JULY 2015 RIR FIGURES.DWG, DATE: 07/27/2015 05:15:56PM



SCALE: NOT TO SCALE

TRC ENVIRONMENTAL CORP.
41 Spring Street
New Providence, New Jersey 07974

PROPOSED SOIL GAS SAMPLING DETAIL

CPB – FAR ROCKAWAY, NEW YORK

JOB NO.: 174788

KL/LB	DATE: JANUARY 2014	FIGURE: 8

FILE: \\MILLBURN-FP2\DRAFTINGFILES\CAD FILES\VISION PROJECTS\174788\SOIL GAS SAMPLING\JULY 2015 RIR FIGURES.DWG, DATE: 07/27/2015 05:16:59PM

FAR ROCKAWAY BOULEVARD

CURB

SIDEWALK

TO BAY
32ND STREET

P.O.B.

8' CHAIN LINK FENCE

12' GATE

8' CHAIN LINK FENCE

6' CHAIN LINK FENCE

8' CHAIN LINK FENCE

BLOCK 15950
LOT 24

BLOCK 15950
LOT 29

BLOCK 15950
LOT 55

PROPERTY LINE

CAPPED
RE-BAR SET

SG-1

MW-1i

MW-1s

SG-7

MW-2

SG-6

AMBIENT AIR
SAMPLE LOCATION

MW-6s*

MW-6i

SG-8

MW-9s*

MW-9i

SG-2

SG-10
OFFSET

SG-10

MW-4s*

MW-10s

PZ-3

MW-4i*

SG-3

MW-3s

MW-3i

SG-9

SG-4

MW-8s*

MW-8i

SG-5

SG-11

ROCKAWAY FREEWAY

Sample Point	SG-1-AIR
Date	1/23/2015
Benzene	1.5
trans-1,2-Dichloroethylene	ND
cis-1,2-Dichloroethylene	ND
Ethylbenzene	ND
Tetrachloroethylene	5.6
Toluene	3.7
Trichloroethylene	13
Vinyl chloride	ND
Xylenes (total)	ND

Sample Point	SG-6-AIR
Date	1/23/2015
Benzene	ND
trans-1,2-Dichloroethylene	ND
cis-1,2-Dichloroethylene	ND
Ethylbenzene	ND
Tetrachloroethylene	ND
Toluene	8.7
Trichloroethylene	ND
Vinyl chloride	ND
Xylenes (total)	ND

Sample Point	AMBIENT
Date	1/29/2015
Benzene	0.73
trans-1,2-Dichloroethylene	ND
cis-1,2-Dichloroethylene	ND
Ethylbenzene	ND
Tetrachloroethylene	0.26
Toluene	0.83
Trichloroethylene	ND
Vinyl chloride	ND
Xylenes (total)	ND

Sample Point	SG-7-AIR
Date	1/23/2015
Benzene	2.9
trans-1,2-Dichloroethylene	ND
cis-1,2-Dichloroethylene	ND
Ethylbenzene	ND
Tetrachloroethylene	2.3
Toluene	2.9
Trichloroethylene	1.2
Vinyl chloride	ND
Xylenes (total)	1.7

Sample Point	SG-2-AIR
Date	1/29/2015
Benzene	1.2
trans-1,2-Dichloroethylene	3.9
cis-1,2-Dichloroethylene	92.4
Ethylbenzene	ND
Tetrachloroethylene	18
Toluene	2.4
Trichloroethylene	1,820
Vinyl chloride	ND
Xylenes (total)	ND

Sample Point	SG-8-AIR
Date	1/23/2015
Benzene	68.4
trans-1,2-Dichloroethylene	ND
cis-1,2-Dichloroethylene	ND
Ethylbenzene	13
Tetrachloroethylene	ND
Toluene	119
Trichloroethylene	11
Vinyl chloride	ND
Xylenes (total)	39

Sample Point	SG-9-AIR
Date	1/23/2015
Benzene	2
trans-1,2-Dichloroethylene	ND
cis-1,2-Dichloroethylene	3.6
Ethylbenzene	ND
Tetrachloroethylene	ND
Toluene	5.3
Trichloroethylene	24
Vinyl chloride	ND
Xylenes (total)	ND

Sample Point	SG-10-AIR	
Date	1/29/2015	1/29/2015 (dup)
Benzene	3.8	4.2
trans-1,2-Dichloroethylene	ND	ND
cis-1,2-Dichloroethylene	20	21
Ethylbenzene	ND	ND
Tetrachloroethylene	4	4.3
Toluene	2.2	2.7
Trichloroethylene	168	178
Vinyl chloride	ND	ND
Xylenes (total)	ND	ND

Sample Point	SG-3-AIR
Date	1/29/2015
Benzene	3.2
trans-1,2-Dichloroethylene	ND
cis-1,2-Dichloroethylene	42
Ethylbenzene	ND
Tetrachloroethylene	ND
Toluene	ND
Trichloroethylene	24
Vinyl chloride	1.6
Xylenes (total)	ND

Sample Point	SG-4-AIR
Date	1/29/2015
Benzene	1.8
trans-1,2-Dichloroethylene	ND
cis-1,2-Dichloroethylene	ND
Ethylbenzene	ND
Tetrachloroethylene	ND
Toluene	2.3
Trichloroethylene	60.7
Vinyl chloride	ND
Xylenes (total)	ND

Sample Point	SG-5-AIR
Date	1/29/2015
Benzene	6.1
trans-1,2-Dichloroethylene	ND
cis-1,2-Dichloroethylene	ND
Ethylbenzene	ND
Tetrachloroethylene	ND
Toluene	3.7
Trichloroethylene	0.81
Vinyl chloride	ND
Xylenes (total)	ND

Sample Point	SG-11-AIR
Date	3/27/2015
Benzene	ND
trans-1,2-Dichloroethylene	207
cis-1,2-Dichloroethylene	14,900
Ethylbenzene	ND
Tetrachloroethylene	134
Toluene	ND
Trichloroethylene	99,400
Vinyl chloride	350
Xylenes (total)	ND

NOTE:
RESULTS IN µg/m³
ND = NOT DETECTED

LEGEND

MW-1 — MONITOR WELL LOCATION

MW-1* — MONITOR WELL LOCATION FOR MNA GW SAMPLES

SG-1 — SOIL GAS SAMPLING LOCATION

0 30
APPROXIMATE SCALE

TRC ENVIRONMENTAL CORP.
41 Spring Street
New Providence, New Jersey 07974

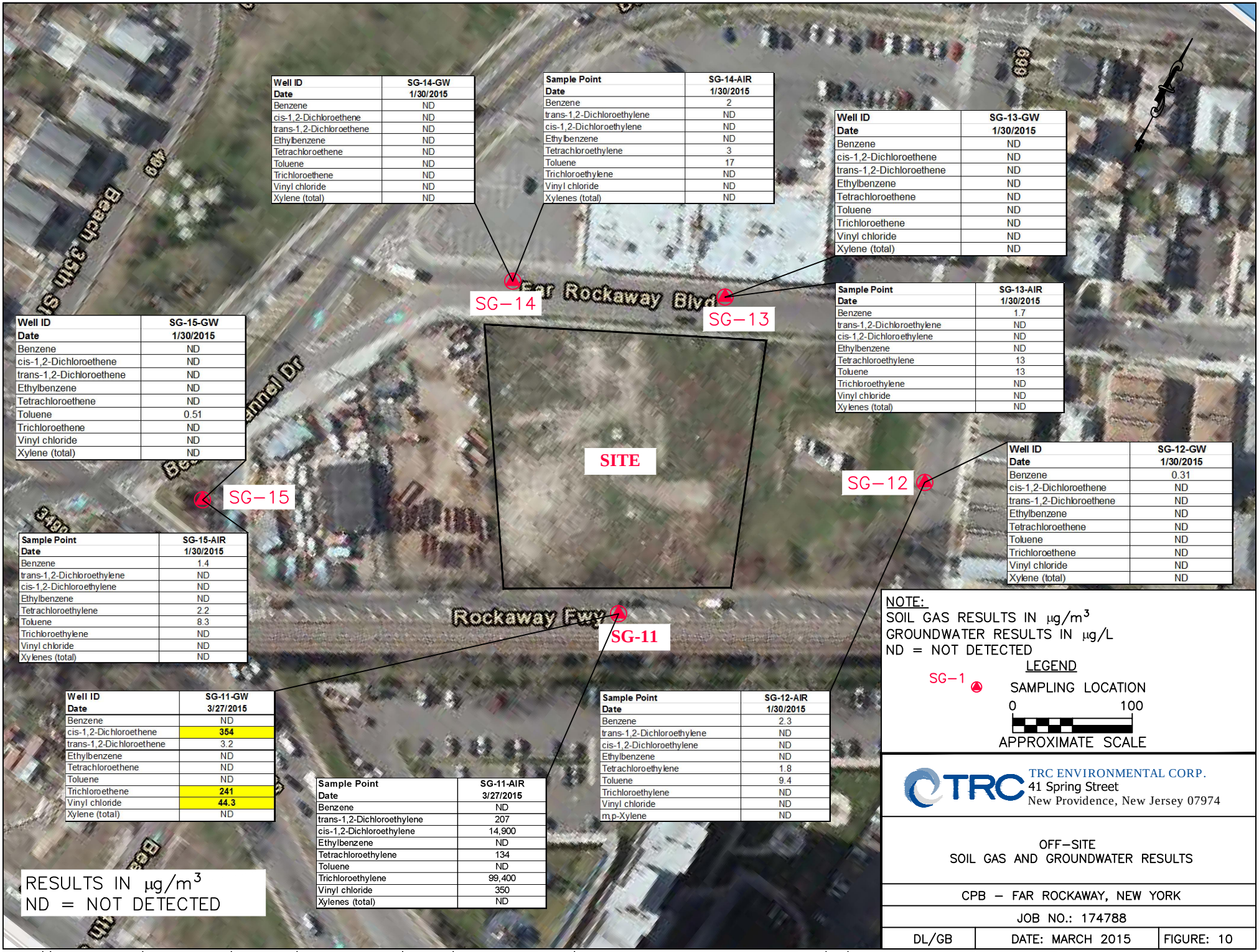
ON-SITE
SOIL GAS SAMPLING RESULTS

CPB – FAR ROCKAWAY, NEW YORK

JOB NO.: 174788

DL/GB | DATE: MARCH 2015 | FIGURE: 9

FILE: \\MILLBURN-FP2\DRAFTINGFILES\CAD FILES\VISION PROJECTS\174788\SOIL GAS SAMPLING\JULY 2015 RIR FIGURES.DWG, DATE: 07/27/2015 05:18:42PM



Well ID	SG-14-GW
Date	1/30/2015
Benzene	ND
cis-1,2-Dichloroethene	ND
trans-1,2-Dichloroethene	ND
Ethylbenzene	ND
Tetrachloroethene	ND
Toluene	ND
Trichloroethene	ND
Vinyl chloride	ND
Xylene (total)	ND

Sample Point	SG-14-AIR
Date	1/30/2015
Benzene	2
trans-1,2-Dichloroethylene	ND
cis-1,2-Dichloroethylene	ND
Ethylbenzene	ND
Tetrachloroethylene	3
Toluene	17
Trichloroethylene	ND
Vinyl chloride	ND
Xylenes (total)	ND

Well ID	SG-13-GW
Date	1/30/2015
Benzene	ND
cis-1,2-Dichloroethene	ND
trans-1,2-Dichloroethene	ND
Ethylbenzene	ND
Tetrachloroethene	ND
Toluene	ND
Trichloroethene	ND
Vinyl chloride	ND
Xylene (total)	ND

Sample Point	SG-13-AIR
Date	1/30/2015
Benzene	1.7
trans-1,2-Dichloroethylene	ND
cis-1,2-Dichloroethylene	ND
Ethylbenzene	ND
Tetrachloroethylene	13
Toluene	13
Trichloroethylene	ND
Vinyl chloride	ND
Xylenes (total)	ND

Well ID	SG-15-GW
Date	1/30/2015
Benzene	ND
cis-1,2-Dichloroethene	ND
trans-1,2-Dichloroethene	ND
Ethylbenzene	ND
Tetrachloroethene	ND
Toluene	0.51
Trichloroethene	ND
Vinyl chloride	ND
Xylene (total)	ND

Sample Point	SG-15-AIR
Date	1/30/2015
Benzene	1.4
trans-1,2-Dichloroethylene	ND
cis-1,2-Dichloroethylene	ND
Ethylbenzene	ND
Tetrachloroethylene	2.2
Toluene	8.3
Trichloroethylene	ND
Vinyl chloride	ND
Xylenes (total)	ND

Well ID	SG-12-GW
Date	1/30/2015
Benzene	0.31
cis-1,2-Dichloroethene	ND
trans-1,2-Dichloroethene	ND
Ethylbenzene	ND
Tetrachloroethene	ND
Toluene	ND
Trichloroethene	ND
Vinyl chloride	ND
Xylene (total)	ND

Well ID	SG-11-GW
Date	3/27/2015
Benzene	ND
cis-1,2-Dichloroethene	**354**
trans-1,2-Dichloroethene	3.2
Ethylbenzene	ND
Tetrachloroethene	ND
Toluene	ND
Trichloroethene	**241**
Vinyl chloride	**44.3**
Xylene (total)	ND

Sample Point	SG-11-AIR
Date	3/27/2015
Benzene	ND
trans-1,2-Dichloroethylene	207
cis-1,2-Dichloroethylene	14,900
Ethylbenzene	ND
Tetrachloroethylene	134
Toluene	ND
Trichloroethylene	99,400
Vinyl chloride	350
Xylenes (total)	ND

Sample Point	SG-12-AIR
Date	1/30/2015
Benzene	2.3
trans-1,2-Dichloroethylene	ND
cis-1,2-Dichloroethylene	ND
Ethylbenzene	ND
Tetrachloroethylene	1.8
Toluene	9.4
Trichloroethylene	ND
Vinyl chloride	ND
m,p-Xylene	ND

RESULTS IN µg/m³
ND = NOT DETECTED

NOTE:
SOIL GAS RESULTS IN µg/m³
GROUNDWATER RESULTS IN µg/L
ND = NOT DETECTED

LEGEND

SG-1 SAMPLING LOCATION

0 100

APPROXIMATE SCALE

TRC ENVIRONMENTAL CORP.
41 Spring Street
New Providence, New Jersey 07974

OFF-SITE
SOIL GAS AND GROUNDWATER RESULTS

CPB – FAR ROCKAWAY, NEW YORK

JOB NO.: 174788

DL/GB	DATE: MARCH 2015	FIGURE: 10

FILE: \\MILLBURN-FP2\DRAFTINGFILES\CAD FILES\VISION PROJECTS\174788\SOIL GAS SAMPLING\JULY 2015 RIR FIGURES.DWG, DATE: 07/27/2015 05:18:50PM

FAR ROCKAWAY BOULEVARD

CURB

SIDEWALK

TO BAY
32ND STREET

P.O.B.

8' CHAIN LINK FENCE

12' GATE

6' CHAIN LINK FENCE

SG-1

MW-1i

MW-1s

SG-7

MW-2

SG-6

AMBIENT AIR
SAMPLE LOCATION

MW-6s*

MW-6i

SG-8

MW-9s*

MW-9i

SG-2

SG-9

SG-10
OFFSET

SG-10

MW-4s*

MW-10s

MW-3s

MW-3i

PZ-3

MW-4i*

SG-3

SG-4

SG-5

MW-8s*

MW-8i

PROPERTY LINE

BLOCK 15950
LOT 55

CAPPED
RE-BAR SET

8' CHAIN LINK FENCE

ROCKAWAY FREEWAY

SG-11

BEACH 20

Well ID	SG-1-GW
Date	1/23/2015
Benzene	ND
cis-1,2-Dichloroethene	ND
trans-1,2-Dichloroethene	ND
Ethylbenzene	ND
Tetrachloroethene	ND
Toluene	ND
Trichloroethene	0.83
Vinyl chloride	0.76
Xylene (total)	ND

Well ID	SG-2-GW
Date	1/29/2015
Benzene	ND
cis-1,2-Dichloroethene	14.8
trans-1,2-Dichloroethene	0.52
Ethylbenzene	ND
Tetrachloroethene	ND
Toluene	ND
Trichloroethene	50.5
Vinyl chloride	1.4
Xylene (total)	ND

BLOCK 15950
LOT 24

Well ID	SG-10-OFFSET-GW
Date	1/30/2015
Benzene	0.68
cis-1,2-Dichloroethene	1.5
trans-1,2-Dichloroethene	ND
Ethylbenzene	ND
Tetrachloroethene	ND
Toluene	0.58
Trichloroethene	4.8
Vinyl chloride	1.9
Xylene (total)	ND

Well ID	SG-10-GW	
Date	1/29/2015	1/29/2015 (dup)
Benzene	1.4	1.3
cis-1,2-Dichloroethene	0.58	0.56
trans-1,2-Dichloroethene	ND	ND
Ethylbenzene	ND	ND
Tetrachloroethene	ND	ND
Toluene	0.83	0.85
Trichloroethene	1.1	0.93
Vinyl chloride	3.8	4.1
Xylene (total)	ND	ND

Well ID	MW-4i	
Date	1/5/2015	1/5/2015 (dup)
Benzene	3.6	3.5
cis-1,2-Dichloroethene	162	167
trans-1,2-Dichloroethene	5.4	5.5
Ethylbenzene	0.46	0.47
Tetrachloroethene	ND	ND
Toluene	0.72	0.69
Trichloroethene	ND	ND
Vinyl chloride	147	151
Xylene (total)	0.78	0.75

Well ID	SG-3-GW
Date	1/29/2015
Benzene	ND
cis-1,2-Dichloroethene	1.3
trans-1,2-Dichloroethene	ND
Ethylbenzene	ND
Tetrachloroethene	ND
Toluene	ND
Trichloroethene	0.48
Vinyl chloride	1
Xylene (total)	ND

Well ID	MW-6s
Date	1/5/2015
Benzene	0.76
cis-1,2-Dichloroethene	2.3
trans-1,2-Dichloroethene	ND
Ethylbenzene	ND
Tetrachloroethene	ND
Toluene	ND
Trichloroethene	6.5
Vinyl chloride	0.81
Xylene (total)	ND

Well ID	MW-9s
Date	1/5/2015
Benzene	1.7
cis-1,2-Dichloroethene	5.4
trans-1,2-Dichloroethene	0.94
Ethylbenzene	ND
Tetrachloroethene	ND
Toluene	0.31
Trichloroethene	3.7
Vinyl chloride	ND
Xylene (total)	

Well ID	SG-8-GW
Date	1/23/2015
Benzene	0.51
cis-1,2-Dichloroethene	ND
trans-1,2-Dichloroethene	ND
Ethylbenzene	0.99
Tetrachloroethene	ND
Toluene	32.7
Trichloroethene	0.3
Vinyl chloride	ND
Xylene (total)	4.2

Well ID	MW-4s
Date	1/6/2015
Benzene	ND
cis-1,2-Dichloroethene	ND
trans-1,2-Dichloroethene	0.65
Ethylbenzene	ND
Tetrachloroethene	ND
Toluene	ND
Trichloroethene	ND
Vinyl chloride	ND
Xylene (total)	ND

Well ID	MW-8s
Date	1/5/2015
Benzene	ND
cis-1,2-Dichloroethene	1
trans-1,2-Dichloroethene	ND
Ethylbenzene	ND
Tetrachloroethene	ND
Toluene	ND
Trichloroethene	1.7
Vinyl chloride	0.86
Xylene (total)	ND

Well ID	SG-4-GW
Date	1/29/2015
Benzene	ND
cis-1,2-Dichloroethene	1.2
trans-1,2-Dichloroethene	ND
Ethylbenzene	ND
Tetrachloroethene	ND
Toluene	ND
Trichloroethene	0.54
Vinyl chloride	1.3
Xylene (total)	ND

Well ID	SG-11-GW
Date	3/27/2015
Benzene	ND
cis-1,2-Dichloroethene	354
trans-1,2-Dichloroethene	3.2
Ethylbenzene	ND
Tetrachloroethene	ND
Toluene	ND
Trichloroethene	241
Vinyl chloride	44.3
Xylene (total)	ND

Well ID	SG-6-GW
Date	1/23/2015
Benzene	ND
cis-1,2-Dichloroethene	ND
trans-1,2-Dichloroethene	ND
Ethylbenzene	ND
Tetrachloroethene	ND
Toluene	23.4
Trichloroethene	ND
Vinyl chloride	ND
Xylene (total)	ND

Well ID	SG-7-GW
Date	1/23/2015
Benzene	ND
cis-1,2-Dichloroethene	ND
trans-1,2-Dichloroethene	ND
Ethylbenzene	ND
Tetrachloroethene	ND
Toluene	ND
Trichloroethene	ND
Vinyl chloride	ND
Xylene (total)	ND

Well ID	SG-9-GW
Date	1/23/2015
Benzene	ND
cis-1,2-Dichloroethene	0.54
trans-1,2-Dichloroethene	ND
Ethylbenzene	ND
Tetrachloroethene	ND
Toluene	ND
Trichloroethene	1.5
Vinyl chloride	ND
Xylene (total)	ND

Well ID	SG-5-GW
Date	1/29/2015
Benzene	ND
cis-1,2-Dichloroethene	ND
trans-1,2-Dichloroethene	ND
Ethylbenzene	ND
Tetrachloroethene	ND
Toluene	ND
Trichloroethene	ND
Vinyl chloride	ND
Xylene (total)	ND

LEGEND

MW-1 — MONITOR WELL LOCATION

MW-1* — MONITOR WELL LOCATION FOR MNA GW SAMPLES

SG-1 — SOIL GAS SAMPLING LOCATION

0 30

APPROXIMATE SCALE

TRC ENVIRONMENTAL CORP.
41 Spring Street
New Providence, New Jersey 07974

ON-SITE
GROUNDWATER SAMPLING RESULTS

CPB – FAR ROCKAWAY, NEW YORK

JOB NO.: 174788

DL/GB | DATE: MARCH 2015 | FIGURE: 11

FAR ROCKAWAY BOULEVARD

CURB

SIDEWALK

TO BAY
32ND STREET

P.O.B.

8' CHAIN LINK FENCE

12' GATE

8' CHAIN LINK FENCE

6' CHAIN LINK FENCE

8' CHAIN LINK FENCE

BLOCK 15950
LOT 24

BLOCK 15950
LOT 29

MW-1i
MW-1s
SS-1
SS-4
MW-2
SS-7
MW-6s*
MW-6i
SS-2
MW-9s*
MW-9i
SS-5
SS-8
MW-3s
MW-3i
MW-4s*
MW-10s
PZ-3
MW-4i*
SS-3
SS-6
SS-9
MW-8s*
MW-8i

Sample Point	SS-8	
Date	3/27/2015	
Depth	2-12"	12-24"
Mercury	1.50	1.9

Sample Point	SS-3
Date	3/27/2015
Depth	2-12"
Manganese	2,250.00

Sample Point	SS-9
Date	3/27/2015
Depth	2-12"
Benzo(a)anthracene	1.95
Benzo(a)pyrene	1.99
Benzo(b)fluoranthene	2.19
Dibenzo(a,H)anthracene	0.51
Indeno(1,2,3-cd)pyrene	1.64

Applicable Criteria (RR-RSCO)	mg/kg
Benzo(a)anthracene	1
Benzo(a)pyrene	1
Benzo(b)fluoranthene	1
Dibenzo(a,h)anthracene	0.33
Indeno(1,2,3-cd)pyrene	0.5
Manganese	2000
Mercury	0.81

RR-RSCO = Restricted Residential-
Restricted Use Soil Cleanup Objectives

PROPERTY LINE

BLOCK 15950
LOT 55

CAPPED
RE-BAR SET

8' CHAIN LINK FENCE

ROCKAWAY FREEWAY

0 30
APPROXIMATE SCALE

LEGEND

MW-1 MONITOR WELL LOCATION

MW-1* MONITOR WELL LOCATION FOR MNA GW SAMPLES

SS-1 SURFACE SOIL SAMPLING LOCATION

TRC ENVIRONMENTAL CORP.
41 Spring Street
New Providence, New Jersey 07974

ON-SITE
SURFACE SOIL SAMPLING RESULTS

CPB – FAR ROCKAWAY, NEW YORK

JOB NO.: 174788

DL/GB | DATE: MARCH 2015 | FIGURE: 12

TABLES

Table 1
Soil Gas Sampling Results
CPB Site
Far Rockaway, NY

	TRC Sample No.:		SG-1-AIR			SG-2-AIR			SG-3-AIR			SG-4-AIR			SG-5-AIR			SG-6-AIR			SG-7-AIR			SG-8-AIR			SG-9-AIR		
	Date Sampled:		1/23/2015			1/29/2015			1/29/2015			1/29/2015			1/29/2015			1/23/2015			1/23/2015			1/23/2015			1/23/2015		
	Lab Sample ID:		JB87099-1			JB87367-1			JB87367-5			JB87367-6			JB87367-7			JB87099-3			JB87099-2			JB87099-5			JB87099-4		
	Laboratory:		Accutest			Accutest			Accutest			Accutest			Accutest			Accutest			Accutest			Accutest			Accutest		
	Units:		ppbv	µg/m3		ppbv	µg/m3		ppbv	µg/m3		ppbv	µg/m3		ppbv	µg/m3		ppbv	µg/m3		ppbv	µg/m3		ppbv	µg/m3		ppbv	µg/m3	
VOCs by GCMS	CAS No.	MW																											
Acetone	67-64-1	58.078	29.3	69.6		23.4	55.6		7.6	18		ND	ND		29.7	70.6		8.9	21		ND	ND		ND	ND		12.7	30.2	
1,3-Butadiene	106-99-0	54.09	0.78	1.7	J	ND	ND		4	8.8		0.48	1.1	J	3.7	8.2		ND	ND		11.1	24.6		19.5	43.1		4	8.8	
Benzene	71-43-2	78.108	0.46	1.5	J	0.38	1.2	J	1	3.2		0.55	1.8	J	1.9	6.1		ND	ND		0.92	2.9		21.4	68.4		0.63	2	J
Bromodichloromethane	75-27-4	163.83	ND	ND		3.7	25		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		0.63	4.2	J
Bromoform	75-25-2	252.75	ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
Bromomethane	74-83-9	94.94	ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
Bromoethene	593-60-2	106.96	ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
Benzyl Chloride	100-44-7	126	ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
Carbon disulfide	75-15-0	76.14	1.6	5		ND	ND		2.5	7.8		0.82	2.6		1.1	3.4		ND	ND		3.3	10		5.7	18		1.3	4	
Chlorobenzene	108-90-7	112.55	ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
Chloroethane	75-00-3	64.52	ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
Chloroform	67-66-3	119.38	0.39	1.9	J	0.51	2.5	J	2	9.8		0.39	1.9	J	ND	ND		ND	ND		ND	ND		ND	ND		8	39	
Chloromethane	74-87-3	50.49	ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		0.68	1.4	J	0.39	0.81	J
3-Chloropropene	107-05-1	76.53	ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
2-Chlorotoluene	95-49-8	126.59	ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
Carbon tetrachloride	56-23-5	153.81	ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
Cyclohexane	110-82-7	84.16	ND	ND		ND	ND		ND	ND		0.78	2.7	J	ND	ND		ND	ND		ND	ND		7.3	25		ND	ND	
1,1-Dichloroethane	75-34-3	98.96	ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
1,1-Dichloroethylene	75-35-4	96.94	ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
1,2-Dibromoethane	106-93-4	187.87	ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
1,2-Dichloroethane	107-06-2	98.96	ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
1,2-Dichloropropane	78-87-5	112.99	ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
1,4-Dioxane	123-91-1	88.12	ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
Dichlorodifluoromethane	75-71-8	120.91	0.59	2.9	J	0.56	2.8	J	0.58	2.9	J	2.7	13		0.55	2.7	J	0.51	2.5	J	0.74	3.7	J	0.52	2.6	J	0.49	2.4	J
Dibromochloromethane	124-48-1	208.29	ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
trans-1,2-Dichloroethylene	156-60-5	96.94	ND	ND		0.98	3.9		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
cis-1,2-Dichloroethylene	156-59-2	96.94	ND	ND		23.3	92.4		10.6	42		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		0.9	3.6	
cis-1,3-Dichloropropene	10061-01-5	110.97	ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
m-Dichlorobenzene	541-73-1	147	ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
o-Dichlorobenzene	95-50-1	147	ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
p-Dichlorobenzene	106-46-7	147	ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
trans-1,3-Dichloropropene	10061-02-6	110.97	ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
Ethanol	64-17-5	46.07	7	13		4.4	8.3		2	3.8		2.7	5.1		7	13		4.2	7.9		4.9	9.2		4.6	8.7		3.3	6.2	
Ethylbenzene	100-41-4	106.17	ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		3	13		ND	ND	
Ethyl Acetate	141-78-6	88	0.65	2.3	J	ND	ND		ND	ND		0.4	1.4	J	ND	ND		ND	ND		0.49	1.8	J	ND	ND		ND	ND	
4-Ethyltoluene	622-96-8	120.2	ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
Freon 113	76-13-1	187.4	ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
Freon 114	76-14-2	170.9	ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
Heptane	142-82-5	100.21	ND	ND		ND	ND		ND	ND		ND	ND		0.76	3.1	J	ND	ND		0.75	3.1	J	21	86.1		0.46	1.9	J
Hexachlorobutadiene	87-68-3	260.76	ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
Hexane	110-54-3	86.172	0.67	2.4	J	0.46	1.6	J	0.52	1.8	J	1.1	3.9		2.2	7.8		0.59	2.1	J	3.4	12		34.8	123		1.8	6.3	
2-Hexanone	591-78-6	100	ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
Isopropyl Alcohol	67-63-0	60.1	3.8	9.3		1.2	2.9		ND	ND		ND	ND		3.3	8.1		1.3	3.2		ND	ND		ND	ND		ND	ND	
Methylene chloride	75-09-2	84.93	ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
Methyl ethyl ketone	78-93-3	72.11	5.8	17		1.5	4.4		0.66	1.9	J	0.53	1.6	J	3	8.8		1.4	4.1		6	18		4.4	13		1.3	3.8	
Methyl Isobutyl Ketone	108-10-1	100.2	ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
Methyl Tert Butyl Ether	1634-04-4	88.15	ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
Methylmethacrylate	80-62-6	100.12	ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
Propylene	115-07-1	42	5.5	9.4		2	3.4		42.8	73.5		ND	ND		39.5	67.9		3.7	6.4		171	294		162	278		59.5	102	
Styrene	100-42-5	104.15	ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
1,1,1-Trichloroethane	71-55-6	133.41	ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
1,1,2,2-Tetrachloroethane	79-34-5	167.85	ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
1,1,2-Trichloroethane	79-00-5	133.41	ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
1,2,4-Trichlorobenzene	120-82-1	181.45	ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
1,2,4-Trimethylbenzene	95-63-6	120.2	ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
1,3,5-Trimethylbenzene	108-67-8	120.2	ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
2,2,4-Trimethylpentane	540-84-1	114.23	ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		0.62	2.9	J	31.4	147		ND	ND	
Tertiary Butyl Alcohol	75-65-0	74.12	ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
Tetrachloroethylene	127-18-4	165.83	0.82	5.6		2.6	18		ND	ND		ND	ND		ND	ND		ND	ND		0.34	2.3		ND	ND		ND	ND	
Tetrahydrofuran	109-99-9	72.11	0.5	1.5	J	ND	ND		ND	ND		ND	ND		0.51	1.5	J	ND	ND		ND	ND		ND	ND		ND	ND	
Toluene	108-88-3	92.14	0.98	3.7		0.63	2.4	J	ND	ND		0.6	2.3	J	0.97	3.7		2.3	8.7		0.78	2.9	J	31.7	119		1.4	5.3	
Trichloroethylene	79-01-6	131.39	2.4	13		338	1,820		4.4	24		11.3	60.7		0.15	0.81	J	ND	ND		0.22	1.2		2.1	11		4.5	24	
Trichlorofluoromethane	75-69-4	137.37	ND	ND		0.39	2.2	J	ND	ND		3.4	19		ND	ND		ND	ND		2.5	14		0.95	5.3		ND	ND	
Vinyl chloride	75-01-4	62.5	ND	ND		ND	ND		0.62	1.6	J	ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
Vinyl Acetate	108-05-4	86	ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
m,p-Xylene	108-38-3 ; 106-42-3	106.2	ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		0.4	1.7	J	6.7	29		ND	ND	
o-Xylene	95-47-6	106.17	ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		2.3	10		ND	ND	
Xylenes (total)	1330-20-7	106.17	ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		0.4	1.7	J	8.9	39		ND	ND	
Total	-	-	61	160		404	2,047		79	199		26	117		94	206		23	56		207	404		360	1,002		101	245	

Notes:
ND = not detected.
J = estimated concentration detected below the Method Detection Limit.
Bold & Highlighted indicates concentration above GWQS.

Table 1
Soil Gas Sampling Results
CPB Site
Far Rockaway, NY

		TRC Sa	SG-10-AIR			SG-10-AIR(A)			SG-11-AIR			SG-12-AIR			SG-13-AIR			SG-14-AIR			SG-15-AIR			AMBIENT		
		Date	1/29/2015			1/29/2015			3/27/2015			1/30/2015			1/30/2015			1/30/2015			1/30/2015			1/29/2015		
		Lab S	JB87367-2			JB87367-3			JB91088-1			JB87394-4			JB87394-1			JB87394-2			JB87394-3			JB87367-4		
		L	Accutest			Accutest			Accutest			Accutest			Accutest			Accutest			Accutest			Accutest		
			ppbv	µg/m3		ppbv	µg/m3		ppbv	µg/m3		ppbv	µg/m3		ppbv	µg/m3		ppbv	µg/m3		ppbv	µg/m3		ppbv	µg/m3	
VOCs by GCMS	CAS No.																									
Acetone	67-64-1		20.1	47.7		22.4	53.2		35.4	84.1		30.5	72.5		9.6	23		18.6	44.2		35.5	84.3		2	4.8	
1,3-Butadiene	106-99-0		2.6	5.8		3	6.6		ND	ND		5.2	12		ND	ND		ND	ND		0.93	2.1		ND	ND	
Benzene	71-43-2		1.2	3.8		1.3	4.2		ND	ND		0.72	2.3	J	0.52	1.7	J	0.62	2	J	0.44	1.4	J	0.23	0.73	
Bromodichloromethane	75-27-4		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
Bromoform	75-25-2		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
Bromomethane	74-83-9		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
Bromoethene	593-60-2		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
Benzyl Chloride	100-44-7		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
Carbon disulfide	75-15-0		2.3	7.2		2.4	7.5		ND	ND		0.84	2.6		0.63	2	J	2.6	8.1		41.9	130		ND	ND	
Chlorobenzene	108-90-7		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
Chloroethane	75-00-3		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
Chloroform	67-66-3		ND	ND		ND	ND		20.4 J	99.6 J		ND	ND		2.6	13		1.2	5.9		ND	ND		ND	ND	
Chloromethane	74-87-3		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		0.68	1.4	
3-Chloropropene	107-05-1		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
2-Chlorotoluene	95-49-8		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
Carbon tetrachloride	56-23-5		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
Cyclohexane	110-82-7		ND	ND		ND	ND		ND	ND		ND	ND		0.61	2.1	J	2.4	8.3		ND	ND		ND	ND	
1,1-Dichloroethane	75-34-3		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
1,1-Dichloroethylene	75-35-4		ND	ND		ND	ND		79.2	314		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
1,2-Dibromoethane	106-93-4		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
1,2-Dichloroethane	107-06-2		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
1,2-Dichloropropane	78-87-5		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
1,4-Dioxane	123-91-1		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
Dichlorodifluoromethane	75-71-8		0.49	2.4	J	0.55	2.7	J	ND	ND		0.51	2.5	J	0.83	4.1		0.6	3	J	0.51	2.5	J	0.56	2.8	
Dibromochloromethane	124-48-1		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
trans-1,2-Dichloroethylene	156-60-5		ND	ND		ND	ND		52.3	207		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
cis-1,2-Dichloroethylene	156-59-2		5	20		5.3	21		3,760	14,900		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
cis-1,3-Dichloropropene	10061-01-5		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
m-Dichlorobenzene	541-73-1		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
o-Dichlorobenzene	95-50-1		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
p-Dichlorobenzene	106-46-7		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
trans-1,3-Dichloropropene	10061-02-6		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
Ethanol	64-17-5		5.1	9.6		6.7	13		ND	ND		2.2	4.1		2.3	4.3		2.5	4.7		2.2	4.1		2.8	5.3	
Ethylbenzene	100-41-4		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
Ethyl Acetate	141-78-6		0.86	3.1		3.3	12		ND	ND		ND	ND		ND	ND		1.1	4		ND	ND		0.32	1.2	
4-Ethyltoluene	622-96-8		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
Freon 113	76-13-1		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
Freon 114	76-14-2		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
Heptane	142-82-5		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		0.51	2.1	J	ND	ND		ND	ND	
Hexachlorobutadiene	87-68-3		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
Hexane	110-54-3		0.63	2.2	J	1.6	5.6		ND	ND		0.4	1.4	J	ND	ND		1.9	6.7		0.66	2.3	J	0.24	0.85	
2-Hexanone	591-78-6		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
Isopropyl Alcohol	67-63-0		ND	ND		1.4	3.4		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
Methylene chloride	75-09-2		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		0.25	0.87	
Methyl ethyl ketone	78-93-3		2.7	8		2.9	8.6		ND	ND		1.3	3.8		0.61	1.8	J	1	2.9		2.1	6.2		0.11	0.32	J
Methyl Isobutyl Ketone	108-10-1		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
Methyl Tert Butyl Ether	1634-04-4		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
Methylmethacrylate	80-62-6		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
Propylene	115-07-1		14.6	25.1		16.9	29		ND	ND		28.4	48.8		1.3	2.2	J	7.6	13		10.1	17.3		0.69	1.2	
Styrene	100-42-5		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
1,1,1-Trichloroethane	71-55-6		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
1,1,2,2-Tetrachloroethane	79-34-5		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
1,1,2-Trichloroethane	79-00-5		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
1,2,4-Trichlorobenzene	120-82-1		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
1,2,4-Trimethylbenzene	95-63-6		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
1,3,5-Trimethylbenzene	108-67-8		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
2,2,4-Trimethylpentane	540-84-1		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
Tertiary Butyl Alcohol	75-65-0		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
Tetrachloroethylene	127-18-4		0.59	4		0.63	4.3		19.7	134		0.27	1.8		1.9	13		0.44	3		0.32	2.2		0.039	0.26	J
Tetrahydrofuran	109-99-9		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
Toluene	108-88-3		0.58	2.2	J	0.72	2.7	J	ND	ND		2.5	9.4		3.4	13		4.6	17		2.2	8.3		0.22	0.83	
Trichloroethylene	79-01-6		31.2	168		33.2	178		18,500	99,400		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
Trichlorofluoromethane	75-69-4		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		0.25	1.4	
Vinyl chloride	75-01-4		ND	ND		ND	ND		137	350		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
Vinyl Acetate	108-05-4		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
m,p-Xylene	108-38-3 ; 106-42-3		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
o-Xylene	95-47-6		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
Xylenes (total)	1330-20-7		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND		ND	ND	
Total	-		88	309		102	352		22,584	115,389		73	161		24	80		46	125		97	261		8	22	

Notes:
ND = not detected.
J = estimated concentration detected below the Method D
Bold & Highlighted indicates concentration above GWQS.

Table 2
Temporary Wellpoint Sampling Results
CPB Site
Far Rockaway, NY

			TRC Sample No.:	SG-1-GW		SG-2-GW		SG-3-GW		SG-4-GW		SG-5-GW		SG-6-GW		SG-7-GW		SG-8-GW		SG-9-GW	
			Date Sampled:	1/23/2015		1/29/2015		1/29/2015		1/29/2015		1/29/2015		1/23/2015		1/23/2015		1/23/2015		1/23/2015	
			Lab Sample ID:	JB87101-1		JB87395-1		JB87395-4		JB87395-5		JB87395-6		JB87101-3		JB87101-2A		JB87101-5		JB87101-4	
			Laboratory:	Accutest		Accutest		Accutest		Accutest		Accutest		Accutest		Accutest		Accutest		Accutest	
VOCs by GCMS (µg/L)	CAS No.	Abbrv.	GWQS																		
Acetone	67-64-1	Acetone	-	ND		8.5	J	7.2	J	8.9	J	ND		25.1		5.5	J	7.3	J	4.5	J
Benzene	71-43-2	Benzene	1	ND		ND		ND		ND		ND		ND		ND		0.51	J	ND	
Bromochloromethane	74-97-5	BCM	5	ND		ND		ND		ND		ND		ND		ND		ND		ND	
Bromodichloromethane	75-27-4	BDCM	-	ND		ND		ND		ND		ND		ND		ND		ND		ND	
Bromoform	75-25-2	Bromoform	-	ND		ND		ND		ND		ND		ND		ND		ND		ND	
Bromomethane	74-83-9	BM	5	ND		ND		ND		ND		ND		ND		ND		ND		ND	
2-Butanone (MEK)	78-93-3	MEK	-	ND		ND		ND		ND		ND		2.7	J	ND		ND		ND	
Carbon disulfide	75-15-0	Carbon disulfide	60	0.74	J	0.3	J	0.53	J	ND		ND		0.69	J	0.22	J	0.38	J	ND	
Carbon tetrachloride	56-23-5	CT	5	ND		ND		ND		ND		ND		ND		ND		ND		ND	
Chlorobenzene	108-90-7	CB	5	ND		ND		ND		ND		ND		1.1		ND		ND		ND	
Chloroethane	75-00-3	CE	5	ND		ND		ND		ND		ND		ND		ND		ND		ND	
Chloroform	67-66-3	Chloroform	7	ND		ND		ND		ND		ND		ND		ND		ND		ND	
Chloromethane	74-87-3	CM	-	ND		ND		ND		ND		ND		ND		ND		ND		ND	
Cyclohexane	110-82-7	Cyclohexane	-	ND		ND		ND		ND		ND		ND		ND		ND		ND	
1,2-Dibromo-3-chloropropane	96-12-8	DBCP	0.04	ND		ND		ND		ND		ND		ND		ND		ND		ND	
Dibromochloromethane	124-48-1	DBCM	5	ND		ND		ND		ND		ND		ND		ND		ND		ND	
1,2-Dibromoethane	106-93-4	EDB	0.0006	ND		ND		ND		ND		ND		ND		ND		ND		ND	
1,2-Dichlorobenzene	95-50-1	1,2-DCB	3	ND		ND		ND		ND		ND		ND		ND		ND		ND	
1,3-Dichlorobenzene	541-73-1	1,3-DCB	3	ND		ND		ND		ND		ND		ND		ND		ND		ND	
1,4-Dichlorobenzene	106-46-7	1,4-DCB	3	ND		ND		ND		ND		ND		ND		ND		ND		ND	
Dichlorodifluoromethane	75-71-8	DCDFM	5	ND		ND		ND		ND		ND		ND		ND		ND		ND	
1,1-Dichloroethane	75-34-3	1,1-DCA	5	ND		ND		ND		ND		ND		ND		ND		ND		ND	
1,2-Dichloroethane	107-06-2	1,2-DCA	0.6	ND		ND		ND		ND		ND		ND		ND		ND		ND	
1,1-Dichloroethene	75-35-4	1,1-DCE	5	ND		ND		ND		ND		ND		ND		ND		ND		ND	
cis-1,2-Dichloroethene	156-59-2	c-1,2-DCE	5	ND		**14.8**		1.3		1.2		ND		ND		ND		ND		0.54	J
trans-1,2-Dichloroethene	156-60-5	t-1,2-DCE	5	ND		0.52	J	ND		ND		ND		ND		ND		ND		ND	
1,2-Dichloropropane	78-87-5	1,2-DCP	1	ND		ND		ND		ND		ND		ND		ND		ND		ND	
cis-1,3-Dichloropropene	10061-01-5	c-1,3-DCP	Total = 1	ND		ND		ND		ND		ND		ND		ND		ND		ND	
trans-1,3-Dichloropropene	10061-02-6	t-1,3-DCP		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Ethylbenzene	100-41-4	EB	5	ND		ND		ND		ND		ND		ND		ND		0.99	J	ND	
Freon 113	76-13-1	Freon 113	5	ND		ND		ND		ND		ND		ND		ND		ND		ND	
2-Hexanone	591-78-6	MBK	-	ND		ND		ND		ND		ND		ND		ND		ND		ND	
Isopropylbenzene	98-82-8	Isopropylbenzene	5	ND		ND		ND		ND		ND		ND		ND		ND		ND	
Methyl Acetate	79-20-9	MeOAc	-	ND		ND		ND		ND		ND		ND		ND		ND		ND	
Methylcyclohexane	108-87-2	Methylcyclohexane	-	ND		ND		ND		ND		ND		ND		ND		ND		ND	
Methyl Tert Butyl Ether	1634-04-4	MTBE	-	ND		ND		ND		ND		ND		ND		ND		ND		ND	
4-Methyl-2-pentanone(MIBK)	108-10-1	MIBK	-	ND		ND		ND		ND		ND		ND		ND		ND		ND	
Methylene chloride	75-09-2	MC	5	ND		ND		ND		ND		ND		ND		ND		ND		ND	
Styrene	100-42-5	Styrene	5	ND		ND		ND		ND		ND		ND		ND		ND		ND	
1,1,2,2-Tetrachloroethane	79-34-5	1,1,2,2-PCA	5	ND		ND		ND		ND		ND		ND		ND		ND		ND	
Tetrachloroethene	127-18-4	PCE	5	ND		ND		ND		ND		ND		ND		ND		ND		ND	
Toluene	108-88-3	Toluene	5	ND		ND		ND		ND		ND		**23.4**		ND		**32.7**		ND	
1,2,3-Trichlorobenzene	87-61-6	1,2,3-TCB	5	ND		ND		ND		ND		ND		ND		ND		ND		ND	
1,2,4-Trichlorobenzene	120-82-1	1,2,4-TCB	5	ND		ND		ND		ND		ND		ND		ND		ND		ND	
1,1,1-Trichloroethane	71-55-6	1,1,1-Trichloroethane	5	ND		ND		ND		ND		ND		ND		ND		ND		ND	
1,1,2-Trichloroethane	79-00-5	1,1,2-Trichloroethane	5	ND		ND		ND		ND		ND		ND		ND		ND		ND	
Trichloroethene	79-01-6	TCE	5	0.83	J	**50.5**		0.48	J	0.54	J	ND		ND		ND		0.3	J	1.5	
Trichlorofluoromethane	75-69-4	TCFM	5	ND		ND		ND		ND		ND		ND		ND		ND		ND	
Vinyl chloride	75-01-4	VC	2	0.76	J	1.4		1		1.3		ND		ND		ND		ND		ND	
m,p-Xylene	-	-	-	ND		ND		ND		ND		ND		ND		ND		2.7		ND	
o-Xylene	-	-	-	ND		ND		ND		ND		ND		ND		ND		1.5		ND	
Xylene (total)	1330-20-7	Xylene	5	ND		ND		ND		ND		ND		ND		ND		4.2		ND	
Total	-	-	-	2.33		76.02		10.51		11.94		0		52.99		5.72		46.38		6.54	

Notes:
ND = not detected.
J = estimated concentration detected below the Method Detection Limit.
GWQS = NY TOGS Class GA Ground Water Quality Standards.
Bold & Highlighted indicates concentration above GWQS.

Table 2
Temporary Wellpoint Sampling Results
CPB Site
Far Rockaway, NY

			TRC Sample No.:	SG-10-GW		SG-10-GW(A)		SG-10-OFFSET-GW		SG-11-GW		SG-12-GW		SG-13-GW		SG-14-GW		SG-15-GW	
			Date Sampled:	1/29/2015		1/29/2015		1/30/2015		3/27/2015		1/30/2015		1/30/2015		1/30/2015		1/30/2015	
			Lab Sample ID:	JB87395-2		JB87395-3		JB87395-11		JB91085-1		JB87395-10		JB87395-7		JB87395-8A		JB87395-9	
			Laboratory:	Accutest		Accutest		Accutest		Accutest		Accutest		Accutest		Accutest		Accutest	
VOCs by GCMS (µg/L)	CAS No.	Abbrv.	GWQS																
Acetone	67-64-1	Acetone	-	9	J	8.1	J	4.1	J	12.7		12.3		3.3	J	5.4	J	ND	
Benzene	71-43-2	Benzene	1	**1.4**		**1.3**		0.68	J	ND		0.31	J	ND		ND		ND	
Bromochloromethane	74-97-5	BCM	5	ND		ND		ND		ND		ND		ND		ND		ND	
Bromodichloromethane	75-27-4	BDCM	-	ND		ND		ND		ND		ND		ND		ND		ND	
Bromoform	75-25-2	Bromoform	-	ND		ND		ND		ND		ND		ND		ND		ND	
Bromomethane	74-83-9	BM	5	ND		ND		ND		ND		ND		ND		ND		ND	
2-Butanone (MEK)	78-93-3	MEK	-	ND		ND		ND		ND		ND		ND		ND		ND	
Carbon disulfide	75-15-0	Carbon disulfide	60	0.54	J	0.72	J	0.37	J	ND		0.24	J	ND		0.58	J	0.93	J
Carbon tetrachloride	56-23-5	CT	5	ND		ND		ND		ND		ND		ND		ND		ND	
Chlorobenzene	108-90-7	CB	5	ND		ND		ND		ND		ND		ND		ND		ND	
Chloroethane	75-00-3	CE	5	ND		ND		ND		ND		ND		ND		ND		ND	
Chloroform	67-66-3	Chloroform	7	ND		ND		ND		0.68	J	ND		ND		ND		ND	
Chloromethane	74-87-3	CM	-	ND		ND		ND		ND		ND		ND		ND		ND	
Cyclohexane	110-82-7	Cyclohexane	-	ND		ND		ND		ND		ND		ND		ND		ND	
1,2-Dibromo-3-chloropropane	96-12-8	DBCP	0.04	ND		ND		ND		ND		ND		ND		ND		ND	
Dibromochloromethane	124-48-1	DBCM	5	ND		ND		ND		ND		ND		ND		ND		ND	
1,2-Dibromoethane	106-93-4	EDB	0.0006	ND		ND		ND		ND		ND		ND		ND		ND	
1,2-Dichlorobenzene	95-50-1	1,2-DCB	3	ND		ND		ND		ND		ND		ND		ND		ND	
1,3-Dichlorobenzene	541-73-1	1,3-DCB	3	ND		ND		ND		ND		ND		ND		ND		ND	
1,4-Dichlorobenzene	106-46-7	1,4-DCB	3	ND		ND		ND		ND		ND		ND		ND		ND	
Dichlorodifluoromethane	75-71-8	DCDFM	5	ND		ND		ND		ND		ND		ND		ND		ND	
1,1-Dichloroethane	75-34-3	1,1-DCA	5	ND		ND		ND		ND		ND		ND		ND		ND	
1,2-Dichloroethane	107-06-2	1,2-DCA	0.6	ND		ND		ND		ND		ND		ND		ND		ND	
1,1-Dichloroethene	75-35-4	1,1-DCE	5	ND		ND		ND		1.3		ND		ND		ND		ND	
cis-1,2-Dichloroethene	156-59-2	c-1,2-DCE	5	0.58	J	0.56	J	1.5		**354**		ND		ND		ND		ND	
trans-1,2-Dichloroethene	156-60-5	t-1,2-DCE	5	ND		ND		ND		3.2		ND		ND		ND		ND	
1,2-Dichloropropane	78-87-5	1,2-DCP	1	ND		ND		ND		ND		ND		ND		ND		ND	
cis-1,3-Dichloropropene	10061-01-5	c-1,3-DCP	Total = 1	ND		ND		ND		ND		ND		ND		ND		ND	
trans-1,3-Dichloropropene	10061-02-6	t-1,3-DCP		ND		ND		ND		ND		ND		ND		ND		ND	
Ethylbenzene	100-41-4	EB	5	ND		ND		ND		ND		ND		ND		ND		ND	
Freon 113	76-13-1	Freon 113	5	ND		ND		ND		ND		ND		ND		ND		ND	
2-Hexanone	591-78-6	MBK	-	ND		ND		ND		ND		ND		ND		ND		ND	
Isopropylbenzene	98-82-8	Isopropylbenzene	5	ND		ND		ND		ND		ND		ND		ND		ND	
Methyl Acetate	79-20-9	MeOAc	-	ND		ND		ND		ND		ND		ND		ND		ND	
Methylcyclohexane	108-87-2	Methylcyclohexane	-	ND		ND		ND		ND		ND		ND		ND		ND	
Methyl Tert Butyl Ether	1634-04-4	MTBE	-	ND		ND		ND		ND		ND		ND		ND		ND	
4-Methyl-2-pentanone(MIBK)	108-10-1	MIBK	-	ND		ND		ND		ND		ND		ND		ND		ND	
Methylene chloride	75-09-2	MC	5	ND		ND		ND		ND		ND		ND		ND		ND	
Styrene	100-42-5	Styrene	5	ND		ND		ND		ND		ND		ND		ND		ND	
1,1,2,2-Tetrachloroethane	79-34-5	1,1,2,2-PCA	5	ND		ND		ND		ND		ND		ND		ND		ND	
Tetrachloroethene	127-18-4	PCE	5	ND		ND		ND		ND		ND		ND		ND		ND	
Toluene	108-88-3	Toluene	5	0.83	J	0.85	J	0.58	J	ND		ND		ND		ND		0.51	J
1,2,3-Trichlorobenzene	87-61-6	1,2,3-TCB	5	ND		ND		ND		ND		ND		ND		ND		ND	
1,2,4-Trichlorobenzene	120-82-1	1,2,4-TCB	5	ND		ND		ND		ND		ND		ND		ND		ND	
1,1,1-Trichloroethane	71-55-6	1,1,1-Trichloroethane	5	ND		ND		ND		ND		ND		ND		ND		ND	
1,1,2-Trichloroethane	79-00-5	1,1,2-Trichloroethane	5	ND		ND		ND		ND		ND		ND		ND		ND	
Trichloroethene	79-01-6	TCE	5	1.1		0.93	J	4.8		**241**		ND		ND		ND		ND	
Trichlorofluoromethane	75-69-4	TCFM	5	ND		ND		ND		ND		ND		ND		ND		ND	
Vinyl chloride	75-01-4	VC	2	**3.8**		**4.1**		1.9		**44.3**		ND		ND		ND		ND	
m,p-Xylene	-	-	-	ND		ND		ND		ND		ND		ND		ND		ND	
o-Xylene	-	-	-	ND		ND		ND		ND		ND		ND		ND		ND	
Xylene (total)	1330-20-7	Xylene	5	ND		ND		ND		ND		ND		ND		ND		ND	
Total	-	-	-	17.25		16.56		13.93		657.18		12.85		3.3		5.98		1.44	

Notes:
ND = not detected.
J = estimated concentration detected below the Method Detection Limit.
GWQS = NY TOGS Class GA Ground Water Quality Standards.
Bold & Highlighted indicates concentration above GWQS.

Table 3
Geochemical Parameters
CPB Site
Far Rockaway, NY

Well	Date	Time	PID (ppm)	Depth to GW (ft)	Temperature (°C)	pH	ORP (mV)	Conductivity (uS / cm)	Dissolved Oxygen (mg / L)	Turbidity (NTU)	Comments
SG-1	1/23/2015	10:35	NR	7.19	4.18	7.98	105	579	7.18	800	Turbid brown
SG-2	1/29/2015	12:32	NR	6.57	8.27	7.22	162	871	9.97	OR	NR
SG-3	1/29/2015	14:26	NR	3.55	6.11	7.37	58	812	5.40	OR	brown/grey, no odor, no sheen
SG-4	1/29/2015	14:50	NR	3.70	6.30	9.86	92	967	5.53	OR	clear to light brown
SG-5	1/29/2015	15:07	NR	3.92	4.56	7.02	17	881	5.54	OR	clear/tan with fine tan sediment
SG-6	1/23/2015	12:07	NR	6.38	7.48	7.41	14	328	8.18	OR	Turbid grey-brown
SG-7	1/23/2015	11:05	NR	8.02	6.80	7.12	-99	1,150	4.55	OR	Turbid brown
SG-8	1/23/2015	14:20	NR	7.22	8.22	7.65	45	1,240	4.27	OR	NR
SG-9	1/23/2015	13:35	NR	3.98	6.46	6.78	-29	1,510	3.71	OR	Turbid grey-brown
SG-10	1/29/2015	13:55	0.1	4.98	6.10	7.07	42	966	4.85	OR	dark grey/black, sl. odor/sheen, possible product
SG-10-offset	1/30/2015	14:40	0.0	5.40	7.85	6.94	22	1,290	8.54	OR	clear to brown/grey, turbid, no sheen no odor
SG-11	3/27/2015	10:53	0.1	5.25	7.23	11.53	8	4,520	6.04	OR	NR
SG-12	1/30/2015	13:15	NR	6.45	7.10	7.73	-44	483	4.17	OR	light brown very turbid
SG-13	1/30/2015	10:00	NR	7.1	8.34	8.39	204	601	6.90	OR	tan, fine sediment, turbid
SG-14	1/30/2015	10:47	NR	6.60	6.20	9.13	185	338	9.10	OR	light brown, turbid
SG-I5	1/30/2015	11:28	NR	4.21	6.45	7.20	-86	25,700	3.50	OR	grey tint, slight odor, no sheen

Notes:

NR = Not Recorded

OR for turbididty is >800 NTU

Table 4
Monitoring Well Sampling Results
CPB Site
Far Rockaway, NY

		TRC Sample No.:	MW-4i		MW-4i(A)		MW-4s		MW - 6s		MW - 8s		MW- 9s		TRIP BLANK		FB010615	
		Date Sampled:	01/05/15		01/05/15		01/06/15		01/05/15		01/05/15		01/05/15		01/05/15		01/06/15	
		Lab Sample No.:	JB85736-3/3F		JB85736-4/4F		JB85827-1/1F		JB85736-2/2F		JB85736-6/6F		JB85736-5/5F		JB85736-1		JB85827-2	
		Laboratory:	Accutest		Accutest		Accutest		Accutest		Accutest		Accutest		Accutest		Accutest	
VOCs (ppb)	***GWQS*[1]**	***GWQS*[2]**			Duplicate Sample										Trip Blank		Field Blank	
Acetone	-	50	ND		ND		ND		6.7	J	6.5	J	ND		ND		ND	
Benzene	1	1	**3.6**		**3.5**		ND		0.76	J	ND		**1.7**		ND		ND	
Bromochloromethane	5	-	ND		ND		ND		ND		ND		ND		ND		ND	
Bromodichloromethane	-	-	ND		ND		ND		ND		ND		ND		ND		ND	
Bromoform	-	-	ND		ND		ND		ND		ND		ND		ND		ND	
Bromomethane	5	-	ND		ND		ND		ND		ND		ND		ND		ND	
2-Butanone (MEK)	-	50	ND		ND		ND		ND		ND		ND		ND		ND	
Carbon disulfide	60	50	ND		ND		ND		ND		ND		ND		ND		ND	
Carbon tetrachloride	5	5	ND		ND		ND		ND		ND		ND		ND		ND	
Chlorobenzene	5	5	ND		ND		ND		ND		ND		ND		ND		ND	
Chloroethane	5	50	ND		ND		ND		ND		ND		ND		ND		ND	
Chloroform	7	7	ND		ND		ND		ND		ND		ND		ND		ND	
Chloromethane	5	-	ND		ND		ND		ND		ND		ND		ND		ND	
Cyclohexane	-	-	ND		ND		ND		ND		ND		ND		ND		ND	
1,2-Dibromo-3-chloropropane	0.04	-	ND		ND		ND		ND		ND		ND		ND		ND	
Dibromochloromethane	-	50	ND		ND		ND		ND		ND		ND		ND		ND	
1,2-Dibromoethane	0.0006	-	ND		ND		ND		ND		ND		ND		ND		ND	
1,2-Dichlorobenzene	3	4.7	ND		ND		ND		ND		ND		ND		ND		ND	
1,3-Dichlorobenzene	3	5	ND		ND		ND		ND		ND		ND		ND		ND	
1,4-Dichlorobenzene	3	5	ND		ND		ND		ND		ND		ND		ND		ND	
Dichlorodifluoromethane	5	-	ND		ND		ND		ND		ND		ND		ND		ND	
1,1-Dichloroethane	5	5	ND		ND		ND		ND		ND		ND		ND		ND	
1,2-Dichloroethane	0.6	5	ND		ND		ND		ND		ND		ND		ND		ND	
1,1-Dichloroethene	5	5	ND		ND		ND		ND		ND		ND		ND		ND	
cis-1,2-Dichloroethene	5	-	**162**		**167**		ND		2.3		1		**5.4**		ND		ND	
trans-1,2-Dichloroethene	5	5	**5.4**		**5.5**		0.65	J	ND		ND		0.94	J	ND		ND	
1,2-Dichloropropane	1	-	ND		ND		ND		ND		ND		ND		ND		ND	
cis-1,3-Dichloropropene	-	-	ND		ND		ND		ND		ND		ND		ND		ND	
trans-1,3-Dichloropropene	-	-	ND		ND		ND		ND		ND		ND		ND		ND	
Ethylbenzene	5	5	0.46	J	0.47	J	ND		ND		ND		ND		ND		ND	
Freon 113	5	5	ND		ND		ND		ND		ND		ND		ND		ND	
2-Hexanone	-	-	ND		ND		ND		ND		ND		ND		ND		ND	
Isopropylbenzene	5	-	ND		ND		ND		ND		ND		ND		ND		ND	
Methyl Acetate	-	-	ND		ND		ND		ND		ND		ND		ND		ND	
Methylcyclohexane	-	-	ND		ND		ND		ND		ND		ND		ND		ND	
Methyl Tert Butyl Ether	10	-	ND		ND		ND		ND		ND		ND		ND		ND	
4-Methyl-2-pentanone(MIBK)	-	50	ND		ND		ND		ND		ND		ND		ND		ND	
Methylene chloride	5	5	ND		ND		ND		ND		ND		ND		ND		ND	
Styrene	5	-	ND		ND		ND		ND		ND		ND		ND		ND	
1,1,2,2-Tetrachloroethane	5	5	ND		ND		ND		ND		ND		ND		ND		ND	
Tetrachloroethene	5	5	ND		ND		ND		ND		ND		ND		ND		ND	
Toluene	5	5	0.72	J	0.69	J	ND		ND		ND		0.31	J	ND		ND	
1,2,3-Trichlorobenzene	5	-	ND		ND		ND		ND		ND		ND		ND		ND	
1,2,4-Trichlorobenzene	5	5	ND		ND		ND		ND		ND		ND		ND		ND	
1,1,1-Trichloroethane	5	5	ND		ND		ND		ND		ND		ND		ND		ND	
1,1,2-Trichloroethane	1	-	ND		ND		ND		ND		ND		ND		ND		ND	
Trichloroethene	5	5	ND		ND		ND		**6.5**		1.7		1.4		ND		ND	
Trichlorofluoromethane	5	-	ND		ND		ND		ND		ND		ND		ND		ND	
Vinyl chloride	2	2	**147**		**151**		ND		0.81	J	0.86	J	**3.7**		ND		ND	
m,p-Xylene	-	-	ND		ND		ND		ND		ND		ND		ND		ND	
o-Xylene	5	-	0.44	J	0.47	J	ND		ND		ND		ND		ND		ND	
Xylene (total)	5	5	0.78	J	0.75	J	ND		ND		ND		ND		ND		ND	
Total VOCs		-	320		329		0.65		17		10		13		0		0	

Notes:
ND = Not Detected.
GWQS[1] = NY TOGS Class GA Ground Water Quality Standards
GWQS[2] = NY TAGM Ground Water Quality Standards/Criteria
Bold and shaded indicates concentration above GWQS.

Table 4
Monitoring Well Sampling Results
CPB Site
Far Rockaway, NY

			TRC Project No.:		MW-4i		MW-4i(A)		MW-4s		MW - 6s		MW - 8s		MW- 9s		FB010615	
			Date Sampled:		01/05/15		01/05/15		01/06/15		01/05/15		01/05/15		01/05/15		01/06/15	
			Lab Sample No.:		JB85736-3/3F		JB85736-4/4F		JB85827-1/1F		JB85736-2/2F		JB85736-6/6F		JB85736-5/5F		JB85827-2	
			Laboratory:		Accutest		Accutest		Accutest		Accutest		Accutest		Accutest		Accutest	
SVOCs (ppb)	***GWQS*[1]**	***GWQS*[2]**					Duplicate Sample										Field Blank	
2-Chlorophenol	-	50	ND		ND		ND		ND		ND		ND		ND		ND	
4-Chloro-3-methyl phenol	-	5	ND		ND		ND		ND		ND		ND		ND		ND	
2,4-Dichlorophenol	1	1	ND		ND		ND		ND		ND		ND		ND		ND	
2,4-Dimethylphenol	1	-	ND		ND		ND		ND		ND		ND		ND		ND	
2,4-Dinitrophenol	1	5	ND		ND		ND		ND		ND		ND		ND		ND	
4,6-Dinitro-o-cresol	-	-	ND		ND		ND		ND		ND		ND		ND		ND	
2-Methylphenol	-	5	ND		ND		ND		ND		ND		ND		ND		ND	
3&4-Methylphenol	-	-	ND		ND		ND		ND		ND		7.3		ND		ND	
2-Nitrophenol	-	5	ND		ND		ND		ND		ND		ND		ND		ND	
4-Nitrophenol	-	5	ND		ND		ND		ND		ND		ND		ND		ND	
Pentachlorophenol	1	1	ND		ND		ND		ND		ND		ND		ND		ND	
Phenol	1	1	ND		ND		ND		ND		ND		ND		ND		ND	
2,3,4,6-Tetrachlorophenol	-	-	ND		ND		ND		ND		ND		ND		ND		ND	
2,4,5-Trichlorophenol	-	1	ND		ND		ND		ND		ND		ND		ND		ND	
2,4,6-Trichlorophenol	-	-	ND		ND		ND		ND		ND		ND		ND		ND	
Acenaphthene	-	20	0.48	J	0.47	J	ND		0.61	J	ND		0.69	J	ND		ND	
Acenaphthylene	-	20	ND		ND		ND		ND		ND		ND		ND		ND	
Acetophenone	-	-	ND		ND		ND		ND		ND		ND		ND		ND	
Anthracene	-	50	ND		ND		ND		ND		ND		ND		ND		ND	
Atrazine	7.5	-	ND		ND		ND		ND		ND		ND		ND		ND	
Benzaldehyde	-	-	ND		ND		ND		ND		ND		ND		ND		ND	
Benzo(a)anthracene	-	0.002	ND		ND		ND		ND		ND		ND		ND		ND	
Benzo(a)pyrene	ND	0.002	ND		ND		ND		ND		ND		ND		ND		ND	
Benzo(b)fluoranthene	-	0.002	ND		ND		ND		ND		ND		ND		ND		ND	
Benzo(g,h,i)perylene	-	5	ND		ND		ND		ND		ND		ND		ND		ND	
Benzo(k)fluoranthene	-	0.002	ND		ND		ND		ND		ND		ND		ND		ND	
4-Bromophenyl phenyl ether	-	-	ND		ND		ND		ND		ND		ND		ND		ND	
Butyl benzyl phthalate	-	50	ND		ND		ND		ND		ND		ND		ND		ND	
1,1'-Biphenyl	5	-	ND		ND		ND		ND		ND		ND		ND		ND	
2-Chloronaphthalene	-	-	ND		ND		ND		ND		ND		ND		ND		ND	
4-Chloroaniline	5	5	ND		ND		ND		ND		ND		ND		ND		ND	
Carbazole	-	-	ND		ND		ND		ND		ND		ND		ND		ND	
Caprolactam	-	-	ND		ND		ND		ND		ND		ND		ND		ND	
Chrysene	-	0.002	ND		ND		ND		ND		ND		ND		ND		ND	
bis(2-Chloroethoxy)methane	5	-	ND		ND		ND		ND		ND		ND		ND		ND	
bis(2-Chloroethyl)ether	1	-	ND		ND		ND		ND		ND		ND		ND		ND	
bis(2-Chloroisopropyl)ether	5	-	ND		ND		ND		ND		ND		ND		ND		ND	
4-Chlorophenyl phenyl ether	-	-	ND		ND		ND		ND		ND		ND		ND		ND	
2,4-Dinitrotoluene	5	-	ND		ND		ND		ND		ND		ND		ND		ND	
2,6-Dinitrotoluene	5	5	ND		ND		ND		ND		ND		ND		ND		ND	
3,3'-Dichlorobenzidine	5	-	ND		ND		ND		ND		ND		ND		ND		ND	
1,4-Dioxane	-	-	ND		ND		ND		ND		ND		ND		ND		ND	
Dibenzo(a,h)anthracene	-	50	ND		ND		ND		ND		ND		ND		ND		ND	
Dibenzofuran	-	5	ND		ND		ND		ND		ND		ND		ND		ND	
Di-n-butyl phthalate	50	50	ND		ND		ND		ND		ND		ND		ND		ND	
Di-n-octyl phthalate	-	50	ND		ND		ND		ND		ND		ND		ND		ND	
Diethyl phthalate	-	50	ND		ND		ND		ND		ND		ND		ND		ND	
Dimethyl phthalate	-	50	ND		ND		ND		ND		ND		ND		ND		ND	
bis(2-Ethylhexyl)phthalate	5	50	3.3		ND		ND		ND		ND		ND		ND		ND	
Fluoranthene	-	50	ND		ND		ND		ND		ND		ND		ND		ND	
Fluorene	-	50	ND		ND		ND		0.45	J	ND		ND		ND		ND	
Hexachlorobenzene	0.04	0.35	ND		ND		ND		ND		ND		ND		ND		ND	
Hexachlorobutadiene	0.5	-	ND		ND		ND		ND		ND		ND		ND		ND	
Hexachlorocyclopentadiene	5	-	ND		ND		ND		ND		ND		ND		ND		ND	
Hexachloroethane	5	-	ND		ND		ND		ND		ND		ND		ND		ND	
Indeno(1,2,3-cd)pyrene	-	0.002	ND		ND		ND		ND		ND		ND		ND		ND	
Isophorone	-	50	ND		ND		ND		ND		ND		ND		ND		ND	
2-Methylnaphthalene	-	50	ND		ND		ND		ND		ND		ND		ND		ND	
2-Nitroaniline	5	5	ND		ND		ND		ND		ND		ND		ND		ND	
3-Nitroaniline	5	5	ND		ND		ND		ND		ND		ND		ND		ND	
4-Nitroaniline	5	-	ND		ND		ND		ND		ND		ND		ND		ND	
Naphthalene	-	10	ND		ND		ND		ND		ND		ND		ND		ND	
Nitrobenzene	0.4	5	ND		ND		ND		ND		ND		ND		ND		ND	
N-Nitroso-di-n-propylamine	-	-	ND		ND		ND		ND		ND		ND		ND		ND	
N-Nitrosodiphenylamine	-	-	ND		ND		ND		ND		ND		ND		ND		ND	
Phenanthrene	-	50	ND		ND		ND		ND		ND		ND		ND		ND	
Pyrene	-	50	ND		ND		ND		ND		ND		ND		ND		ND	
1,2,4,5-Tetrachlorobenzene	5	-	ND		ND		ND		ND		ND		ND		ND		ND	
Total	**-**	**-**	3.78		0.47		0		1.06		7.3		0.69		0			

Notes:
ND = Not Detected.
GWQS[1] = NY TOGS Class GA Ground Water Quality Standards
GWQS[2] = NY TAGM Ground Water Quality Standards/Criteria
Bold and shaded indicates concentration above GWQS.

Table 4
Monitoring Well Sampling Results
CPB Site
Far Rockaway, NY

			TRC Project No.:	MW-4i		MW-4i(A)		MW-4s		MW - 6s		MW - 8s		MW- 9s	
			Date Sampled:	01/05/15		01/05/15		01/06/15		01/05/15		01/05/15		01/05/15	
			Lab Sample No.:	JB85736-3/3F		JB85736-4/4F		JB85827-1/1F		JB85736-2/2F		JB85736-6/6F		JB85736-5/5F	
			Laboratory:	Accutest		Accutest		Accutest		Accutest		Accutest		Accutest	
Dissolved Gases (ppb)	***GWQS*** [1]	***GWQS*** [2]				Duplicate Sample									
Methane	-	-		12,000		NA		1,170		5,790		2,550		9,200	
Ethane	-	-		17.9		NA		0.31		2.5		1.3		6	
Ethene	-	-		25		NA		ND		ND		0.18		1.2	
Total	-	-		12,043		NA		1,170		5,793		2,551		9,207	

Notes:
ND = Not Detected.
NA = Not Analyzed
GWQS[1] = NY TOGS Class GA Ground Water Quality Standards
GWQS[2] = NY TAGM Ground Water Quality Standards/Criteria
Bold and shaded indicates concentration above GWQS.

Table 4
Monitoring Well Sampling Results
CPB Site
Far Rockaway, NY

		TRC Sample No.:	MW-4i		MW-4i(A)		MW-4s		MW - 6s		MW - 8s		MW- 9s		FB010615	
		Date Sampled:	01/05/15		01/05/15		01/06/15		01/05/15		01/05/15		01/05/15		01/06/15	
		Lab Sample No.:	JB85736-3/3F		JB85736-4/4F		JB85827-1/1F		JB85736-2/2F		JB85736-6/6F		JB85736-5/5F		JB85827-2	
		Laboratory:	Accutest		Accutest		Accutest		Accutest		Accutest		Accutest		Accutest	
Dissolved Gases (ppb)	***GWQS*[1]**	***GWQS*[2]**			Duplicate Sample										Field Blank	
Aldrin	0.01	0.01	ND		ND		ND		ND		ND		ND		ND	
alpha-BHC	0.05	0.05	ND		ND		ND		ND		ND		ND		ND	
beta-BHC	0.05	0.05	ND		ND		ND		ND		ND		ND		ND	
delta-BHC	0.05	0.05	ND		ND		ND		ND		ND		ND		ND	
gamma-BHC (Lindane)	0.05	0.05	ND		ND		ND		ND		ND		ND		ND	
alpha-Chlordane	-	-	ND		ND		ND		ND		ND		ND		ND	
gamma-Chlordane	0.1	0.1	ND		ND		ND		ND		ND		ND		ND	
Dieldrin	0.01	0.01	ND		ND		ND		ND		ND		ND		ND	
4,4'-DDD	0.01	0.01	ND		ND		ND		ND		ND		ND		ND	
4,4'-DDE	0.01	0.01	ND		ND		ND		ND		ND		ND		ND	
4,4'-DDT	0.01	0.01	ND		ND		ND		ND		ND		ND		ND	
Endrin	0.01	0.01	ND		ND		ND		ND		ND		ND		ND	
Endosulfan sulfate	0.1	0.1	ND		ND		ND		ND		ND		ND		ND	
Endrin aldehyde	-	-	ND		ND		ND		ND		ND		ND		ND	
Endrin ketone	-	-	ND		ND		ND		ND		ND		ND		ND	
Endosulfan-I	0.1	0.1	ND		ND		ND		ND		ND		ND		ND	
Endosulfan-II	0.1	0.1	ND		ND		ND		ND		ND		ND		ND	
Heptachlor	0.01	0.01	ND		ND		ND		ND		ND		ND		ND	
Heptachlor epoxide	0.01	0.01	ND		ND		ND		ND		ND		ND		ND	
Methoxychlor	35	35	ND		ND		ND		ND		ND		ND		ND	
Toxaphene	-	-	ND		ND		ND		ND		ND		ND		ND	
Total	-	-	0		0		0		0		0		0		0	

Notes:
ND = Not Detected.
GWQS[1] = NY TOGS Class GA Ground Water Quality Standards
GWQS[2] = NY TAGM Ground Water Quality Standards/Criteria
Bold and shaded indicates concentration above GWQS.

Table 4
Monitoring Well Sampling Results
CPB Site
Far Rockaway, NY

		TRC Sample No.:	MW-4i		MW-4i(A)		MW-4s		MW - 6s		MW - 8s		MW- 9s		FB010615	
		Date Sampled:	01/05/15		01/05/15		01/06/15		01/05/15		01/05/15		01/05/15		01/06/15	
		Lab Sample No.:	JB85736-3/3F		JB85736-4/4F		JB85827-1/1F		JB85736-2/2F		JB85736-6/6F		JB85736-5/5F		JB85827-2	
		Laboratory:	Accutest		Accutest		Accutest		Accutest		Accutest		Accutest		Accutest	
PCBs (ppb)	***GWQS*[1]**	***GWQS*[2]**			Duplicate Sample										Field Blank	
Aroclor 1016	0.09	0.1	ND		ND		ND		ND		ND		ND		ND	
Aroclor 1221	0.09	0.1	ND		ND		ND		ND		ND		ND		ND	
Aroclor 1232	0.09	0.1	ND		ND		ND		ND		ND		ND		ND	
Aroclor 1242	0.09	0.1	ND		ND		ND		ND		ND		ND		ND	
Aroclor 1248	0.09	0.1	ND		ND		ND		ND		ND		ND		ND	
Aroclor 1254	0.09	0.1	ND		ND		ND		ND		ND		ND		ND	
Aroclor 1260	0.09	0.1	ND		ND		ND		ND		ND		ND		ND	
Aroclor 1268	0.09	0.1	ND		ND		ND		ND		ND		ND		ND	
Aroclor 1262	0.09	0.1	ND		ND		ND		ND		ND		ND		ND	
Total	-	-	0		0		0		0		0		0		0	

Notes:
ND = Not Detected.
GWQS[1] = NY TOGS Class GA Ground Water Quality Standards
GWQS[2] = NY TAGM Ground Water Quality Standards/Criteria
Bold and shaded indicates concentration above GWQS.

Table 4
Monitoring Well Sampling Results
CPB Site
Far Rockaway, NY

		TRC Sample No.:	MW-4i		MW-4i(A)		MW-4s		MW - 6s		MW - 8s		MW- 9s		FB010615									
		Date Sampled:	01/05/15		01/05/15		01/06/15		01/05/15		01/05/15		01/05/15		01/06/15									
		Lab Sample No.:	JB85736-3/3F		JB85736-4/4F		JB85827-1/1F		JB85736-2/2F		JB85736-6/6F		JB85736-5/5F		JB85827-2									
		Laboratory:	Accutest		Accutest		Accutest		Accutest		Accutest		Accutest		Accutest									
Metals (ppb)	***GWQS*[1]**	***GWQS*[2]**			Duplicate Sample										Field Blank									
Aluminum	-	-	568		ND		265		ND		233		ND		ND									
Antimony	3	-	ND		ND		ND		ND		ND		ND		ND									
Arsenic	25	-	17.9		19.3		ND		ND		ND		7.1		ND									
Barium	1000	-	ND		ND		ND		ND		ND		ND		ND									
Beryllium	-	-	ND		ND		ND		ND		ND		ND		ND									
Cadmium	5	-	ND		ND		ND		ND		ND		ND		ND									
Calcium	-	-	232,000		237,000		40,400		135,000		31,400		131,000		ND									
Chromium	50	-	ND		ND		37.7		ND		38.3		ND		ND									
Cobalt	-	-	ND		ND		ND		ND		ND		ND		ND									
Copper	200	-	ND		ND		ND		ND		77.5		ND		ND									
Iron	300	-	**12,900**		**13,400**		**364**		**869**		**7,170**		**733**		ND									
Dissolved Iron	300		**12,900**		NA		ND		**829**		**4,760**		**815**		NA									
Lead	25	-	ND		ND		8.3		ND		4.5		ND		ND									
Magnesium	-	-	69,100		70,500		ND		10,700		7,760		9,210		ND									
Manganese	300	-	**1,340**		**1,340**		ND		121		71.5		95.2		ND									
Dissolved Manganese	300		**1,470**		NA		ND		124		64.8		95.7		NA									
Mercury	0.7	-	ND		ND		ND		ND		ND		ND		ND									
Nickel	100	-	ND		ND		ND		ND		126		ND		ND									
Potassium	-	-	38,700		39,700		ND		14,500		11,300		28,400		ND									
Selenium	10	-	ND		ND		ND		ND		ND		ND		ND									
Silver	50	-	ND		ND		ND		ND		ND		ND		ND									
Sodium	20000	-	**831,000**		**822,000**		**121,000**		**171,000**		**161,000**		**232,000**		ND									
Thallium	-	-	ND		ND		ND		ND		ND		ND[a]		ND									
Vanadium	-	-	ND		ND		ND		ND		ND		ND		ND									
Zinc	-	-	162		31		27.3		ND		116		ND		ND									

Notes:
ND = Not Detected.
GWQS[1] = NY TOGS Class GA Ground Water Quality Standards
GWQS[2] = NY TAGM Ground Water Quality Standards/Criteria
[a] = Elevated detection limit due to dilution required for high interfering element.
Bold and shaded indicates concentration above GWQS.

Table 4
Monitoring Well Sampling Results
CPB Site
Far Rockaway, NY

			TRC Sample No.:	MW-4i		MW-4i(A)		MW-4s		MW - 6s		MW - 8s		MW- 9s	
			Date Sampled:	01/05/15		01/05/15		01/06/15		01/05/15		01/05/15		01/05/15	
			Lab Sample No.:	JB85736-3/3F		JB85736-4/4F		JB85827-1/1F		JB85736-2/2F		JB85736-6/6F		JB85736-5/5F	
			Laboratory:	Accutest		Accutest		Accutest		Accutest		Accutest		Accutest	
MNA Parameters (ppm)	***GWQS*** [1]	***GWQS*** [2]				Duplicate Sample									
Alkalinity, Total as CaCO3	-	-	575		NA		344		521		309		343		
Chloride	250	-	**1,410**		NA		35.2		56.8		141		105		
Nitrogen, Nitrate	10	-	ND[b]		NA		ND[b]		1.7 [b]		0.21 [b]		ND[b]		
Nitrogen, Nitrate + Nitrite	10	-	ND		NA		ND		1.7		0.21		ND		
Nitrogen, Nitrite	1	-	ND		NA		ND		ND		ND		ND		
Phosphorus, Total	-	-	0.17		NA		0.23		0.58		0.47		0.14		
Sulfate	250	-	59.2		NA		34		175		19.1		406		
Sulfide	-	-	ND		NA		ND		ND		3.9		ND		

Notes:
ND = Not Detected.
NA = Not Analyzed
GWQS[1] = NY TOGS Class GA Ground Water Quality Standards
GWQS[2] = NY TAGM Ground Water Quality Standards/Criteria
[b] = Calculated as: (Nitrogen, Nitrate + Nitrite) - (Nitrogen, Nitrite)
Bold and shaded indicates concentration above GWQS.

Table 4
Monitoring Well Sampling Results
CPB Site
Far Rockaway, NY

		TRC Sample No.:	MW-4i	MW-4s
		Date Sampled:	01/05/15	01/06/15
		Lab Sample No.:	003MA-1	003MA-2
		Laboratory:	Microbial Insights	Microbial Insights
Biological (cells/mL)	***GWQS*** [1]	***GWQS*** [2]		
Dehalococcoides	-	-	31,000	66,400

Notes:
GWQS[1] = NY TOGS Class GA Ground Water Quality Standards
GWQS[2] = NY TAGM Ground Water Quality Standards/Criteria

Table 5
Monitoring Well Geochemical Parameters
CPB Site
Far Rockaway, NY

Sampling Date: 1/5/2015 | **Weather: Sunny 30's - 40's, windy** | **Site Name/Location: CPB, Edgemere, NY** | **Rev. 07/11**

PRE-PURGE INFORMATION							PURGING INFORMATION							INITIAL PURGE PARAMETERS							
Well Number	Time	Total Depth (ft)	Depth to Water (ft)	PID (ppm)	Depth to Prod (ft)	Prod Thick (ft)	Pump Type	Tubing Type	Pump Intake Depth (ft)	Purge Start Time	Purge Stop Time	Flow Rate (ml/m)	Total Purge Vol. (gal)	Temp (°C)	pH (s.u.)	K_{25} (µS/cm)	SAL ppt	D.O. (ppm)	ORP (mv)	Turb (NTU)	Water Conditions/Comments
MW-4i	11:25	40.14	7.28	0.0	ND	ND	Monsoon	Teflon	33	11:25	12:32	300	7.0	21.24	6.67	4960	2.7	3.43	-127	40.8	Clear, No odor. Collected dup sample.
MW-6s	10:05	13.89	9.50	0.0	ND	ND	Monsoon	Teflon	11	10:05	11:02	250	4.0	13.27	6.24	1420	0.7	7.09	-85	36.1	Clear, No odor
MW-8s	14:23	14.54	6.05	4.3	ND	ND	Monsoon	Teflon	10	14:23	15:20	300	4.0	9.82	6.43	1210	0.6	9.50	-91	136	Grey tint, particles in water
MW-9s	12:15	14.63	8.67	0.3	ND	ND	Monsoon	Teflon	10	12:15	13:24	350	4.0	11.77	6.96	1520	0.8	3.17	-114	29.4	Clear, Lt. grey tint

FINAL 3 READINGS

Well: MW-4i Sample Start Time: 12:32 Finish: 13:02
Weather Conditions: Clear, 30's

Time	DTW	Temp	pH	K_{25}	SAL	D.O.	ORP	Turb
12:20	8.71	19.40	6.82	5130	2.8	1.48	-130	19.9
12:25	8.71	19.00	6.82	5110	2.8	1.40	-129	18.2
12:30	8.71	18.96	6.82	5100	2.8	1.36	-129	18.0

Well: MW-6s Sample Start Time: 11:02 Finish: 11:20
Weather Conditions: Sunny 30's - 40's, windy

Time	DTW	Temp	pH	K_{25}	SAL	D.O.	ORP	Turb
10:50	9.55	13.27	6.71	1330	0.7	2.39	-139	0.1
10:55	9.55	13.17	6.65	1320	0.7	2.35	-140	0.1
11:00	9.55	13.51	6.66	1310	0.7	2.29	-142	0.1

Well: MW-8s Sample Start Time: 15:20 Finish: 15:35
Weather Conditions: Partly cloudy, 30's, windy

Time	DTW	Temp	pH	K_{25}	SAL	D.O.	ORP	Turb
15:05	6.19	10.33	6.72	987	0.5	1.43	-137	6.6
15:10	6.20	10.29	6.73	976	0.5	1.36	-140	5.8
15:15	6.20	9.94	6.72	978	0.5	1.28	-142	5.4

Well: MW-9s Sample Start Time: 13:24 Finish: 13:40
Weather Conditions: Partly cloudy, 30's, windy

Time	DTW	Temp	pH	K_{25}	SAL	D.O.	ORP	Turb
13:10	8.73	12.73	6.71	1600	0.8	1.81	-181	7.6
13:15	8.77	12.87	6.80	1600	0.8	1.82	-182	6.9
13:20	8.70	12.39	6.81	1630	0.8	1.81	-185	6.9

Well: Sample Start Time: Finish:
Weather Conditions:

Time	DTW	Temp	pH	K_{25}	SAL	D.O.	ORP	Turb

Well: Sample Start Time: Finish:
Weather Conditions:

Time	DTW	Temp	pH	K_{25}	SAL	D.O.	ORP	Turb

Well: Sample Start Time: Finish:
Weather Conditions:

Time	DTW	Temp	pH	K_{25}	SAL	D.O.	ORP	Turb

Well: Sample Start Time: Finish:
Weather Conditions:

Time	DTW	Temp	pH	K_{25}	SAL	D.O.	ORP	Turb

Well: Sample Start Time: Finish:
Weather Conditions:

Time	DTW	Temp	pH	K_{25}	SAL	D.O.	ORP	Turb

The well was considered stabilized when the final three readings were: +/- 0.1 s.u. for pH; +/- 3% for temperature and conductivity; +/- 10% for D.O. and turbidity; and +/- 10 mv for Eh (for values greater than 1). NJDEP Certification No. 07734

Analytical Methods (EPA): Temp (SM 2550 B); pH (SM 4500-H B); Cond (120.1 and SM 2510 B); DO (SM 4500-O G); Salinity (SM 2520 B)

K_{25} = Conductivity to 25°C.

Turbidity readings are field screening data measured with rental meter; TRC is not certified in New Jersey for this parameter.

SAL = Sali

PID lamp is 10.6 eV, unless otherwise noted.

Reviewed & Approved by: ____________________

Laboratory Manager or Designated Supervisor

TRC Meter Numbers			Rental Meter
pH: ______	Cond: ______	D.O.: ______	Name: Horiba U-52
ORP:			Serial No.: 16780/21102, 16898/21320

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Table 5
Monitoring Well Geochemical Parameters
CPB Site
Far Rockaway, NY

Sampling Date: 1/6/2015 **Weather: Snow, 20°F** **Site Name/Location: CPB, Edgemere, NY** **Rev. 07/11**

PRE-PURGE INFORMATION							PURGING INFORMATION							INITIAL PURGE PARAMETERS							
Well Number	Time	Total Depth (ft)	Depth to Water (ft)	PID (ppm)	Depth to Prod (ft)	Prod Thick (ft)	Pump Type	Tubing Type	Pump Intake Depth (ft)	Purge Start Time	Purge Stop Time	Flow Rate (ml/m)	Total Purge Vol. (gal)	Temp (^{O}C)	pH (s.u.)	K_{25} (µS/cm)	SAL ppt	D.O. (ppm)	ORP (mv)	Turb (NTU)	Water Conditions/Comments
MW-4s	11:05	19.65	7.25	0.0	ND	ND	Peri	Teflon	11	11:05	11:55	300	4.0	8.79	6.3	666	0.3	4.72	-55	100	Clear, no odor

FINAL 3 READINGS

Well: MW-4s Sample Start Time: 11:55 Finish: 12:25									Well: Sample Start Time: Finish:									Well: Sample Start Time: Finish:								
Conditions: Snow, 20°F									Weather Conditions:									Weather Conditions:								
Time	DTW	Temp	pH	K_{25}	SAL	D.O.	ORP	Turb	Time	DTW	Temp	pH	K_{25}	SAL	D.O.	ORP	Turb	Time	DTW	Temp	pH	K_{25}	SAL	D.O.	ORP	Turb
11:42	7.3	14.67	7.31	674	0.3	1.59	-128	19.9																		
11:47	7.3	14.58	7.31	675	0.3	1.55	-129	20.8																		
11:52	7.3	14.54	7.32	680	0.3	1.47	-131	18.0																		

Well: Sample Start Time: Finish:									Well: Sample Start Time: Finish:									Well: Sample Start Time: Finish:								
Weather Conditions:									Weather Conditions:									Weather Conditions:								
Time	DTW	Temp	pH	K_{25}	SAL	D.O.	ORP	Turb	Time	DTW	Temp	pH	K_{25}	SAL	D.O.	ORP	Turb	Time	DTW	Temp	pH	K_{25}	SAL	D.O.	ORP	Turb

Well: Sample Start Time: Finish:									Well: Sample Start Time: Finish:									Well: Sample Start Time: Finish:								
Weather Conditions:									Weather Conditions:									Weather Conditions:								
Time	DTW	Temp	pH	K_{25}	SAL	D.O.	ORP	Turb	Time	DTW	Temp	pH	K_{25}	SAL	D.O.	ORP	Turb	Time	DTW	Temp	pH	K_{25}	SAL	D.O.	ORP	Turb

The well was considered stabilized when the final three readings were: +/- 0.1 s.u. for pH; +/- 3% for temperature and conductivity; +/- 10% for D.O. and turbidity; and +/- 10 mv for Eh (for values greater than 1). NJDEP Certification No. 07734

Analytical Methods (EPA): Temp (SM 2550 B); pH (SM 4500-H B); Cond (120.1 and SM 2510 B); DO (SM 4500-O G); Salinity (SM 2520 B)

K_{25} = Conductivity to 25°C.

Turbidity readings are field screening data measured with rental meter; TRC is not certified in New Jersey for this parameter.

SAL = Salii

PID lamp is 10.6 eV, unless otherwise noted.

Reviewed & Approved by: _____

Laboratory Manager or Designated Supervisor

TRC Meter Numbers			Rental Meter
pH:	Cond:	D.O.:	Name: Horiba U-52
ORP:			Serial No.: 16780/21102

TRC Job No. 171111

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Table 6
Surface Soil Sampling Results
CPB Site
Far Rockaway, NY

TRC Sample No.:		SS-1 (0-2")		SS-1 (2-12")		SS-1 (12-24")		SS-2 (0"-2")		SS-2 (12"-24")		SS-2 (2"-12")		SS-3 (0"-2")		SS-3 (12"-24")		SS-3 (2"-12")		SS-4 (0-2")		SS-4 (12-24")		SS-4 (2-12")		SS-5 (0"-2")		SS-5 (12"-24")		SS-5 (2"-12")	
Date Sampled:		1/19/2015		1/19/2015		1/23/2015		3/27/2015		3/27/2015		3/27/2015		3/27/2015		3/27/2015		3/27/2015		1/23/2015		1/23/2015		1/23/2015		3/27/2015		3/27/2015		3/27/2015	
Lab Sample ID:		JB86729-1		JB86729-2		JB87101-6		JB91085-2		JB91085-4		JB91085-3		JB91085-8		JB91085-10		JB91085-9		JB87101-7		JB87101-9		JB87101-8		JB91085-5		JB91085-7		JB91085-6	
Laboratory:		Accutest		Accutest		Accutest		Accutest		Accutest		Accutest		Accutest		Accutest		Accutest		Accutest		Accutest		Accutest		Accutest		Accutest		Accutest	
VOCs by GCMS (mg/kg)	RR-RSCO																														
Acetone	100	ND		ND		ND		ND		ND		ND		ND		ND		0.0193		ND		ND		ND		ND		ND		ND	
Benzene	4.8	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Bromochloromethane	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Bromodichloromethane	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Bromoform	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Bromomethane	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
2-Butanone (MEK)	100	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
n-Butylbenzene	100	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
sec-Butylbenzene	100	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
tert-Butylbenzene	100	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Carbon disulfide	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Carbon tetrachloride	2.4	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Chlorobenzene	100	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Chloroethane	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Chloroform	49	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Chloromethane	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Cyclohexane	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
1,2-Dibromo-3-chloropropane	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Dibromochloromethane	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
1,2-Dibromoethane	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
1,2-Dichlorobenzene	100	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
1,3-Dichlorobenzene	49	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
1,4-Dichlorobenzene	13	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Dichlorodifluoromethane	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
1,1-Dichloroethane	26	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
1,2-Dichloroethane	3.1	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
1,1-Dichloroethene	100	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
cis-1,2-Dichloroethene	100	ND		ND		ND		ND		ND		ND		ND		ND		0.00094		ND		ND		ND		ND		ND		ND	
trans-1,2-Dichloroethene	100	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
1,2-Dichloropropane	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
cis-1,3-Dichloropropene	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
trans-1,3-Dichloropropene	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Ethylbenzene	41	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Freon 113	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
2-Hexanone	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Isopropylbenzene	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
p-Isopropyltoluene	-	NA		NA		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Methyl Acetate	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Methylcyclohexane	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Methyl Tert Butyl Ether	100	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
4-Methyl-2-pentanone(MIBK)	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Methylene chloride	100	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		0.0017	J	ND		0.0019	J
n-Propylbenzene	100	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Styrene	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
1,1,2,2-Tetrachloroethane	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Tetrachloroethene	19	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Toluene	100	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
1,2,3-Trichlorobenzene	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
1,2,4-Trichlorobenzene	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
1,1,1-Trichloroethane	100	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
1,1,2-Trichloroethane	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Trichloroethene	21	ND		0.00058	J	0.0024	J	0.00065	J	0.0062		0.0022		0.0013		0.0018		0.0098		ND		0.00022	J	ND		ND		ND		ND	
Trichlorofluoromethane	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
1,2,4-Trimethylbenzene	52	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
1,3,5-Trimethylbenzene	52	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Vinyl chloride	0.9	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
m,p-Xylene	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
o-Xylene	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Xylene (total)	100	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Total	-	0		0.00058		0.0024		0.00065		0.0062		0.0022		0.0013		0.0018		0.03004		0		0.00022		0		0.0017		0		0.0019	
Total VOC TICs	-	0		0		0		0		0		0		0		0		0		0		0		0		0		0		0	
Total VOCs	-	0		0.00058		0.0024		0.00065		0.0062		0.0022		0.0013		0.0018		0.03004		0		0.00022		0		0.0017		0		0.0019	

Notes:
ND = not detected.
NA = not analyzed.
J = estimated concentration detected below the Method Detection Limit.
RR-RSCO = Restricted Residential Restricted Use Soil Cleanup Objectives
Bold & Highlighted indicates concentration above RR-RSCO.

Table 6
Surface Soil Sampling Results
CPB Site
Far Rockaway, NY

TRC Sample No.:		SS-6 (0"-2")		SS-6 (12"-24")		SS-6 (2"-12")		SS-7 (0-2")		SS-7 (0-2")(A)		SS-7 (12-24")		SS-7 (2-12")		SS-7 (2-12")(A)		SS-8 (0"-2")		SS-8 (12"-24")		SS-8 (2"-12")		SS-9 (0"-2")		SS-9 (12"-24")		SS-9 (2"-12")	
Date Sampled:		3/27/2015		3/27/2015		3/27/2015		1/23/2015		1/23/2015		1/23/2015		1/23/2015		1/23/2015		3/27/2015		3/27/2015		3/27/2015		3/27/2015		3/27/2015		3/27/2015	
Lab Sample ID:		JB91085-11		JB91085-13		JB91085-12		JB87101-10		JB87101-11		JB87101-14		JB87101-12		JB87101-13		JB91085-17		JB91085-19		JB91085-18		JB91085-14		JB91085-16		JB91085-15	
Laboratory:		Accutest		Accutest		Accutest		Accutest		Accutest		Accutest		Accutest		Accutest		Accutest		Accutest		Accutest		Accutest		Accutest		Accutest	
VOCs by GCMS (mg/kg)	RR-RSCO																												
Acetone	100	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Benzene	4.8	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Bromochloromethane	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Bromodichloromethane	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Bromoform	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Bromomethane	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
2-Butanone (MEK)	100	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
n-Butylbenzene	100	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
sec-Butylbenzene	100	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
tert-Butylbenzene	100	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Carbon disulfide	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Carbon tetrachloride	2.4	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Chlorobenzene	100	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Chloroethane	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Chloroform	49	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Chloromethane	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Cyclohexane	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
1,2-Dibromo-3-chloropropane	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Dibromochloromethane	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
1,2-Dibromoethane	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
1,2-Dichlorobenzene	100	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
1,3-Dichlorobenzene	49	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
1,4-Dichlorobenzene	13	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Dichlorodifluoromethane	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
1,1-Dichloroethane	26	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
1,2-Dichloroethane	3.1	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
1,1-Dichloroethene	100	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
cis-1,2-Dichloroethene	100	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
trans-1,2-Dichloroethene	100	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
1,2-Dichloropropane	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
cis-1,3-Dichloropropene	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
trans-1,3-Dichloropropene	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Ethylbenzene	41	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Freon 113	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
2-Hexanone	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Isopropylbenzene	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
p-Isopropyltoluene	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Methyl Acetate	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Methylcyclohexane	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Methyl Tert Butyl Ether	100	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
4-Methyl-2-pentanone(MIBK)	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Methylene chloride	100	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
n-Propylbenzene	100	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Styrene	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
1,1,2,2-Tetrachloroethane	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Tetrachloroethene	19	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Toluene	100	ND		0.00055	J	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
1,2,3-Trichlorobenzene	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
1,2,4-Trichlorobenzene	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
1,1,1-Trichloroethane	100	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
1,1,2-Trichloroethane	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Trichloroethene	21	ND		0.003		0.00063	J	ND		ND		ND		ND		ND		ND		ND		ND		ND		0.0027		0.00042	J
Trichlorofluoromethane	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
1,2,4-Trimethylbenzene	52	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
1,3,5-Trimethylbenzene	52	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Vinyl chloride	0.9	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
m,p-Xylene	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
o-Xylene	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Xylene (total)	100	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Total	-	0		0.00355		0.00063		0		0		0		0		0		0		0		0		0.0027		0.00042			
Total VOC TICs	-	0		0		0		0		0		0		0		0		0		0		0		0		0			
Total VOCs	-	0		0.00355		0.00063		0		0		0		0		0		0		0		0		0.0027		0.00042			

Notes:
ND = not detected.
NA = not analyzed.
J = estimated concentration detected below the M
RR-RSCO = Restricted Residential Restricted Us
Bold & Highlighted indicates concentration above

Table 6
Surface Soil Sampling Results
CPB Site
Far Rockaway, NY

			TRC Sample No.:		SS-1 (0-2")		SS-1 (2-12")		SS-1 (12-24")		SS-2 (0"-2")		SS-2 (12"-24")		SS-2 (2"-12")		SS-3 (0"-2")		SS-3 (12"-24")		SS-3 (2"-12")		SS-4 (0-2")		SS-4 (12-24")		SS-4 (2-12")		SS-5 (0"-2")		SS-5 (12"-24")		SS-5 (2"-12")	
			Date Sampled:		1/19/2015		1/19/2015		1/23/2015		3/27/2015		3/27/2015		3/27/2015		3/27/2015		3/27/2015		3/27/2015		1/23/2015		1/23/2015		1/23/2015		3/27/2015		3/27/2015		3/27/2015	
			Lab Sample ID:		JB86729-1		JB86729-2		JB87101-6		JB91085-2		JB91085-4		JB91085-3		JB91085-8		JB91085-10		JB91085-9		JB87101-7		JB87101-9		JB87101-8		JB91085-5		JB91085-7		JB91085-6	
			Laboratory:		Accutest		Accutest		Accutest		Accutest		Accutest		Accutest		Accutest		Accutest		Accutest		Accutest		Accutest		Accutest		Accutest		Accutest		Accutest	
SVOCs by GCMS (mg/kg)	RR-RSCO	C-RSCO																																
2-Chlorophenol	-		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
4-Chloro-3-methyl phenol	-		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
2,4-Dichlorophenol	-		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
2,4-Dimethylphenol	-		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
2,4-Dinitrophenol	-		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
4,6-Dinitro-o-cresol	-		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
2-Methylphenol	-		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
3&4-Methylphenol	-		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
2-Nitrophenol	-		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
4-Nitrophenol	-		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Pentachlorophenol	6.7		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Phenol	100		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
2,3,4,6-Tetrachlorophenol	-		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
2,4,5-Trichlorophenol	-		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
2,4,6-Trichlorophenol	-		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Acenaphthene	100		ND		ND		0.0216	J	ND		0.0142	J	0.0488		0.0194	J	ND		ND		0.0151	J	ND		ND		0.0235	J	ND		0.0161	J
Acenaphthylene	100		ND		ND		0.0224	J	0.0233	J	0.0332	J	0.0476		0.0634		0.0459		0.061		0.0531		0.0216	J	0.0468		0.0714		0.0541		0.0556	
Acetophenone	-		ND		ND		ND		ND		ND		0.0256	J	ND		ND		ND		0.0301	J	ND		ND		ND		ND		ND	
Anthracene	100		0.015	J	ND		0.0363		0.0323	J	0.0652		0.167		0.13		0.0597		0.0796		0.0684		0.0297	J	0.0513		0.124		0.0794		0.0916	
Atrazine	-		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Benzo(a)anthracene	1		0.0857		0.0629		0.146		0.154		0.212		0.392		0.448		0.225		0.325		0.295		0.16		0.238		0.33		0.19		0.284	
Benzo(a)pyrene	1		0.101		0.069		0.165		0.181		0.268		0.421		0.522		0.293		0.412		0.347		0.187		0.308		0.4		0.209		0.313	
Benzo(b)fluoranthene	1		0.12		0.0957		0.202		0.22		0.316		0.488		0.614		0.345		0.477		0.422		0.239		0.365		0.449		0.246		0.383	
Benzo(g,h,i)perylene	100		0.0714		0.0611		0.133		0.151		0.215		0.299		0.401		0.286		0.334		0.302		0.16		0.283		0.324		0.156		0.228	
Benzo(k)fluoranthene	3.9		0.0468		0.029	J	0.0684		0.0709		0.0955		0.185		0.212		0.125		0.177		0.17		0.077		0.148		0.178		0.0761		0.118	
4-Bromophenyl phenyl ether	-		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Butyl benzyl phthalate	-		ND		0.0407	J	ND		ND		ND		ND		0.223		ND		ND		0.128		ND		0.0777		ND		ND		ND	
1,1'-Biphenyl	-		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Benzaldehyde	-		ND		ND		ND		ND		ND		0.0191	J	ND		ND		ND		ND		ND		ND		ND		ND		ND	
2-Chloronaphthalene	-		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
4-Chloroaniline	-		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Carbazole	-		ND		ND		0.0217	J	ND		0.0246	J	0.0477	J	0.0299	J	ND		0.0178	J	0.0296	J	ND		0.0221	J	0.0333	J	ND		0.0297	J
Caprolactam	-		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Chrysene	3.9		0.096		0.0726		0.165		0.157		0.228		0.407		0.459		0.232		0.343		0.347		0.19		0.284		0.355		0.193		0.295	
bis(2-Chloroethoxy)methane	-		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
bis(2-Chloroethyl)ether	-		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
bis(2-Chloroisopropyl)ether	-		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
4-Chlorophenyl phenyl ether	-		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
2,4-Dinitrotoluene	-		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
2,6-Dinitrotoluene	-		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
3,3'-Dichlorobenzidine	-		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
1,4-Dioxane	-		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Dibenzo(a,h)anthracene	0.33		0.0176	J	0.0145	J	0.031	J	0.0383		0.0531		0.0793		0.0943		0.0614		0.0778		0.0685		0.0386		0.0639		0.0796		0.0439		0.062	
Dibenzofuran	-		ND		ND		0.0202	J	ND		ND		0.0327	J	ND		ND		ND		ND		ND		ND		ND		ND		ND	
Di-n-butyl phthalate	-		ND		ND		0.0493	J	ND		ND		ND		ND		ND		ND		0.0494	J	ND		0.047	J	ND		ND		ND	
Di-n-octyl phthalate	-		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Diethyl phthalate	-		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Dimethyl phthalate	-		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
bis(2-Ethylhexyl)phthalate	-		ND		0.0817		1.62		0.0678	J	0.0867		0.0625	J	0.174		0.117		ND		0.306		ND		0.176		0.0783		0.187		0.114	
Fluoranthene	100		0.128		0.0931		0.305		0.233		0.376		0.795		0.747		0.255		0.402		0.523		0.251		0.387		0.58		0.303		0.506	
Fluorene	100		ND		ND		0.0207	J	ND		ND		0.0485		0.0229	J	ND		ND		0.0177	J	ND		ND		0.0201	J	ND		0.0175	J
Hexachlorobenzene	-		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Hexachlorobutadiene	-		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Hexachlorocyclopentadiene	-		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Hexachloroethane	-		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Indeno(1,2,3-cd)pyrene	0.5		0.071		0.0557		0.123		0.137		0.215		0.304		0.384		0.244		0.315		0.275		0.153		0.259		0.305		0.144		0.229	
Isophorone	-		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
2-Methylnaphthalene	-		ND		ND		0.0572	J	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
2-Nitroaniline	-		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
3-Nitroaniline	-		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
4-Nitroaniline	-		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Naphthalene	100		ND		ND		0.0297	J	ND		ND		0.0197	J	ND		ND		ND		ND		ND		ND		ND		ND		ND	
Nitrobenzene	-		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
N-Nitroso-di-n-propylamine	-		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
N-Nitrosodiphenylamine	-		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Phenanthrene	100		0.0553		0.0302	J	0.248		0.0946		0.183		0.553		0.338		0.0668		0.112		0.215		0.109		0.163		0.258		0.119		0.213	
Pyrene	100		0.149		0.106		0.284		0.232		0.346		0.676		0.688		0.277		0.399		0.492		0.249		0.39		0.57		0.309		0.467	
1,2,4,5-Tetrachlorobenzene	-		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Total	-		0.9568		0.8122		3.7695		1.7922		2.7315		5.1185		5.5699		2.6328		3.5322		4.1539		1.8649		3.3098		4.1792		2.3095		3.4225	
Total SVOC TICs	-		1.47	J	1.17	J	1.54	J	0.55	J	1.13	J	3.71	J	2.19	J	1.91	J	1.29	J	5.57	J	1.18	J	3.52	J	3.73	J	1.24	J	1.19	J
Total SVOCs	-		2.43		1.98		5.31		2.34		3.86		8.83		7.76		4.54		4.82		9.72		3.04		6.83		7.91		3.55		4.61	

Notes:
ND = not detected.
J = estimated concentration detected below the Method Detection Limit.
RR-RSCO = Restricted Residential Restricted Use Soil Cleanup Objectives
C-RSCO = Commercial Restricted Use Soil Cleanup Objectives
Bold & Highlighted indicates concentration above RR-RSCO.

Table 6
Surface Soil Sampling Results
CPB Site
Far Rockaway, NY

	TRC Da Lat	SS-6 (0"-2") 3/27/2015 JB91085-11 Accutest		SS-6 (12"-24") 3/27/2015 JB91085-13 Accutest		SS-6 (2"-12") 3/27/2015 JB91085-12 Accutest		SS-7 (0-2") 1/23/2015 JB87101-10 Accutest		SS-7 (0-2")(A) 1/23/2015 JB87101-11 Accutest		SS-7 (12-24") 1/23/2015 JB87101-14 Accutest		SS-7 (2-12") 1/23/2015 JB87101-12 Accutest		SS-7 (2-12")(A) 1/23/2015 JB87101-13 Accutest		SS-8 (0"-2") 3/27/2015 JB91085-17 Accutest		SS-8 (12"-24") 3/27/2015 JB91085-19 Accutest		SS-8 (2"-12") 3/27/2015 JB91085-18 Accutest		SS-9 (0"-2") 3/27/2015 JB91085-14 Accutest		SS-9 (12"-24") 3/27/2015 JB91085-16 Accutest		SS-9 (2"-12") 3/27/2015 JB91085-15 Accutest	
SVOCs by GCMS (mg/kg)	RR-RSCO																														
2-Chlorophenol	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
4-Chloro-3-methyl phenol	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
2,4-Dichlorophenol	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
2,4-Dimethylphenol	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
2,4-Dinitrophenol	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
4,6-Dinitro-o-cresol	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
2-Methylphenol	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
3&4-Methylphenol	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
2-Nitrophenol	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
4-Nitrophenol	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Pentachlorophenol	6.7	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Phenol	100	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
2,3,4,6-Tetrachlorophenol	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
2,4,5-Trichlorophenol	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
2,4,6-Trichlorophenol	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Acenaphthene	100	0.0152	J	ND		0.0188	J	ND		0.0091	J	ND		0.151		ND		ND		ND		0.0196	J	ND		0.0297	J	ND			
Acenaphthylene	100	0.0455		0.041		0.0355		0.0197	J	0.0218	J	ND		ND		ND		0.021	J	0.0237	J	0.0377	J	ND		0.386		0.026	J		
Acetophenone	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND			
Anthracene	100	0.0779		0.0737		0.0847		0.0259	J	0.0333		ND		0.24		ND		0.0257	J	0.0292	J	0.0723		0.0155	J	0.672		0.055			
Atrazine	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND			
Benzo(a)anthracene	1	0.28		0.233		0.287		0.126		0.149		ND		0.5		0.0542		0.137		0.139		0.284		0.057		**1.95**		0.119			
Benzo(a)pyrene	1	0.318		0.246		0.286		0.156		0.193		ND		0.396		0.0646		0.161		0.163		0.295		0.0586		**1.99**		0.117			
Benzo(b)fluoranthene	1	0.372		0.301		0.343		0.197		0.229		ND		0.494		0.0846		0.205		0.215		0.378		0.0701		**2.19**		0.136			
Benzo(g,h,i)perylene	100	0.264		0.199		0.216		0.138		0.173		ND		0.199		0.0559		0.128		0.134		0.21		0.0468		1.86		0.074			
Benzo(k)fluoranthene	3.9	0.135		0.0856		0.116		0.0653		0.0833		ND		0.173		0.0321	J	0.067		0.0634		0.13		0.0234	J	0.795		0.0517			
4-Bromophenyl phenyl ether	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND			
Butyl benzyl phthalate	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND			
1,1'-Biphenyl	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND			
Benzaldehyde	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND			
2-Chloronaphthalene	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND			
4-Chloroaniline	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND			
Carbazole	-	0.0281	J	0.0224	J	0.0332	J	ND		0.0159	J	ND		0.157		ND		ND		ND		0.0352	J	ND		0.062	J	ND			
Caprolactam	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND			
Chrysene	3.9	0.308		0.246		0.297		0.136		0.169		ND		0.541		0.0662		0.154		0.159		0.312		0.0634		2.25		0.128			
bis(2-Chloroethoxy)methane	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND			
bis(2-Chloroethyl)ether	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND			
bis(2-Chloroisopropyl)ether	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND			
4-Chlorophenyl phenyl ether	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND			
2,4-Dinitrotoluene	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND			
2,6-Dinitrotoluene	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND			
3,3'-Dichlorobenzidine	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND			
1,4-Dioxane	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND			
Dibenzo(a,h)anthracene	0.33	0.0557		0.0465		0.0565		0.0358		0.0465		ND		0.0663		0.0143	J	0.0335	J	0.0308	J	0.0595		ND		**0.507**		0.0171	J		
Dibenzofuran	-	ND		ND		ND		ND		ND		ND		0.0879		ND		ND		ND		0.0191	J	ND		0.021	J	ND			
Di-n-butyl phthalate	-	0.0918		0.0709	J	21.7		ND		ND		ND		ND		ND		ND		ND		ND		ND		0.28		0.0494	J		
Di-n-octyl phthalate	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND			
Diethyl phthalate	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND			
Dimethyl phthalate	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND			
bis(2-Ethylhexyl)phthalate	-	0.473		0.636		0.802		0.0911		0.0885		ND		ND		ND		0.14		0.0823		0.0902		0.0854		0.761		0.274			
Fluoranthene	100	0.502		0.391		0.496		0.211		0.256		ND		1.18		0.0896		0.257		0.261		0.578		0.092		1.78		0.216			
Fluorene	100	0.0153	J	ND		0.0178	J	ND		ND		ND		0.15		ND		ND		ND		0.0262	J	ND		0.0617		0.016	J		
Hexachlorobenzene	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND			
Hexachlorobutadiene	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND			
Hexachlorocyclopentadiene	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND			
Hexachloroethane	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND			
Indeno(1,2,3-cd)pyrene	0.5	0.234		0.174		0.206		0.133		0.164		ND		0.227		0.056		0.123		0.122		0.21		0.0458		**1.64**		0.0714			
Isophorone	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND			
2-Methylnaphthalene	-	0.0245	J	0.0295	J	0.0277	J	ND		ND		ND		0.0375	J	ND		ND		ND		ND		ND		0.0216	J	ND			
2-Nitroaniline	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND			
3-Nitroaniline	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND			
4-Nitroaniline	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND			
Naphthalene	100	0.0384		0.0224	J	0.0219	J	ND		ND		ND		0.023	J	ND		ND		ND		0.0224	J	ND		0.032	J	ND			
Nitrobenzene	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND			
N-Nitroso-di-n-propylamine	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND			
N-Nitrosodiphenylamine	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND			
Phenanthrene	100	0.218		0.185		0.274		0.0889		0.115		ND		1.42		0.0373		0.0919		0.0931		0.29		0.045		0.708		0.122			
Pyrene	100	0.491		0.409		0.476		0.211		0.248		ND		1.06		0.0877		0.222		0.229		0.494		0.0989		3.13		0.194			
1,2,4,5-Tetrachlorobenzene	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND			
Total	-	3.9874		3.412		25.7951		1.6347		1.9944		0		7.1027		0.6425		1.7661		1.7445		3.5632		0.7019		21.127		1.6666			
Total SVOC TICs	-	3.09	J	1.31	J	1.97	J	2.46	J	3.1	J	0.26	J	1.81	J	1.12	J	2.57	J	1.15	J	3.24	J	0.17	J	7.71	J	1.13	J		
Total SVOCs	-	7.08		4.72		27.77		4.09		5.09		0.26		8.91		1.76		4.34		2.89		6.80		0.87		28.84		2.80			

Notes:
ND = not detected.
J = estimated concentration detected below the
RR-RSCO = Restricted Residential Restricted U
C-RSCO = Commercial Restricted Use Soil Clea
Bold & Highlighted indicates concentration abov

Table 6
Surface Soil Sampling Results
CPB Site
Far Rockaway, NY

TRC Sample No.:		SS-1 (0-2")		SS-1 (2-12")		SS-1 (12-24")		SS-2 (0"-2")		SS-2 (12"-24")		SS-2 (2"-12")		SS-3 (0"-2")		SS-3 (12"-24")		SS-3 (2"-12")		SS-4 (0-2")		SS-4 (12-24")		SS-4 (2-12")		SS-5 (0"-2")		SS-5 (12"-24")		SS-5 (2"-12")	
Date Sampled:		1/19/2015		1/19/2015		1/23/2015		3/27/2015		3/27/2015		3/27/2015		3/27/2015		3/27/2015		3/27/2015		1/23/2015		1/23/2015		1/23/2015		3/27/2015		3/27/2015		3/27/2015	
Lab Sample ID:		JB86729-1		JB86729-2		JB87101-6		JB91085-2		JB91085-4		JB91085-3		JB91085-8		JB91085-10		JB91085-9		JB87101-7		JB87101-9		JB87101-8		JB91085-5		JB91085-7		JB91085-6	
Laboratory:		Accutest		Accutest		Accutest		Accutest		Accutest		Accutest		Accutest		Accutest		Accutest		Accutest		Accutest		Accutest		Accutest		Accutest		Accutest	
Pesticides by GC (mg/kg)	RR-RSCO																														
Aldrin	0.097	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
alpha-BHC	0.48	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
beta-BHC	0.36	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
delta-BHC	100	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
gamma-BHC (Lindane)	1.3	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
alpha-Chlordane	4.2	ND		ND		ND		0.0052	a	0.005	a	0.0125	a	0.0113	a	0.007	a	0.0112	a	0.0036	a	ND		0.002	a	0.003	a	0.0082		0.0124	a
gamma-Chlordane	-	ND		ND		ND		0.0048		0.0052		0.0095		0.0109		0.007		0.0108		0.0018	a	ND		0.0011		0.0021		0.0076		0.0118	
Dieldrin	0.2	ND		ND		ND		0.0025		ND		ND		0.0199		0.0125		0.0198		ND		ND		ND		ND		ND		0.0202	
4,4'-DDD	13	ND		ND		ND		ND		ND		ND		ND		0.00072		0.00089		ND		ND		ND		ND		ND		ND	
4,4'-DDE	8.9	ND		0.0022		0.0276		ND		ND		ND		0.0011	a	0.0013	a	0.0013	a	0.0027	a	ND		0.0075		ND		ND		0.0013	a
4,4'-DDT	7.9	0.0037	a	0.0046		0.0501		0.0094		ND		0.0098		0.0069		0.0023		0.0055		0.0146		0.0036		0.0267		ND		ND		0.0061	
Endrin	11	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Endosulfan sulfate	24	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Endrin aldehyde	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Endosulfan-I	24	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Endosulfan-II	24	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Heptachlor	2.1	ND		ND		ND		ND		ND		ND		0.0011		ND		0.0012		ND		ND		ND		ND		ND		0.0013	
Heptachlor epoxide	-	ND		ND		ND		0.00084		ND		ND		0.0013		0.00069		0.0012		0.0008		ND		ND		ND		ND		0.0014	
Methoxychlor	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Endrin ketone	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Toxaphene	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Total	-	0.0037		0.0068		0.0777		0.02274		0.0102		0.0318		0.0525		0.03151		0.05189		0.0235		0.0036		0.0373		0.0051		0.0158		0.0545	

Notes:
ND = not detected.
a = more than 40% RPD for detected concentrations between the two GC columns.
RR-RSCO = Restricted Residential Restricted Use Soil Cleanup Objectives
Bold & Highlighted indicates concentration above RR-RSCO.

Table 6
Surface Soil Sampling Results
CPB Site
Far Rockaway, NY

TRC Sample No.:		SS-6 (0"-2")		SS-6 (12"-24")		SS-6 (2"-12")		SS-7 (0-2")		SS-7 (0-2")(A)		SS-7 (12-24")		SS-7 (2-12")		SS-7 (2-12")(A)		SS-8 (0"-2")		SS-8 (12"-		SS-8 (2"-12")		SS-9 (0"-2")		SS-9 (12"-24")		SS-9 (2"-12")	
Date Sampled:		3/27/2015		3/27/2015		3/27/2015		1/23/2015		1/23/2015		1/23/2015		1/23/2015		1/23/2015		3/27/2015		3/27/2015		3/27/2015		3/27/2015		3/27/2015		3/27/2015	
Lab Sample ID:		JB91085-11		JB91085-13		JB91085-12		JB87101-10		JB87101-11		JB87101-14		JB87101-12		JB87101-13		JB91085-17		JB91085-19		JB91085-18		JB91085-14		JB91085-16		JB91085-15	
Laboratory:		Accutest		Accutest		Accutest		Accutest		Accutest		Accutest		Accutest		Accutest		Accutest		Accutest		Accutest		Accutest		Accutest		Accutest	
Pesticides by GC (mg/kg)	RR-RSCO																												
Aldrin	0.097	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
alpha-BHC	0.48	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
beta-BHC	0.36	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
delta-BHC	100	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
gamma-BHC (Lindane)	1.3	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
alpha-Chlordane	4.2	0.003	a	0.004	a	0.0052	a	ND		ND		ND		ND		ND		ND		0.0036		0.0013		ND		ND		ND	
gamma-Chlordane	-	0.0027		0.0041		0.0051		ND		ND		ND		ND		ND		ND		0.0037		0.0013		ND		ND		ND	
Dieldrin	0.2	0.0012	a	0.0019	a	0.0029	a	ND		ND		ND		ND		ND		ND		0.0012		ND		ND		ND		ND	
4,4'-DDD	13	ND		0.0019		0.0013	a	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
4,4'-DDE	8.9	0.002	a	0.0031	a	0.0015	a	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
4,4'-DDT	7.9	0.0142		0.0129		0.0143		0.0023		0.0014		ND		ND		ND		0.003		0.0032		0.0016		0.0015		ND		0.0027	
Endrin	11	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Endosulfan sulfate	24	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Endrin aldehyde	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Endosulfan-I	24	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Endosulfan-II	24	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Heptachlor	2.1	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Heptachlor epoxide	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Methoxychlor	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Endrin ketone	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Toxaphene	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Total	-	0.0231		0.0279		0.0303		0.0023		0.0014		0		0		0		0.003		0.0117		0.0042		0.0015		0		0.0027	

Notes:
ND = not detected.
a = more than 40% RPD for detected concentra
RR-RSCO = Restricted Residential Restricted U
Bold & Highlighted indicates concentration abo

Table 6
Surface Soil Sampling Results
CPB Site
Far Rockaway, NY

TRC Sample No.:		SS-1 (0-2")		SS-1 (2-12")		SS-1 (12-24")		SS-2 (0"-2")		SS-2 (12"-24")		SS-2 (2"-12")		SS-3 (0"-2")		SS-3 (12"-24")		SS-3 (2"-12")		SS-4 (0-2")		SS-4 (2-12")		SS-4 (12-24")		SS-5 (0"-2")		SS-5 (12"-24")		SS-5 (2"-12")	
Date Sampled:		1/19/2015		1/19/2015		1/23/2015		3/27/2015		3/27/2015		3/27/2015		3/27/2015		3/27/2015		3/27/2015		1/23/2015		1/23/2015		1/23/2015		3/27/2015		3/27/2015		3/27/2015	
Lab Sample ID:		JB86729-1		JB86729-2		JB87101-6		JB91085-2		JB91085-4		JB91085-3		JB91085-8		JB91085-10		JB91085-9		JB87101-7		JB87101-8		JB87101-9		JB91085-5		JB91085-7		JB91085-6	
Laboratory:		Accutest		Accutest		Accutest		Accutest		Accutest		Accutest		Accutest		Accutest		Accutest		Accutest		Accutest		Accutest		Accutest		Accutest		Accutest	
PCBs by GC (mg/kg)	RSCO																														
Aroclor 1016	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Aroclor 1221	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Aroclor 1232	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Aroclor 1242	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Aroclor 1248	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Aroclor 1254	-	ND		ND		ND		ND		0.0647		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Aroclor 1260	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Aroclor 1268	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Aroclor 1262	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Total	1	0		0		0		0		0.0647		0		0		0		0		0		0		0		0		0		0	

Notes:
ND = not detected.
RR-RSCO = Restricted Residential Restricted Use Soil Cleanup Objectives

Table 6
Surface Soil Sampling Results
CPB Site
Far Rockaway, NY

TRC Sample No.:		SS-6 (0"-2")		SS-6 (12"-12")		SS-6 (2"-12")		SS-7 (0-2")		SS-7 (0-2")(A)		SS-7 (2-12")		SS-7 (2-12")(A)		SS-7 (12-24")		SS-8 (0"-2")		SS-8 (12"-12")		SS-8 (2"-12")		SS-9 (0"-2")		SS-9 (12"-12")		SS-9 (2"-12")	
Date Sampled:		3/27/2015		3/27/2015		3/27/2015		1/23/2015		1/23/2015		1/23/2015		1/23/2015		1/23/2015		3/27/2015		3/27/2015		3/27/2015		3/27/2015		3/27/2015		3/27/2015	
Lab Sample ID:		JB91085-11		JB91085-13		JB91085-12		JB87101-10		JB87101-11		JB87101-12		JB87101-13		JB87101-14		JB91085-17		JB91085-19		JB91085-18		JB91085-14		JB91085-16		JB91085-15	
Laboratory:		Accutest		Accutest		Accutest		Accutest		Accutest		Accutest		Accutest		Accutest		Accutest		Accutest		Accutest		Accutest		Accutest		Accutest	
PCBs by GC (mg/kg)	RSCO																												
Aroclor 1016	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Aroclor 1221	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Aroclor 1232	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Aroclor 1242	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Aroclor 1248	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Aroclor 1254	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Aroclor 1260	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Aroclor 1268	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Aroclor 1262	-	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Total	1	0		0		0		0		0		0		0		0		0		0		0		0		0		0	

Notes:
ND = not detected.
RR-RSCO = Restricted Residential Restricted U

Table 6
Surface Soil Sampling Results
CPB Site
Far Rockaway, NY

	TRC Sample No.:		SS-1 (0-2")	SS-1 (2-12")	SS-1 (12-24")	SS-2 (0"-2")	SS-2 (12"-24")	SS-2 (2"-12")	SS-3 (0"-2")	SS-3 (12"-24")	SS-3 (2"-12")	SS-4 (0-2")	SS-4 (2-12")	SS-4 (12-24")	SS-5 (0"-2")	SS-5 (12"-24")	SS-5 (2"-12")
	Date Sampled:		1/19/2015	1/19/2015	1/23/2015	3/27/2015	3/27/2015	3/27/2015	3/27/2015	3/27/2015	3/27/2015	1/23/2015	1/23/2015	1/23/2015	3/27/2015	3/27/2015	3/27/2015
	Lab Sample ID:		JB86729-1	JB86729-2	JB87101-6	JB91085-2	JB91085-4	JB91085-3	JB91085-8	JB91085-10	JB91085-9	JB87101-7	JB87101-8	JB87101-9	JB91085-5	JB91085-7	JB91085-6
	Laboratory:		Accutest	Accutest	Accutest	Accutest	Accutest	Accutest	Accutest	Accutest	Accutest	Accutest	Accutest	Accutest	Accutest	Accutest	Accutest
Metals (mg/kg)	RR-RSCO	C-RSCO															
Aluminum	-	-	1,870	2,920	2,950	3,020	3,600	4,080	4,670	4,560	6,410	2,560	2,340	2,500	4,400	3,890	4,920
Antimony	-	-	ND	2.9	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic	16	16	ND	11.8	4.1	2.4	3.5	2.6	3	3.2	11.1	4.2	3.3	3.8	4	3.2	4.6
Barium	400	400	23.7	56.9	40.7	39.4	37	42.2	59.1	53.8	107	61.5	56.4	74.2	52.9	32.7	40.9
Beryllium	72	590	ND	ND	ND	ND	ND	ND	0.24	ND	0.61	ND	ND	ND	0.22	ND	ND
Cadmium	4.3	9.3	ND	0.52	0.91	ND	ND	ND	ND	ND	ND	0.7	0.59	0.59	ND	ND	ND
Calcium	-	-	1,110	1,250	7,220	6,530	9,200	9,340	16,900	20,400	26,700	56,000	4,580	1,950	26,700	14,100	23,700
Chromium	110	400	6	21.5	9.8	11.4	10.9	14.6	16.9	15.3	17.9	9.5	10.5	9.5	19.1	8.3	12.5
Cobalt	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Copper	270	270	10	25.3	18.8	16.7	20.7	18.5	22.7	19.2	57.3	24.8	24.8	28.8	28.5	17.9	30.6
Iron	-	-	3,560	13,400	4,880	5,270	6,800	6,930	8,770	8,950	15,300	6,220	5,660	9,170	10,600	6,720	8,630
Lead	400	1000	77	149	123	79.1	108	102	108	80.4	88	185	183	210	98.8	67.1	85.8
Magnesium	-	-	786	560	982	1,630	3,410	2,390	2,940	4,360	4,680	3,610	897	641	8,490	1,960	6,340
Manganese	2000	10000	58.3	75.7	62.4	78.4	70.5	83.4	122	153	**2250**	112	70.1	69.8	117	90.6	94.9
Mercury	0.81	2.8	0.2	0.14	0.39	0.14	0.097	0.16	0.17	0.12	0.13	0.21	0.2	0.11	0.17	0.19	0.21
Nickel	310	310	ND	6.3	8.1	8.6	8.4	11	34.6	22.6	32.2	11.3	11.5	7.7	29	9.1	29.1
Potassium	-	-	ND	ND	ND	ND	ND	ND	ND	ND	1040	ND	ND	ND	ND	ND	ND
Selenium	180	1500	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Silver	180	1500	ND	ND	ND	ND	ND	ND	ND	ND	1.1	ND	ND	ND	ND	ND	ND
Sodium	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Thallium	-	-	ND	ND	ND	ND	ND	ND	ND	ND	<3.0 b	ND	ND	ND	ND	ND	ND
Vanadium	-	-	7.1	30.8	9.7	10.6	15.4	16.1	21.7	16.3	22.5	11.3	10	10	21	16.1	18.3
Zinc	10000	10000	75.7	124	93	74.3	122	83.1	98.7	77.3	679	156	136	154	111	73.9	95
General Chemistry (%)																	
Solids, Percent			88.1	94.5	92	87	92.1	90.4	87.6	90.5	96.4	96.8	88.6	92.5	86.7	90.8	87.5

Notes:
ND = not detected.
RR-RSCO = Restricted Residential Restricted Use Soil Cleanup Objectives
C-RSCO = Commercial Restriced Use Soil Cleanup Objectives
Bold & Highlighted indicates concentration above RR-RSCO.
b - Elevated detection limit due to dilution required for high interfering element.

Table 6
Surface Soil Sampling Results
CPB Site
Far Rockaway, NY

			TRC Sample No.:		SS-6 (0"-2")		SS-6 (12"-24")		SS-6 (2"-12")		SS-7 (0-2")		SS-7 (0-2")(A)		SS-7 (2-12")		SS-7 (2-12")(A)		SS-7 (12-24")		SS-8 (0"-2")		SS-8 (12"-24")		SS-8 (2"-12")		SS-9 (0"-2")		SS-9 (12"-24")		SS-9 (2"-12")	
			Date Sampled:		3/27/2015		3/27/2015		3/27/2015		1/23/2015		1/23/2015		1/23/2015		1/23/2015		1/23/2015		3/27/2015		3/27/2015		3/27/2015		3/27/2015		3/27/2015		3/27/2015	
			Lab Sample ID:		JB91085-11		JB91085-13		JB91085-12		JB87101-10		JB87101-11		JB87101-12		JB87101-13		JB87101-14		JB91085-17		JB91085-19		JB91085-18		JB91085-14		JB91085-16		JB91085-15	
			Laboratory:		Accutest		Accutest		Accutest		Accutest		Accutest		Accutest		Accutest		Accutest		Accutest		Accutest		Accutest		Accutest		Accutest		Accutest	
Metals (mg/kg)	RR-RSCO	C-RSCO																													
Aluminum	-	-		4,570		4,050		3,970		2,300		2,340		1,800		1,730		1,160		3,450		4,920		3,760		3,820		3,140		3,540	
Antimony	-	-		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Arsenic	16	16		4		4.8		5		2.5		2.5		ND		ND		ND		3.2		4.1		2.9		2.7		4.3		2.8	
Barium	400	400		107		130		82.4		33.2		ND		23.1		24.9		ND		54.6		93.4		65.1		42.2		80.6		41.2	
Beryllium	72	590		0.59		0.24		0.47		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Cadmium	4.3	9.3		ND		ND		ND		4		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Calcium	-	-		10,400		9,780		14,000		1,140		1,000		ND		611		ND		2,560		8,310		5,760		1,660		28,700		1,470	
Chromium	110	400		53.3		71.9		57.3		15.6		7.9		6.1		5.1		3.6		13.6		21.9		12		7.8		51.4		18.9	
Cobalt	-	-		ND		ND		5.6		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Copper	270	270		132		137		190		28.1		20.7		11.6		8.8		ND		46.2		53.3		44.5		24.2		130		42.4	
Iron	-	-		10,100		9,770		14,700		7,080		5,450		3,920		2,980		2,000		7,520		9,680		6,190		10,100		12,700		6,400	
Lead	400	1000		216		267		296		134		153		52.3		49.8		4.4		142		218		155		123		243		158	
Magnesium	-	-		2,410		1,470		1,770		730		675		ND		ND		ND		1,110		2,640		1,290		1,290		8,800		743	
Manganese	2000	10000		119		89.6		130		55.5		49		34.5		32.0		21.7		69.6		83.8		63		126		88.1		106	
Mercury	0.81	2.8		0.34		0.53		0.65		0.17		0.22		0.24		0.074		ND		0.51		**1.9**		**1.5**		0.18		0.44		0.29	
Nickel	310	310		202		291		244		8.4		7.8		ND		ND		ND		26.2		123		38.6		7.6		107		94.4	
Potassium	-	-		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Selenium	180	1500		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Silver	180	1500		ND		ND		ND		ND		ND		ND		ND		ND		0.62		1.2		1.2		<0.54		0.59		<0.54	
Sodium	-	-		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Thallium	-	-		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Vanadium	-	-		19.9		29.7		23.1		17		9		6.4		6		ND		11.6		17.5		17.7		10.9		11.4		11	
Zinc	10000	10000		583		297		564		102		99.1		47.2		49.7		17		200		293		195		97.6		313		138	
General Chemistry (%)																															
Solids, Percent				93.9		84.4		90.5		96.1		94.9		95.4		95.6		97.8		84.5		88		87.3		90.2		84.3		89.2	

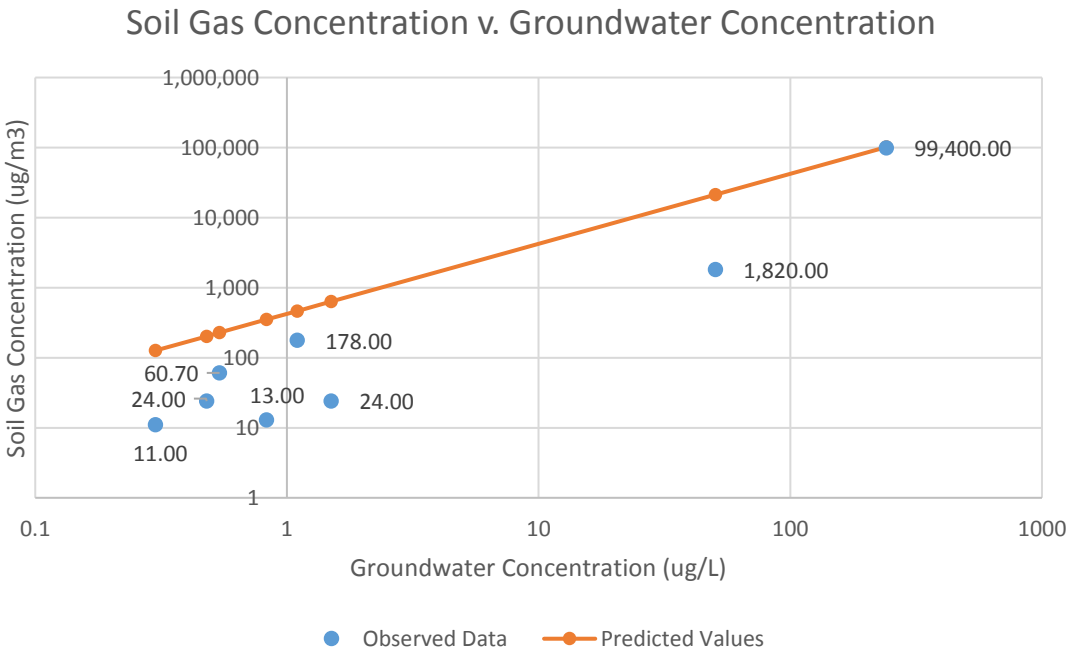
Notes:
ND = not detected.
RR-RSCO = Restricted Residential Restricted Use Soil Clea
C-RSCO = Commercial Restriced Use Soil Cleanup Objectiv
Bold & Highlighted indicates concentration above RR-RSCC
b - Elevated detection limit due to dilution required for high in

Table 7
Soil Gas and Groundwater Result Comparison
CPB Site
Far Rockaway, NY

TCE Henry's Law Constant (Dimensionless): 0.422
H= Cg/Cw Cg=Cw*H

TCE Concentrations

Location	GW Concentration (ug/L)	Observed Soil Gas (ug/m3)	Predicted Soil Gas (ug/m3)	% Difference
SG-1	0.83	13.00	350.26	96%
SG-2	50.5	1,820.00	21,311.00	91%
SG-3	0.48	24.00	202.56	88%
SG-4	0.54	60.70	227.88	73%
SG-5	0	0.81	-	
SG-6	0	-	-	
SG-7	0	1.20	-	
SG-8	0.3	11.00	126.60	91%
SG-9	1.5	24.00	633.00	96%
SG-10	1.1	178.00	464.20	62%
SG-11	241	99,400.00	101,702.00	2%
SG-12	0	-	-	--
SG-13	0	-	-	--
SG-14	0	-	-	--
SG-15	0	-	-	--



APPENDICES

APPENDIX A

PHOTOGRAPHIC DOCUMENTATION LOG

APPENDIX A
PHOTOGRAPHIC DOCUMENTATION LOG
JANUARY 2015 SOIL GAS SAMPLING
CPB
Far Rockaway, NY

Photograph 1
Leak testing setup at soil gas sampling point

Photograph 2
Typical soil gas sampling point with cap to connect to Summa canister

Photograph 3
Ambient air sampling with typical Summa canister and flow regulator setup

Photograph 4
Installation of offsite soil gas point SG-11

TRC Job No 171111	Photographs Taken By: TRC	Client: CPB	Type of Site: Vacant

APPENDIX B

DATA USABILITY SUMMARY REPORT