REMEDIAL INVESTIGATION REPORT

for

363 BOND STREET AND 388 CARROLL STREET
Brooklyn, New York

Tax Map Block 452, Lots 1 and 15
NYCOER Project No. 13EH-A196K
NYSDEC Spill No. 05-01697
NYSDEC Brownfield Cleanup Site No. C224173
USEPA No. 422395.DE.02

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1.0 INTRODUCTION

This Remedial Investigation Report (RIR) has been prepared by Langan Engineering, Environmental, Surveying and Landscape Architecture, D.P.C. (Langan) on behalf of LSG 363 Bond Street, LLC (Lightstone) for the properties at 363 Bond Street and 388 Carroll Street located in the Carroll Gardens neighborhood of Brooklyn, New York (site). The site was entered into the New York State Department of Environmental Conservation (NYSDEC) Brownfield Cleanup Program (BCP) by Lightstone and BCP site No. C224173 was assigned to the site.

This RIR summarizes the Remedial Investigation completed at the site in accordance with the 10 July 2013 Remedial Investigation Workplan (RIWP) which was approved by the NYSDEC on 26 July 2013. The RI included completion of a geophysical survey and the collection of soil, groundwater, and soil vapor samples between 28 August 2013 and 17 September 2013. The RI was completed to address the environmental concerns identified in previous environmental investigations associated with NYSDEC Spill Nos. 05-01697 (363 Bond Street) and 04-00876 (388 Carroll Street) and to supplement the results reported during previous sub-surface investigations.

1.1 Site Description and Current Usage

The Site is located in the Carroll Gardens neighborhood of Brooklyn, New York and is identified as Block 452, Lots 1 and 15 on the New York City Tax Map. A Site location map is provided as Figure 1 and a Site plan of the properties is provided as Figure 2. The Site consists of the two parcels as discussed below.

The property at 363 Bond Street (Tax Block 452, Lot 1) is located northeast of the intersection of Bond Street and First Street. The approximately ±0.68-acre site contains a one-story vacant, light industrial building. The site is bounded to the north by the 388 Carroll Street subject property and a one-story building and associated parking that is operated by the City of New York as an EMS station (located along Carroll Street), to the east by the Gowanus Canal followed by a one-story industrial and manufacturing building, to the south by First Street followed by an active redevelopment site, and to the west by Bond Street followed by a three-story mixed-use commercial and residential building and a six-story residential building.

The property at 388 Carroll Street (Tax Block 452, Lot 15) is located southeast of the intersection of Carroll Street and the Gowanus Canal. The approximately ±0.67-acre site is currently vacant. The site was recently improved with a two-story residential building. Five above ground storage tanks (ASTs) within concrete secondary containment structures used to store fuel oil were previously located at the site. Two of these vacant secondary containment structures remained at the site until recent demolition. The site is bound to the northeast by Carroll Street followed by a four-story industrial and manufacturing building and associated parking lot, to the southeast by the Gowanus Canal followed by a one-story industrial and manufacturing building, to the southwest by the subject property at 363 Bond Street, and to the northwest by a one-story building and associated parking that is operated by the City of New York as an EMS station and a two-story residential building.

1.2 Proposed Development Plan

The proposed use of the Site will consist of constructing a 5 to 12-story mixed use commercial and residential building with a partial basement occupying almost the entire footprint of the subject properties. The basement level of the building will be occupied by a parking garage, basketball court and building amenities and the first floor will be occupied by residential and commercial spaces. The partial below-grade level is located on the northern portion of Lot 1 and the southwestern portion of Lot 15. In addition to the building plans, a waterfront esplanade will be developed along the Gowanus Canal shoreline. In order to construct the esplanade, a new corrugated steel sheet pile bulkhead will be installed across the entire length of the development area. The subject properties are zoned as M1-4/R7-2, industrial and manufacturing and medium-density apartment house residential. Additionally, the subject properties are zoned in a Special Mixed Use District established to encourage the investment in and enhance the vitality of existing neighborhoods with mixed residential and industrial uses in close proximity.

1.3 Surrounding Property Use

The surrounding area consists of industrial, commercial, and residential uses. A residential building, an EMS station, and commercial and manufacturing buildings are located to the north of the subject properties. Commercial, industrial, and manufacturing buildings are located to the south of the subject properties. To the east is the Gowanus Canal followed by industrial facilities.

Bond Street is located to the west of the subject properties followed by multi-family residential buildings. The majority of surrounding properties have a M1-4/R7-2, industrial and manufacturing zoning designation or a R6B, mixed residential and commercial building zoning designation.

2.0 SITE PHYSICAL CHARACTERISTICS

2.1 Topography

The elevation of the Site in the Brooklyn Highway Vertical Datum ranges from 9.20' to -1.91'. The topography of the Site and the surrounding area slopes to the east towards the Gowanus Canal which directly abuts the site to the east.

2.2 Geology

The "Generalized Surficial Geology of New York" map by the New York State Museum State Geological Survey indicates that the surficial geology at the site consists of till and the "Geologic Map of New York – Lower Hudson Sheet" by the New York State Museum State Geological Survey indicates that the site is underlain by glacial and alluvial deposits. According to the "New York Bedrock and Engineering Geologic Map" by Charles A. Baskerville, the bedrock consists of the Hartland Formation, consisting of interbedded units of schist, granite, and amphibole.

A Preliminary Geotechnical Evaluation was completed for the neighboring property at 365 Bond Street by Langan in October 2004. The evaluation consisted of advancement and analysis of four test borings. The evaluation identified a surficial fill layer consisting of brown, coarse to fine sand with varying amounts of silt, gravel, brick, cinders, concrete, and wood varying in thickness form 7 to 12-feet. Underlying the surficial fill layer is a gray organic clay layer ranging from 8- to 13-feet in thickness containing trace amounts of wood fibers, shells, and sand. A 5-foot thick layer of red-brown peat was observed inter-bedded within the organic clay layer in one of the borings. Below the clay layer a brown and grayish-brown fine to coarse sand was identified. The natural sand deposit becomes coarser and contains increasing amounts of gravel with depth. Two of the borings contained 2- to 3-foot thick layers of clay inter-bedded in the natural sand.

Soil borings completed at the Site during the Due Diligence / Phase II Investigation in August 2012 and Remedial Investigation (RI) in September 2013 confirmed that a layer of historic fill consisting of sand and silt is present from the surface to between 6 and 11-feet below ground surface (bgs) at 363 Bond Street and 388 Carroll Street. A clay layer was observed underlying the historic fill in LSB-1 through LSB-4 and LSB-27. A geotechnical investigation completed by Langan at the Site in March and April 2013 revealed a 10- to 14-foot thick historic fill layer underlain by clay in borings LB-1 through LB-5, SLB-3, and BLB-3. Additionally, the clay layer was identified in borings completed during the Phase II Investigation by ELM including SB-1 through SB-5 and MW-1 through MW-5 (363 Bond Street) and SB-1 through SB-12 (388 Carroll Street). Boring logs from the Langan Phase II Investigation, Remedial Investigation, and geotechnical investigation, and the /Phase II Investigation completed by ELM were reviewed to evaluate the presence of the clay aquitard in the subsurface across the site. Based on this information a clay elevation contour map was developed and is provided as Figure 3.

2.3 Hydrogeology

Groundwater has generally been observed to be between 2.7 and 9.5-feet bgs at the Site due to the variability of the site topography. During the Remedial Investigation groundwater was observed to be between 5.5 and 12-feet bgs. Although there is a 6-foot fluctuation between high and low tide at the mouth of Gowanus Bay (entrance to the canal), a one-week groundwater level monitoring event completed with an In-Situ Level TROLL 700 water level meter at the property immediately to the south of the Site between 26 June and 3 July 2013 revealed that groundwater elevation is minimally affected by tidal changes. Groundwater elevation data is provided in Appendix B. The groundwater flow direction is towards the canal to the northeast. A groundwater contour map is provided as Figure 4.

2.4 Wetlands

There are no wetlands or waters of the U.S. within the limits of the subject property; however, the site is bound to the east by the Gowanus Canal. The Gowanus Canal is mapped by the New York State Department of Environmental Conservation (NYSDEC) as Littoral Zone (LZ). The limits of the open water area associated with the Gowanus Canal have been delineated based on the elevation of mean high water (MHW) and spring high water (SHW). The

elevation of MHW within the Gowanus Canal adjacent to the project site is reported to be 0.34 feet (Brooklyn Highway Datum) while spring high water is reported to be 0.68 feet. Mean high water and SHW are bound by the existing bulkhead which parallels the Lot 15 property boundary.

3.0 SITE BACKGROUND AND PREVIOUS INVESTIGATION RESULTS

Prior to the completion of the RI, the following environmental work plans and reports were developed for the subject properties:

- *Soil Investigation - 388 Carroll Street*, dated November 1997, prepared by Cosmos Environmental Services;
- *Soil Sampling Report – 388 Carroll Street,* dated September 2002, prepared by Tradewinds;
- *Environmental Investigation – 388 Carroll Street*, October 2002, prepared by North Atlantic;
- *Phase II Investigation Report – 388 Carroll Street*, dated May 6, 2005, prepared by ELM;
- *Phase II Investigation Report – 363 Bond Street*, dated May 31, 2005, prepared by ELM;
- *Remedial Action Plan – 363-365 Bond Street and 388 Carroll Street*, dated February 3, 2009, Prepared by ELM;
- *Gowanus Canal Remedial Investigation Report, Volume 1 dated January 2011, prepared by HDR, CH2M Hill, GRB Environmental Services Inc., prepared for USEPA*
- *Draft Subsurface Investigation Summary Report*, dated 13 September 2011, prepared by PW Grosser Consulting, Inc.;
- *Remedial Action Plan – 388 Carroll Street*, dated July 2011, prepared by PW Grosser Consulting, Inc.;
- *Bulkhead Replacement – 388 Carroll Street letter, dated 25 October 2011, prepared by PW Grosser;*
- *Phase I Environmental Assessment – 363 Bond Street*, dated February 2012, prepared by PW Grosser;
- *Phase I Environmental Assessment – 388 Carroll Street,* dated February 2012, prepared by PW Grosser;
- *Soil Sampling – 388 Carroll Street*, dated April 2012, completed by Zeb Environmental; and,
- *Limited Phase II Environmental Investigation Report – Proposed 363-365 Bond Street Redevelopment,* dated October 2012, prepared by Langan

- *Revised Remedial Investigation Workplan – Proposed 363 Bond Street Redevelopment,* dated 10 July 2013, prepared by Langan

3.1 Previous Investigation Results

Areas of Concern (AOCs) identified in the reports listed in section 4.0 are shown on Figure 2, a historic sampling summary table is provided in Table 1, and historic sample locations are shown on Figure 5. Historical soil analytical results compared to current NYSDEC Brownfields Soil Cleanup Objectives (SCOs) are provided in Tables 2 and 3 and are summarized on Figure 6. Historical groundwater analytical results are summarized in Tables 4 and 5 and are shown on Figure 7. Soil, groundwater, and soil vapor analytical results collected at the site during Langan's Phase II Investigation are included with the RI analytical results in Tables 6, 7, and 8, respectively, and are summarized on Figures 8, 9, and 10, respectively.

Detailed discussions of the previous environmental investigation reports and their conclusions were provided in the Revised Remedial Investigation Work Plan (RIWP) for the Proposed 363 Bond Street Development prepared by Langan and dated 10 July 2013 that was approved by the NYSDEC on 26 July 2013. Summaries of previous environmental investigation results specific to on-site areas of concern are provided below.

Former ASTs

Review of historic Sanborn Maps identified five large diameter containment vessels on the 388 Carroll Street property that were associated with former above-ground oil storage tanks for the previous oil terminal operations. As part of the ELM Phase II investigation 12 soil borings and six test pits were completed and soil samples were collected from the shallow overburden fill material between 3- to 7-feet bgs. Elevated concentrations of polycyclic aromatic hydrocarbons (PAHs) and metals above NYSDEC SCOs were detected in the shallow vadose zone. Petroleum impacts (odors, staining or elevated PID readings) were identified in all 12 boring locations and in five of the six test pit locations. Light non-aqueous phase liquid (LNAPL) was observed at SB-8, SB-10, and TP-6. Based on these results, the impacts observed for PAHs and metals were consistent with those typically associated with historic fill. Elevated concentrations of volatile organic compounds (VOCs), PAHs, polychlorinated biphenyls (PCBs), and dissolved metals above the NYSDEC Groundwater Quality

Standards (GWQS) were detected in five of the seven in groundwater samples collected at the site.

Petroleum Impacted Hotspots

Based on the results of the ELM Phase II investigations four petroleum impacted "hotspots" were identified at the Site and NYSDEC Spill Nos. 04-00876 and 0-501697 were issued on 25 April 2004 and 11 May 2005 respectively. Three of hotspots are located on the north central and southeastern portion of the 388 Carroll Street site. The two northernmost hotspots were combined into an area designated as AOC-1 and the third is designated as AOC-2. An area designated as AOC-3 is located in the central portion of the 363 Bond Street site.

AOC 1 and 2

P.W. Grosser submitted a RAP to the NYSDEC and NYCDEP in July 2011 that proposed excavation of onsite hotspots to a depth of 2-feet into groundwater (7-feet bgs). Completion of the excavations was proposed to extend to the soil which exhibit no evidence of petroleum impacts and were to be confirmed by post-excavation soil sampling. This RAP was approved by the NYSDEC in a letter dated 19 July 2011.

A subsequent investigation was completed by ZEB Environmental in April 2012 to further delineate the hotspot areas at 388 Carroll Street. Soil samples were collected at depths ranging from 3 to 8-feet bgs. The results of the investigation determined that several VOCs and semi-volatile organic compounds (SVOCs) were detected above NYSDEC SCOs. Additionally, as a result of this investigation, the original northernmost two hotspots were expanded and combined into a single excavation area (AOC-1) and the AOC-2 area was expanded to the extents of the petroleum impacted material as shown on the Figure 2.

AOC 3

As part of the ELM Phase II investigation for the 363 Bond Street property, soil samples were collected primarily from within the shallow vadose zone between 1- to 6-feet bgs and below the groundwater table (saturated zone) between 6- to 16-feet bgs. Elevated concentrations of VOCs, PAHs, and metals above NYSDEC SCOs were detected in soil both the shallow vadose zone and the saturated zone. Petroleum impacts (staining, odors, elevated PID readings and

LNAPL) were identified in all boring locations. LNAPL was reported at boring locations MW-5 and SB-1. Elevated concentrations of VOCs, SVOCs, and total and dissolved metals above the NYSDEC GWQS were detected in groundwater at the site in MW-2, MW-4, and MW-5.

Based on these results ELM prepared a RAP dated February 2009 that identified that the area in the central portion of the 363 Bond Street property would be excavated to remove the area of free product that was identified (AOC 3). Soil stabilization in the areas to the east and west of this excavation area was proposed.

Langan completed additional sampling at the 363 Bond Street portion of the site during the August 2012 Phase II Investigation in the area of AOC-3 to provide further delineation of petroleum impacted soils to the north and west in these areas. The results revealed that PAHs were detected above the NYSDEC SCOs. During the sampling 1.5-feet of LNAPL was noted on groundwater at MW-5, located within the extents of AOC-3.

Gasoline USTs (AOC-5)

The potential presence of two gasoline USTs was identified on historic Sanborn Fire Insurance maps on the western portion of the 363 Bond Street property within the footprint of the current building.

As part of the Langan Phase II Investigation, two soil borings and one soil vapor sample were completed downgradient of the suspected former USTs. The soil analytical results revealed marginal exceedances of the SCOs for VOCs, SVOCs, and lead. Additionally, LNAPL was observed in soil at boring LSB-1.

Soil gas sample results in the vicinity of the former USTs, revealed that elevated concentrations of chlorinated VOCs (tetrachloroethylene [PCE], trichloroethylene [TCE], and chloroform) are present below the existing building. Based on the absence of these VOCs in soil and groundwater in this area, the source of these impacts in soil gas is unknown.

USEPA Coal Tar Study

The results of the United States Environmental Protection Agency (USEPA) Remedial Investigation of the Gowanus Canal in the areas of the site were presented in a January 2011 Gowanus Canal Remedial Investigation Report. As part of the investigation, coal tar impacts were identified within the canal adjacent to the 388 Carroll Street site and two groundwater monitoring wells (MW-36 and MW-43) were installed at 388 Carroll Street. The results of this identified coal tar NAPL at the MW-43 location at a depth of approximately 20-feet below the groundwater table, which corresponds to approximately 30- to 32-feet bgs. Based on these results, PW Grosser completed a subsurface investigation at 388 Carroll Street to further delineate the extent of the soil impacts in the vicinity of MW-43 as documented in the Draft Subsurface Investigation Summary Report dated 13 September 2011. Eleven soil borings were advanced to a depth of approximately 35-feet bgs to investigation the sediment at the site. Thin lenses of impacted soil containing NAPL were observed in three of the soil samples collected (GP-01, GP-05, and GP-08) approximately 25-feet bgs and in one of the soil samples collected (GP-10) at approximately 30-feet bgs between MW-43 and the Gowanus Canal. A fingerprint analysis of the NAPL identified the product as coal tar/creosote. Soil samples collected as part of this investigation did not report exceedances of the Unrestricted Use SCOs.

In a letter dated September 2012, the USEPA identified that groundwater monitoring wells were installed on the 400 Carroll Street (MW-36 and MW-43) property. According to the 2011 USEPA Remedial Investigation Report, MW-36 and MW-43 were installed to a depth of approximately 38-feet bgs, and MW-5 and MW-6 were installed to a depth of approximately 35-feet bgs (approximately 30 feet below the water table) to assess the potential of deep impacts to the canal from the sites. Based on the results of their investigation and the investigation completed by PW Grosser in 2011, it was determined that the NAPL impacts identified on the 388 Carroll Street site were localized and minimal and although the presence of these impacts may have originated from the canal, remediation was determined to be required to address the potential for these areas to impact the canal. The remedial approach identified in the USEPA letter and that are currently planned for the Site include a sealed steel bulkhead on the outboard side of the existing timber bulkhead to isolate these impacts both to and from the canal. Details of the sheeting design were

provided to the USEPA in the Bulkhead Work Plan prepared by Langan dated February 2014.

Historic Fill

Based on the results of shallow soil sampling completed throughout the site, historic fill material is present above the confining clay layer at both properties. This fill material is impacted by PAHs, SVOCs and metals at concentrations typical of historic urban fill. Some impacts associated with the presence of petroleum-based LNAPL have been documented within this material and are identified as hot spot areas (as discussed above).

4.0 REMEDIAL INVESTIGATION

Langan conducted the RI field investigation between 28 August 2013 and 17 September 2013, in accordance with the procedures set-forth in the NYSDEC approved RIWP, dated 10 July 2013. The RI field investigation included the following activities:

- Geophysical survey, using ground penetrating radar and electromagnetics to clear boring and test pit locations for utilities and subsurface obstructions and for identification of underground piping networks associated with the historic use of the Site;
- Completion of ten direct-push soil borings (LSB-7 through LSB-10, LSB-21 through LSB-25, LSB-27) and associated soil sampling, and analysis;
- Completion of four groundwater monitoring wells (LMW-6, LMW-7, LMW-9, and LMW-10)and associated sampling and analysis;
- Sampling and analysis of five existing groundwater monitoring wells (MW-1 through MW-5);
- Completion of twenty co-located sub-slab soil vapor and deep soil vapor monitoring points (LSV-1 through LSV-5 and LSV-16 through LSB-20) and completion of five individual soil vapor monitoring points (LSV-11 through LSV-15) and associated sampling, and analysis;
- Excavation of three test pits (TP-1 to TP-3) and collection of associated groundwater and soil samples for LNAPL fingerprinting analysis; and,
- Surveying of soil borings, groundwater monitoring wells, and soil vapor sampling locations.

The results of the geophysical survey are provided in Section 4.2. Soil, groundwater, and soil vapor sampling procedures are discussed in Sections 4.3, 4.4, and 4.5,

respectively, and analytical results of soil, groundwater, and soil vapor sampling are discussed in Section 5.1.2., 5.2, and 5.3. Quality assurance procedures that were implemented during this investigation are discussed in Section 4.6. Test pit excavation and sampling procedures and analytical results are discussed in Section 4.3.3 and 4.3.4, respectively.

A summary of sampling rationale, locations, depths, and analyses is provided in Table 1. The locations of all soil and groundwater samples collected during the 2013 Remedial Investigation are shown on Figure 5. A summary of the laboratory analytical results for soil, groundwater, and soil vapor are provided in Tables 6, 7, and 8, respectively, and summarized on Figures 8, 9, and 10, respectively. All samples were analyzed by a New York State Department of Health (NYSDOH) Environmental Laboratory Approval Program (ELAP)-certified laboratory. Laboratory analytical results will be submitted to the NYSDEC as an electronic data deliverable (EDD) per the NYSDEC Environmental Data Submission requirements following submission of this RIR.

4.1 Investigation Rationale

An investigation of soil, groundwater, and soil vapor was conducted in accordance with the NYSDEC-approved RIWP to further characterize the Site, for delineation of previously identified AOCs to allow for mass excavation of associated material, and to comply with New York City Office of Environmental Remediation (NYCOER) requirements for (E)-designated properties. The following section provides details of the rationale for the RI completed at the Site.

Ten soil borings, four groundwater monitoring wells (to supplement the five existing groundwater monitoring wells), and 25 soil vapor points were installed at the Site. From these sampling locations, 17 soil samples (including two field duplicate samples), 11 groundwater samples (including two field duplicate samples), and 26 soil vapor samples (including one field duplicate sample) were collected to provide further Site characterization and to delineate the following AOCs:

- Former ASTs
- AOC-3: Proposed Excavation Area – 363 Bond Street;
- AOC-5: Former UST Area – 363 Bond Street.

A total of nine shallow soil samples (including one field duplicate) were collected from approximately 0- to 2-feet bgs to provide site-wide characterization of shallow fill (LSB-23 was collected from 2- to 4-feet bgs and LSB-24 was collected from 0- to 4-feet bgs due to poor soil recovery in the respective borings in the 0- to 2-feet bgs interval). Five soil samples were collected from the groundwater interface or the depth interval which exhibited the greatest evidence of impact to provide delineation of AOC-3 and AOC-5 and three soil samples (including one field duplicate) were collected at the groundwater interface or the depth interval which exhibited the greatest evidence of impact to provide overall Site assessment of soils and to address potential impacts from the former ASTs. Four groundwater monitoring wells (LMW-6, LMW-7, LMW-9 and LMW-10) were installed to a maximum depth of 15-feet bgs or to a depth which corresponded to approximately two-feet into the clay layer and with sufficient screen length to allow for screening across the groundwater table so that the potential presence of LNAPL could be assessed, and 11 groundwater samples (including two duplicate groundwater samples) were collected from these new monitoring well locations and the previously installed monitoring wells. Twenty-five soil vapor sampling points (15 deep vapor points and 10 sub-slab vapor points) were installed to provide overall Site assessment of soil vapor. The following provides a detailed rationale for sample collection completed during this RI.

Site-wide Characterization

- One shallow sample (0- to 2-feet bgs) was collected from LSB-7, LSB-9, LSB-10, LSB-21, LSB-22, and LSB-27 and two shallow samples were collected from LSB-22 (including one field duplicate) to provide overall Site assessment of shallow soils;
- Soil borings LSB-21, LSB-22, LSB-25, and LSB-27 were completed as groundwater monitoring wells LMW-5, LMW-6, LMW-7, and LMW-9, respectively, to provide overall Site assessment of groundwater.
- Existing monitoring wells MW-1, MW-2, MW-3, MW-4 and MW-5 were sampled to provide overall site assessment of groundwater.
- Temporary soil vapor points LSV-1, LSV-2, LSV-3, LSV-4, LSV-5, LSV-16, LSV-17, LSV-18, LSV-19 and LSV-20 were installed immediately below the slab within the building at 363 Bond Street to provide overall Site assessment of soil vapor;

- Temporary deep soil vapor points were installed at 5-feet bgs (or the depth identified as 1-foot above the groundwater at time of installation) and co-located with the sub-slab soil vapor points at LSV-1, LSV-2, LSV-3, LSV-4, LSV-5, LSV-16, LSV-17, LSV-18, LSV-19, and LSV-20 to provide overall Site assessment of soil vapor;
- LSV-11, LSV-12, LSV-13, LSV-14, and LSV-15 were installed as deep soil vapor points at 5-feet bgs (or the depth identified as 1-foot above the groundwater at time of installation) outside of the former buildings at 388 Carroll Street to provide overall Site assessment of soil vapor.

Former ASTs

Based on the results of the previous environmental investigations, delineation of soil and groundwater impacts has been completed on the 388 Carroll Street Site; however, additional soil, groundwater, and soil vapor sampling was completed as part of this RI to refine the extents of proposed excavation areas.

- One soil sample was collected from LSB-27 and two samples were collected from LSB-21 (including one field duplicate) at the groundwater interface or the depth interval which exhibited the greatest evidence of impact to provide overall Site assessment of soils and to address potential impacts from the former ASTs at the 388 parcel;
- LMW-9 and LMW-10 were installed on the south side of 388 Carroll Street to address potential impacts from the former ASTs and to provide overall site assessment of groundwater; and,
- LSV-11, LSV-12, LSV-13, LSV-14, and LSV-15 were installed as deep soil vapor points at 5-feet bgs (or the depth identified as 1-foot above the groundwater at time of installation) outside of the former buildings at 388 Carroll Street to provide overall Site assessment of soil vapor and to address potential impacts from the former ASTs.

Petroleum Impacted Hotspots (AOC-1, AOC-2, AOC-3)

As identified above, soil impacts have been delineated at AOC-1 and AOC-2 in areas measuring 6,455 and 2,385 square feet, respectively, and extend vertically to the limits of the clay and depth to groundwater at a depth of approximately 7-feet bgs. Soil vapor sampling was completed as part of this RI to further refine proposed excavation areas for this AOC.

- LSV-11, LSV-12, LSV-13, LSV-14, and LSV-15 were installed as deep soil vapor points at 5-feet bgs (or the depth identified as 1-foot above the groundwater at time of installation) outside of the former buildings at 388 Carroll Street to provide overall Site assessment of soil vapor and to address potential impacts from the former ASTs.

Based on the results of the previous investigations that have been completed for AOC-3, additional soil and groundwater delineation was completed during this RI to delineate the extent of petroleum impacted area. In addition, in order to assess the presence of LNAPL in the groundwater at the MW-5 location, an additional groundwater monitoring well was installed within this AOC.

- One shallow sample was collected from LSB-23 (2- to 4-feet bgs) and LSB-24 (0- to 4-feet bgs) at the groundwater interface or the depth interval which exhibited the greatest evidence of impact to provide overall Site assessment of soils and to complete the horizontal and vertical delineation of the AOC-3;
- One sample was collected from LSB-9 and LSB-22 at the groundwater interface or the depth interval which exhibited the greatest evidence of impact to complete the horizontal and vertical delineation of the AOC-3;
- LMW-6 was installed on the north side of 363 Bond Street to delineate impacts from AOC-3;
- MW-5 was sampled to delineate impacts at AOC-3; and,
- Three test pits (TP-1 through TP-3) were completed to confirm the spatial extents of LNAPL in AOC-3 and one groundwater and one soil sample were collected for fingerprinting analysis of the LNAPL.

Gasoline USTs (AOC-5)

Based on the results of the Phase II Investigation completed by Langan, impacts to soil and groundwater from the gasoline USTs have been identified and additional delineation of these impacts was completed as part of the RI. Additionally, soil vapor samples were collected in this AOC to address the PCE and TCE impacts that were detected as part of Langan's Phase II Investigation as well as part of the site wide characterization of soil vapor.

- One sample was collected from LSB-7, LSB-8 and LSB-25 at the groundwater interface or the depth interval which exhibited the greatest evidence of impact to complete vertical and horizontal delineation of AOC-5;
- LMW-7 was installed along the western side of 363 Bond Street to delineate impacts from AOC-5;

Deviations from the RIWP sampling program resulting from field conditions encountered during the RI are discussed in Section 9.

4.2 Utility Clearance and Geophysical Survey

The geophysical survey was completed on 28 August 2013 by Nova Geophysical Services (Nova) of Douglaston, NY using ground penetrating radar, electromagnetic, and comprehensive subsurface utility surveying equipment. The purpose of the geophysical survey was to clear and mark proposed environmental sampling locations and to identify any USTs, anomalies, and subsurface structures (including piping networks) that may exist on site. A copy of the geophysical investigation report is provided in Appendix A.

The geophysical survey investigation identified the following:

- Anomalies located along the western portion of the building at 363 Bond Street associated with two gasoline USTs, including a confirmed vent pipe.
- A partial basement located beneath the northwest corner of the building at 363 Bond Street. The partial basement was not accessible at the time of the geophysical survey.
- A fill port and a second vent pipe located on the sidewalk adjacent to the western portion of the building at 363 Bond Street and in close proximity to cellar doors leading into the partial basement. Nova was unable to determine if the fill port and second vent pipe are associated with the gasoline USTs or potential AST(s) in the partial basement as the area was inaccessible at the time of the geophysical survey.
- Anomalies located along the southern portion of the yard at 388 Carroll Street (adjacent to the boundary with 363 Bond Street). Due to limited access, Nova was unable to investigate the area further. According to the September 2011 Draft Subsurface Investigation Report completed by PW Grosser, test pits completed in this area identified large chunks of concrete that appeared to be former building footers or building slabs at approximately six-feet bgs. Test pit locations completed by PW Grosser are shown on Figure 5.
- Minor scattered anomalies located throughout the surveyed areas consistent with the presence of subsurface utilities and or historic piping networks.
- Interconnected on-site floor drains (363 Bond Street) that connect to the sewer system located along Bond Street.

The geophysical survey was completed across the entire site with the exception of the partial basement located beneath the northwest corner of the building at 363 Bond Street and an area of thickly matted vegetation along the western boundary of 388 Carroll Street. Additionally, accessibility in the grove of trees in the middle of 388 Carroll Street was limited. Figures and photographs illustrating the findings of the geophysical investigation are provided in the Geophysical Engineering Survey Report provided as Attachment A.

Following the completion of drilling activities, access to the partial basement was granted. At that time Langan observed two, 1,000-gallon fuel oil tanks located in the partial basement and associated with the additional fill port and vent pipe.

Deviations from the RIWP resulting from the geophysical survey are discussed in Section 9.

4.3 Soil Investigation

4.3.1 Soil Boring Sampling Methodology

Between 6 and 13 September 2013, ten soil borings (LSB-7, LSB-8, LSB-9, LSB-10, LSB-21, LSB-22, LSB-23, LSB-24, LSB-25, and LSB-27) were installed at the Site by PAL Environmental Services of Long Island City, New York (PAL). The boring logs are included in Appendix C and the soil boring locations advanced as part of this RI are shown on Figure 8.

All soil borings were advanced with direct-push drilling methods utilizing a Geoprobe™ 420 Mobile (due to site access restrictions to the 363 Bond Street building) or Geoprobe™ 7822 DT drill rig. Borings were advanced to approximately 15-feet below sidewalk grade or to refusal. Soils were collected continuously to the boring termination depth using a Geoprobe™ macrocore sampler in 2-, 4- or 5-foot increments using disposable acetate liners.

A Langan engineer provided full time oversight of the soil boring activities, screened the soil samples for environmental impacts, and collected environmental samples for laboratory analyses. Soils were screened for organic vapors with a photoionization detector (PID) and evaluated for visual and olfactory indications of environmental impacts. Soil descriptions were

recorded on boring logs and are provided in Appendix C. All non-dedicated drilling equipment was decontaminated between each boring. Drill cuttings were containerized in UN/DOT-approved 55-gallon for later off-Site disposal. All work complied with the procedures identified in the site-specific investigation HASP found in Appendix D of the RIWP.

4.3.2 Soil Boring Sample Collection/Analyses

A total of 17 soil samples (including two field duplicate samples) were collected from the ten soil borings advanced as shown on Table 1. Nine samples were collected from shallow soils, with seven collected from the 0- to 2-foot interval below existing sidewalk grade, one collected from 0- to 4-feet below existing grade due to poor soil recovery and one collected from 2- to 4-feet bgs due to poor soil recovery. In addition, eight soil samples were collected from the groundwater interface or the depth interval which exhibited the greatest evidence of impact.

Samples were collected in laboratory-supplied containers and were sealed, labeled, and immediately placed in a cooler containing ice (to maintain a temperature of approximately 4 degrees Celsius) for delivery to York Analytical Laboratories, Inc. of Stratford, Connecticut (York), a NYSDOH ELAP-certified analytical laboratory. Soil samples were analyzed for the following:

- Target compound list VOCs via USEPA Method 8260;
- Target compound list SVOCs via USEPA Method 8270;
- Pesticides via USEPA Method 8081;
- PCBs via USEPA Method 8082; and,
- Target Analyte List metals via USEPA Methods 6010 and 7473.

4.4 Test Pit Sample Methodology

Between 12 and 16 September 2013, three test pits (TP-1 through TP-3) were excavated at the Site by PAL to confirm the spatial extents of LNAPL in AOC-3. All three test pits locations were installed within the AOC-3 area within the building at 363 Bond Street. The test pit logs are included in Appendix C and the test pit locations are shown on Figure 5.

The test pits were advanced to target general locations of previously identified or suspected soil contamination and LNAPL. The test pits were excavated to approximately 1-foot deeper than the observed groundwater depth or approximately 6.5- to 8.5-feet bgs.

A Langan engineer provided full time oversight of the test pit activities, screened the samples for environmental impacts, and collected environmental samples for laboratory analyses. Soils were screened for organic vapors with a PID and evaluated for visual and olfactory indications of environmental impacts. All non-dedicated equipment was decontaminated between each test pit. Excavated test pit materials were placed on plastic sheeting while screening activities took place. Upon completion of these activities, the excavated material was returned to the test pit in the general order it was excavated so that surface material was placed on top and potentially contaminated material was buried. Work complied with the procedures identified in the site-specific investigation HASP found in Appendix D of the RIWP.

4.4.1 Test Pit Sample Collection Analyses

Three samples, one from each test pit, were collected from the depth corresponding to the groundwater interface or approximately 5.5- to 7.5-feet bgs. Groundwater samples were collected from TP-1 and TP-2 and a soil sample was collected from TP-3 for the completion of fingerprint analyses of the LNAPL. Dedicated plastic trowels and laboratory-supplied glass jars were used to collect sample materials.

Samples were collected in laboratory-supplied containers and were sealed, labeled, and immediately placed in a cooler containing ice (to maintain a temperature of approximately 4 degrees Celsius) and submitted under chain-of-custody to York for the following analysis:

- Total Petroleum Hydrocarbon (TPH) identification via USEPA Method 3550B

As no LNAPL was observed in the TP-2 groundwater sample, the sample was not analyzed by York; therefore, only two test pits samples, TP-1 and TP-3 were analyzed for TPH identification.

4.5 Groundwater Investigation

4.5.1 Monitoring Well Installation Methodology

On 12 and 13 September 2013, four groundwater monitoring wells (LMW-6, LMW-7, LMW-9, and LMW-10) were installed at the Site by PAL. Soil borings LSB-22 and LSB-25 were completed as 1-inch temporary flush-mounted groundwater monitoring wells LMW-6 and LMW-7, respectively. Soil borings LSB-27 and LSB-21 were completed as 2-inch permanent, flush-mounted groundwater monitoring wells LMW-9 and LMW-10, respectively. The well construction logs are included in Appendix C and the well locations installed as part of this RI, along with existing monitoring well locations on the Site, are shown on Figure 5.

LMW-6 and LMW-7 were installed to a depth of 16-feet bgs, which corresponded to the approximate termination depth of soil borings LSB-22 and LSB-25. The wells were constructed with 1-inch diameter threaded, flush-joint, Schedule 40 PVC casing with approximately 15-feet of 0.010-inch slotted well screen. The annulus around the well screen was filled with a #1sand pack to approximately one-foot above the well screen, followed by a bentonite seal to the ground surface.

LMW-9 was installed to a depth of 15-feet, which corresponded to approximately five-feet into the clay layer and the termination depth of soil boring LSB-27. The well was constructed with 2-inch diameter threaded, flush-joint, Schedule 40 PVC casing with approximately 10-feet of 0.010-inch slotted well screen. The annulus around the well was filled with a #1 sand pack to approximately one-foot above the well screen, followed by a bentonite seal to the ground surface. The well was completed with a flush mounted well cover.

LMW-10 was installed to a depth of 9-feet bgs, which corresponded to the approximate termination depth of soil boring LSB-21. Refusal was encountered at the LSB-21 at the base of the former AST containment structure. The well was constructed with 2-inch diameter threaded, flush-joint, Schedule 40 PVC casing with approximately five-feet of 0.010-inch slotted well screen. The annulus around the well was filled with a #1 sand pack to approximately 3-feet above the well screen, followed by a bentonite

seal to the ground surface. The well was completed with a flush mounted well cover.

Monitoring wells LMW-6, LMW-7, LMW-9, and LMW-10 were developed on 13 September 2013 by purging groundwater with a submersible pump until the purged water appeared free of visible sediment.

On 6, 7 and 8 November 2013, the horizontal and vertical control used to locate and transfer elevations to all monitoring wells on Site (including existing monitoring wells) was surveyed with a Trimble RTK GPS Unit, referencing the New York State Department of Transportation (NYSDOT) cooperative base station network. The horizontal coordinates and elevations for these wells were located via conventional survey methods and were used to determine groundwater flow direction and horizontal gradient.

4.5.2 Groundwater Sampling Collection/Analyses

On 16 and 17 September 2013, depths to groundwater were measured using an oil/water interface probe and 11 groundwater samples (including two duplicate groundwater samples) were collected using a peristaltic pump and dedicated Teflon tubing from the newly installed monitoring wells (LMW-6, LMW-7, LMW-9 and LMW-10) and existing monitoring wells (MW-1, MW-2, MW-3, MW-4, and MW-5). Monitoring wells were sampled in accordance with NYSDEC Draft DER-10 Technical Guidance for Site Investigation and Remediation, dated December 2002, and Sampling Guidelines and Protocols, dated March 1991. Low flow sampling parameter sheets are provided in Appendix C.

Samples were collected in laboratory-supplied containers and were sealed, labeled, and immediately placed in a cooler containing ice (to maintain a temperature of approximately 4 degrees Celsius) and submitted under chain-of-custody to York for analysis. Groundwater samples were analyzed for the following parameters:

- Target compound list volatile organic compounds via USEPA Method 8260;
- Target compound list semi-volatile organic compounds via USEPA Method 8270;

- Pesticides via USEPA Method 8081;
- PCBs via USEPA Method 8082; and,
- Target Analyte List metals (total and dissolved) via USEPA Methods 6010 and 7473.

4.6 Soil Vapor Investigation

4.6.1 Soil Vapor Sampling Point Installation and Methodology

Between 9 and 12 September 2013, 15 deep soil vapor points (LSV-1 through LSV-5, LSV-11 through LSV-15, and LSV-16 through LSV-20) were installed at the Site by PAL Environmental Services of Long Island City, New York. The soil vapor sampling locations are shown on Figure 5.

A Geoprobe™ was used to advance the tooling to the desired depth (approximately 1-foot above the groundwater table) and stainless steel sampling points were installed. The points were constructed with a six-inch long double woven stainless steel soil gas sampling mesh attached to Teflon-lined polyethylene tubing, and drilling sand was installed around the screen, with additional sand up to six-inches above the top of the screen. The remaining annular space was backfilled to grade with hydrated bentonite. The soil gas screens were set at between 2.5- to 4-feet bgs or approximately 1-foot above the observed water table at the time of installation.

On 9 and 10 September 2013, ten co-located, sub-slab soil vapor points (LSV-1 through LSV-5 and LSV-16 through LSV-20) were installed within the building at 363 Bond Street using a Bosch hammer drill equipped with a 0.5-inch bit. Teflon-lined polyethylene tubing was installed to 1-foot bgs or approximately six-inches beneath the slab and sealed using modeling clay.

4.6.2 Soil Vapor Sampling Collection/Analysis

Between 9 and 12 September 2013, 26 soil vapor sampling points (15 deep vapor points, 10 sub-slab vapor points, and one field duplicate sample) were installed to provide overall Site assessment of soil vapor and characterization of soil vapor associated with the former ASTs. In addition, two ambient air samples were collected for quality assurance and control. Soil vapor sampling logs are included in Appendix C.

In accordance with the RIWP, a tracer gas test was performed on all soil vapor sampling points using helium gas to confirm the integrity of the clay seals prior to sampling. A detection of helium in the sample tubing would indicate that the seal was compromised and must be repaired.

With the seal confirmed, a PID (which pumps air at approximately 0.2 liters per minute) was attached to the polyethylene tubing, and a total volume of at least three times that of the tubing and screen setup was purged (approximately 1.5 liters). The purged soil vapor was also screened with a PID capable of detecting organic soil vapors at a detection level within the parts per billion (ppb) range and the values were recorded in field sampling sheets. After purging was complete, a laboratory-supplied 6-liter Summa canister with a flow controller (with a laboratory-set flow rate of 0.05 liters per minute) was attached to the polyethylene tubing. Each Summa canister arrived from the lab with approximately 30-inches of mercury vacuum. Sampling was commenced by fully opening the canister valve. The sample was collected over a period of approximately 120 minutes. When the canister vacuum dropped below 5 inches of mercury, the sample was stopped by closing the valve.

Soil vapor samples were submitted under chain-of-custody to York for analysis of VOCs by USEPA Method TO-15.

4.7 Quality Assurance/Quality Control

During the RI, field blanks, trip blanks, field duplicate samples, and ambient air samples were collected and submitted for laboratory analysis for QA/QC. Analytical results for QA/QC samples for soil, groundwater, and soil vapor are provided in Tables 9, 10, and 11, respectively. During the course of the investigation, the following QA/QC samples were collected:

<u>Soil samples:</u>

- One field duplicate sample;
- One field blank sample;
- One matrix spike/matrix spike duplicate (MS/MSD) sample;
- One trip blank sample per shipped cooler containing soil samples to be analyzed for VOCs.

Groundwater samples:

- One field duplicate sample;
- One field blank sample;
- One MS/MSD sample;
- One trip blank sample per shipped cooler containing groundwater samples to be analyzed for VOCs.

Soil vapor samples:

- One field duplicate sample;
- One ambient air sample per day of soil vapor sampling.

4.7.1 Laboratory Analysis and Data Validation

As indicated above, laboratory analyses of soil, groundwater, and soil vapor samples were conducted by York, a NYSDOH, ELAP-approved laboratory. Laboratory analyses were conducted in accordance with USEPA SW-846 methods and NYSDEC Analytical Services Protocol (ASP) B deliverable format. All data was provided in the Department's Electronic Data Deliverable (EDD) EQuIS format.

QA/QC procedures required by the NYSDEC ASP and SW-846 methods were followed, including initial and continuing instrument calibrations, standard compound spikes, surrogate compound spikes, and analysis of other samples (blanks, laboratory control samples, and matrix spikes/matrix spike duplicates). The laboratory provided sample bottles which were pre-cleaned and preserved in accordance with the SW-846 methods. Where there were differences in the SW-846 and NYSDEC ASP requirements, the NYSDEC ASP took precedence.

Data validation was performed in accordance with USEPA validation guidelines for organic and inorganic review. Validation included the following:

- Verification of QC sample results (both quantitative and qualitative);
- Verification of sample results (both positive hits and non-detects);
- Recalculation of 10% of all investigation sample results; and,
- Preparation of Data Usability Summary Reports (DUSRs).

The DUSRs were prepared in accordance with DER-10 and reviewed by the Program Quality Assurance Monitor (PQAM). The DUSRs present the results of the data validation, including a summary assessment of laboratory data packages, sample preservation and chain of custody procedures, and completeness for each analytical method. The DUSRs are included as Appendix D, and a discussion of data usability is included in Section 5.4.

4.8 Field Equipment Decontamination

All drilling equipment including the drilling rig, augers, bits, rods, tools, etc., were cleaned with a thorough non-phosphate detergent (e.g., Alquinox) and water wash and fresh water rinse, before beginning work and between boring locations. Direct contact with the ground was avoided. The back of the drill rig and all tools, augers, and rods were decontaminated at the completion of the work and prior to leaving the Site.

Decontamination occurred at the sampling location and all liquids were contained in buckets. Between rinses, equipment was placed on polyethylene sheets avoiding contact with the ground. Water collected from the decontamination activities was collected in 55-gallon drums and managed as described in Section 4.9.

4.9 Management of Investigation-Derived Waste

Soil boring cuttings were containerized in UN/DOT-approved 55-gallon for later off-Site disposal. Personal protective equipment and contaminated supplies were also stored in UN/DOT-approved drums. Decontamination and well development/purging fluids were placed in UN/DOT approved fluid drums with closed tops.

4.10 Community Air Monitoring

Langan conducted community air monitoring and fugitive dust and particulate monitoring in compliance with the NYSDOH Generic Community Air Monitoring Plan (CAMP) and NYSDEC DER-10. The CAMP is summarized in greater detail in the HASP included in Appendix D of the RIWP. General CAMP information including real-time air monitoring for dust and VOCs at the perimeter of the hot zone is presented in the following paragraphs.

Periodic monitoring for VOCs was conducted during non-intrusive activities such as the collection of groundwater samples. Periodic monitoring included obtaining measurements upon arrival at a location, when opening a monitoring well cap, when bailing/purging a well, as well as upon departure from the location. Continuous monitoring for VOCs and dust was conducted during all ground intrusive activities (i.e., soil boring and monitoring well installation). Upwind concentrations of VOCs and dust were recorded at the start of each workday, and periodically thereafter, to establish background concentrations. VOCs and dust were monitored continuously at the downwind perimeter of the work zone, which was established at a point on the site where the general public or site employees may be present.

Monitoring of VOCs was conducted with a PID equipped with a 10.6 eV lamp. Dust emissions were monitored using a Thermo MIE DR-4000 DataRam, real-time monitoring equipment capable of measuring particulate matter less than 10 micrometers in size and capable of integrating over a period of 15 minutes (or less) for comparison to the airborne particulate action level. The particulate level threshold was never exceeded for a continuous 15-minute period. No dust suppression measures were necessary.

5.0 OBSERVATIONS AND RESULTS

This section summarizes the findings of the RI. Based upon the analytical results of the RI, engineering controls, institutional controls, and/or site-specific SCOs will be developed which will be protective of public health and the environment.

5.1 Soil Investigation Findings

5.1.1 General Field Observations

Soil borings completed during the RI at the Site confirmed that a layer of historic fill consisting of sand and silt is present from the surface to between 6- and 11-feet bgs at 363 Bond Street and 388 Carroll Street. A clay layer was observed underlying the historic fill in LSB-27 at approximately 10-feet bgs. Additional observations of the clay layer are discussed in Section 2.2. Groundwater was encountered between 5.5- and 12-feet bgs in the soil borings and test pits completed at the Site.

A secondary slab was encountered between 4- and 6-feet bgs in soil borings LSB-9 LSB-10, LSB-23, and LSB-24, all located within the eastern portion of the building at 363 Bond Street. The presence of a secondary slab was confirmed in all three test pit locations, TP-1, TP-2 and TP-3. Boring refusal was encountered at these 4 locations at the elevation of the secondary slab.

PID readings above background were observed in all of the borings except for LSB-22, as readings could not be taken at that location due to heavy rain during drilling. The following provides the maximum PID readings (ranging from 3.1 to 955 ppm) in the remaining borings:

Boring	Depth (ft bgs)	PID Reading (ppm)
LSB-7	10	3.1
LSB-8	4.5	706
LSB-9	0.5	791
LSB-10	1	41.3
LSB-21	N/A*	N/A
LSB-22	6	527
LSB-23	4	3.1
LSB-24	0	N/A
LSB-25	6	955
LSB-27	5.5	66.3

*PID readings were not collected due heavy rain.

Additionally, higher PID readings were observed in several borings but were attributed to very wet soil, rain or high humidity rather than the presence of VOCs as minimal or no odors were observed at the time the readings were collected.

NAPL was identified by Langan at the Site at the following sample locations: TP-1 at 5.4-feet bgs, TP-3 at 6-feet bgs, and LSB-22 at 4-feet bgs. A summary of NAPL observations from the RI and previous investigations is provided in Figure 11.

5.1.2 Analytical Results Overview

The proposed future use of the Site will be mixed-use commercial and residential; therefore soil analytical results were compared to the Title 6,

New York Code of Rules and Regulations, Part 375 Soil Cleanup Objectives (SCOs) Soil analytical results are presented in Table 6 and summarized on Figure 8. The results are summarized below and organized by sampling rationale as follows:

- Unrestricted Use SCOs and Restricted Use Residential SCOs,
- Restricted Residential SCOs, and
- Restricted Commercial and Restricted Industrial SCOs.

5.1.2.1 AOC-3 Proposed Excavation Area – 363 Bond Street

Four samples were collected from LSB-9, LSB-22, LSB-23, and LSB-24 at the groundwater interface or the depth interval which exhibited the greatest evidence of impact to complete the horizontal and vertical delineation of AOC-3. LSB-9 (4- to 6-feet bgs) and LSB-22 (4- to 6-feet bgs) were collected from the interval which exhibited the greatest impacts. LSB-23 (2- to 4-feet bgs) and LSB-24 (0- to 4-feet bgs) were collected from these accessible intervals due to poor sample recovery from the borings.

VOCs

VOCs were detected in exceedance of the Unrestricted Use SCOs in the sample collected at LSB-9 including 1,2,4-trimethylbenzene, benzene, ethylbenzene, and toluene. VOCs were detected in exceedance of the Unrestricted Use SCOs in LSB-9 and LSB-22 including cis-1,2-dichloroethylene, TCE, and m&p-xylene. Additionally, the VOC acetone was detected in exceedance of the Unrestricted Use SCOs in the samples collected at LSB-23 and LSB-24.

No VOCs were detected in exceedances of the Restricted Use Residential, Restricted Residential, Restricted Commercial, or Restricted Industrial SCOs.

SVOCs

SVOCs were detected in exceedance of the Unrestricted Use and/or Restricted Use Residential SCOs in LSB-9 including acenaphthene, dibenzofuran, and fluorene.

SVOCs were detected in exceedance of the Restricted Residential SCOs in LSB-9 including fluoranthene, naphthalene, phenanthrene, and pyrene and in LSB-22 and LSB-23 including benzo(k)fluoranthene and chrysene. Additionally, the SVOC indeno(1,2,3-cd)pyrene was detected in exceedance of the Restricted Residential SCOs in LSB-23.

SVOCs were detected in exceedance of the Restricted Commercial and/or Restricted Industrial SCOs in LSB-9, LSB-22, and LSB-23 including benzo(a)anthracene, benzo(a)pyrene, and benzo(b)fluoranthene. Additionally, the SVOCs benzo(k)fluoranthene, chrysene, and indeno(1,2,3-cd)pyrene were detected in exceedance of the Restricted Commercial and/or Restricted Industrial SCOs in LSB-9 and dibenzo(a,h)anthracene was detected in exceedance of the Restricted Industrial SCOs in LSB-9 and LSB-23.

Pesticides

The pesticide 4,4'-DDE was detected in exceedance of the Unrestricted Use SCOs in LSB-24.

PCBs

No PCBs were detected in exceedances of the NYSDEC SCOs in any of the samples collected.

Metals

Zinc was detected in exceedance of the Unrestricted Use and/or Restricted Use Residential SCOs in all of the soil samples collected. Copper was detected in exceedance of the Unrestricted Use SCOs in LSB-22 and LSB-24 and lead was detected in exceedance of the Unrestricted Use SCOs at LSB-22, LSB-23, and LSB-24.

Mercury was detected in exceedance of the Restricted Residential SCOs at LSB-9.

Lead was detected in exceedances of the Restricted Commercial SCOs at LSB-9. Mercury was detected in exceedance of the Restricted Commercial SCOs at LSB-22. Cadmium was detected in exceedances of the Restricted

Commercial and/or Restricted Industrial SCOs at LSB-9, LSB-23, and LSB-24.

5.1.2.2 AOC-5 Former UST Area – 363 Bond Street

Three samples were collected from LSB-7, LSB-8 and LSB-25 at the groundwater interface or the depth interval which exhibited the greatest evidence of impact to complete the horizontal and vertical delineation of AOC-5. LSB-7 (13- to 15-feet bgs) and LSB-25 (5.5- to 7.5-feet bgs) were collected from the intervals exhibiting the greatest evidence of impacts. LSB-8 (10- to 12-feet bgs) was collected from the interval directly above the groundwater interface.

VOCs

Acetone, a common laboratory artifact, was detected in exceedance of the Unrestricted Use SCOs at LSB-8 and LSB-25. VOCs including cis-1,2-dichloroethylene, ethylbenzene, m&p-xylene, and TCE were detected in exceedances of the Unrestricted Use SCOs at LSB-25. No VOCs were detected in exceedances of the Restricted Use Residential or Restricted Residential SCOs.

No VOCs were detected in exceedances of the Restricted Commercial or Restricted Industrial SCOs.

SVOCs

No exceedances of any of the SCOs for SVOCs were detected in LSB-8. Benzo(k)fluoranthene and chrysene were detected in exceedances of the Restricted Use Residential SCOs in LSB-7and acenaphthene, dibenzofuran, and naphthalene were detected in exceedances of the Unrestricted Use and/or Restricted Use Residential SCOs in LSB-25.

Benzo(a)anthracene, benzo(b)fluoranthene, and indeno(1,2,3-cd)pyrene were detected in exceedance of the Restricted Residential SCOs in LSB-7 and benzo(k)fluoranthene, fluoranthene, phenanthrene, and pyrene were detected in exceedances of the Restricted Residential SCOs in LSB-25.

Benzo(a)pyrene was detected in exceedance of the Restricted Industrial SCOs in LSB-7 and LSB-25. Benzo(a)anthracene, benzo(b)fluoranthene,

chrysene, and indeno(1,2,3-cd)pyrene were detected in exceedance of the Restricted Commercial and/or Restricted Industrial SCOs in LSB-25.

Pesticides

No pesticides were detected in exceedances of the NYSDEC SCOs in any of the samples collected.

PCBs

No PCBs were detected in exceedances of the NYSDEC SCOs in any of the samples collected.

Metals

No exceedances of the NYSDEC SCOs were detected in LSB-7. Lead was detected in exceedance of the Unrestricted Use SCOs in LSB-8.

Lead was detected in exceedance of the Restricted Residential SCOs in LSB-25.

No exceedances of the Restricted Commercial or Restricted Industrial SCOs were detected in any of the samples collected.

5.1.2.3 Former ASTs

Three samples (including one field duplicate) were collected from LSB-21 and LSB-27 at the groundwater interface or the depth interval which exhibited the greatest evidence of impact to provide overall Site assessment of soils and to address potential impacts from the former ASTs. LSB-21 (7- to 9-feet bgs) and LSB-27 (5- to 7-feet bgs) were both sampled from the intervals which exhibited the greatest evidence of impacts.

VOCs

Acetone, a common laboratory artifact, was detected in exceedance of the Unrestricted Use SCOs LSB-21 and vinyl chloride was detected in exceedance of the Unrestricted Use SCOs LSB-27. No other VOCs were detected in exceedance of the Unrestricted Use, Restricted Use Residential, or Restricted Residential SCOs.

No VOCs were detected in exceedance of the Restricted Residential SCOs.

No VOCs were detected in exceedance of the Restricted Commercial or Restricted Industrial SCOs.

SVOCs

No SVOCs were detected in exceedance of the NYSDEC SCOs in any of the samples collected.

Pesticides

No pesticides were detected in exceedance of the NYSDEC SCOs in any of the samples collected.

PCBs

No PCBs were detected in exceedance of the NYSDEC SCOs in any of the samples collected.

Metals

No metals were detected in exceedance of the NYSDEC SCOs in any of the samples collected.

5.1.2.4 Site Characterization

Nine shallow samples (including 1 field duplicate) were collected from the 0- to 2-foot bgs interval of LSB-7, LSB-9, LSB-10, LSB-21, LSB-22, LSB-23, LSB-24 and LSB-27 to provide overall Site assessment of shallow soils.

VOCs

Acetone, a common laboratory artifact, was detected in exceedance of the Unrestricted Use SCOs in four of the soil samples collected. No other VOCs were detected in exceedance of the Unrestricted Use or Restricted Use Residential.

No VOCs were detected in exceedance of the Restricted Residential SCOs.

No VOCs were detected in exceedance of the Restricted Commercial or Restricted Industrial SCOs.

SVOCs

Benzo(k)fluoranthene was detected in exceedance of the Restricted Use Residential SCOs in LSB-22.

Benzo(k)fluoranthene, chrysene, and indeno(1,2,3-cd)pyrene were detected in exceedance of the Restricted Residential SCOs in LSB-23.

Benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, and dibenzo(a,h)anthracene were detected in exceedance of the Restricted Commercial or Restricted Industrial SCOs in LSB-23. No other exceedances of the NYSDEC SCOs for SVOCs were detected in any of the samples collected.

Pesticides

Pesticides detected in exceedance of the Unrestricted Use SCOs included 4,4'-DDE in LSB-10, LSB-22, and LSB-24 and 4,4'-DDT in LSB-22. No other exceedances of the NYSDEC SCOs for pesticides were detected in any of the samples collected.

PCBs

Aroclor 1254 was detected in exceedance of the Unrestricted Use SCOs in the soil sample collected from LSB-7.

Aroclor 1254 was detected in exceedance of the Restricted Commercial SCOs in LSB-9.

No other exceedances of the NYSDEC SCOs for PCBs were detected in any of the samples collected.

Metals

Copper was detected in exceedance of the Unrestricted Use SCOs in LSB-9 and LSB-24. Lead was detected in exceedances of the Unrestricted Use SCOs in LSB-9, LSB-23, and LSB-24. Mercury was detected in exceedance of the Unrestricted Use SCOs in LB-9. Nickel was detected in exceedances of the Unrestricted Use SCOs in LSB-9, LSB-22, and LSB-23. Zinc was detected in exceedance of the Unrestricted Use and/or the Restricted Use Residential SCOs in LSB-9, LSB-22, LSB-23, and LSB-24.

Lead and mercury were detected in exceedance of the Restricted Residential SCOs in LSB-22.

Cadmium was detected in exceedance of the Restricted Commercial and/or Restricted Industrial SCOs in LSB-9, LSB-23, and LSB-24. Copper was detected in exceedance of the Restricted Commercial SCOs in LSB-22.

5.2 Groundwater Investigation Findings

Analytical results for groundwater were compared to NYSDEC Division of Water Technical and Operation Guidance Series 1.1.1 Ambient Water Quality Standards (TOGS) and Part 703 Surface Water and GWQS and Groundwater Effluent Limitations for Class GA groundwater. Groundwater analytical results are presented in Table 7 and summarized on Figure 9. Results in exceedance of the GWQS are summarized below and organized by sampling rationale:

5.2.1 AOC-3 Proposed Excavation Area – 363 Bond Street

Monitoring well LMW-6 was installed and sampled in order to delineate impacts associated with AOC-3. Monitoring well MW-5 was proposed as a sampling location to assess site characterization of groundwater, but based on analytical results not being representative of general Site characteristics, MW-5 results are being used to further characterize groundwater impacts associated with AOC-3. A duplicate sample was collected from MW-5.

VOCs

VOCs detected in exceedance of the GWQS in both samples collected include 1,2,4-trimethylbenzene, benzene, ethylbenzene, isopropylbenzene (cumene), n-propylbenzene, o-xylene (1,2-dimethylbenzene), and toluene. VOCs 1,3,5-trimethylbenzene (mesitylene) and vinyl chloride were detected in MW-5.

SVOCs detected in exceedance of the GWQS in both samples include acenaphthene and naphthalene. SVOCs anthracene, benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, fluoranthene, fluorene, indeno(1,2,3-C,D)pyrene, phenanthrene, and pyrene were detected in exceedances of the GWQS in MW-5.

Pesticides

Pesticides were not detected in exceedance of the GWQS in either of the groundwater samples collected.

PCBs

PCBs were not detected in exceedance of the GWQS in either of the samples collected.

Metals

Metals detected in exceedance of the GWQS in both samples include total and dissolved aluminum, total and dissolved iron, total lead, total and dissolved magnesium, and total and dissolved selenium.

LNAPL

LNAPL was observed at MW-5 during the RI at a thickness of 0.1-feet.

5.2.2 AOC-5 Former UST Area

Monitoring well LMW-7 was sampled in order to delineate impacts associated with AOC-5.

VOCs

VOCs detected in exceedance of the GWQS include 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene (mesitylene), ethylbenzene, isopropylbenzene (cumene), n-butylbenzene, n-propylbenzene, o-xylene (1,2-dimethylbenzene), sec-butylbenzene, and toluene.

SVOCs

Naphthalene is the only SVOC that was detected in exceedance of the GWQS in the LMW-7 groundwater sample.

Pesticides

Pesticides were not detected in exceedance of the GWQS in the LMW-7 groundwater sample.

PCBs

One PCB, Aroclor 1254, was detected in exceedance of the GWQS in the LMW-7 groundwater sample.

Metals

Metals detected in exceedance of the GWQS include total iron, total lead, total and dissolved magnesium, and total and dissolved manganese.

LNAPL

LNAPL was observed in LMW-7 at a thickness of 3.0-feet.

5.2.3 Site Groundwater Characterization

Monitoring wells MW-1, MW-2, MW-3, MW-4, LMW-9 and LMW-10 were sampled to provide overall site assessment of groundwater. In addition, LMW-9 and LMW-10 were sampled to address potential impacts from the former ASTs located at 388 Carroll Street. A duplicate sample was collected from MW-3.

VOCs

VOCs detected in exceedance of the GWQS include 1,2,4-trimethylbenzene (MW-4,), acetone (MW-3), benzene (LMW-9), cis-1,2-dichloroethylene (LMW-9), isopropylbenzene (cumene) (MW-3), n-butylebenzene (MW-3), n-propylbenzene (MW-3), TCE (LMW-9), and vinyl chloride (LMW-9). Acetone, a common laboratory artifact, was detected in exceedance of the GWQS in one of the groundwater samples collected.

SVOCs

SVOCs were not detected in exceedance of the GWQS in any of the groundwater samples collected.

Pesticides

Pesticides were not detected in exceedance of the GWQS in any of the groundwater samples collected.

PCBs

PCBs were not detected in exceedance of the GWQS in any of the groundwater samples collected.

Metals

Metals detected in exceedance of the GWQS include total and dissolved aluminum, total and dissolved iron, total and dissolved magnesium, total and dissolved manganese, and total and dissolved selenium.

5.3 Soil Vapor Investigation Findings

The following compounds are potentially associated with former site operations and were considered for the potential vapor intrusion condition:

- Benzene
- Toluene
- Ethylbenzene
- M&P-Xylenes
- O-Xylene
- 1,1-Dichloroethane
- 1,1-Dichloroethene
- Tetrachloroethylene (PCE)
- Trichloroethylene (TCE)

Analytical results for soil vapor were compared to the NYSDOH October 2006 Soil Vapor Intrusion Guidance Document, the NYSDOH Study of Volatile Organic Chemicals in Air of Fuel Oil Heated Home Upper Fence Criteria and the USEPA 2001 Building Assessment and Survey Evaluation (BASE) Database using Summa Canister Method. Soil vapor analytical results are presented in Table 8 and summarized on Figure 10. Results in exceedance of NYSDOH or USEPA criteria are summarized below.

5.3.1 Site Characterization

Sub slab soil vapor sampling locations LSV-1, LSV-2, LSV-3, LSV-4, LSV-5, LSV-16, LSV-17, LSV-18, LSV-19 and LSV-20 were sampled to provide overall Site assessment of soil vapor. Additionally, deep soil vapor points LSV-1, LSV-2, LSV-3, LSV-4, LSV-5, LSV-11, LSV-12, LSV-13, LSV-14, LSV-15, LSV-16, LSV-17, LSV-18, LSV-19 and LSV-20 were sampled to provide potential soil vapor gradients between the samples collected directly above groundwater and those impacts detected in subslab samples as well as for site characterization purposes in areas where buildings were not present. As a QA/QC measure, two ambient air samples were

collected, Ambient-1 from the indoor air at 363 Bond Street and Ambient-3 from the outdoor air at 388 Carroll Street.

VOCs

One or more VOCs were detected in exceedance of the NYSDOH and/or USEPA criteria in all of the soil vapor samples collected.

Target VOCs detected in exceedance of the NYSDOH and/or USEPA criteria included benzene, ethylbenzene, m&p xylenes, o xylene, total xylenes, PCE, TCE, and toluene. PCE and TCE were detected at concentrations in soil vapor that would require an active sub-slab depressurization system be installed as part of the new construction.

5.4 LNAPL Fingerprint Findings

The soil sample collected from TP-3 for fingerprinting analysis identified the LNAPL as diesel and an unidentified hydrocarbon. The groundwater sample collected from TP-1 for fingerprinting analysis identified the LNAPL as hydraulic fluid.

5.5 Data Usability

Data validation was performed in accordance with the USEPA Region II and USEPA CLP data validation guidelines for organic and inorganic data review and the specific requirements of the analytical methods. Validation included the following:

- Verification of QC sample results (both qualitative and quantitative).
- Verification of sample results (both positive hits and non-detects).
- Recalculation of 10% of all investigative sample results.
- Preparation of Data Usability Summary Reports (DUSRs).

The DUSRs was prepared in accordance with DER-10 and reviewed by the Program Quality Assurance Monitor (PQAM) before issuance. The DUSRs presented the results of data validation, including a summary assessment of laboratory data packages, sample preservation and chain of custody procedures, and a summary assessment of deficiencies for each analytical method. A detailed assessment of each sample delivery group (SDG) will follow. DUSRs for the RI are provided in Appendix D.

Data validation was performed by Langan's in-house Project Chemist/Risk Assessor. Final ASP B-like laboratory reports were provided by York for all samples collected during the Due Diligence/Phase II and Remedial Investigations. Validation included, but was not limited to, a review of the following:

- Custody Documentation
- Holding Times
- Surrogate Recoveries
- Internal Standard Areas
- Matrix Spike Recoveries/Spike Duplicate Recoveries and Relative Percent Differences (RPDs)
- Method, Field, and Trip blank Samples
- Laboratory Control Spike/Laboratory Control Duplicate Recoveries and RPDs
- Instrument Tunes
- Initial and Continuing Calibrations and Calibration Verifications
- Field Duplicate Precision
- Inductively Coupled Plasma (ICP) Serial Dilution
- Laboratory Duplicate Samples
- CRI/CRA Standards

No data was flagged as unusable. Some data qualifiers were appended to the reported results, which have been included in the respective data summary tables (Tables 6, 7, and 8). Copies of the DUSRs are included in Appendix D.

6.0 NATURE AND EXTENT OF CONTAMINATION

This section discusses the preliminary nature and extent of soil, groundwater, and soil vapor contamination at the Site based on the findings of the RI and previous investigations. Summaries of all historic soil and groundwater sampling results are provided in tables 2, 3, 4, and 5 and are shown on figures 6 and 7. Summaries of the most recent Remedial Investigation soil, groundwater, and soil vapor sampling results (including the results of the Langan's Phase II Investigation) are provided in tables 6, 7, and 8 respectively and are shown on figures 8, 9 and 10.

6.1 Soil

Contaminants of concern (COCs) have been identified at the Site associated with the historic fill material and petroleum impacts from historic operations at the Site. As the NYSDEC Brownfield Cleanup Program objective will be to achieve Track 4 cleanup standards it is anticipated that site-specific clean up criteria will be established for COCs at the Site. Therefore, a summary of all historical

results that exceed the NYSDEC Restricted Commercial SCOs is provided below. The Restricted Commercial SCOs were selected as the standard due to the first floor of the proposed building being designated for commercial use. A summary of all historical results that exceed the NYSDEC Restricted Residential SCOs is also provided.

VOCs

No VOCs were detected in exceedances of the Restricted Residential or Restricted Commercial SCOs in any of the samples collected at the site. Petroleum related VOCs (primarily benzene, toluene and xylene) were detected above Unrestricted Use Objectives (UUOs) in areas identified as hot spots; however, at only one sample location (SB-3 at 6 to 8 feet bgs) did any VOC results exceed Unrestricted Residential Use Standards (benzene marginally exceeded the criteria at a concentration of 3.1 ppm). SB-3 is located downgradient of AOC-2 and was collected at a depth within saturated soils. TCE and associated breakdown products were detected at limited locations throughout the site above UUOs but were not detected above Unrestricted Residential Standards at any sample location.

SVOCs

SVOCs were detected in exceedance of the Restricted Residential SCOs in 40 soil samples collected at the site and in exceedance of the Restricted Commercial SCOs in 37 samples collected at the site.

Soil samples for SVOC analysis were collected from within the extents of **AOC-1** at SB-3, SB-4, SB-5, TP-1, TP-6, P-5, P-6, P-7, P-8, P-9, P-12, and TP-3.

SVOCs were detected in exceedance of the Restricted Residential SCOs in AOC-1 at P-7, P-8, P-9, P-12, and TP-3 including benzo(a)anthracene (1,100 ug/kg – 3,030 ug/kg), benzo(b)fluoranthene (1,110 ug/kg – 2,760 ug/kg), and indeno(1,2,3-cd)pyrene (915 ug/kg – 3,570 ug/kg). No SVOCs were detected in exceedance of the Restricted Residential SCOs in SB-3, SB-4, SB-5, TP-1, TP-6, P-5, and P-6. SVOCs were detected in exceedance of the Restricted Commercial SCOs in AOC-1 at P-8, P-9, P-12, and TP-3 including benzo(a)pyrene (1,460 ug/kg – 5,840 ug/kg) and dibenzo(a,h)anthracene (668 ug/kg). No SVOCs were detected in exceedance of the Restricted Commercial SCOs at SB-3, SB-4, SB-5, TP-1, TP-6, P-5, P-6, and P-7. All SVOC exceedances of the Restricted

Residential and Restricted Commercial SCOs in AOC-1 were identified between 3.5- and 5.0-feet bgs.

Soil samples for SVOC analysis were collected from immediately to the east, west, and south of AOC-1 at SB-1, SB-2, SB-11, SB-12, P-10, TP-1, TP-6, and TP-7. SVOCs exceeding the Restricted Residential SCOs were detected to the immediate east and west of AOC-1 in SB-1, SB-11, P-10, and TP-1 including benzo(a)anthracene (1,800 ug/kg – 4,100 ug/kg), benzo(b)fluoranthene (1,600 ug/kg – 4,500 ug/kg), benzo(k)fluoranthene (5,700 ug/kg), chrysene (4,200 ug/kg), dibenzo(a,h)anthracene (480 ug/kg), and indeno(1,2,3-cd)pyrene (582 ug/kg – 1,100 ug/kg). No SVOCs were detected in exceedance of the Restricted Residential SCOs in SB-2, SB-12, TP-6, and TP-7. SVOCs exceeding the Restricted Commercial SCOs were detected immediately to the east and west of AOC-1 in SB-1, SB-11, and TP-1 including benzo(a)pyrene (1,700 ug/kg – 11,000 ug/kg) and dibenzo(a,h)anthracene (1,800 ug/kg). No SVOCs were detected in exceedance of the Restricted Commercial SCOs at SB-2, SB-12, P-10, TP-6, or TP-7. All exceedances of the Restricted Residential SCOs immediately to the east and west of AOC-1 were detected between 3- and 5-feet bgs and exceedances of the Restricted Commercial SCOs immediately to the east and west of AOC-1 were detected between 4- and 5-feet bgs.

Soil samples for SVOC analysis were collected from within the extents of **AOC-2** at TP-5, P-3, SB-8, and SB-9.

SVOCs were detected in exceedance of the Restricted Residential SCOs in AOC-2 at SB-9, TP-5, and P-3 including benzo(a)anthracene (1,500 ug/kg), benzo(b)fluoranthene (2,700 ug/kg – 5,500 ug/kg), benzo(k)fluoranthene (5,300 ug/kg – 11,900 ug/kg), chrysene (7,500 ug/kg – 10,500 ug/kg), dibenzo(a,h)anthracene (540 ug/kg), and indeno(1,2,3-cd)pyrene (920 ug/kg – 3,800 ug/kg). No SVOCs were detected in exceedance of the Restricted Residential SCOs at SB-8. SVOCs were detected in exceedance of the Restricted Commercial SCOs in AOC-2 at TP-5, P-3, and SB-9 including benzo(a)anthracene (7,500 ug/kg – 11,300 ug/kg), benzo(a)pyrene (1,700 ug/kg – 14,600 ug/kg), benzo(b)fluoranthene (10,400 ug/kg), and dibenzo(a,h)anthracene (1,700 ug/kg – 3,870 ug/kg). No exceedances of the Restricted Commercial SCOs were detected in SB-8. All SVOC exceedances of the Restricted

Residential and Restricted Commercial SCOs in AOC-2 were identified between 1.5- and 5-feet bgs.

Soil samples for SVOC analysis were collected from the immediate east, west, and north of AOC-2 at TP-8, P-1B, P-2, P-4, TP-4, and SB-10. SVOCs exceeding the Restricted Residential SCOs were detected in sampled collected immediately to the east, west, and north of AOC-2 in SB-10, P-1B, P-2, P-4, and TP-8 including benzo(a)anthracene (1,040 ug/kg – 4,300 ug/kg), benzo(b)fluoranthene (1,010 ug/kg – 3,300 ug/kg), dibenzo(a,h)anthracene (4,200 ug/kg), and indeno(1,2,3-cd)pyrene (644 ug/kg – 2,000 ug/kg). No exceedances of the Restricted Residential SCOs were detected in TP-4. SVOC exceedances of the Restricted Commercial SCOs were detected in samples collected immediately to the east and west of AOC-2 in SB-10, P-2, P-4, and TP-8 including benzo(a)pyrene (1,090 ug/kg – 4,000 ug/kg) and dibenzo(a,h)anthracene (710 ug/kg – 860 ug/kg). No exceedances of the Restricted Commercial SCOs were detected in TP-4 and P-1B. All SVOC exceedances of the Restricted Residential and Restricted Commercial SCOs immediately to the east, west, and north of AOC-2 were identified between 1- and 5-feet bgs.

Soil samples for SVOC analysis were collected from within the extents of **AOC-3** at LSB-4, LSB-9, LSB-22, SB-1, and MW-5.

SVOCs were detected in exceedance of the Restricted Residential SCOs in AOC-3 at all five sample locations including acenaphthene (200,000 ug/kg), anthracene (270,000 ug/kg), benzo(a)anthracene (1,660 ug/kg), benzo(b)fluoranthene (1,240 ug/kg), benzo(g,h,i)perylene (200,000 ug/kg), benzo(k)fluoranthene (11,2000 ug/kg), chrysene (10,2000 ug/kg – 18,000 ug/kg), fluoranthene (180,000 ug/kg – 245,000 ug/kg), fluorene (200,000 ug/kg), naphthalene (105,000 ug/kg – 300,000 ug/kg), indeno(1,2,3-cd)pyrene (503 ug/kg – 718 ug/kg), phenanthrene (190,000 ug/kg – 279,000 ug/kg), and pyrene (110,000 ug/kg – 198,000 ug/kg). SVOCs were detected in exceedance of the Restricted Commercial SCOs in AOC-3 at all five sample locations including benzo(a)anthracene (10,400 ug/kg – 340,000 ug/kg), benzo(a)pyrene (1,320 ug/kg – 330,000 ug/kg), benzo(b)fluoranthene (11,000 ug/kg – 210,000 ug/kg), benzo(k)fluoranthene (74,500 ug/kg – 270,000), chrysene (61,000 ug/kg – 410,000 ug/kg), dibenzo(a,h)anthracene (3,900 ug/kg – 84,000 ug/kg),

fluoranthene (950,000 ug/kg), indeno(1,2,3-cd)pyrene (26,300 ug/kg – 170,000 ug/kg), phenanthrene (1,100,000 ug/kg), and pyrene (890,000 ug/kg). All SVOC exceedances of the Restricted Residential and Restricted Commercial SCOs in AOC-3 were identified between 1- and 15-feet bgs.

Soil samples for SVOC analysis were collected from immediately to the west and east of AOC-3 at LSB-3, LSB-23, LSB-24, and MW-4. SVOCs were detected in exceedance of the Restricted Residential SCOs immediately to the west of AOC-3 at LSB-3 and LSB-23 including benzo(a)anthracene (1,580 ug/kg), benzo(b)fluoranthene (1,490 ug/kg – 4,960 ug/kg), chrysene (6,090 ug/kg – 9,590 ug/kg), and indeno(1,2,3-cd)pyrene (762 ug/kg – 3,550 ug/kg). NO SVOCs were detected in exceedance of the Restricted Residential SCOs to the immediate east of AOC-3 at MW-4 and LSB-24. SVOCs were detected in exceedance of the Restricted Commercial SCOs to the immediate west of AOC-3 at LSB-3 and LSB-23 including benzo(a)anthracene (6,450 ug/kg – 11,700 ug/kg), benzo(a)pyrene (1,410 ug/kg – 9,820 ug/kg), benzo(b)fluoranthene (9,010 ug/kg), and dibenzo(a,h)anthracene (1,310 ug/kg – 1,670 ug/kg). No SVOCs were detected in exceedance of the Restricted Commercial SCOs at MW-4 and LSB-24 to the immediate east of AOC-3. All SVOC exceedances of the Restricted Residential and Restricted Commercial SCOs immediately to the west of AOC-3 were detected between 2- and 14-feet bgs.

Soil samples for SVOC analysis were collected from within the extents of **AOC-5** at LSB-1, LSB-25, and SB-5.

SVOCs were detected in exceedance of the Restricted Residential SCOs at all sample locations including anthracene (151,000 ug/kg), benzo(k)fluoranthene (10,000 ug/kg – 39,700 ug/kg), chrysene (13,000 ug/kg), dibenzofuran (62,100 ug/kg), fluoranthene (160,000 ug/kg – 473,000 ug/kg), naphthalene (102,000 ug/kg), phenanthrene (162,000 ug/kg), and pyrene (149,000 ug/kg – 340,000 ug/kg). SVOCs were detected in exceedance of the Restricted Commercial SCOs at all sample locations including benzo(a)anthracene (11,000 ug/kg – 168,000 ug/kg), benzo(a)pyrene (16,000 ug/kg – 152,000 ug/kg), benzo(b)fluoranthene (11,000 ug/kg – 150,000 ug/kg), benzo(k)fluoranthene (76,700 ug/kg), chrysene (74,800 ug/kg – 166,000 ug/kg), dibenzo(a,h)anthracene (3,200 ug/kg – 36,900 ug/kg), indeno(1,2,3-cd)pyrene (7,600 ug/kg – 89,900 ug/kg), and phenanthrene (539,000 ug/kg). All SVOC exceedances of the

Restricted Residential and Restricted Commercial SCOs in AOC-5 were identified between 5.5- and 9.5-feet bgs.

Soil samples for SVOC analysis were collected from the immediate east and south of AOC-5 at LSB-2, LSB-7, LSB-8, and MW-3. SVOCs were detected in exceedance of the Restricted Residential SCOs to the immediate east of AOC-5 at LSB-2 and LSB-7 including benzo(a)anthracene (2,010 ug/kg – 2,670 ug/kg), benzo(b)fluoranthene (1,230 ug/kg – 3,000 ug/kg), and indeno(1,2,3-cd)pyrene (594 ug/kg – 1,910 ug/kg). No exceedances of the Restricted Residential SCOs for SVOCs were detected to the south of AOC-5 at LSB-8 and MW-3. SVOCs were detected in exceedance of the Restricted Commercial SCOs to the immediate east of AOC-5 at LSB-2 and LSB-7 including benzo(a)pyrene (1,980 ug/kg – 3,080 ug/kg) and dibenzo(a,h)anthracene (686 ug/kg – 774 ug/kg). No SVOCs were detected in exceedance of the Restricted Commercial SCOs at MW-3 or LSB-8 to the immediate south of AOC-5. All SVOC exceedances of the Restricted Residential and Restricted Commercial SCOs to the immediate east of AOC-5 were identified between 6.5- and 15-feet bgs.

Soil samples for SVOC analysis were collected from the vicinity of the **former ASTs** at LSB-21, LSB-27, TP-1, TP-7, SB-2, SB-3, and P-4. Exceedances of the Restricted Residential SCOs for SVOCs were detected at P-4 and TP-1 including benzo(a)anthracene (1,360 ug/kg – 2,400 ug/kg), benzo(b)fluoranthene (1,010ug/kg – 2,400 ug/kg), dibenzo(a,h)anthracene (480 ug/kg), and indeno(1,2,3-cd)pyrene (780 ug/kg – 1,100 ug/kg). No exceedances of the Restricted Residential SCOs were detected in any of the other samples collected. Exceedances of the Restricted Commercial SCOs for SVOCs were detected at P-4 and TP-1 including benzo(a)pyrene (1,150 ug/kg – 2,800 ug/kg). No exceedances of the Restricted Commercial SCOs were detected in any of the other samples collected. All SVOC exceedances of the Restricted Residential and Restricted Commercial SCOs in the vicinity of the former ASTs were identified between 3.5- and 5-feet bgs.

Soil samples for SVOC analysis that are not in the vicinity of AOC-1 and AOC-2 at 388 Carroll Street were collected at TP-3, SB-6, and SB-7. SVOCs were not detected in exceedance of the Restricted Residential or Restricted Commercial SCOs in any of the samples collected. Soil samples for SVOC analysis that are not in the vicinity of AOC-3 and AOC-5 at 363 Bond Street were collected at

LSB-10, SB-2, SB-3, SB-4, MW-1, and MW-2. SVOCs were detected in exceedance of the Restricted Residential SCOs at MW-2, SB-2, SB-3, and SB-4 including benzo(a)anthracene (1,900 ug/kg – 3,700 ug/kg), benzo(b)fluoranthene (1,600 ug/kg – 2,800 ug/kg), benzo(k)fluoranthene (5,100 ug/kg – 19,000 ug/kg), chrysene (4,300 ug/kg – 30,000 ug/kg), and indeno(1,2,3-cd)pyrene (1,800 ug/kg – 3,100 ug/kg). SVOCs were not detected in exceedance of the Restricted Residential SCOs at LSB-10. SVOCs were detected in exceedance of the Restricted Commercial SCOs at MW-2, SB-2, SB-3, and SB-4 including benzo(a)anthracene (8,200 ug/kg – 26,000 ug/kg), benzo(a)pyrene (2,200 ug/kg – 26,000 ug/kg), benzo(b)fluoranthene (15,000 ug/kg – 19,000 ug/kg), dibenzo(a,h)anthracene (570 ug/kg – 6,800 ug/kg), and indeno(1,2,3-cd)pyrene (12,000 ug/kg – 15,000 ug/kg). No SVOCs were detected in exceedance of the Restricted Commercial SCOs at LSB-10 and MW-1. All SVOC exceedances of the Restricted Residential and Restricted Commercial SCOs not in the vicinity of AOC-1 and AOC-2 were detected between 1- and 12-feet bgs.

Pesticides

Pesticides were detected at only seven sample locations above UUOs, but were not detected above Unrestricted Use Residential Standards at any sample location.

PCBs

PCBs were detected above UUOs at only three soil boring locations. With the exception of one sample at LSB-9, no exceedances of Restricted Residential SCOs were reported. Aroclor 1254 was detected in exceedances of the Restricted Commercial SCOs in AOC-3 at LSB-9 (6,240 ug/kg) from 0- to 2-feet bgs. PCBs were not detected above Unrestricted Use SCOs in the deeper sample (4- to 6-feet) collected at the LB-9 location.

Metals

Metals were detected in exceedance of the Restricted Residential SCOs in 17 soil samples collected at the site and in exceedance of the Restricted Commercial SCOs in 16 soils samples collected at the site.

Soil samples for metals analysis were collected from within the extents of **AOC-1** at SB-3, SB-4, TP-1, and TP-6.

Metals exceedances of the Restricted Residential SCOs were detected in AOC-1 at SB-3 and TP-6 including magnesium (856,000 ug/kg) and mercury (1,900 ug/kg

– 2,700 ug/kg). No metals exceedances of the Restricted Residential SCOs were detected in SB-4 or TP-1. Metals exceedances of the Restricted Commercial SCOs were detected in AOC-1 at SB-3, TP-1, and TP-6 including arsenic (20,000 ug/kg – 43,200 ug/kg). No metals exceedances of the Restricted Commercial SCOs were detected in SB-4. All metals exceedances of the Restricted Residential SCOs were detected between 2.7- and 5-feet bgs and all metals exceedances of the Restricted Commercial SCOs were detected between 0.5- and 5-feet bgs.

Soil samples for metals analysis were collected from immediately to the east and west of AOC-1 at SB-1, SB-11, and SB-12. The only metal that was detected in exceedance of the Restricted Residential SCOs was mercury (840 ug/kg) in SB-1 from 4- to 5-feet bgs. No exceedances of the Restricted Residential SCOs were detected SB-11 or SB-12. No metals were detected in exceedance of the Restricted Commercial SCOs in any of the samples collected.

Soil samples for metals analysis were collected from within the extents of **AOC-2** at SB-8 and TP-5.

The only metal that was detected in exceedance of the Restricted Residential SCOs was mercury (1,600 ug/kg) in TP-5 from 1.5- to 3-feet bgs. No metals were detected in exceedance of the Restricted Residential SCOs in SB-8. No metals exceedances of the Restricted Commercial SCOs were detected in either of the samples collected.

Soil samples for metals analysis were collected from the immediate north and east of AOC-2 at TP-4 and SB-10. No metals exceedances of the Restricted Residential or Restricted Commercial SCOs were detected in either of the samples collected.

Soil samples for metals analysis were collected from within the extents of **AOC-3** at LSB-9, LSB-22, SB-1, and MW-5. Metals were detected in exceedance of the Restricted Residential SCOs at SB-1, LSB-9, and LSB-22 including cadmium (4,700 ug/kg), lead (489,000 ug/kg – 572 ug/kg), and mercury (828 ug/kg – 2,010 ug/kg). Metals were detected in exceedance of the Restricted Commercial SCOs in AOC-3 at LSB-9, LSB-22, and MW-5 including arsenic (80,300 ug/kg), barium (1,060,000 ug/kg), cadmium (62,300 ug/kg – 213,000 ug/kg), copper (487,000 ug/kg – 2,680,000 ug/kg), lead (1,420,000 ug/kg – 2,990,000 ug/kg), and mercury (4,320 ug/kg – 19,500 ug/kg). No metals were detected in exceedance of the Restricted Commercial SCOs atSB-1. All metals

exceedances of the Restricted Residential SCOs in AOC-3 were detected between 0- and 6-feet bgs and all metals exceedances of the Restricted Commercial SCOs in AOC-3 were identified between 0- and 9.5-feet bgs.

Soil samples for metals analysis were collected from immediately to the west and east of AOC-3 at LSB-23, LSB-24, and MW-4. Exceedances of the Restricted Residential SCO were detected for mercury (840 ug/kg – 1,600 ug/kg) at MW-4 from 6- to 14-feet bgs. Exceedances of the Restricted Commercial SCOs for metals were detected in all three samples collected including arsenic (17,000 ug/kg), barium (502,000 ug/kg), cadmium (21,000 ug/kg – 50,000 ug/kg), and lead (1,290,000 ug/kg). All metals exceedances of the Restricted Commercial SCOs to the immediate east and west of AOC-3 were identified between 0- and 8-feet bgs.

Soil samples for metals analysis were collected from within the extents of **AOC-5** at SB-5 and soil samples for lead analysis were collected from within the extents of AOC-5 at LSB-1 and LSB-25. Metals were detected in exceedance of the Restricted Residential SCOs in SB-5, LSB-1, and LSB-25 including lead (430,000 ug/kg – 582,000 ug/kg) and mercury (2,400 ug/kg). An exceedance of the Restricted Commercial SCO for arsenic (39,200 ug/kg) was detected in AOC-5 at SB-5. No other metals were detected in exceedance of the Restricted Commercial SCOs in AOC-5. All exceedances of the Restricted Residential SCOs for metals in AOC-5 were detected between 5.5- and 8-feet bgs and the exceedance of the Restricted Commercial SCOs was detected between 7- and 8-feet bgs.

Soil samples for metals analysis were collected from the immediate east and south of AOC-5 at MW-3 and LSB-7. No exceedances of the Restricted Residential or Restricted Commercial SCOs were detected at either sample location.

Soil samples for metals analysis were collected from the vicinity of the **former ASTs** at SB-3. Exceedances of the Restricted Residential SCOs were detected at SB-3 for lead (856,000 ug/kg) and mercury (1,900 ug/kg) from 5- to 7-feet bgs. Exceedances of the Restricted Commercial SCOs were detected at SB-3 for arsenic (43,200 ug/kg) between 5- and 7-feet bgs.

Soil samples for metals analysis that are not in the vicinity of AOC-1 and AOC-2 at 388 Carroll Street were collected at SB-6 and TP-3. The only exceedance of the Restricted Residential SCOs detected was for mercury (1,200 ug/kg) from 4-

to 6-feet bgs at SB-6. Metals were not detected in exceedance of the Restricted Commercial SCOs in either of the samples collected. Soil samples for metals analysis that are not in the vicinity of AOC-3 and AOC-5 at 363 Bond Street were collected at LSB-10, SB-2, SB-3, SB-4, MW-1, and MW-2. Exceedances of the Restricted Residential SCOs were detected MW-2 and SB-3 including lead (674,000 ug/kg – 851,000 ug/kg) and mercury (970 ug/kg). No exceedances of the Restricted Residential SCOs were detected in MW-1 and LSB-10. Exceedances of the Restricted Commercial SCOs were detected at MW-2, SB-2, and SB-4 including arsenic (51,500 ug/kg), cadmium (32,400 ug/kg), copper (354,000 ug/kg), lead (1,450,000 ug/kg), and mercury (9,900 ug/kg). No exceedances of the Restricted Commercial SCOs were detected in LSB-10, MW-1, and SB-3. All exceedances of the Restricted Residential SCOs for metals were detected between 1- and 10-feet bgs and all exceedances of the Restricted Commercial SCOs for metals were detected between 1- and 12-feet bgs.

LNAPL

LNAPL and/or sheen was identified in soil at 11 sample locations. Sheen was observed within the extents and in the vicinity of AOC-1 at SB-2 (2- and 8-feet bgs), SB-3 (4-feet bgs) and SB-5 (2-feet bgs). LNAPL was observed within the extents of and in the vicinity of AOC-2 at SB-8 (3.5-feet bgs) and SB-10 (8-feet bgs) with a thickness of approximately 0.5-feet. LNAPL and/or sheen was observed within the extents of AOC-3 at TP-1 (5.4-feet bgs), MW-5 (7- and 8-feet bgs), LSB-22 (4-feet bgs), and SB-1 (2- and 4-feet bgs) at a thickness ranging between 0.1- and 0.5 feet. LNAPL and/or sheen was observed within the extents and in the vicinity of AOC-5 at LSB-1 (8- and 10-feet bgs) and LSB-8 (8-feet bgs) with a thickness of approximately 0.67 feet. NAPL observations are provided on Figure 11.

6.2 Groundwater

The RI identified groundwater impacts associated with historic operations in portions of the Site. A summary of exceedances of the GWQS reported at monitoring well locations throughout the site is provided below.

VOCs

VOCs were detected in exceedance of the GWQS in 16 of the samples collected (corresponding to 13 unique sample locations).

VOCs were detected in exceedance of the GWQS in groundwater samples collected from **AOC-1** at SB-3 including benzene (1.7 ug/l). VOCs were detected in exceedance of the GWQS in groundwater samples collected to the east of AOC-1 at SB-11 including benzene (33 ug/l), toluene (5.5 ug/l), and mixed xylenes (17 ug/l).

VOCs were detected in exceedance of the GWQS in groundwater samples collected from **AOC-2** at MW-1 including benzene (3.2 ug/l).

VOCs were detected in exceedance of the GWQS in groundwater samples collected from **AOC-3** at MW-5 and LMW-6 including 1,2,4-trimethylbenzene (24 ugl/ - 160 ug/l), 1,3,5-trimethylbenzene (Mesitylene) (42 ug/l), benzene (39 ug/l – 59 ug/l), cis-1,2-dichloroethylene (450 ug/l), ethylbenzene (11 ug/l – 64 ug/l), isopropylbenzene (cumene) (14 ug/l – 16 ug/l), n-propylbenzene (11 ug/l – 17 ug/l), o-xylene (14 ug/lg – 93 ug/l), toluene (6.1 ug/l – 38 ug/l), mixed xylenes (94 ug/l), and vinyl chloride (10 ug/l - 11 ug/l). VOCs were detected in groundwater samples collected from MW-2 and MW-4 to the west and east of AOC-3 including naphthalene (23 ug/l) and benzene (1 ug/l).

VOCs were detected in exceedance of the GWQS in groundwater samples collected from **AOC-5** at LMW-7 including 1,2,4-trimethylbenzene (6,000 ug/l), 1,3,5-trimethylbenze (1,900 ug/l), ethylbenzene (360 ug/l), isopropylbenzene (410 ug/l), n-butylbenzene (580 ug/l), n-propylbenzene (610 ug/l), o-xylene (3,200 ug/l), sec-butylbenzene (320 ug/l), and toluene (1,800 ug/l). VOCs were detected in exceedance of the GWQS in groundwater samples collected to the south of AOC-5 at MW-3 including acetone (130 ug/l), isopropylbenzene (14 ug/l), n-butylbenzene (6.8 ug/l), and n-propylbenzene (19 ug/l).

VOCs were detected in exceedance of the GWQS in groundwater samples collected from monitoring wells in the vicinity of the **former ASTs** at SB-2 and LMW-9 including benzene (1.9 ug/l – 8.8 ug/l), cis-1,2-dichlorethylene (8.1 ug/l), TCE (6.6 ug/l), and vinyl chloride (4.6 ug/l). No VOCs were detected in LMW-10.

VOCs were detected marginally in exceedance of the GWQS in groundwater samples collected from monitoring wells not in the vicinity of AOCs only at SB-7 including benzene (1 ug/l – 8.8 ug/l). VOCs were not detected in monitoring wells MW-1, SB-7, and SB-12.

SVOCs

SVOCs were detected in exceedance of the GWQS in eight of the samples collected (corresponding to six unique sample locations).

No SVOCs were detected in exceedance of the GWQS in groundwater samples collected from **AOC-1** at SB-3. SVOCs were detected in exceedance of the GWQS in groundwater samples collected to the east of AOC-1 at SB-11 including acenaphthene (89 ug/l), benzo(a)anthracene (2 ug/l), chrysene (1 ug/l), and naphthalene (10 ug/l).

NO SVOCs were detected in exceedance of the GWQS in groundwater samples collected from **AOC-2** at MW-1.

SVOCs were detected in exceedance of the GWQS in groundwater samples collected from **AOC-3** at MW-5 and LMW-6 including acenaphthene (63.9 ug/l – 1,020 ug/l), anthracene (507 ug/l – 675 ug/l), benzo(a)anthracene (10 ug/l – 376 ug/l), benzo(b)fluoranthene (214 ug/l – 242 ug/l), benzo(k)fluoranthene (184 ug/l – 236 ug/l), chrysene (11 ug/l – 346 ug/l), fluoranthene (1,130 ug/l – 1,360 ug/l), fluorene (59 ug/l – 1,030 ug/l), indeno(1,2,3-cd)pyrene (57.8 ug/l – 84.7 ug/l), naphthalene (139 ug/l – 43,700 ug/l), phenanthrene (110 ug/l – 2,250 ug/l), pyrene (866 ug/l – 976 ug/l), 2,4-dimethylphenol (260 ug/l), o-cresol(s) (2-methylphenol) (47 ug/l), and phenol (7 ug/l). SVOCs were detected in groundwater samples collected from MW-2 and MW-4 to the west and east of AOC-3 including naphthalene (23 ug/l).

SVOCs were detected in exceedance of the GWQS in groundwater samples collected from **AOC-5** at LMW-7 including naphthalene (43,700 ug/l). No SVOCs were detected in exceedance of the GWQS in groundwater samples collected to the south of AOC-5 at MW-3.

No SVOCs were detected in exceedance of the GWQS in groundwater samples collected from monitoring wells in the vicinity of the **former ASTs** at SB-2, LMW-9, and LMW-10.

SVOCs were detected in marginal exceedance of the GWQS in groundwater samples collected from monitoring wells not in the vicinity of AOCs at SB-7 including benzo(a)anthracene (0.6 ug/l). SVOCs were not detected in monitoring wells MW-1, SB-7, and SB-12.

Pesticides

No pesticides were detected in exceedances of the GWQS.

PCBs

Aroclor 1254 was detected in exceedances of the GWQS at LMW-7 in AOC-5 (9.35 ug/l).

Metals

Metals were detected in exceedances of the GWQS in 22 of the samples collected (corresponding to 15 unique sample locations) including total aluminum (10 ug/l – 1,150 ug/l), dissolved aluminum (12 ug/l – 28 ug/l), total antimony (8.3 ug/l), total arsenic (35.7 ug/l – 930 ug/l), dissolved arsenic (30.5 ug/l), total barium (8,680 ug/l), total cadmium (16.4 ug/l – 134 ug/l), dissolved cadmium (15.3 ug/l), total iron (426 ug/l – 25,200 ug/l), dissolved iron (504 ug/l – 5,110 ug/l), total lead (27 ug/l – 109,000 ug/l), dissolved lead (135 ug/l), total magnesium (38,400 ug/l – 406,000 ug/l), dissolved magnesium (40,500 ug/l – 409,000 ug/l), total manganese (544 ug/l – 4,650 ug/l), dissolved manganese (512 ug/l – 4,480 ug/l), total selenium (11 ug/l – 19 ug/l), dissolved selenium (11 ug/l – 50 ug/l), total sodium (28,400 ug/l – 187,000 ug/l), and dissolved sodium (29,000 ug/l – 184,000 ug/l).

LNAPL

Additionally, LNAPL and/or sheen was identified in groundwater at five groundwater sample locations and in two test pits. LNAPL and/or sheen was identified in AOC-1 at TP-6 (0.5-feet thick), in AOC-3 at TP-3 (0.1-feet thick), TP-2 (sheen), and MW-5 (0.1-feet thick), and in AOC-5 at LMW-7 (3.0-feet thick) and MW-3 (0.5-feet thick). NAPL observations are provided on Figure 11.

6.3 Soil Vapor

The following compounds are potentially associated with former site operations and were considered for the potential vapor intrusion condition:

- Benzene
- Toluene
- Ethylbenzene
- M&P-Xylenes
- O-Xylene
- 1,1-Dichloroethane
- 1,1-Dichloroethene
- Tetrachloroethylene (PCE)
- Trichloroethylene (TCE)

Target VOCs detected in exceedance of the NYSDOH and/or USEPA criteria included benzene (10 ug/m^3 – 850 ug/m^3), ethylbenzene (23 ug/m^3 – 690 ug/m^3), m&p xylenes (22 ug/m^3 – 2,000 ug/m^3), o-xylene (8.3 ug/m^3 – 590 ug/m^3), total xylenes (12 ug/m^3), PCE (17 ug/m^3 – 4,160 ug/m^3), TCE (13 ug/m^3 – 56,000 ug/m^3), and toluene (46,000 ug/m^3 – 2,000 ug/m^3). Petroleum-related VOCs in soil vapor were identified throughout the Site corresponding to the presence of petroleum-related VOCs detected in groundwater throughout the Site. CVOCs were detected in soil vapor throughout the Site at higher concentrations that would typically be anticipated based on the concentrations of CVOCs detected in groundwater.

The PCE concentrations ranging between 17 ug/m^3 – 4,160 ug/m^3 were compared to Matrix 2 of the NYSDOH Vapor Intrusion Guidance document and accordingly, concentrations detected above 100 ug/m^3 require monitoring and concentrations detected above 1,000 ug/m^3 require mitigation. No further action is required for concentrations detected below 100 ug/m^3. The TCE concentrations ranging between 13 ug/m^3 – 56,000 ug/m^3 were compared to Matrix 1 of the NYSDOH Vapor Intrusion Guidance document and accordingly, concentrations detected between 50 ug/m^3 and 250 ug/m^3 require monitoring and concentrations detected above 250 ug/m^3 require mitigation. No further action is required for concentrations detected below 50 ug/m^3.

Soil vapor analytical results revealed that mitigation is required in AOC-3 and AOC-5.

7.0 FATE AND TRANSPORT OF COPCS

The soil/fill and groundwater sample analytical results were incorporated with the physical characterization of the Site to evaluate the fate and transport of constituents of primary concern (COPCs) in Site media. The mechanisms by which the COPCs can migrate to other areas or media are briefly outlined below.

7.1 Fugitive Dust Generation

Volatile and non-volatile chemicals present in soil can be released to ambient air as a result of fugitive dust generation. Under the proposed future residential and commercial land use, the Site would be covered by a composite cover capping system consisting of structures, concrete, and vegetation. However, since fugitive dusts may be generated during construction activities, this migration pathway is potentially relevant and should be mitigated with a

Community Air Monitoring Program which will incorporate Site perimeter dust monitoring and dust suppression techniques, accordingly.

7.2 Volatilization

Volatile chemicals present in soil/fill, groundwater, and soil gas may be released to ambient or indoor air either from or through the soil/fill underlying current or future building structures. Volatile chemicals typically have a low organic-carbon partition coefficient (Koc), low molecular weight, and a high Henry's Law constant.

VOCs were detected in site soils above 6 NYCRR Part 375 unrestricted use SCOs. Elevated concentrations of PCE and TCE are present in soil vapor and exceedances of the NYSDOH and USEPA criteria were detected in all of the soil vapor samples for benzene, toluene, ethylbenzene, and xylenes (collectively known as BTEX compounds). Additionally, VOCs were detected in site groundwater at concentrations above the Class GA GWQS. As these exceedances are located within the footprint of the proposed building, a sub-slab depressurization system (SSDS) is being proposed for all occupied structures proposed on the Site to mitigate a potential exposure pathway.

7.3 Surface Water Runoff

Erosion and transport of surface soils and associated sorbed chemicals in surface water runoff is a potential migration pathway. Chemicals in subsurface soil and groundwater could be potentially transported during excavation or construction activities; however, potential surface water runoff is being addressed by the Stormwater Pollution Prevention Plan (SWPPP) prepared by AKRF Engineering, P.C. and dated October 2013. Under the proposed future residential and commercial land use, the entire Site will be covered by a composite cover capping system consisting of structures, concrete, and vegetation; stormwater runoff will be collected in on-site and off-site catch basins. Stormwater from the building will be collected and treated by a Vortechs treatment system prior to discharge to the canal. Stormwater will be conveyed via overland flow directly to the canal from the waterfront esplanade which will be part of the site composite capping system.

7.4 Leaching

Leaching refers to chemicals present in soil/fill migrating downward to groundwater as a result of infiltration of precipitation. Excavation and off-Site disposal of a significant amount of impacted soil/fill from the Site to address the presence of identified petroleum impacts will mitigate potential leaching of

chemicals to groundwater. Those COPCs remaining on Site below the composite cover system will consist mostly of metals and PAHs compounds that are primarily associated with the fill and are not considered highly mobile. Under the proposed future residential commercial land use, the entire Site will be covered by a composite cover capping system consisting of structures, concrete, and landscaped areas that will be placed on 2-feet of clean fill material, minimizing the infiltration of water through the fill material. As such, leaching is not considered a potential migration pathway for this Site.

7.5 Groundwater Transport

The groundwater flow direction at the Site is towards the Gowanus Canal to the east. Chemicals detected in on-site groundwater above GWQS may be transported across the Site via this pathway. The Interim Remedial Action (IRM) activities proposed in the October 2013 IRM Workplan (IRMWP) prepared by Langan will effectively remove potential source areas of contamination. Additionally, as part of the overall site remediation four significant portions of the site (AOCs 1, 2, 3, and 5) will be excavated to remove these potential source areas of contamination.

As groundwater in Brooklyn is not used as a potable water source, on-site and off-site exposure via ingestion of contaminated groundwater is unlikely.

7.6 Exposure Pathways

Based on the analysis of chemical fate and transport provided above, the pathways through which Site COPCs could reach receptors off-Site at significant exposure point concentrations are volatilization; and, to a lesser extent, fugitive dust emissions via physical disturbance of subsurface soil particles and surface water migration.

The fugitive dust emissions potential will be mitigated during construction activities via the implementation of a CAMP and perimeter dust and volatile organic compound monitoring, dust management practices and engineered controls. As previously discussed, under the proposed future land use, the majority of the Site would be covered by structures, concrete, asphalt, and landscaped areas which will be underlain by 2-feet of clean fill, making fugitive dust emissions less likely.

Volatilization and groundwater transport exposure pathways are anticipated to be mitigated by the use of engineered and institutional controls (i.e. vapor barrier and SSDS) and groundwater use restriction.

Best Management Practices (BMP) for soil erosion and surface water runoff shall be selected to minimize erosion and sedimentation off-site from the start of the remediation to the completion of the development.

8.0 QUALITATIVE HUMAN EXPOSURE ASSESSMENT

A Qualitative Human Health Exposure Assessment was conducted in accordance with Appendix 3B of the NYSDEC DER-10, Technical Guidance for Site Investigation and Remediation, dated May 2010. The assessment includes an evaluation of potential sources and migration pathways of site contamination, potential receptors, exposure media, and receptor intake routes and exposure pathways.

8.1 Site Conditions

The Site consists of two parcels and is identified as Block 452, Lots 1 and 15 on the New York City Tax Map. The property at 363 Bond Street (Tax Block 452, Lot 1) consists of an irregularly shaped lot that is approximately ±0.68-acres and is improved with a one -story vacant, light industrial building. The property at 388 Carroll Street (Tax Block 452, Lot 15) consists of an irregularly-shaped vacant lot that is approximately ±0.67-acres and is currently vacant.

The proposed use of the Site will consist of constructing a 5- to 12-story mixed use commercial and residential building occupying almost the entire footprint of the subject properties. . The basement level of the building will be occupied by a parking garage, basketball court and building amenities, the first floor will be occupied by residential and commercial spaces. The partial below-grade level is located on the northern portion of Lot 1 and the southwestern portion of Lot 15. In addition to the building plans, a waterfront esplanade will be developed along the Gowanus Canal shoreline. In order to construct the esplanade, a new corrugated steel sheet pile bulkhead will be installed across the entire length of the development area.

The environmental conditions at the Site for soil, groundwater, and soil vapor (the exposure media) were described in Section 7. Soil COPCs include VOCs, PAHs, SVOCs and metals in historic fill throughout the Site. Groundwater COPCs include VOCs, PAHs, PCBs, and dissolved metals. Soil vapor COPCs include several chlorinated and petroleum-related VOCs.

8.2 Conceptual Site Model

A conceptual site model has been developed based on the findings of the Site subsurface investigations. The purpose of the conceptual site model is to develop a simplified framework for understanding the distribution of impacted

materials, potential migration pathways, and potentially complete exposure pathways, as discussed below.

8.2.1 Potential Sources of Contamination

Potential sources of contamination at the Site have been identified in Section 3.1 based on investigations completed for the Site. The potential sources of contamination include contaminants from documented historic urban fill material (primarily metals and SVOCs), the presence of two gasoline USTs located along the western area of the Site located in AOC-5, free phase petroleum associated with active NYSDEC spills, and petroleum-impacted soil and groundwater related to the former use of the Site including extensive industrial and manufacturing operations such as an oil terminal, a salvage yard, and a marine equipment storage yard at 388 Carroll Street and an asphalt and cement works, a paint manufacturer, and an automotive repair shop and garage and 363 Bond Street. Petroleum-related VOCs that were identified in groundwater were also identified in soil gas at the site in the designated AOC areas. Chlorinated VOCs were also detected at limited locations at low concentrations in groundwater and at elevated concentrations in soil gas. The source of the petroleum is the former c Site operations and the elevated CVOC concentrations in soil gas may be the result of contributing offsite sources.

8.2.2 Exposure Media

The media that may have been impacted by the above sources include soil, groundwater, and soil gas. Site soil has been impacted by the former historical operations and/or the nature of the historic fill. Analytical data collected to date indicates that the historic fill underlying the Site is contaminated with SVOCs and metals. LNAPL-impacted soil and groundwater are present in AOC-1, AOC-2, AOC-3 and AOC-5 and historic fill is present throughout the Site. Soil gas results indicate the presence of petroleum-related VOCs throughout the Site, the source of which is historic Site operations and CVOC concentrations with potential on and offsite sources. A review of soil, groundwater, and soil vapor analytical results is provided in Section 6.0 (Nature and Extent of Contamination).

As elevated concentrations of petroleum-related VOCs were detected in soil within the extents of the AOCs, petroleum-related VOCs were

detected in groundwater in the vicinity of the AOCs, and isolated CVOCs were detected in groundwater, there is potential for vapors to accumulate under the proposed building slab as the foundation will be above the groundwater table.

8.2.3 Receptor Populations

The Site is currently vacant and access is prevented by a locked construction fence that is located at the perimeter of the property, preventing public access; therefore, human receptors are limited to construction workers who have temporary job trailers on the 388 Carroll Street site. During site development, human receptors are limited to construction and remediation workers, authorized guests visiting the Site and the public adjacent to the Site. Under future conditions, receptors will include the new building tenants, workers, and visitors to the residential and commercial properties including children.

8.2.4 Potential Exposure Pathways – On-Site

Potential pathways to human receptors include direct contact (dermal absorption), ingestion, and inhalation of identified contaminants of concern (COCs). An evaluation of potential exposure pathways is provided below.

Current Site Conditions

Soil at the Site has been contaminated with VOCs, SVOCs, and metals. The Site surface cover is composed of a concrete building slab and an at grade unpaved lot. Human exposure to contaminated soil is possible at the Site and the potential migration pathway is likely complete for dermal absorption, inhalation and ingestion. In order to limit this exposure, activity is limited to authorized workers and guests.

Groundwater is impacted with VOCs, SVOCs, PCBs and metals. Groundwater was encountered between approximately 5.5- and 12-feet bgs during the RI and flows to the northeast towards the Gowanus Canal, located adjacent to the eastern property boundary. LNAPL is also present in AOCs 2, 3 and 5. Because groundwater in New York City is not used as a potable water source, there is no completion of the exposure pathway under current site conditions.

Soil vapor samples were collected from 25 locations across the Site. Soil vapor results indicate the presence of VOCs at concentrations that are

above the NYSDOH October 2006 Vapor Intrusion Guidance Matrix 1 and Matrix 2 criteria for mitigation. Current Site activities are limited to pre-demolition and IRM Site visits within the building. Indoor air samples were not collected because the existing building is vacant and will be demolished; therefore, the exposure pathway to on-Site workers under current conditions has not been fully evaluated.

Exposure prevention is discussed in Section 8.3.

8.2.5 Construction/Remediation Condition

Construction and remediation activities at the Site may result in potential exposures to Site contaminants. Soil at the Site has primarily been contaminated with VOCs, SVOCs, and metals. Construction and remedial activities include construction of foundation components the partial below grade parking garage structure, and excavation and removal of impacted soil. Therefore, the potential exists for exposure of soil COCs to construction and remediation workers via dermal absorption, ingestion, and inhalation of particulate matter. In addition, activities may result in exposure to the public adjacent to the Site through potential generation and off-site migration of dust containing Site COCs.

Site groundwater has been contaminated with VOCs, SVOCs, PCBs, and metals. Groundwater may be encountered during excavation activities by workers, and there is potential for exposure to groundwater COCs for construction workers via dermal absorption, ingestion, or inhalation.

Soil vapor results indicated the presence of VOCs. Therefore, the potential exists for exposure to soil vapor COCs for construction and remediation workers via inhalation. Activities may also result in exposure to the public adjacent to the Site through volatilization of vapors into the air and potential off-site migration.

Exposure prevention during construction and remediation is discussed in Section 8.3.2.

8.2.6 Proposed Future Conditions

The proposed development will include residential and commercial use. Upon completion of the new development, most of the footprint of the Site will be capped with the concrete building basement slab/foundation with a waterproofing/vapor barrier. The remainder of the Site (sidewalks, paved walkways, and landscaped areas of the waterfront esplanade) will be

capped with a demarcation layer and two foot clean fill soil cover system. These barriers will prevent direct human exposure to impacted soil and groundwater that may be left in place. The majority of the petroleum impacts in AOCs 1, 2 and 3 will be addressed via the excavation and off-site disposal of petroleum impacted soils. Additionally, the gasoline-impacted soil and groundwater remediation in AOC 5 will be completed via the excavation and disposal of grossly impacted material and the use of an SVE system and LNAPL recovery wells, thus reducing COC concentrations.

The presence of VOCs in the soil and groundwater creates potential for VOCs vapors to volatilize and potentially accumulate in the proposed building and impact future users. Points of exposure include potential cracks in the foundation of the proposed development. Routes of exposure may include inhalation of vapors entering the building. This pathway will be addressed via the installation of a SSDS within the future building.

There is no risk of ingesting groundwater COCs, since the Site and surrounding areas obtain their drinking water supply from surface water reservoirs located upstate and not from groundwater; therefore, the groundwater will not be pumped from wells or intended for consumption.

8.2.7 Potential Exposure Pathways – Off-Site

Soils have the potential to be transported off-site by wind in the form of dust or on the tires of vehicles or equipment leaving the Site during development and remediation activities. Metal impacts to groundwater are considered a regional problem; however, VOC and SVOC impacts to the groundwater are attributed to the historic petroleum release and/or industrial uses at the Site.

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

- CAMP air monitoring will be conducted for particulates (i.e., dust) and VOCs during all intrusive activities as part of a community air monitoring program. Dust and/or vapor suppression techniques will be employed to limit potential for off-site migration of site soils and vapors.
- Vehicle tires and undercarriages will be washed as necessary prior to leaving the Site to prevent tracking material off-site.

- The Site is located in a highly urbanized area with continuous impervious (i.e. concrete) surface covering.
- Groundwater in New York City is not used as a potable water source.

8.3 Evaluation of Human Health Exposure

Based upon the conceptual site model and the review of environmental data, complete on-site exposure pathways appear to be present based on the current, construction and remediation, and future conditions. The complete exposure pathways indicate there is a risk of exposure to humans from Site contaminants via exposure to soil, groundwater, and soil vapor.

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

8.3.1 Current Conditions

Contaminant sources include the on-site historic fill, LNAPL, and petroleum-impacted fill, soil vapor, and contaminated groundwater. Contaminant release and transport mechanisms include contaminated soil transported as dust and volatilization of contaminants from the soil and groundwater matrices to the soil vapor phase, and existing soil vapor contaminants. Construction is ongoing at the Site and current site conditions are addressed in Section 8.3.2.

8.3.2 Construction/Remediation Activities

During development and remediation activities, points of exposure include disturbed and exposed contaminated soil during excavation, contaminated dust and organic vapors arising from the excavation activities, and contaminated groundwater that may be encountered during excavation operations. Routes of exposure include ingestion and dermal absorption of contaminated soil and groundwater, inhalation of organic vapors arising from contaminated soil and groundwater, and inhalation of dust arising from contaminated soil. The receptor population includes the construction and remediation workers and, to a lesser extent, the public adjacent to the Site. All five elements exist; therefore, completed exposure pathways are present. However, the risk can be minimized by applying appropriate health

and safety measures, such as monitoring the air for organic vapors and dust, using vapor and dust suppression measures, maintaining site security, and wearing the appropriate PPE.

Potential exposures would be of short duration limited only to intrusive activities. In accordance with a HASP, a Soil Management Plan, and a CAMP, measures such as conducting an air-monitoring program, donning PPE, and applying vapor and dust suppression measures to prevent off-site migration of contaminants during construction will be implemented. Such measures would prevent completion of these potential migration pathways.

All construction and remediation work to be completed at the site will be conducted under a site-specific Health and Safety Plan (HASP) which includes workzone air monitoring and a Community Air Monitoring Plan (CAMP) which will serve to prevent onsite and offsite exposure to contaminants at the Site.

8.3.3 Future (Post-Construction) Conditions

Contaminant release and transport mechanisms include volatilization of contaminants from soil vapor or the groundwater matrix to the soil vapor phase. Points of exposure include potential cracks in the foundation slab of the proposed development. Routes of exposure may include inhalation of vapors entering the building; these routes may not exist depending on the effectiveness of the remediation. The receptor population includes the building tenants, residential property employees, and visitors. The possible routes of exposure will be mitigated by proper installation of soil vapor mitigation measures (e.g., SVE and a vapor barrier with an active SSDS) and the impermeable (concrete) site cap.

8.4 Human Health Exposure Assessment Conclusions

The following conclusions were developed from this human health exposure assessment:

1. There is a moderate risk of exposure during the construction and remediation activities. This risk can be minimized by following the appropriate health and safety, vapor and dust suppression, and site security measures. All construction and remediation work to be completed at the site will be conducted under a site-specific HASP which includes workzone air monitoring and a CAMP which will serve to prevent onsite and offsite exposure to contaminants at the Site.

2. The existence of a complete exposure pathway for Site contaminants to human receptors during proposed future conditions is unlikely, as a large quantity of contaminated soils will be excavated for off-site disposal, and a continuous impervious site cap will be installed below the building footprint. The potential pathway for soil vapor intrusion into the building would be addressed through the use of soil vapor intrusion mitigation measures (e.g., SVE and a vapor barrier with an active SSDS).
3. It is unlikely that a complete exposure pathway exists for the migration of site contaminants to off-site human receptors for current, construction phase, or future conditions. A HASP, CAMP, and control measures will be used during construction to prevent completion of this pathway.

8.5 Potential Ecological Risks

Upon completion of the new development, most of the footprint of the Site will be capped with the concrete building basement slab/foundation with a waterproofing/vapor barrier. The remainder of the Site (sidewalks, paved walkways, and landscaped areas of the waterfront esplanade) will be capped with a demarcation layer and two foot clean fill soil cover system. As such, no unacceptable ecological risks are anticipated under the anticipated future use scenario.

The NYSDEC's decision key contained in Appendix 3C of DER-10 (NYSDEC, 2010) was utilized to evaluate whether or not performance of a Fish and Wildlife Resources Impact Analysis was needed.

Review of the NYSDEC's internet-based Environmental Resources Management Resource Mapper suggests that the Site and adjacent properties do not contain state-regulated freshwater wetlands and rare plants and/or rare animals; however, the site is bound to the east by the Gowanus Canal. The proposed remedial activities will effectively remove potential source areas of contamination and the contemplated remedial approach will include a steel bulkhead on the outboard side of the existing timber bulkhead to isolate remaining impacts both to and from the canal. Details of the sheeting design will be provided in a Remedial Action Workplan for the site. As such, there is no evidence that contamination present at the Site has the potential to migrate to and impact potential off-Site ecological resources. Therefore, a Fish and Wildlife Resources Impact Analysis was not needed based on interpretation of NYSDEC guidance (DER-10 Appendix 3C).

9.0 DEVIATIONS FROM RI WORK PLAN

The following is a list of deviations from the NYSDEC-approved RIWP due to site conditions and constraints:

LSB-5 and LSB-6 were not advanced due to a partial basement identified during the geophysical survey. The partial basement was not accessible during RI field activities. However, soil borings LSB-2 and LSB-3 completed during the Phase II Investigation were installed near the southernmost extents of the partial basement and represent the northernmost accessible boring locations.

LSB-10, LSB-23, and LSB-24 were not advanced deeper than 4-feet bgs due to a secondary slab within portions of the building at 363 Bond Street. Therefore, a second sample was not collected from the groundwater interface or depth of greatest impact at these borings.

LMW-6 and LMW-7 were installed as 1-inch temporary wells rather than permanent monitoring wells because of vertical clearance restrictions within the building at 363 Bond Street which limited access for necessary drilling equipment.

10.0 RI SUMMARY/CONCLUSIONS

Based on the data and analyses presented in the preceding sections, Langan offers the following summary and conclusions:

Stratigraphy

Soil at the site consists of an up to 12-foot thick layer of historic urban fill consisting of sand with varying amounts of silt, gravel, brick, cinders, concrete, and wood underlain by an 8- to 14-foot thick clay layer. The clay is underlain by a fine to coarse sand that becomes coarser and contains increasing amount of gravel with depth.

AOC-1 & AOC-2

Analytical results have revealed that soil in AOC-1 and AOC-2 are impacted with SVOCs exceeding the NYSDEC Restricted Residential SCOs including benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, and indeno(1,2,3-cd)pyrene and exceeding the Restricted Commercial and/or Restricted Industrial SCOs including benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, and dibenzo(a,h)anthracene. In addition, AOC-1 and AOC-2 are impacted with metals

exceeding the Restricted Residential SCOs including magnesium and mercury and exceeding the Restricted Commercial and/or Restricted Industrial SCOs including arsenic. No VOCs or pesticides were detected above the Restricted Residential or Restricted Commercial SCOs. A summary of all soil analytical results for the site are provided on Figure 12. Additionally, LNAPL and/or sheen were identified in soil in four locations within the extents and in the vicinity of these AOCs as shown on Figure 11.

Analytical results have revealed that groundwater in AOC-1 and AOC-2 is impacted with low-level benzene and metals above the GWQS. A summary of all groundwater analytical results for the site are provided on Figure 13. Additionally, a sheen was identified on groundwater in one location within these AOCs as shown on Figure 11.

Analytical results have revealed that soil vapor in AOC-1 and AOC-2 are impacted with petroleum-related VOCs above the NYSDOH and/or USEPA criteria. CVCOs PCE and TCE were not detected above concentrations for which the NYSDOH Vapor Intrusion Guidance Matrices 1 and 2 require mitigation.

Soil, groundwater, and soil vapor samples collected at the Site to date have sufficiently delineated the extents of the contamination contained within these AOCs. Delineation of soil is complete at AOC-1 and AOC-2, as analytical results for contaminants of concern SVOCs and metals are substantially lower in the samples collected immediately outside of the AOC extents than those collected within the extents and are representative of typical historic fill concentrations. The analytical results for samples collected within the AOC extents are indicative of petroleum impacts. Additionally, all observed LNAPL impacts are contained within the extents of the AOCs with the exception of SB-10 which, due to the detection of what at what depth, will be incorporated into AOC-2. The remediation of soil and groundwater for these AOCs will be addressed by excavation and a groundwater monitoring program which will be discussed in a Remedial Action Workplan (RAWP) being developed for the Site. Petroleum-related soil vapor impacts will be addressed by the installation of a sub-slab depressurization system (SSDS) that will be installed beneath the footprint of the building as proposed in the IRMWP.

AOC-3

Analytical results have revealed that soil in AOC-3 is impacted with SVOCs exceeding the NYSDEC Restricted Residential SCOs including acenaphthene, benzo(a)anthracene, benzo(b)fluoranthene, benzo(g,h,i)perylene), benzo(k)fluoranthene, chrysene,

fluoranthene, fluorene, naphthalene, indeno(1,2,3-cd)pyrene, phenanthrene, and pyrene and with SVOCs exceeding the Restricted Commercial and/or Restricted Industrial SCOs including benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, fluoranthene, indeno(1,2,3-cd)pyrene, phenanthrene, and pyrene. In addition, AOC-3 is impacted with metals exceeding the Restricted Residential SCOs include cadmium, lead, and mercury and exceeding the Restricted Commercial and/or Restricted Industrial SCOs including arsenic, barium, cadmium, lead, copper, and mercury. PCBs were detected at only one location in exceedance of the Restricted Commercial SCOs. No VOCs or pesticides were detected above the Restricted Residential or Restricted Commercial SCOs. A summary of all soil analytical results for the site are provided on Figure 12. Additionally, LNAPL was identified in soil in four locations within the extents of the AOC as shown on Figure 11.

Analytical results have revealed that groundwater in AOC-3 is impacted with VOCs, SVOCs, and metals above the GWQS. A summary of all groundwater analytical results for the site are provided on Figure 13. Additionally, LNAPL and/or sheen were observed on groundwater at two locations within the extents of the AOC as shown on Figure 11.

Analytical results have revealed that soil vapor in AOC-3 is impacted with petroleum-related VOCs in addition to CVOCs above the NYSDOH and/or USEPA criteria. Specifically, PCE and TCE were detected above concentrations for which the NYSDOH Vapor Intrusion Guidance Matrices 1 and 2 require mitigation. Soil vapor impacts will be addressed via the installation of a sub-slab depressurization system (SSDS) that will be installed beneath the footprint of the building as proposed in the IRMWP.

Soil, groundwater, and soil vapor samples collected at the Site to date have sufficiently delineated the extents of the contamination contained within this AOC. Delineation of soil is complete at AOC-3 as analytical results for contaminants of concern SVOCs and metals are substantially lower in the samples collected immediately outside of the AOC extents than those collected within the extents and are representative of typical historic fill concentrations. The analytical results for samples collected within the AOC extents are indicative of petroleum impacts. In addition, the single PCB exceedance of the Restricted Commercial SCOs is located within the extents of AOC-3. All observed LNAPL impacts are also contained within the extents of the AOC. As proposed in the NYSDEC-approved October 2013 IRMWP, LNAPL impacts in soil and groundwater in AOC-3 will be addressed via multi-phase extraction (MPE) using a high vacuum air

extraction system to remove LNAPL, contaminated groundwater, and vapor from the subsurface. Impacts identified in this AOC that will not be addressed by the IRMWP will be addressed by excavation which will be discussed in a RAWP being developed for the Site.

AOC-5

Analytical results have revealed that soil in AOC-5 is impacted with SVOCs exceeding the NYSDEC Restricted Residential SCOs including anthracene, benzo(k)fluoranthene , chrysene, dibenzofuran, fluoranthene, naphthalene, phenanthrene, and pyrene and exceeding the Restricted Commercial and/or Restricted Industrial SCOs including benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, indeno(1,2,3-cd)pyrene, phenanthrene, and pyrene. In addition, AOC-5 is impacted with metals exceeding the Restricted Residential SCOs including lead and mercury and exceeding the Restricted Commercial and/or Restricted Industrial SCOs for aresenic. No VOCs or pesticides were detected above the Restricted Commercial SCOs. A summary of all soil analytical results for the site are provided on Figure 12. Additionally, LNAPL was identified in soil in two locations within the extents and in the vicinity of the AOC as shown on Figure 11.

Analytical results have revealed that groundwater in AOC-5 is impacted with VOCs, one SVOC, one PCB, and metals above the GWQS. Specifically, the VOC impacts are indicated of gasoline impats. A summary of all groundwater analytical results for the site are provided on Figure 13. Additionally, LNAPL was observed on groundwater at one location within the extents of the AOC and at one location to the south of this AOC as shown on Figure 11.

Analytical results have revealed that soil vapor in AOC-5 is impacted with petroleum-related VOCs in addition to CVOCs above the NYSDOH and/or USEPA criteria. Specifically, PCE and TCE were detected above concentrations for which the NYSDOH Vapor Intrusion Guidance Matrices 1 and 2 require mitigation. Soil vapor impacts will be addressed via the installation of a sub-slab depressurization system (SSDS) that will be installed beneath the footprint of the building as proposed in the IRMWP.

Soil, groundwater, and soil vapor samples collected at the Site to date have sufficiently delineated the extents of the contamination contained within this AOC. Delineation of soil is complete at AOC-5 as analytical results for contaminants of concern SVOCs and metals are substantially lower in the samples collected immediately outside of the AOC

extents than those collected within the extents and are representative of typical historic fill concentrations. The analytical results for samples collected within the AOC extents are indicative of petroleum impacts. Additionally, all observed LNAPL impacts are contained within the extents of the AOC with the exception of LNAPL observed at MW-3. As proposed in the NYSDEC-approved October 2013 IRMWP, LNAPL recovery and gasoline-impacted soil and groundwater remediation using soil vapor extraction (SVE) and LNAPL recovery wells is currently being completed at the Site. Impacts identified in this AOC and LNAPL impacts to the south of this AOC that are not currently being addressed by the IRMWP will be addressed by excavation which will be discussed in a RAWP being developed for the Site.

Coal Tar Impacts

Based on the results of the investigation completed at the site by PW Grosser and the proposed remedial approach discussed in Section 3.0, no further delineation of the DNAPL impacts are proposed for these impacts.

Former ASTs

As detailed in Section 6.1, soil in the vicinity of the former ASTs is impacted with concentrations of SVOCs and metals typical of historic urban fill and no petroleum impacts are evident. Groundwater in this area is impacted with low concentrations of petroleum-related VOCs, the highest concentration of which was detected at downgradient temporary well location SB-11/TW. Sporadic detections of naturally occurring metals (aluminum, antimony, iron, magnesium, and manganese) and SVOC benzo(a)anthracene were the only other COCs detected in the area of the former ASTs and downgradient. As such, no further delineation of this area is proposed. The identified soil impacts will be addressed by the proposed excavation, and any remaining groundwater impacts present subsequent to source removal will be addressed by natural attenuation monitoring that will be detailed in a groundwater monitoring program to be included in the RAWP.

Historic Fill and Site-Wide Impacts

As discussed in preceding sections, soil at the Site is impacted with SVOCs, metals, and one PCB above the NYSDEC Restricted Residential, Restricted Commercial, and/or Restricted Industrial SCOs. The remainder of the soil at the site is impacted with VOCs, SVOCs, and pesticides, and metals at concentrations typical of historic urban fill. As the fill material is located site wide, further delineation of this material is not proposed. The presence of fill material will be addressed by development of a Construction Soil

Management Plan and capping associated with redevelopment of the site to prevent direct contact and inhalation exposure. Isolated areas exhibiting anomalously high concentration of SVOCs, metals, and one PCB will be addressed by excavation within the AOCs as discussed above.

Additionally, groundwater at the Site is impacted with VOCs, SVOCs, metals, and one PCB, and soil vapor at the Site is impacted with VOCs at concentrations which require mitigation according to the NYSDOC Vapor Intrusion Guidance document. Contamination in specific areas of concern will be addressed by interim remedial measures as discussed above. Impacts not associated with the AOCs and not addressed by the interim remedial measures will be addressed in a RAWP being developed for the Site.

TABLES

TABLE 1
SAMPLE SUMMARY
363 BOND STREET AND 388 CARROLL STREET
Brooklyn, New York

363 Bond Street

Environmental Liability Management of New York, LLC Phase II Investigation (2005)			
Matrix	Location	Sample Depth (ft. bgs)	Analyses
Soil	MW-1/3-4	7'-8'	VOCs SVOCs Pesticides PCBs Metals
	MW-1/9-10	9'-10'	
	MW-2/1-3	1'-3'	
	MW-2/9-10	9'-10'	
	MW-3/4-6	4'-6'	
	MW-3/13-15	13'-15'	
	MW-4/6-8	6'-8	
	MW-4/12-14	12'-14'	
	MW-5/7.5-9.5	7.5'-9.5'	
	MW-5/13-15	13'-15'	
	SB-1/1-4	1'-4'	
	SB-1/10-12	10'-12'	
	SB-2/6-8	6'-8'	
	SB-2/10-12	10'-12'	
	SB-3/6-8	6'-8'	
	SB-3/10-12	10'-12'	
	SB-4/9-10.5	9'-10.5'	
	SB-4/14-16	14'-16'	
	SB-5/5-7	5'-7'	
	SB-5/7-8	7'-8'	
Groundwater	MW-1	7.89'	
	MW-2	5.41'	
	MW-4	11.66'	
	MW-5	10.42'	

Langan Phase II Due Diligence Investigation (2012)					
Matrix	Location	Sample Depth (ft. bgs)	Boring Termination (ft. bgs)	Rationale	Analyses
Soil	LSB-1	7.5' - 9.5'	15'	AOC-5 Delineation	VOCs SVOCs Lead
	LSB-2	6.5' - 8.5'	15'		
	LSB-2	11.5' - 13.5'	15'		
	LSB-3	6' - 8'	15'	AOC-3 Delineation	VOCs SVOCs
	LSB-3	12' - 14'	15'		
	LSB-4	7' - 9'	12'		
Groundwater	MW-2	7'	-	Site Characterization	VOCs SVOCs
	MW-5	10'	-		
Soil Vapor	LSV-1	Sub-slab	-	Site Characterization	VOCs
	LSV-2	Sub-slab	-		
Langan Remedial Investigation (2013)					
Matrix	Location	Sample Depth (ft. bgs)	Boring Termination (ft. bgs)	Rationale	Analyses
Soil	LSB-7	0' - 2'	16'	Site Characterization	VOCs SVOCs Pesticides PCBs Metals
	LSB-9	0' - 2'	6'		
	LSB-10	0' - 2'	4'		
	LSB-22	0' - 2'	16'		
	LSB-23	2' - 4'	4'	Site Characterization AOC-3 Delineation	
	LSB-24	0' - 4'	4'		
	LSB-9	4' - 6'	6'	AOC-3 Delineation	
	LSB-22	4' - 6'	16'		
	LSB-7	13' - 15'	16'	AOC-5 Delineation	VOCs, SVOCs, Lead
	LSB-8	10' - 12'	14'		
	LSB-25	5.5' - 7.5'	14'		
	TP-3	7.5'	-	AOC-3 Characterization	Petroleum Fingerpint
Groundwater	MW-1	9'	-	Site Characterization	VOCs SVOCs Pesticides PCBs Total Metals Dissolved Metals
	MW-2	7'	-		
	MW-3	12'	-		
	MW-4	14'	-		
	MW-5	12'	-	AOC-3 Delineation	
	LMW-6	12'	-		
	LMW-7	12.5'	-	AOC-5 Delineation	
	TP-1	5.4'	-	AOC-3 Characterization	Petroleum Fingerpint
Soil Vapor	LSV-1	1'	-	Site Characterization	VOCs
	LSV-2	1'	-		
	LSV-3	1'	-		
	LSV-4	1'	-		
	LSV-5	1'	-		
	LSV-16	1'	-		
	LSV-17	1'	-		
	LSV-18	1'	-		
	LSV-19	1'	-		
	LSV-20	1'	-		
	LSV-1	4'	-		
	LSV-2	3'	-		
	LSV-3	4'	-		
	LSV-4	4'	-		
	LSV-5	4'	-		
	LSV-16	4'	-		
	LSV-17	4'	-		
	LSV-18	4'	-		
	LSV-19	3.5'	-		
	LSV-20	4'	-		

NOTES:
Indicates a previous investigation
AOC-3: Proposed Excavation Area - 363 Bond Street
AOC-5: Former UST Area - 363 Bond Street

388 Carroll Street

Cosmos Environmental Services (1997)			
Matrix	Location	Sample Depth (ft. bgs)	Analyses
Soil	TP-1	---	VOCs SVOCs
	TP-3	---	
	TP-6	---	
	TP-7	---	
	TP-8	---	
	Composite	---	
Groundwater	PPW-3	---	VOCs

Tradewinds (2002)			
Matrix	Location	Sample Depth (ft. bgs)	Analyses
Soil	NE Corner	---	VOCs SVOCs
	NW Corner	---	
	SE Corner	---	
	SW Corner	---	
Groundwater	W1	---	VOCs

Environmental Liability Management of New York, LLC Phase II Investigation (2004)			
Matrix	Location	Sample Depth (ft. bgs)	Analyses
Soil	SB-1/4-5	4'-5'	VOCs SVOCs PCBs Metals
	SB-3/5-7	5'-7'	
	SB-4/3-5	3'-5'	
	SB-6/4-6	4'-6'	
	SB-8/5-7	5'-7'	
	SB-10/1-3	1'-3'	
	SB-11/4-5	4'-5'	
	SB-12/2-4	2'-4'	
	SB-2/9-10	9'-10'	VOCs SVOCs
	SB-5/19-20	19'-20'	
	SB-7/14-15	14'-15'	
	SB-9/3-5	3'-5'	
	SB-11/14-15	14'-15'	
	TP-1/0.5-3	0.5'-3'	VOCs SVOCs PCBs Metals
	TP-1/3-3.5	3'-3.5'	
	TP-3/4-7	4'-7'	
	TP-4/4-5	4'-5'	
	TP-5/1.5-3	1.5'-3'	
	TP-6/2.7-4.7	2.7'-4.7'	
Groundwater	MW-1	---	
	SB-2/TW	---	
	SB-3/TW	---	
	SB-6/TW	---	
	SB-7/TW	---	
	SB-11/TW	---	
	SB-12/TW	---	

P.W. Grosser Consulting. Inc / P.W. Grosser Consulting Engineer & Hydrogeologist, PC (2011)			
Matrix	Location	Sample Depth (ft. bgs)	Analyses
Soil	GP-02	25'-30'	VOCs SVOCs
	GP-04	25'-30'	
	GP-10	25'-30'	
	GP-11	25'-30'	

Zeb Environmental (2012)			
Matrix	Location	Sample Depth (ft. bgs)	Analyses
Soil	P-9	3.5'-5'	VOCs SVOCs
	P-9	6.5'-7'	
	P-10	3'-4'	
	P-10	7'-8'	
	P-12	4'-5'	
	P-1B	4'-5'	
	P-1B	6'-7'	
	P-2	4'-5'	
	P-2	6'-7'	
	P-3	3.5'-5'	
	P-3	7'-7.5'	
	P-4	3.5'-5'	
	P-4	6'-7'	
	P-5	3.5'-5'	
	P-5	7'-7.5'	
	P-6	4'-4.5'	
	P-6	6.5'-7'	
	P-7	4'-5'	
	P-7	7-7.5'	
	P-8	4'-5'	
	P-8	7'-7.5'	

Langan Remedial Investigation (2013)					
Matrix	Location	Sample Depth (ft. bgs)	Boring Termination (ft. bgs)	Rationale	Analyses
Soil	LSB-21	0' - 2'	10'	Site Characterization	VOCs, SVOCs, Pesticides, PCBs, Metals
	LSB-27	0' - 2'	15'		
	LSB-21	7' - 9'	10'	Site Characterization Former ASTs	VOCs, SVOCs, Lead
	LSB-27	5' - 7'	15'		VOCs, SVOCs, Lead
Soil Vapor	LSV-11	3'	---	Site Characterization Former ASTs	VOCs
	LSV-12	3'	---		
	LSV-13	3'	---		
	LSV-14	3'	---		
	LSV-15	2.5'	---		
Groundwater	LMW-9	10'	---	Site Characterization Former ASTs	VOCs, SVOCs, Pesticides, PCBs, Metals
	LMW-10	12'	---		

TABLE 2
SUMMARY OF HISTORICAL SOIL ANALYTICAL RESULTS
363 BOND STREET
Brooklyn, New York

Subpart 375-6 (Revised Brownfields) — Protection of Public Health

Analyte	CAS No.	Unrestricted Use Objectives (ug/kg)	Residential (ug/kg)	Restricted - Residential (ug/kg)	Restricted - Commercial (ug/kg)	Restricted - Industrial (ug/kg)
Volatile Organic Compounds (VOCs)						
1,1-Dichloroethane	75-34-3	270	19,000	26,000	240,000	480,000
1,1-Dichloroethene	75-35-4	330	100,000	100,000	500,000	1,000,000
1,2-Dichloroethane	107-06-2	20	2,300	3,100	30,000	60,000
1,2-Dichloroethene (cis)	156-59-2	250	59,000	100,000	500,000	1,000,000
1,2-Dichloroethene (trans)	156-60-5	190	100,000	100,000	500,000	1,000,000
Acetone	67-64-1	50	100,000	100,000	500,000	1,000,000
Benzene	71-43-2	60	2,900	4,800	44,000	89,000
Carbon Disulfide	75-15-0	—	—	—	—	—
Carbon tetrachloride	56-23-5	760	1,400	2,400	22,000	44,000
Chloroform	67-66-3	370	10,000	49,000	350,000	700,000
Ethylbenzene	100-41-4	1,000	30,000	41,000	390,000	780,000
Methyl ethyl ketone (MEK / 2-butanone)	78-93-3	120	100,000	100,000	500,000	1,000,000
Methylene chloride	75-09-2	50	51,000	100,000	500,000	1,000,000
Styrene	100-42-5	—	—	—	—	—
Toluene	108-88-3	700	100,000	100,000	500,000	1,000,000
Trichloroethene	79-01-6	470	10,000	21,000	200,000	400,000
Vinyl Chloride	75-01-4	20	210	900	13,000	27,000
Xylene (total)	1330-20-7	260	100,000	100,000	500,000	1,000,000
Semi-Volatile Organic Compounds (SVOCs)						
1,2-Dichlorobenzene	95-50-1	1,100	100,000	100,000	500,000	1,000,000
2-Methylnaphthalene	91-57-6	—	—	—	—	—
4-Chloro-3-methylphenol	35421-08-0	—	—	—	—	—
Acenaphthene	83-32-9	20,000	100,000	100,000	500,000	1,000,000
Acenaphthylene	208-96-8	100,000	100,000	100,000	500,000	1,000,000
Anthracene	120-12-7	100,000	100,000	100,000	500,000	1,000,000
Benzo (a) anthracene	56-55-3	1,000	1,000	1,000	5,600	11,000
Benzo (a) pyrene	50-32-8	1,000	1,000	1,000	1,000	1,100
Benzo (b) fluoranthene	205-99-2	1,000	1,000	1,000	5,600	11,000
Benzo (g,h,i) perylene	191-24-2	100,000	100,000	100,000	500,000	1,000,000
Benzo (k) fluoranthene	207-08-9	800	1,000	3,900	56,000	110,000
bis(2-ethylhexyl)phthalate	117-81-7	—	—	—	—	—
Carbozole	86-74-8	—	—	—	—	—
Chrysene	218-01-9	1,000	1,000	3,900	56,000	110,000
Dibenzo (a,h) anthracene	53-70-3	330	330	330	560	1,100
Dibenzofuran	132-64-9	—	—	—	—	—
Di-n-butyl phthalate	84-74-2	—	—	—	—	—
Fluoranthene	206-44-0	100,000	100,000	100,000	500,000	1,000,000
Fluorene	86-73-7	30,000	100,000	100,000	500,000	1,000,000
Indeno (1,2,3-cd) pyrene	193-39-5	500	500	500	5,600	11,000
Naphthalene	91-20-3	12,000	100,000	100,000	500,000	1,000,000
o-Cresol(s) (2-Methylphenol)	95-48-7	330	100,000	100,000	500,000	1,000,000
p-Cresol(s) (4-Methylphenol)	106-44-5	330	34,000	100,000	500,000	1,000,000
Pentachlorophenol	87-86-5	800	2,400	6,700	6,700	55,000
Phenanthrene	85-01-8	100,000	100,000	100,000	500,000	1,000,000
Phenol	108-95-2	330	100,000	100,000	500,000	1,000,000
Pyrene	129-00-0	100,000	100,000	100,000	500,000	1,000,000
Pesticides						
4,4'-DDE	72-55-9	3	1,800	8,900	62,000	120,000
4,4'-DDT	50-29-3	3	1,700	7,900	47,000	94,000
4,4'-DDD	72-54-8	3	2,600	13,000	92,000	180,000
Aldrin	309-00-2	5	19	97	680	1,400
Alpha-BHC	319-84-6	20	97	480	3,400	6,800
Beta-BHC	319-85-7	36	72	360	3,000	14,000
Chlordane (alpha)	5103-71-9	94	910	4,200	24,000	47,000
Delta-BHC	319-86-8	40	100,000	100,000	500,000	1,000,000
Dieldrin	60-57-1	5	39	200	1,400	2,800
Endosulfan I	959-98-8	2,400	4,800	24,000	200,000	920,000
Endosulfan II	33213-65-9	2,400	4,800	24,000	200,000	920,000
Endosulfan Sulfate	1031-07-8	2,400	4,800	24,000	200,000	920,000
Endrin aldehyde	7421-93-4	—	—	—	—	—
Endrin ketone	53494-70-5	—	—	—	—	—
Heptachlor	76-44-8	42	420	2,100	15,000	29,000
Heptachlor epoxide	1024-57-3	—	—	—	—	—
Lindane	58-89-9	100	280	1,300	9,200	23,000
Methoxychlor	72-43-5	—	—	—	—	—
Polychlorinated biphenyls (PCBs)	1336-36-3					
Aroclor 1254	11097-69-1	100	1,000	1,000	1,000	25,000
Aroclor 1260	11096-82-5	100	1,000	1,000	1,000	25,000
Metals						
Aluminum	7429-90-5	—	—	—	—	—
Arsenic	7440-38-2	13,000	16,000	16,000	16,000	16,000
Barium	7440-39-3	350,000	350,000	400,000	400,000	10,000,000
Beryllium	7440-41-7	7,200	14,000	72,000	590,000	2,700,000
Cadmium	7440-43-9	2,500	2,500	4,300	9,300	60,000
Calcium	7440-70-2	—	—	—	—	—
Chromium	7440-47-3	1,000	22,000	110,000	400,000	800,000
Cobalt	7440-48-4	—	—	—	—	—
Copper	7440-50-8	50,000	270,000	270,000	270,000	10,000,000
Iron	7439-89-6	—	—	—	—	—
Lead	7439-92-1	63,000	400,000	400,000	1,000,000	3,900,000
Magnesium	7439-95-4	—	—	—	—	—
Manganese	7439-96-5	1,600,000	2,000,000	2,000,000	10,000,000	10,000,000
Mercury (elemental)	7439-97-6	180	810	810	2,800	5,700
Nickel	7440-02-0	30,000	140,000	310,000	310,000	10,000,000
Potassium	7440-09-7	—	—	—	—	—
Selenium	7782-49-2	3,900	36,000	180,000	1,500,000	6,800,000
Silver	7440-22-4	2,000	36,000	180,000	1,500,000	6,800,000
Sodium	7440-23-5	—	—	—	—	—
Vanadium	7440-62-2	—	—	—	—	—
Zinc	7440-66-6	109,000	2,200,000	10,000,000	10,000,000	10,000,000

Consultant: Environmental Liability Management (ELM) of New York, LLC

Sample ID	MW-1/3-4	MW-1/9-10	MW-2/1-3	MW-2/9-10	MW-3/4-6
Laboratory Sample Number	209324-001	209324-002	209324-003	209324-004	209324-005
Sampling Date	4/15/2005	4/15/2005	4/15/2005	4/15/2005	4/15/2005
Sampling Depth (ft bgs)	3-4'	9-10'	1-3'	9-10'	4-6'
Units	ug/kg Q	ug/kg Q	ug/kg Q	ug/kg Q	ug/kg Q
Volatile Organic Compounds (VOCs)					
1,1-Dichloroethane	1.5 U	1.6 U	1.7 U	1.8 U	710 U
1,1-Dichloroethene	2.4 U	2.4 U	2.5 U	2.8 U	830 U
1,2-Dichloroethane	2.1 U	2.2 U	2.3 U	2.5 U	710 U
1,2-Dichloroethene (cis)	1.4 U	1.4 U	1.5 U	1.7 U	710 U
1,2-Dichloroethene (trans)	1.7 U	1.7 U	1.8 U	2 U	590 U
Acetone	20 B	24 B	51 B	47.000 B	1700 U
Benzene	1.7 U	1.7 U	1.8 U	2 U	470 U
Carbon Disulfide	2 U	5.8 J	7.8	6.000 J	1100 U
Carbon tetrachloride	2.5 U	2.5 U	2.7 U	2.9 U	1200 U
Chloroform	1.3 U	1.3 U	1.4 U	1.5 U	830 U
Ethylbenzene	2.1 U	2.2 U	6.6	2.5 U	1200 U
Methyl ethyl ketone (MEK / 2-butanone)	2.7 U	2.8 U	2.9 U	3.2 U	8,000 B
Methylene chloride	6 JB	5.8 JB	6.9 JB	7.4000 JB	470 UB
Styrene	1.2 U	1.2 U	1.6 J	1.4 U	590 U
Toluene	2 U	2 U	2,900 J	2.4 U	360 U
Trichloroethene	2 U	2 U	2.2 U	2.4 U	830 U
Vinyl Chloride	2.4 U	2.4 U	2.5 U	2.8 U	950 U
Xylene (total)	5.4 U	5.4 U	51	6.3 U	1200 U
Semi-Volatile Organic Compounds (SVOCs)					
1,2-Dichlorobenzene	65 U	65 U	1400 U	150 U	1300 U
2-Methylnaphthalene	61 U	61 U	8900	2100	59000
4-Chloro-3-methylphenol	130 U	130 U	2800 U	310 U	2600 U
Acenaphthene	64 U	63 U	5600 J	1100	1300 U
Acenaphthylene	48 U	47 U	1500 J	480 J	950 U
Anthracene	64 U	63 U	11000	1900	1300 U
Benzo (a) anthracene	52 U	52 U	26,000	3,700	1000 U
Benzo (a) pyrene	48 U	47 U	26,000	3,700	950 U
Benzo (b) fluoranthene	110 U	110 U	19,000	2,800	2100 U
Benzo (g,h,i) perylene	43 U	43 U	18000	1900	850 U
Benzo (k) fluoranthene	43 U	43 U	19,000	2,400	850 U
bis(2-ethylhexyl)phthalate	51 U	51 U	1100 U	120 U	1000 U
Carbozole	57 U	57 U	2400 J	530 J	1100 U
Chrysene	49 U	48 U	30,000	4,300	970 U
Dibenzo (a,h) anthracene	43 U	43 U	6,800 J	710 J	850 U
Dibenzofuran	61 U	61 U	3300 J	610 J	1200 U
Di-n-butyl phthalate	51 U	51 U	1100 U	120 U	1000 U
Fluoranthene	49 U	48 U	71000	9100	1500 J
Fluorene	50 U	50 U	5600 J	1300	4400 J
Indeno (1,2,3-cd) pyrene	39 U	39 U	15,000	1,800	780 U
Naphthalene	66 U	66 U	23,000	2700	1300 U
o-Cresol(s) (2-Methylphenol)	100 U	100 U	2200 U	240 U	2100 U
p-Cresol(s) (4-Methylphenol)	210 U	210 U	4400 U	490 U	4100 U
Pentachlorophenol	330 U	330 U	7100 U	780 U	6600 U
Phenanthrene	45 U	45 U	45000	8400	6000 J
Phenol	110 U	110 U	2400 U	260 U	2200 U
Pyrene	53 U	53 U	72000	7700	1200 J
Pesticides					
4,4'-DDE	0.5 U	0.52 U	2.7 U	0.61 U	1.8 J
4,4'-DDT	0.36 U	0.37 U	1.9 U	0.43 U	0.36 U
4,4'-DDD	0.44 U	0.45 U	2.4 U	0.53 U	0.45 U
Aldrin	0.41 U	0.42 U	2.2 U	0.5 U	0.42 U
Alpha-BHC	0.32 U	0.33 U	1.7 U	0.38 U	1.6 J
Beta-BHC	0.31 U	0.32 U	1.7 U	1.2 J	0.32 U
Chlordane (alpha)	0.13 U	0.13 U	65	0.15 U	0.13 U
Delta-BHC	0.12 U	0.12 U	0.64 U	0.14 U	0.16 J
Dieldrin	0.37 U	0.38 U	53	0.45 U	0.38 U
Endosulfan I	0.17 U	0.18 U	160	0.2 U	0.17 U
Endosulfan II	0.2 U	0.2 U	1.1 U	0.24 U	0.2 U
Endosulfan Sulfate	0.2 U	0.21 U	1.1 U	31	0.2 U
Endrin aldehyde	0.37 U	0.38 U	28	0.45 U	0.38 U
Endrin ketone	0.17 U	0.17 U	46	0.2 U	0.17 U
Heptachlor	0.17 U	0.18 U	0.94 U	0.21 U	0.18 U
Heptachlor epoxide	0.13 U	0.14 U	15	3.1	1.3 J
Lindane	0.18 U	0.18 U	34	0.21 U	1.9 J
Methoxychlor	2.5 U	2.5 U	13 U	32	2.5 U
Polychlorinated biphenyls (PCBs)					
Aroclor 1254	1.4 U	1.4 U	1.5 U	1.7 U	1.4 U
Aroclor 1260	4.6 U	4.8 U	5 U	5.6 U	4.7 U
Metals					
Aluminum	10,200,000	9,900,000	3,250,000	4,330,000	4,500,000
Arsenic	3100 B	4500 J	51,500	13,900	2000 J
Barium	49600	55600	524,000	131000	39000
Beryllium	700 U	710 U	650 U	740 U	500 U
Cadmium	1400 U	1400 U	1,300.0 U	1500 U	1000 U
Calcium	989000	1,360,000	12,300,000	20,000,000	2,020,000
Chromium	22,200	21,200	11,900	11,400	9,400
Cobalt	8600	7500	5200	4300	5300
Copper	26000	20200	354,000	69,200	11800
Iron	19,700,000	20,200,000	15,200,000	9,700,000	9,150,000
Lead	12600	23600	851,000	674,000	41700
Magnesium	3,010,000	2,770,000	3,020,000	3,290,000	2,260,000
Manganese	315000	264000	192000	145000	353000
Mercury (elemental)	41 J	42 J	9,900	680	74
Nickel	23300	20500	25700	25200	24300
Potassium	730000	714000	614000	608000	513000
Selenium	2200 U	2300 U	2100 U	2400 U	1600 U
Silver	450 U	460 U	420 U	470 U	320 U
Sodium	144000	127000 J	430000	624000	72300 J
Vanadium	29800	28800	18300	12800	13500
Zinc	37500	38400	552,000	138,000	26200

Sample ID	MW-3/13-15	MW-4/6-8	MW-4/12-14	MW-5/7.5-9.5	MW-5/13-15
Laboratory Sample Number	209324-006	209324-007	209324-008	209324-009	209324-010
Sampling Date	4/15/2005	4/20/2005	4/20/2005	4/20/2005	4/20/2005
Sampling Depth (ft bgs)	13-15'	6-8'	12-14'	7.5-9.5'	13-15'
Units	ug/kg Q	ug/kg Q	ug/kg Q	ug/kg Q	ug/kg Q
Volatile Organic Compounds (VOCs)					
1,1-Dichloroethane	1.5 U	1.8 U	1.9 U	290 U	1.5 U
1,1-Dichloroethene	2.4 U	2.8 U	2.9 U	340 U	2.2 U
1,2-Dichloroethane	2.1 U	2.5 U	2.6 U	290 U	2 U
1,2-Dichloroethene (cis)	1.4 U	1.7 U	1.8 U	290 U	42
1,2-Dichloroethene (trans)	1.7 U	2 U	2 U	240 U	1.6 U
Acetone	14	2.4 U	2.5 U	680 U	16
Benzene	1.7 U	11	2 U	980 J	1.6 U
Carbon Disulfide	2 U	2.4 U	2.5 U	430 U	3.2 J
Carbon tetrachloride	2.5 U	3 U	3.1 U	480 U	2.4 U
Chloroform	1.3 U	1.6 U	1.6 U	340 U	1.2 U
Ethylbenzene	2.1 U	2.5 U	2.6 U	1,300 J	6.7
Methyl ethyl ketone (MEK / 2-butanone)	2.7 U	3.3 U	3.4 U	580 U	2.6 U
Methylene chloride	6.6000 JB	5 UB	5.9 JB	290 JB	8.9 JB
Styrene	1.2 U	1.4 U	1.5 U	240 U	1.1 U
Toluene	2 U	2.4 U	2.5 U	670 J	2.7 J
Trichloroethene	2 U	2.4 U	2.5 U	340 U	6.7
Vinyl Chloride	2.4 U	2.8 U	2.9 U	390 U	14
Xylene (total)	5.3 U	8.5	6.6 U	2,400 J	33
Semi-Volatile Organic Compounds (SVOCs)					
1,2-Dichlorobenzene	260	150 U	80 U	13000 U	620 U
2-Methylnaphthalene	16000	180 J	140 J	240000	3200 J
4-Chloro-3-methylphenol	520 U	310 U	160 U	26000 U	1300 U
Acenaphthene	250 U	150 U	79 U	200,000	6600
Acenaphthylene	190 U	110 U	59 U	18000 J	1300 J
Anthracene	250 U	260 J	100 J	270,000	13000
Benzo (a) anthracene	210 U	480 J	190 J	340,000	16,000
Benzo (a) pyrene	190 U	510 J	160 J	330,000	14,000
Benzo (b) fluoranthene	430 U	450 J	180 J	210,000	11,000
Benzo (g,h,i) perylene	170 U	390 J	130 J	200,000	8200
Benzo (k) fluoranthene	170 U	210 J	160 J	270,000	10,000
bis(2-ethylhexyl)phthalate	760 J	420 J	210 J	10000 U	490 U
Carbozole	230 U	130 U	70 U	88000	4100
Chrysene	200 J	580 J	270 J	410,000	18,000
Dibenzo (a,h) anthracene	170 U	150 J	53 U	84,000	3,900
Dibenzofuran	250 U	150 U	76 U	130000	5300
Di-n-butyl phthalate	200 U	130 J	63 U	10000 U	490 U
Fluoranthene	380 J	1100	460 J	950,000	52000
Fluorene	1100 J	130 J	79 J	200,000	6800
Indeno (1,2,3-cd) pyrene	160 U	300 J	110 J	170,000	7,600
Naphthalene	260 U	260 J	170 J	300,000	5900
o-Cresol(s) (2-Methylphenol)	410 U	240 U	130 U	20000 U	990 U
p-Cresol(s) (4-Methylphenol)	830 U	490 U	260 U	41000 U	2000 U
Pentachlorophenol	1300 U	790 U	410 U	66000 U	3200 U
Phenanthrene	1700	900 J	430 J	1,100,000	49000
Phenol	450 U	270 U	140 U	22000 U	1100 U
Pyrene	400 J	770 J	390 J	890,000	45000
Pesticides					
4,4'-DDE	0.51 U	0.61 U	370	1,500	110
4,4'-DDT	0.36 U	0.43 U	110	18 U	1.7 U
4,4'-DDD	0.45 U	0.53 U	5.5 U	23 U	2.1 U
Aldrin	0.42 U	0.5 U	5.2 U	21 U	2 U
Alpha-BHC	0.32 U	0.39 U	4 U	16 U	1.5 U
Beta-BHC	0.32 U	0.38 U	3.9 U	120	13
Chlordane (alpha)	0.13 U	0.15 U	1.6 U	6.5 U	0.61 U
Delta-BHC	0.12 U	0.14 U	1.5 U	6.1 U	4.3 J
Dieldrin	0.38 U	0.45 U	4.7 U	19 U	1.8 U
Endosulfan I	0.17 U	0.21 U	2.1 U	8.7 U	0.82 U
Endosulfan II	0.2 U	0.24 U	2.5 U	10 U	0.94 U
Endosulfan Sulfate	0.2 U	5.8	2.5 U	10 U	0.96 U
Endrin aldehyde	0.38 U	0.45 U	4.7 U	19 U	1.8 U
Endrin ketone	0.17 U	0.2 U	2.1 U	8.5 U	0.8 U
Heptachlor	0.18 U	0.21 U	2.2 U	35 J	0.83 U
Heptachlor epoxide	0.13 U	1.4 J	1.7 U	450	32
Lindane	0.18 U	0.21 U	2.2 U	9 U	0.84 U
Methoxychlor	2.5 U	15 J	31 U	1100	86 J
Polychlorinated biphenyls (PCBs)					
Aroclor 1254	1.4 U	1.7 U	1.8 U	1.4 U	1.3 U
Aroclor 1260	4.7 U	5.6 U	8 J	4.7 U	4.4 U
Metals					
Aluminum	4,590,000	4,830,000	5,170,000	3,480,000	1,960,000
Arsenic	2200 J	17,000	5100 J	80,300	2800 J
Barium	40800	502,000	128000	1,060,000	28000
Beryllium	690 U	800 U	710 U	720 U	600 U
Cadmium	1400 U	1600 U	1600 J	1500 J	1200 U
Calcium	1,930,000	6,960,000	46,700,000	27,900,000	15,300,000
Chromium	9,800	9,400	7,100	14,000	4,400
Cobalt	4900	4800	2900	2900	1700 J
Copper	12700	67,700	23300	2,680,000	16500
Iron	9,630,000	6,870,000	7,470,000	10,500,000	3,650,000
Lead	49200	1,290,000	201,000	1,420,000	37500
Magnesium	2,360,000	1,170,000	2,030,000	2,630,000	2,450,000
Manganese	263000	168000	144000	307000	62600
Mercury (elemental)	110	1,600	840	19,500	120
Nickel	22000	12500	9600	14100	4700 J
Potassium	562000	630000	681000	457000	149000 J
Selenium	2200 U	2500 U	2300 U	2300 U	1900 U
Silver	440 U	510 U	450 U	650 J	380 U
Sodium	92500 J	984000	677000	1,130,000	417000
Vanadium	15000	23600	11800	13200	5200
Zinc	28200	483000	60900	1,270,000	1,050,000

Sample ID	SB-1/1-4	SB-1/10-12	SB-2/6-8	SB-2/10-12	SB-3/6-8
Laboratory Sample Number	209324-011	209324-012	209324-013	209324-014	209324-015
Sampling Date	4/20/2005	4/20/2005	4/20/2005	4/20/2005	4/21/2005
Sampling Depth (ft bgs)	1-4'	10-12'	6-8'	10-12'	6-8'
Units	ug/kg Q	ug/kg Q	ug/kg Q	ug/kg Q	ug/kg Q
Volatile Organic Compounds (VOCs)					
1,1-Dichloroethane	300 U	1.6 U	1.5 U	1.6 U	380 U
1,1-Dichloroethene	350 U	2.4 U	2.3 U	2.5 U	440 U
1,2-Dichloroethane	300 U	2.2 U	2.1 U	2.3 U	380 U
1,2-Dichloroethene (cis)	300 U	1.5 U	1.4 U	1.5 U	380 U
1,2-Dichloroethene (trans)	250 U	1.7 U	1.6 U	1.8 U	320 U
Acetone	710 U	40	2 UB	2.1 U	880 U
Benzene	200 U	1.7 U	1.6 U	23	3,100 J
Carbon Disulfide	460 U	2.1 U	2 U	2.1 U	570 U
Carbon tetrachloride	510 U	2.5 U	2.4 U	2.7 U	630 U
Chloroform	350 U	1.3 U	1.3 U	1.4 U	440 U
Ethylbenzene	1900 J	2.2 U	2.1 U	3.8 J	960 J
Methyl ethyl ketone (MEK / 2-butanone)	610 U	3.7 J	2.7 U	2.9 U	760 U
Methylene chloride	270 JB	7.3 JB	4.9 JB	4.4 UB	320 JB
Styrene	250 U	1.2 U	1.2 U	1.3 U	320 U
Toluene	890 J	2.1 U	2 U	8.5	2,700 J
Trichloroethene	350 U	2.1 U	2 U	2.1 U	440 U
Vinyl Chloride	410 U	2.4 U	2.3 U	2.5 U	510 U
Xylene (total)	3,700	5.4 U	5.2 U	17	3,900
Semi-Volatile Organic Compounds (SVOCs)					
1,2-Dichlorobenzene	2800 U	67 U	130 U	140 U	1400 U
2-Methylnaphthalene	20000	64 U	350 J	390 J	4600 J
4-Chloro-3-methylphenol	ND	ND	ND	ND	ND
Acenaphthene	19000	66 U	120 U	710 J	5400 J
Acenaphthylene	8100 J	49 U	92 U	330 J	3900 J
Anthracene	48000	66 U	120 U	750 J	8000
Benzo (a) anthracene	62,000	56 J	250 J	1,900	22,000
Benzo (a) pyrene	61,000	49 U	280 J	2,200	25,000
Benzo (b) fluoranthene	38,000	110 U	210 U	1,600	15,000
Benzo (g,h,i) perylene	31000	44 U	360 J	1,300	16,000
Benzo (k) fluoranthene	42,000	45 J	130 J	1,300	18,000
bis(2-ethylhexyl)phthalate	2200 U	140 J	120 J	110 U	1100 U
Carbozole	16000	59 U	110 U	460 J	1500 J
Chrysene	61,000	64 J	300 J	2,200	27,000
Dibenzo (a,h) anthracene	12,000 J	44 U	83 U	570 J	4,800 J
Dibenzofuran	18000	64 U	120 U	600 J	5100 J
Di-n-butyl phthalate	2200 U	53 U	98 U	110 U	1100 U
Fluoranthene	180,000	120 J	410 J	3500	37000
Fluorene	27000	52 U	96 U	850	7700 J
Indeno (1,2,3-cd) pyrene	27,000	41 U	140 J	1,100	12,000
Naphthalene	21,000	120 J	320 J	1000	3900 J
o-Cresol(s) (2-Methylphenol)	4400 U	110 U	200 U	220 U	2200 U
p-Cresol(s) (4-Methylphenol)	8800 U	220 U	400 U	560 J	4400 U
Pentachlorophenol	14000 U	350 U	640 U	730 U	7000 U
Phenanthrene	190,000	140 J	180 J	3100	28000
Phenol	4800 U	120 U	220 U	240 U	2400 U
Pyrene	110,000	130 J	380 J	3100	39000
Pesticides					
4,4'-DDE	2.7 U	0.52 U	2.7 J	0.54 U	75
4,4'-DDT	1.9 U	0.37 U	0.35 U	0.39 U	1.9 U
4,4'-DDD	2.4 U	0.45 U	0.43 U	0.48 U	2.4 U
Aldrin	2.2 U	0.42 U	0.41 U	0.44 U	2.2 U
Alpha-BHC	1.7 U	0.33 U	0.31 U	0.34 U	1.7 U
Beta-BHC	10 J	0.32 U	0.31 U	0.34 U	1.7 U
Chlordane (alpha)	0.69 U	0.13 U	0.13 U	0.14 U	0.69 U
Delta-BHC	8.2 J	0.12 U	0.12 U	0.13 U	0.64 U
Dieldrin	2 U	0.38 U	0.37 U	0.4 U	2 U
Endosulfan I	0.92 U	0.18 U	0.17 U	0.18 U	0.92 U
Endosulfan II	11 J	0.2 U	0.19 U	0.21 U	1.1 U
Endosulfan Sulfate	230	0.21 U	0.2 U	2.4 J	1.1 U
Endrin aldehyde	2 U	0.38 U	0.37 U	0.4 U	2 U
Endrin ketone	0.9 U	0.17 U	0.16 U	0.18 U	0.9 U
Heptachlor	0.94 U	0.18 U	0.17 U	0.19 U	0.94 U
Heptachlor epoxide	68	0.14 U	0.13 U	1.3 J	22
Lindane	0.95 U	0.18 U	0.17 U	0.19 U	14
Methoxychlor	260	2.5 U	2.4 U	2.6 U	91 J
Polychlorinated biphenyls (PCBs)					
Aroclor 1254	1.5 U	1.4 U	1.4 U	1.5 U	1.5 U
Aroclor 1260	5 U	4.8 U	4.6 U	5 U	5 U
Metals					
Aluminum	2,780,000	4,590,000	749000	4,300,000	3,210,000
Arsenic	8600 J	5600 J	1400 U	7700 J	7000 J
Barium	164000	166000	30500	170000	106000
Beryllium	640 U	610 U	570 U	670 U	680 U
Cadmium	4,700	1,200.0 U	3,400 B	1300 U	1400 U
Calcium	6,780,000	6,270,000	671,000	16,900,000	6,380,000
Chromium	12,200	9,000	2,800 J	6,800	8,300
Cobalt	3800	4200	1200 J	4700	4800
Copper	76,900	16,000	46700	33300	78,500
Iron	7,210,000	11,300,000	2,120,000	9,950,000	7,080,000
Lead	489,000	106,000	91,900	1,450,000	371,000
Magnesium	1,430,000	1,680,000	91,700.0	1,170,000	1,670,000
Manganese	133000	278000	14200	99000	136000
Mercury (elemental)	1,500	110	180	380	970
Nickel	14000	13900	5300 J	9700	13100
Potassium	488000	544000	45500 U	425000	362000
Selenium	2000 U	2000 U	5,500 J	2200 U	2200 U
Silver	410 U	390 U	360 U	430 U	440 U
Sodium	593000	784000	34500 J	392000	185000
Vanadium	11800	17900	5400	16900	12500
Zinc	243,000	35800	25100	57000	147,000

Sample ID	SB-3/10-12	SB-4/9-10.5	SB-4/14-16	SB-5/5-7	SB-5/7-8
Laboratory Sample Number	209324-016	209324-017	209324-018	209324-019	209324-020
Sampling Date	4/21/2005	4/21/2005	4/21/2005	4/21/2005	4/21/2005
Sampling Depth (ft bgs)	10-12'	9-10.5'	14-16'	5-7'	7-8'
Units	ug/kg Q	ug/kg Q	ug/kg Q	ug/kg Q	ug/kg Q
Volatile Organic Compounds (VOCs)					
1,1-Dichloroethane	1.5 U	340 U	1.6 U	1.6 U	1.5 U
1,1-Dichloroethene	2.4 U	400 U	2.4 U	2.4 U	2.3 U
1,2-Dichloroethane	2.1 U	340 U	2.2 U	2.2 U	2.1 U
1,2-Dichloroethene (cis)	1.4 U	340 U	1.5 U	1.5 U	1.4 U
1,2-Dichloroethene (trans)	1.7 U	280 U	1.7 U	1.7 U	1.6 U
Acetone	42 B	800 U	18 B	18 B	16 B
Benzene	1.7 U	230 U	1.7 U	1.7 U	1.6 U
Carbon Disulfide	2 U	510 U	2.1 U	2.1 U	2 U
Carbon tetrachloride	2.5 U	570 U	2.6 U	2.6 U	2.5 U
Chloroform	1.3 U	400 U	1.3 U	1.3 U	1.3 U
Ethylbenzene	2.1 U	1,300 J	2.2 U	2.2 U	2.1 U
Methyl ethyl ketone (MEK / 2-butanone)	12	680 U	2.8 U	2.8 U	2.7 U
Methylene chloride	5.5 JB	380 JB	6 JB	6.1 JB	4.2 JB
Styrene	1.2 U	280 U	1.2 U	1.2 U	1.2 U
Toluene	2 U	170 U	2.1 U	2.1 U	2 U
Trichloroethene	2 U	400 U	2.1 U	2.1 U	2 U
Vinyl Chloride	2.4 U	460 U	2.4 U	2.4 U	2.3 U
Xylene (total)	5.3 U	5,700	5.5 U	5.5 U	5.3 U
Semi-Volatile Organic Compounds (SVOCs)					
1,2-Dichlorobenzene	63 U	980 U	66 U	68 U	500 U
2-Methylnaphthalene	59 U	50000	200 J	64 U	1100 J
4-Chloro-3-methylphenol	130 U	2000 U	130 U	140 U	1000 U
Acenaphthene	62 U	3000 J	65 U	150 J	2000 J
Acenaphthylene	46 U	720 U	48 U	50 U	1100 J
Anthracene	62 U	5500 J	67 J	160 J	4900
Benzo (a) anthracene	50 U	8,200	130 J	340 J	11,000
Benzo (a) pyrene	46 U	7,800	130 J	340 J	16,000
Benzo (b) fluoranthene	100 U	4,800 J	120 J	280 J	11,000
Benzo (g,h,i) perylene	41 U	3500 J	92 J	260 J	8400
Benzo (k) fluoranthene	41 U	5,100 J	85 J	280 J	10,000
bis(2-ethylhexyl)phthalate	49 U	770 U	52 U	54 U	390 U
Carbozole	55 U	2100 J	58 U	62 J	950 J
Chrysene	47 U	7,900	160 J	410	13,000
Dibenzo (a,h) anthracene	41 U	1,400 J	44 U	79 J	3,200
Dibenzofuran	59 U	2900 J	63 U	64 U	1100 J
Di-n-butyl phthalate	49 U	770 U	52 U	54 U	390 U
Fluoranthene	47 U	22000	310 J	770	25000
Fluorene	48 U	4300 J	54 J	130 J	2100 J
Indeno (1,2,3-cd) pyrene	38 U	3,100 J	66 J	200 J	7,600
Naphthalene	64 U	20,000	110 J	120 J	2300 J
o-Cresol(s) (2-Methylphenol)	100 U	1600 U	110 U	110 U	790 U
p-Cresol(s) (4-Methylphenol)	200 U	3100 U	210 U	220 U	1600 U
Pentachlorophenol	320 U	5000 U	340 U	350 U	2600 U
Phenanthrene	44 U	23000	320 J	660	16000
Phenol	110 U	1700 U	110 U	120 U	860 U
Pyrene	51 U	16000	330 J	820	21000
Pesticides					
4,4'-DDE	0.5 U	65	6.3	0.52 U	2.5 U
4,4'-DDT	0.36 U	1.7 U	0.37 U	0.37 U	1.8 U
4,4'-DDD	0.44 U	2.1 U	0.46 U	0.46 U	2.2 U
Aldrin	0.41 U	17	0.43 U	0.43 U	2.1 U
Alpha-BHC	0.32 U	1.6 U	0.33 U	0.33 U	1.6 U
Beta-BHC	0.31 U	1.5 U	0.33 U	0.32 U	1.6 U
Chlordane (alpha)	0.13 U	0.62 U	0.13 U	0.13 U	0.64 U
Delta-BHC	0.12 U	0.58 U	0.12 U	0.12 U	0.6 U
Dieldrin	0.37 U	1.8 U	0.39 U	0.39 U	1.9 U
Endosulfan I	0.17 U	38	0.18 U	0.18 U	0.86 U
Endosulfan II	0.2 U	0.96 U	0.21 U	0.21 U	0.99 U
Endosulfan Sulfate	0.2 U	0.98 U	2.8 J	0.21 U	1 U
Endrin aldehyde	0.37 U	1.8 U	0.39 U	0.39 U	1.9 U
Endrin ketone	0.17 U	0.81 U	0.17 U	0.17 U	0.84 U
Heptachlor	0.17 U	0.85 U	0.18 U	0.18 U	0.87 U
Heptachlor epoxide	0.13 U	0.64 U	1.8 J	0.14 U	19
Lindane	0.18 U	5.5 J	0.18 U	0.18 U	0.88 U
Methoxychlor	2.4 U	12 U	15 J	2.6 U	96 J
Polychlorinated biphenyls (PCBs)					
Aroclor 1254	1.4 U	880	26	1.5 U	6.2 J
Aroclor 1260	4.6 U	22 U	11 J	4.8 U	13 J
Metals					
Aluminum	8,040,000	4,060,000	4,440,000	9,140,000	2,800,000
Arsenic	7500 J	2500 J	2300 J	5600 J	39,200
Barium	69900	47400	40000	58100	273000
Beryllium	650 U	540 U	680 U	600 U	580 U
Cadmium	1300 U	32,400	1400 J	1200 U	1200 U
Calcium	4,650,000	4,820,000	2,200,000	1,200,000	15,200,000
Chromium	17,100	10,700	9,500	12,800	7,800
Cobalt	7300	4400	6200	4300	3600
Copper	27900	27900	14200	15400	176,000
Iron	15,100,000	9,370,000	9,930,000	12,000,000	9,750,000
Lead	41100	88,500	9200 J	41000	582,000
Magnesium	3,730,000	2,790,000	2,950,000	1,950,000	1,720,000
Manganese	168000	136000	165000	126000	176000
Mercury (elemental)	48	460	26 J	100	2,400
Nickel	46,200	20500	23300	12500	11200
Potassium	1,290,000	891000	751000	372000	380000
Selenium	2100 U	1700 U	2200 U	1900 U	1900 U
Silver	410 U	350 U	440 U	380 U	470 J
Sodium	196000	566000	213000	193000	269000
Vanadium	19600	20700	17000	19400	13000
Zinc	136,000	350,000	44900	39900	520,000

NOTES:
Subpart 375-6 (Revised Brownfields) criteria are from the NYSDEC Soil Cleanup Objective Tables 375-6.8(a) and 375-6.8(b), last revised 14 December 2006.
— : No criteria identified
ft bgs - feet below ground surface
NA: Not analyzed
J: Estimated value
U: Indicates that the result is lower than the MDL.

Analytical results were provided in the Phase II Investigation Report, 363 Bond Street by ELM dated May 2005.

Italicized and **Bold *results*** indicate method detection limits (MDL) greater than or equal to the most stringent criteria.

TABLE 3
HISTORICAL SOIL ANALYTICAL RESULTS
388 CARROLL STREET
Brooklyn, New York

Consultant:		Subpart 375-6 (Revised Brownfields)					Environmental Liability Management (ELM) of New York, LLC																		
			Protection of Public Health																						
Sample ID:	**CAS No.**	**Unrestricted Use Objectives**	**Residential**	**Restricted - Residential**	**Restricted - Commercial**	**Restricted - Industrial**	SB-1/4-5	SB-2/9-10	SB-3/5-7	SB-4/3-5	SB-5/19-20	SB-6/4-6	SB-7/14-15	SB-8/5-7	SB-9/3-5	SB-10/1-3	SB-11/4-5	SB-11/14-15	SB-12/2-4	TP-1/0.5-3	TP-1/3-3.5	TP-3/4-7	TP-4/4-5	TP-5/1.5-3	TP-6/2.7-4.7
Laboratory Sample Number:							207935-001	207935-002	207935-003	207935-004	207935-005	207935-006	207935-007	207935-008	207935-009	207935-010	207935-012	207935-011	207936-005	207935-019	207935-020	207936-001	207936-002	207936-003	207936-004
Sampling Date:							10/25/2004	10/25/2004	10/25/2004	10/25/2004	10/25/2004	10/25/2004	10/25/2004	10/25/2004	10/25/2004	10/25/2004	10/25/2004	10/25/2004	10/25/2004	10/27/2004	10/27/2004	10/27/2004	10/27/2004	10/27/2004	10/27/2004
Sampling Depth (ft):							4-5	9-10	5-7	3-5	19-20	4-6	14-15	5-7	3-5	1-3	4-5	14-15	2-4	0.5-3	3-3.5	4-7	4-5	1.5-3	2.7-4.7
Units:		**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	ug/kg Q	ug/kg Q	ug/kg Q	ug/kg Q	ug/kg Q	ug/kg Q	ug/kg Q	ug/kg Q	ug/kg Q	ug/kg Q	ug/kg Q	ug/kg Q	ug/kg Q	ug/kg Q	ug/kg Q	ug/kg Q	ug/kg Q	ug/kg Q	ug/kg Q
Volatile Organic Compounds (VOCs)																									
1,1,1-Trichloroethane	71-55-6	680	100,000	100,000	500,000	1,000,000	670 U	8.7 U	690 U	620 U	6.4 U	620 U	8.7 U	3200 U	31 U	620 U	3400 U	8.9 U	0.58 U	650 U	580 U	0.61 U	110 U	420 U	470 U
1,1-Dichloroethane	75-34-3	270	19,000	26,000	240,000	480,000	670 U	8.7 U	690 U	620 U	6.4 U	620 U	8.7 U	3200 U	31 U	620 U	3400 U	8.9 U	0.47 U	650 U	580 U	0.49 U	51 U	200 U	220 U
1,1-Dichloroethene	75-35-4	330	100,000	100,000	500,000	1,000,000	670 U	8.7 U	690 U	620 U	6.4 U	620 U	8.7 U	3200 U	31 U	620 U	3400 U	8.9 U	0.47 U	650 U	580 U	0.49 U	90 U	350 U	390 U
1,2-Dichloroethane	107-06-2	20	2,300	3,100	30,000	60,000	670 U	8.7 U	690 U	620 U	6.4 U	620 U	8.7 U	3200 U	31 U	620 U	3400 U	8.9 U	0.58 U	650 U	580 U	0.61 U	76 U	300 U	330 U
1,2-Dichloroethene (cis)	156-59-2	250	59,000	100,000	500,000	1,000,000	670 U	8.7 U	690 U	620 U	6.4 U	620 U	8.7 U	3200 U	31 U	620 U	3400 U	8.9 U	0.35 U	650 U	580 U	0.37 U	88 U	350 U	380 U
1,2-Dichloroethene (trans)	156-60-5	190	100,000	100,000	500,000	1,000,000	670 U	8.7 U	690 U	620 U	6.4 U	620 U	8.7 U	3200 U	31 U	620 U	3400 U	8.9 U	0.7 U	650 U	580 U	0.74 U	60 U	240 U	260 U
1,2,3-Trichlorobenzene	87-61-6	—	—	—	—	—	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3-Trichloropropane	96-18-4	—	—	—	—	—	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	120-82-1	—	—	—	—	—	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trimethylbenzene	95-63-6	3,600	47,000	52,000	190,000	380,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3,5-Trimethylbenzene	108-67-8	8,400	47,000	52,000	190,000	380,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Isopropyltoluene	99-87-6	—	—	—	—	—	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	67-64-1	50	100,000	100,000	500,000	1,000,000	1700 U	48	1,100 J	3,600	15.000	1,200 J	16 J	7900 U	140	1500 U	8500 U	25	45	820 J	1500 U	63	240 U	2,200 J	2,400 J
Benzene	71-43-2	60	2,900	4,800	44,000	89,000	86 J	8.7 U	130 J	110 J	6.4 U	620 U	8.7 U	630 J	31 U	620 U	3400 U	8.9 U	3.5 J	650 U	580 U	0.61 U	65 U	780 J	460 J
n-Butylbenzene	104-51-8	12,000	100,000	100,000	500,000	1,000,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon Disulfide	75-15-0	—	—	—	—	—	72 J	17	310 J	620.000 U	6.4 U	620 U	19	3200 U	7.5 J	620 U	3400 U	10	3.1 J	650 U	580 U	3 J	45 U	180 U	340 J
Carbon tetrachloride	56-23-5	760	1,400	2,400	22,000	44,000	670 U	8.7 U	690 U	620.000 U	6.4 U	620 U	8.7 U	3200 U	31 U	620 U	3400 U	8.9 U	0.35 U	650 U	580 U	0.37 U	68 U	270 U	300 U
Chlorobenzene	108-90-7	1,100	100,000	100,000	500,000	1,000,000	670 U	8.7 U	690 U	620.000 U	6.4 U	620 U	8.7 U	3200 U	31 U	620 U	3400 U	8.9 U	0.47 U	650 U	580 U	0.49 U	54 U	210 U	230 U
Chloroform	67-66-3	370	10,000	49,000	350,000	700,000	670 U	8.7 U	690 U	620 U	6.4 U	620 U	8.7 U	3200 U	31 U	620 U	3400 U	8.9 U	0.7 U	650 U	580 U	0.74 U	68 U	270 U	300 U
Diethylbenzene-p	105-05-5	—	—	—	—	—	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	100-41-4	1,000	30,000	41,000	390,000	780,000	8100	2.9 J	77 J	110.00 J	1.9 J	620 U	8.7 U	3200 U	73	620 U	3400 U	8.9 U	59	650 U	580 U	15	59 U	640 J	900 J
p-Ethyltoluene	622-96-8	—	—	—	—	—	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isopropyl Benzene	98-82-8	—	—	—	—	—	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
p-Isopropyltoluene	99-87-6	—	—	—	—	—	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl ethyl ketone (MEK / 2-butanone)	78-93-3	120	100,000	100,000	500,000	1,000,000	670 U	17 U	690 U	620 U	13 U	620 U	17 U	3200 U	62 U	620 U	3400 U	18 U	0.7 U	650 U	580 U	0.74 U	200 U	770 U	850 U
Methylene chloride	75-09-2	50	51,000	100,000	500,000	1,000,000	110 JB	9.2 B	120 JB	110 JB	5.7 JB	110 JB	7.2 JB	560 JB	32 B	99 JB	560 JB	6.9 JB	14 B	130 JB	110 JB	15 B	160 JB	710 JB	670 JB
4-Methyl-2-Pentanone	108-10-1	—	—	—	—	—	670 U	17 U	690 U	620 U	13 U	620 U	17 U	3200 U	62 U	620 U	3400 U	18 U	0.47 U	650 U	580 U	0.49 U	110 U	410 U	460 U
Naphthalene	91-20-3	—	—	—	—	—	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Propylbenzene-n	103-65-1	3,900	100,000	100,000	500,000	1,000,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sec-Butylbenzene	135-98-8	11,000	100,000	100,000	500,000	1,000,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tert-Butylbezene	98-06-6	5,900	100,000	100,000	500,000	1,000,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tetrachloroethene	127-18-4	1,300	5,500	19,000	150,000	300,000	670 U	8.7 U	690 U	620 U	6.4 U	620 U	8.7 U	3200 U	6 J	620 U	3400 U	8.9 U	0.7 U	650 U	580 U	0.74 U	52 U	200 U	220 U
Toluene	108-88-3	700	100,000	100,000	500,000	1,000,000	220 J	1.3 J	120 J	620 U	0.73 J	620 U	8.7 U	3200 U	24 J	620 U	3400 U	8.9 U	26	650 U	580 U	5.9 J	44 U	890 J	370 J
Trichloroethene	79-01-6	470	10,000	21,000	200,000	400,000	670 U	8.7 U	690 U	620 U	6.4 U	620 U	8.7 U	3200 U	31 U	620 U	3400 U	8.9 U	0.35 U	650 U	580 U	0.37 U	96 U	380 U	420 U
Tetramethylbenzene-1,2,4,5	95-93-2	—	—	—	—	—	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vinyl Chloride	75-01-4	20	210	900	13,000	27,000	670 U	8.7 U	690 U	620 U	6.4 U	620 U	8.7 U	3200 U	31 U	620 U	3400 U	8.9 U	0.35 U	650 U	580 U	0.37 U	67 U	270 U	290 U
1,2-Xylene (o-Xylene)	95-47-6	260	100,000	100,000	500,000	1,000,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-Xylene (m-Xylene)	108-38-3	260	100,000	100,000	500,000	1,000,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Xylene (m,p-Xylene)	108-38-3	260	100,000	100,000	500,000	1,000,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Xylene (total)	1330-20-7	260	100,000	100,000	500,000	1,000,000	520 J	8.9	220 J	410 J	6.6	620 U	8.7 U	3200 U	280	280 J	3400 U	8.9 U	180	650 U	580 U	42	110 U	2,200 J	1,100 J
Semi-Volatile Organic Compounds (SVOCs)																									
1,2-Dichlorobenzene	95-50-1	1,100	100,000	100,000	500,000	1,000,000	1700 U	570 U	450 U	400 U	400 U	410 U	570 U	410 U	3200 U	1600 U	1800 U	590 U	64 U	420 U	370 U	67 U	65 U	63 U	140 U
1,2-Diphenylhydrazine	122-66-7	—	—	—	—	—	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	120-82-1	—	—	—	—	—	1700 U	570 U	450 U	400 U	400 U	410 U	570 U	410 U	3200 U	1600 U	1800 U	590 U	64 U	420 U	370 U	67 U	65 U	63 U	140 U
2-Methylnaphthalene	91-57-6	—	—	—	—	—	1000 J	570 U	1100	360 J	400 U	2200	570 U	440	2600 J	1700	4400	590 U	2900	1000	150 J	2900	74 J	2100	780 J
2-Nitrophenol	88-75-5	—	—	—	—	—	1700 U	570 U	450 U	400 U	400 U	410 U	570 U	410 U	3200 U	1600 U	1800 U	590 U	130 U	420 U	370 U	140 U	130 U	130 U	290 U
2,4-Dimethylphenol	105-67-9	—	—	—	—	—	1700 U	570 U	450 U	400 U	400 U	410 U	570 U	410 U	3200 U	1600 U	1800 U	590 U	200 U	420 U	370 U	200 U	220 J	190 U	430 U
2,6-Dinitrotoluene	606-20-2	—	—	—	—	—	1700 U	570 U	450 U	400 U	400 U	410 U	570 U	410 U	3200 U	1600 U	1800 U	590 U	70 U	420 U	370 U	73 U	71 U	69 U	150 U
3-Nitroanaline	99-09-2	—	—	—	—	—	8500 U	2800 U	2200 U	1900 U	1900 U	2000 U	2700 U	2000 U	16000 U	7700 U	8800 U	2800 U	79 U	2000 U	1800 U	82 U	80 U	78 U	170 U
4-Chloroanaline	106-47-8	—	—	—	—	—	1700 U	570 U	450 U	400 U	400 U	410 U	570 U	410 U	3200 U	1600 U	1800 U	590 U	120 U	420 U	370 U	130 U	120 U	120 U	270 U
4-Nitroaniline	100-01-6	—	—	—	—	—	3500 U	1100 U	890 U	800 U	800 U	810 U	1100 U	820 U	6400 U	3200 U	3600 U	1200 U	55 U	840 U	730 U	57 U	56 U	54 U	120 U
Acenaphthene	83-32-9	20,000	100,000	100,000	500,000	1,000,000	2200	570 U	830	950	400 U	620	570 U	290 J	1700 J	930 J	6800	590 U	890	1200	150 J	340 J	670	690	1200
Acenaphthylene	208-96-8	100,000	100,000	100,000	500,000	1,000,000	960 J	570 U	410 J	400 U	400 U	210 J	570 U	130 J	620 J	260 J	2900	590 U	47 U	420 U	92 J	210 J	47 U	520	750 J
Anthracene	120-12-7	100,000	100,000	100,000	500,000	1,000,000	2100	570 U	280 J	350 J	400 U	150 J	570 U	290 J	3500	2000	4100	590 U	500	520	370 U	220 J	310 J	660	1500
Benzo (a) anthracene	56-55-3	1,000	1,000	1,000	5,600	11,000	1,800	570 U	180 J	290 J	400 U	130 J	570 U	580	7,500	3,900	4,100	590 U	740	540	370 U	400	280 J	1,500	950
Benzo (a) pyrene	50-32-8	1,000	1,000	1,000	1,000	1,100	1,700 J	570 U	130 J	650	400 U	170 J	570 U	500	6,700	4,000	11,000	590 U	810	580	370 U	420	220 J	1,700	640 J
Benzo (b) fluoranthene	205-99-2	1,000	1,000	1,000	5,600	11,000	1,600 J	570.00 U	210 J	360 J	400 U	410 U	570 U	360 J	5,500	3,000	4,500	590 U	810	480	370 U	390 J	180 J	2,700	510 J
Benzo (g,h,i) perylene	191-24-2	100,000	100,000	100,000	500,000	1,000,000	1300 J	570 U	130 J	600	400 U	130 J	570 U	230 J	3900	2400	13000	590 U	610	360 J	370 U	290 J	120 J	1000	630 J
Benzo (k) fluoranthene	207-08-9	800	1,000	3,900	56,000	110,000	890 J	570 U	180 J	350 J	400 U	130 J	570 U	450	5,300	3,400	5,700	590 U	650	440	370 U	330 J	190 J	42 U	530 J
Benzyl alcohol	100-51-6	—	—	—	—	—	1700 U	570 U	450 U	400 U	400 U	410 U	570 U	410 U	3200 U	1600 U	1800 U	590 U	72 U	420 U	370 U	75 U	73 U	71 U	160 U
bis(2-chloroethoxy)methane	111-91-1	—	—	—	—	—	1700 U	570 U	450 U	400 U	400 U	410 U	570 U	410 U	3200 U	1600 U	1800 U	590 U	65 U	420 U	370 U	68 U	66 U	64 U	140 U
bis(2-ethylhexyl)phthalate	117-81-7	—	—	—	—	—	1400 J	570 U	450 U	400 U	400 U	410 U	570 U	410 U	3200 U	1600 U	1800 U	590 U	200 J	300 J	200 J	130 J	51 U	180 J	150 J
Butylbenzylphthalate	85-68-7	—	—	—	—	—	1700 U	570 U	450 U	400 U	400 U	410 U	570 U	410 U	840 J	1600 U	1800 U	590 U	49 U	420 U	370 U	51 U	50 U	48 U	110 U
Carbozole	86-74-8	—	—	—	—	—	380 J	570 U	450 U	400 U	400 U	410 U	570 U	410 U	1300 J	330 J	1800 U	590 U	56 U	420 U	370 U	58 U	57 U	80 J	120 U
Chrysene	218-01-9	1,000	1,000	3,900	56,000	110,000	2,000	570.00 U	270 J	310 J	400 U	130 J	570 U	640	7,500	4,200	4,200	590 U	840	590	370 U	450	320 J	1,600	1,000
Dibenzo (a,h) anthracene	53-70-3	330	330	330	560	1,100	1700 U	570 U	450 U	82 J	400 U	410 U	570 U	100 J	1,700 J	860 J	1,800	590 U	230 J	81 J	370 U	110 J	46 J	540	130 J
Dibenzofuran	132-64-9	—	—	—	—	—	1000 J	570 U	520	750	400 U	160 J	570 U	140 J	1200 J	620 J	1800	590 U	620	830	160 J	170 J	430	490	690 J
Fluoranthene	206-44-0	100,000	100,000	100,000	500,000	1,000,000	5500	570 U	540	450	400 U	240 J	570 U	990	15000	8500	6500	590 U	1500	960	62 J	910	800	2200	1900
Fluorene	86-73-7	30,000	100,000	100,000	500,000	1,000,000	3000	570 U	1100	1600	400 U	300 J	570 U	250 J	2200 J	1100 J	5300	590 U	1100	1500	250 J	260 J	810	730	1900
Hexachloroethane	67-72-1	—	—	—	—	—	1700 U	570 U	450 U	400 U	400 U	410 U	570 U	410 U	3200 U	1600 U	1800 U	590 U	67 U	420 U	370 U	70 U	68 U	66 U	150 U
Indeno (1,2,3-cd) pyrene	193-39-5	500	500	500	5,600	11,000	840 J	570 U	100 J	350 J	400 U	81 J	570 U	200 J	3,800	2,000	7,200	590 U	450	290 J	370 U	220 J	110 J	920	390 J
Isophorone	78-59-1	—	—	—	—	—	1700 U	570 U	450 U	400 U	400 U	410 U	570 U	410 U	3200 U	1600 U	1800 U	590 U	68 U	420 U	370 U	71 U	69 U	68 U	150 U
n-Nitrosodiphenylamine	86-30-6	—	—	—	—	—	1700 U	570 U	450 U	400 U	400 U	410 U	570 U	410 U	3200 U	1600 U	1800 U	590 U	57 U	420 U	370 U	59 U	58 U	56 U	120 U
Naphthalene	91-20-3	12,000	100,000	100,000	500,000	1,000,000	1600 J	570 U	460	400 U	400 U	930	570 U	350 J	1600 J	1600	4200	590 U	1500	640	110 J	530	66 U	1000	2200
Nitrobenzene	98-95-3	—	—	—	—	—	1700 U	570 U	450 U	400 U	400 U	410 U	570 U	410 U	3200 U	1600 U	1800 U	590 U	46 U	420 U	370 U	48 U	46 U	45 U	100 U
o-Cresol(s) (2-Methylphenol)	95-48-7	330	100,000	100,000	500,000	1,000,000	1700 U	570 U	450 U	400 U	400 U	410 U	570 U	410 U	3200 U	1600 U	1800 U	590 U	100 U	420 U	370 U	110 U	100 U	100 U	220 U
m,p-Cresol(s) (3&4-Methylphenol)	106-44-5	330	34,000	100,000	500,000	1,000,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
p-Cresol(s) (4-Methylphenol)	106-44-5	330	34,000	100,000	500,000	1,000,000	1700 U	570 U	450 U	400 U	400 U	410 U	570 U	410 U	3200 U	1600 U	1800 U	590 U	200 U	420 U	370 U	210 U	210 U	200 U	450 U
Pentachlorophenol	87-86-5	800	2,400	6,700	6,700	55,000	8500 U	2800 U	2200 U	1900 U	1900 U	2000 U	2700 U	2000 U	16000 U	7700 U	8800 U	2800 U	330 U	2000 U	1800 U	340 U	330 U	320 U	720 U
Phenanthrene	85-01-8	100,000	100,000	100,000	500,000	1,000,000	5300	570 U	520	1300	400 U	310 J	570 U	1100	11,000	6100	10000	590 U	1900	1900	240 J	870	180 J	1500	3500
Phenol	108-95-2	330	100,000	100,000	500,000	1,000,000	1700 U	570 U	450 U	400 U	400 U	410 U	570 U	410 U	3200 U	1600 U	1800 U	590 U	110 U	420 U	370 U	120 U	110 U	110 U	240 U
Pyrene	129-00-0	100,000	100,000	100,000	500,000	1,000,000	5900	570 U	580	930	400 U	400 J	570 U	1200	11000	7300	9800	590 U	1900	1800	92 J	910	740	2500	3400
TPH - Diesel Range Organics (DRO)																									
Fuel Oil #2		—	—	—	—	—	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total DRO TPH		—	—	—	—	—	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown DRO TPH		—	—	—	—	—	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCBs/Pesticides																									
Aroclor 1242	53469-21-9	100	1,000	1,000	1,000	25,000	150	NA	23 U	21 U	NA	21 U	NA	21 U	NA	21 U	23 U	NA	3.4 U	22 U	19 U	3.6 U	3.5 U	3.5 U	3.8 U
Aroclor 1248	12672-29-6	100	1,000	1,000	1,000	25,000	22 U	NA	23 U	21 U	NA	21 U	NA	21 U	NA	21 U	23 U	NA	6.5 J	28	19 U	3.2 U	3.2 U	3.1 U	3.4 U
Aroclor 1260	11096-82-5	100	1,000	1,000	1,000	25,000	98	NA	23 U	21 U	NA	21 U	NA	22	NA	21 U	23 U	NA	4.6 U	46	19 U	4.8 U	4.7 U	4.7 U	5.1 U
Total PCBs/Pesticides	—	—	—	—	—	—	380	NA			NA		NA	168	NA			NA	23 J	204	152	20.5	20.1	20	21.9
Metals																									
Aluminum	7429-90-5	—	—	—	—	—	9,260,000	NA	3,960,000	1,130,000	NA	3,420,000	NA	5,730,000	NA	2,630,000	4,210,000	NA	2,700,000	4,220,000	7,910,000	3,520,000	4,690,000	2,880,000	6,340,000
Arsenic	7440-38-2	13,000	16,000	16,000	16,000	16,000	9800 J	NA	43,200	9200 J	NA	11100 J	NA	3200 J	NA	8900 J	6100 J	NA	5600 J	33,300	2000 J	7000 J	2100 J	5900 J	20,000
Barium	7440-39-3	350,000	350,000	400,000	400,000	10,000,000	202000	NA	150000	18300	NA	142000	NA	60200	NA	57800	102000	NA	58300	108000	26400	91900	35600	65600	105000
Beryllium	7440-41-7	7,200	14,000	72,000	590,000	2,700,000	2600 U	NA	2800 U	2500 U	NA	2800 U	NA	2600 U	NA	2600 U	2900 U	NA	660 U	2200 U	2500 U	580 U	550 U	660 U	1100 J
Cadmium	7440-43-9	2,500	2,500	4,300	9,300	60,000	2200 J	NA	4200 U	3700 U	NA	4200 U	NA	3900 U	NA	3900 U	4400 U	NA	1300 U	1300 J	3700 U	1200 U	1100 U	1300 U	1100 U
Calcium	7440-70-2	—	—	—	—	—	22,300,000	NA	15,000,000	216,000,000	NA	4,230,000	NA	6,830,000	NA	18,500,000	81,300,000	NA	7,870,000	25,600,000	1,020,000	8,890,000	4,610,000	14,500,000	3,080,000
Chromium	7440-47-3						27200	NA	11300	61400	NA	8000	NA	19900	NA	7600	6000	NA	11100	16100	15100	11400	11300	168000	12600
Cobalt	7440-48-4	—	—	—	—	—	8500	NA	7100	1700 J	NA	4400	NA	6600	NA	4200	3100	NA	5400	6300	6200	5500	5900	4100	24400
Copper	7440-50-8	50,000	270,000	270,000	270,000	10,000,000	159,000	NA	49500	37400	NA	204,000	NA	26100	NA	131,000	76,000	NA	42300	85,000	17500	79,000	14200	153,000	45300
Iron	7439-89-6	—	—	—	—	—	32,100,000	NA	15,100,000	7,750,000	NA	8,290,000	NA	13,400,000	NA	9,460,000	7,440,000	NA	9,620,000	18,300,000	14,500,000	11,100,000	11,100,000	8,430,000	10,100,000
Lead	7439-92-1	63,000	400,000	400,000	1,000,000	3,900,000	283,000	NA	856,000	93,900	NA	265,000	NA	52800	NA	222,000	139,000	NA	129,000	232,000	11800	305,000	14500	177,000	81,800
Magnesium	7439-95-4	—	—	—	—	—	5,990,000	NA	1,830,000	2,250,000	NA	948,000	NA	3,610,000	NA	705,000	3,840,000	NA	1,400,000	1,830,000	2,620,000	2,780,000	3,420,000	1,470,000	1,910,000
Manganese	7439-96-5	1,600,000	2,000,000	2,000,000	10,000,000	10,000,000	267000	NA	139000	133000	NA	141000	NA	161000	NA	93100	282000	NA	151000	276000	85700	140000	212000	93200	76600
Mercury (elemental)	7439-97-6	180	810	810	2,800	5,700	840	NA	1,900	140	NA	1,200	NA	620	NA	280	85	NA	94	490	28 J	650	180	1,600	2,700
Nickel	7440-02-0	30,000	140,000	310,000	310,000	10,000,000	34,500	NA	16800	5100 J	NA	10400	NA	16300	NA	13700	10400	NA	16400	21700	19400	19000	19500	14600	75,500
Potassium	7440-09-7	—	—	—	—	—	1980000	NA	448000	285000	NA	554,000	NA	1100000	NA	306000	333,000	NA	310000	574000	819000	602,000	771000	412,000	738000
Selenium	7782-49-2	3,900	36,000	180,000	1,500,000	6,800,000	20800 U	NA	17,400 J	20000 U	NA	22400 U	NA	20400 U	NA	20700 U	23400 U	NA	2100 U	6,000 J	19700 U	1900 U	1700 U	2100 U	1800 U
Silver	7440-22-4	2,000	36,000	180,000	1,500,000	6,800,000	3900 U	NA	5,900	3700 U	NA	700 J	NA	3800 U	NA	3900 U	4400 U	NA	420 U	3300 U	3700 U	370 U	350 U	430 U	360 U
Sodium	7440-23-5	—	—	—	—	—	466000	NA	171000	192000	NA	407,000	NA	208000	NA	114000 J	533000	NA	131000	169000	97800 J	156000	136000	105,000 B	164000
Vanadium	7440-62-2	—	—	—	—	—	32000	NA	22700	5300	NA	16400	NA	25600	NA	10300	11000	NA	12600	18900	21700	15800	30600	12000	23000
Zinc	7440-66-6	109,000	2,200,000	10,000,000	10,000,000	10,000,000	779,000	NA	1,090,000	69200	NA	106000	NA	57400	NA	79,900.0	211,000	NA	73100	264,000	59200	131,000	30800	132,000	997,000

NOTES:
Subpart 375-6 (Revised Brownfields) criteria are from the NYSDEC Soil Cleanup Objective Tables 375-6.8(a) and 375-6.8(b), last revised 14 December 2006.
— : No criteria identified

Sample data for ELM, Cosmos, and Tradewind were provided in the Phase II Investigation Report, 400 Carroll Street by ELM dated May 2005.
Sample data for PW Grosser were provided in the PW Grosser Draft Subsurface Investigation Summary Report dated 16 June 2011.
Sample data for Zeb Environmental were provided in an environmental investigatiton provided by Sive Padget & Riesel, LLP.
ND:Not detected
NA: Not analyzed
E:Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument
J:Estimated result
U: Indicates that the result is lower than the MDL
B: Analyte detected in method blank

Italicized and **Bold *results*** indicate method detection limits (MDL) greater than or equal to the most stringent criteria.

Cosmos Environmental Services Samples:
^ : EcoTest Laboratories reported that it could not separate the isonomers for benzo(b)fluoranthene and benzo(k)fluoranthene. Therefore, the sum is split evenly between the two analytes.

TABLE 3
HISTORICAL SOIL ANALYTICAL RESULTS
388 CARROLL STREET
Brooklyn, New York

Subpart 375-6 (Revised Brownfields) — Protection of Public Health (ug/kg)

Compound	CAS No.	Unrestricted Use Objectives	Residential	Restricted - Residential	Restricted - Commercial	Restricted - Industrial
Volatile Organic Compounds (VOCs)						
1,1,1-Trichloroethane	71-55-6	680	100,000	100,000	500,000	1,000,000
1,1-Dichloroethane	75-34-3	270	19,000	26,000	240,000	480,000
1,1-Dichloroethene	75-35-4	330	100,000	100,000	500,000	1,000,000
1,2-Dichloroethane	107-06-2	20	2,300	3,100	30,000	60,000
1,2-Dichloroethene (cis)	156-59-2	250	59,000	100,000	500,000	1,000,000
1,2-Dichloroethene (trans)	156-60-5	190	100,000	100,000	500,000	1,000,000
1,2,3-Trichlorobenzene	87-61-6	—	—	—	—	—
1,2,3-Trichloropropane	96-18-4	—	—	—	—	—
1,2,4-Trichlorobenzene	120-82-1	—	—	—	—	—
1,2,4-Trimethylbenzene	95-63-6	3,600	47,000	52,000	190,000	380,000
1,3,5-Trimethylbenzene	108-67-8	8,400	47,000	52,000	190,000	380,000
4-Isopropyltoluene	99-87-6	—	—	—	—	—
Acetone	67-64-1	50	100,000	100,000	500,000	1,000,000
Benzene	71-43-2	60	2,900	4,800	44,000	89,000
n-Butylbenzene	104-51-8	12,000	100,000	100,000	500,000	1,000,000
Carbon Disulfide	75-15-0	—	—	—	—	—
Carbon tetrachloride	56-23-5	760	1,400	2,400	22,000	44,000
Chlorobenzene	108-90-7	1,100	100,000	100,000	500,000	1,000,000
Chloroform	67-66-3	370	10,000	49,000	350,000	700,000
Diethylbenzene-p	105-05-5	—	—	—	—	—
Ethylbenzene	100-41-4	1,000	30,000	41,000	390,000	780,000
p-Ethyltoluene	622-96-8	—	—	—	—	—
Isopropyl Benzene	98-82-8	—	—	—	—	—
p-Isopropyltoluene	99-87-6	—	—	—	—	—
Methyl ethyl ketone (MEK / 2-butanone)	78-93-3	120	100,000	100,000	500,000	1,000,000
Methylene chloride	75-09-2	50	51,000	100,000	500,000	1,000,000
4-Methyl-2-Pentanone	108-10-1	—	—	—	—	—
Naphthalene	91-20-3	—	—	—	—	—
Propylbenzene-n	103-65-1	3,900	100,000	100,000	500,000	1,000,000
Sec-Butylbenzene	135-98-8	11,000	100,000	100,000	500,000	1,000,000
Tert-Butylbezene	98-06-6	5,900	100,000	100,000	500,000	1,000,000
Tetrachloroethene	127-18-4	1,300	5,500	19,000	150,000	300,000
Toluene	108-88-3	700	100,000	100,000	500,000	1,000,000
Trichloroethene	79-01-6	470	10,000	21,000	200,000	400,000
Tetramethylbenzene-1,2,4,5	95-93-2	—	—	—	—	—
Vinyl Chloride	75-01-4	20	210	900	13,000	27,000
1,2-Xylene (o-Xylene)	95-47-6	260	100,000	100,000	500,000	1,000,000
1,3-Xylene (m-Xylene)	108-38-3	260	100,000	100,000	500,000	1,000,000
Xylene (m,p-Xylene)	108-38-3	260	100,000	100,000	500,000	1,000,000
Xylene (total)	1330-20-7	260	100,000	100,000	500,000	1,000,000
Semi-Volatile Organic Compounds (SVOCs)						
1,2-Dichlorobenzene	95-50-1	1,100	100,000	100,000	500,000	1,000,000
1,2-Diphenylhydrazine	122-66-7	—	—	—	—	—
1,2,4-Trichlorobenzene	120-82-1	—	—	—	—	—
2-Methylnaphthalene	91-57-6	—	—	—	—	—
2-Nitrophenol	88-75-5	—	—	—	—	—
2,4-Dimethylphenol	105-67-9	—	—	—	—	—
2,6-Dinitrotoluene	606-20-2	—	—	—	—	—
3-Nitroanaline	99-09-2	—	—	—	—	—
4-Chloroanaline	106-47-8	—	—	—	—	—
4-Nitroaniline	100-01-6	—	—	—	—	—
Acenaphthene	83-32-9	20,000	100,000	100,000	500,000	1,000,000
Acenaphthylene	208-96-8	100,000	100,000	100,000	500,000	1,000,000
Anthracene	120-12-7	100,000	100,000	100,000	500,000	1,000,000
Benzo (a) anthracene	56-55-3	1,000	1,000	1,000	5,600	11,000
Benzo (a) pyrene	50-32-8	1,000	1,000	1,000	1,000	1,100
Benzo (b) fluoranthene	205-99-2	1,000	1,000	1,000	5,600	11,000
Benzo (g,h,i) perylene	191-24-2	100,000	100,000	100,000	500,000	1,000,000
Benzo (k) fluoranthene	207-08-9	800	1,000	3,900	56,000	110,000
Benzyl alcohol	100-51-6	—	—	—	—	—
bis(2-chloroethoxy)methane	111-91-1	—	—	—	—	—
bis(2-ethylhexyl)phthalate	117-81-7	—	—	—	—	—
Butylbenzylphthalate	85-68-7	—	—	—	—	—
Carbozole	86-74-8	—	—	—	—	—
Chrysene	218-01-9	1,000	1,000	3,900	56,000	110,000
Dibenzo (a,h) anthracene	53-70-3	330	330	330	560	1,100
Dibenzofuran	132-64-9	—	—	—	—	—
Fluoranthene	206-44-0	100,000	100,000	100,000	500,000	1,000,000
Fluorene	86-73-7	30,000	100,000	100,000	500,000	1,000,000
Hexachloroethane	67-72-1	—	—	—	—	—
Indeno (1,2,3-cd) pyrene	193-39-5	500	500	500	5,600	11,000
Isophorone	78-59-1	—	—	—	—	—
n-Nitrosodiphenylamine	86-30-6	—	—	—	—	—
Naphthalene	91-20-3	12,000	100,000	100,000	500,000	1,000,000
Nitrobenzene	98-95-3	—	—	—	—	—
o-Cresol(s) (2-Methylphenol)	95-48-7	330	100,000	100,000	500,000	1,000,000
m,p-Cresol(s) (3&4-Methylphenol)	106-44-5	330	34,000	100,000	500,000	1,000,000
p-Cresol(s) (4-Methylphenol)	106-44-5	330	34,000	100,000	500,000	1,000,000
Pentachlorophenol	87-86-5	800	2,400	6,700	6,700	55,000
Phenanthrene	85-01-8	100,000	100,000	100,000	500,000	1,000,000
Phenol	108-95-2	330	100,000	100,000	500,000	1,000,000
Pyrene	129-00-0	100,000	100,000	100,000	500,000	1,000,000
TPH - Diesel Range Organics (DRO)						
Fuel Oil #2		—	—	—	—	—
Total DRO TPH		—	—	—	—	—
Unknown DRO TPH		—	—	—	—	—
PCBs/Pesticides						
Aroclor 1242	53469-21-9	100	1,000	1,000	1,000	25,000
Aroclor 1248	12672-29-6	100	1,000	1,000	1,000	25,000
Aroclor 1260	11096-82-5	100	1,000	1,000	1,000	25,000
Total PCBs/Pesticides	—	—	—	—	—	—
Metals						
Aluminum	7429-90-5	—	—	—	—	—
Arsenic	7440-38-2	13,000	16,000	16,000	16,000	16,000
Barium	7440-39-3	350,000	350,000	400,000	400,000	10,000,000
Beryllium	7440-41-7	7,200	14,000	72,000	590,000	2,700,000
Cadmium	7440-43-9	2,500	2,500	4,300	9,300	60,000
Calcium	7440-70-2	—	—	—	—	—
Chromium	7440-47-3					
Cobalt	7440-48-4	—	—	—	—	—
Copper	7440-50-8	50,000	270,000	270,000	270,000	10,000,000
Iron	7439-89-6	—	—	—	—	—
Lead	7439-92-1	63,000	400,000	400,000	1,000,000	3,900,000
Magnesium	7439-95-4	—	—	—	—	—
Manganese	7439-96-5	1,600,000	2,000,000	2,000,000	10,000,000	10,000,000
Mercury (elemental)	7439-97-6	180	810	810	2,800	5,700
Nickel	7440-02-0	30,000	140,000	310,000	310,000	10,000,000
Potassium	7440-09-7	—	—	—	—	—
Selenium	7782-49-2	3,900	36,000	180,000	1,500,000	6,800,000
Silver	7440-22-4	2,000	36,000	180,000	1,500,000	6,800,000
Sodium	7440-23-5	—	—	—	—	—
Vanadium	7440-62-2	—	—	—	—	—
Zinc	7440-66-6	109,000	2,200,000	10,000,000	10,000,000	10,000,000

Consultant:	P.W. Grosser				Zeb Environmental								
Sample ID:	GP-02	GP-04	GP-10	GP-11	P-9	P-9	P-10	P-10	P-12	P-1B	P-1B	P-2	P-2
Laboratory Sample Number:	L1104348-02	L1104348-04	L1104656-02	L1104656-03	1204165-1	1204165-2	1204165-3	1204165-4	1204165-5	1204166-1	1204166-2	1204166-3	1204166-4
Sampling Date:	3/30/2011	3/30/2011	4/6/2011	4/6/2011	4/12/2012	4/12/2012	4/12/2012	4/12/2012	4/12/2012	4/11/2012	4/11/2012	4/11/2012	4/11/2012
Sampling Depth (ft):	25-30	25-30	25-30	25-30	3.5-5	6.5-7	3-4	7-8	4-5	4-5	6-7	4-5	6-7
Units:	ug/kg Q	ug/kg Q	ug/kg Q	ug/kg Q	ug/kg Q	ug/kg Q	ug/kg Q	ug/kg Q	ug/kg Q	ug/kg Q	ug/kg Q	ug/kg Q	ug/kg Q
Volatile Organic Compounds (VOCs)													
1,1,1-Trichloroethane	3 U	3 U	130 U	3 U	245 U	10.4 U	77 U	73.8 U	80.1 U	88.9 U	79 U	10.5 U	4.86 U
1,1-Dichloroethane	4 U	5 U	190 U	5 U	142 U	9.18 U	44.4 U	42.6 U	46.2 U	51.3 U	45.6 U	9.25 U	4.27 U
1,1-Dichloroethene	3 U	3 U	130 U	3 U	175 U	10.8 U	54.8 U	52.5 U	57 U	63.3 U	56.2 U	10.9 U	5.05 U
1,2-Dichloroethane	3 U	3 U	***130 U***	3 U	***236 U***	11.5 U	***74 U***	***71 U***	***77 U***	***85.5 U***	***76 U***	11.6 U	5.37 U
1,2-Dichloroethene (cis)	3 U	3 U	130 U	3 U	198 U	10.6 U	62.2 U	59.6 U	64.7 U	71.8 U	63.8 U	10.7 U	4.94 U
1,2-Dichloroethene (trans)	4 U	5 U	***190 U***	5 U	127 U	10.4 U	40 U	38.3 U	41.6 U	46.2 U	41 U	10.5 U	4.86 U
1,2,3-Trichlorobenzene	15 U	16 U	630 U	16 U	170 U	10.1 U	53.3 U	51.1 U	55.4 U	221 J	157 J	10.2 U	4.7 U
1,2,3-Trichloropropane	29 U	32 U	1300 U	32 U	2830	10.3 U	470 J	76.7 U	494 J	504 J	82.1 U	10.4 U	4.81 U
1,2,4-Trichlorobenzene	NA	NA	NA	NA	212 U	10.7 U	66.6 U	63.9 U	69.3 U	146 J	68.4 U	10.8 U	4.97 U
1,2,4-Trimethylbenzene	15 U	16 U	630 U	16 U	454 J	12.5 U	249 J	62.5 U	116 J	75.2 U	66.9 U	12.6 U	5.82 U
1,3,5-Trimethylbenzene	15 U	16 U	630 U	16 U	203 U	12.4 U	133 J	61.1 U	66.2 U	73.5 U	65.4 U	12.5 U	5.77 U
4-Isopropyltoluene	NA	NA	NA	NA	1430 J	14.8 J	718 J	48.3 U	126 J	58.1 U	51.7 U	12.4 U	5.74 U
Acetone	29 U	32 U	***1300 U***	32 U	***1380 U***	38.7 U	***432 U***	***415 U***	***450 U***	***499 U***	***444 U***	39 U	32.1 J
Benzene	3 U	3 U	***130 U***	8	***203 U***	10.7 U	**112 J**	***61.1 U***	**94.2 J**	***73.5 U***	***65.4 U***	10.8 U	4.99 U
n-Butylbenzene	3 U	5.3 U	130 U	3 U	10100	18.9 J	483 J	515 J	549 J	703 J	472 J	20.3 J	5.74 U
Carbon Disulfide	29 U	32 U	1300 U	32 U	189 U	13.8 J	59.2 U	56.8 U	61.6 U	68.4 U	60.8 U	7.57 U	3.5 U
Carbon tetrachloride	3 U	3 U	130 U	3 U	208 U	10.4 U	65.1 U	62.5 U	67.8 U	75.2 U	66.9 U	10.5 U	4.83 U
Chlorobenzene	3 U	3 U	130 U	3 U	227 U	12.3 U	71 U	68.2 U	73.9 U	82.1 U	73 U	12.4 U	5.71 U
Chloroform	6	6	190 U	5 U	217 U	11.6 U	68.1 U	65.3 U	70.8 U	78.7 U	69.9 U	11.7 U	5.39 U
Diethylbenzene-p	12 U	29	510 U	13 U	2500	11.4 U	351 J	447 J	818	66.7 U	59.3 U	11.4 U	5.29 U
Ethylbenzene	3 U	3 U	310	5	194 U	10.2 U	137 J	58.2 U	238 J	70.1 U	62.3 U	10.2 U	4.73 U
p-Ethyltoluene	NA	NA	NA	NA	633 J	12.3 U	317 J	55.4 U	371 J	66.7 U	59.3 U	12.4 U	5.71 U
Isopropyl Benzene	3 U	3 U	130 U	5 U	4440	12.2 U	226 J	649 J	492 J	298 J	66.9 U	12.3 U	5.66 U
p-Isopropyltoluene	3 U	3 U	130 U	3 U	1430 J	14.8 U	718 J	48.3 U	126 J	58.1 U	51.7 U	12.4 U	5.74 U
Methyl ethyl ketone (MEK / 2-butanone)	29 U	32 U	***1300 U***	32 U	***906 U***	20.8 U	***284 U***	***273 U***	***296 U***	***328 U***	***292 U***	21 U	9.69 U
Methylene chloride	29 U	32 U	***1300 U***	32 U	***184 U***	10.8 U	***57.7 U***	***55.4 U***	***60.1 U***	***66.7 U***	***59.3 U***	10.9 U	5.02 U
4-Methyl-2-Pentanone	29 U	32 U	1300 U	32 U	859 U	27.9 U	269 U	258 U	280 U	311 U	277 U	28.1 U	13 U
Naphthalene	16	16 U	5600	16 U	156 U	7.98 U	666 J	46.9 U	845	56.4 U	50.2 U	8.03 U	22.7
Propylbenzene-n	3 U	3 U	130 U	4	**9,200**	21.1 J	351 J	1080	710 J	271 J	62.3 U	11.3 U	5.21 U
Sec-Butylbenzene	3 U	3 U	130 U	3 U	8680	12.5 U	537 J	960	814	802 J	427 J	12.6 U	5.82 U
Tert-Butylbezene	15 U	16 U	630 U	16 U	2730	11.9 U	375 J	322 J	270 J	285 J	156 J	35.8	5.55 U
Tetrachloroethene	3 U	3 U	130 U	3 U	278 U	12.3 U	87.3 U	83.8 U	90.9 U	101 U	89.7 U	12.4 U	5.71 U
Toluene	4 U	5 U	190 U	5 U	212 U	10.9 U	102 J	63.9 U	69.3 U	76.9 U	68.4 U	12.9 J	5.07 U
Trichloroethene	3 U	3 U	130 U	3 U	217 U	9.99 U	68.1 U	65.3 U	70.8 U	78.7 U	69.9 U	10.1 U	4.65 U
Tetramethylbenzene-1,2,4,5	12 U	28	510 U	13 U	30200	115	2160	3120	3110	3170	1970	109	14.8
Vinyl Chloride	6 U	7 U	***250 U***	6 U	***203 U***	12.6 U	***63.6 U***	***61.1 U***	***66.2 U***	***73.5 U***	***65.4 U***	12.7 U	5.87 U
1,2-Xylene (o-Xylene)	6 U	7 U	250 U	6 U	175 U	12.6 U	54.8 U	52.5 U	57 U	63.3 U	56.2 U	12.7 U	5.85 U
1,3-Xylene (m-Xylene)	NA	NA	NA	NA	**771 J**	24 U	**273 J**	122 U	148 J	147 U	131 U	24.2 U	11.2 U
Xylene (m,p-Xylene)	6 U	7 U	250 U	6 U	**771 J**	24 U	**273 J**	122 U	148 J	147 U	131 U	24.2 U	11.2 U
Xylene (total)	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA
Semi-Volatile Organic Compounds (SVOCs)													
1,2-Dichlorobenzene	200 U	220 U	200 U	210 U	38.9 U	35.5 U	36.6 U	35 U	38.1 U	42.3 U	37.5 U	35.7 U	41.3 U
1,2-Diphenylhydrazine	NA	NA	NA	NA	209 J	34.7 U	35.8 U	34.2 U	37.3 U	41.3 U	36.7 U	34.9 U	40.3 U
1,2,4-Trichlorobenzene	200 U	220 U	200 U	210 U	455 J	47.8 U	49.3 U	47.2 U	51.4 U	171 J	50.5 U	48.1 U	55.5 U
2-Methylnaphthalene	200 U	220 U	1400 E	8.5 U	49.9 U	74.6 J	963	45 U	491 J	54.3 U	48.2 U	45.9 U	53 U
2-Nitrophenol	800 U	880 U	440 U	460 U	38.2 U	34.9 U	36 U	34.5 U	37.5 U	41.6 U	36.9 U	35.1 U	40.6 U
2,4-Dimethylphenol	200 U	220 U	200 U	210 U	52.6 U	48 U	405 J	47.4 U	211 J	412 J	50.7 U	48.3 U	55.8 U
2,6-Dinitrotoluene	200 U	220 U	200 U	210 U	51.8 U	47.3 U	48.8 U	46.7 U	50.9 U	940	199 J	47.6 U	55 U
3-Nitroanaline	200 U	220 U	200 U	210 U	21.6 U	19.7 U	505 J	19.5 U	200 J	293 J	107 J	19.9 U	23 U
4-Chloroanaline	200 U	220 U	200 U	210 U	47.9 U	43.7 U	45.1 U	43.2 U	47 U	702	46.2 U	44 U	50.9 U
4-Nitroaniline	280 U	310 U	200 U	210 U	123 U	112 U	116 U	111 U	121 U	342 J	119 U	113 U	131 U
Acenaphthene	200 U	290	1,400.0 E	93	4410	55.1 U	1030	47.7 U	2950	1010	170 J	145 J	56.2 U
Acenaphthylene	200 U	220 U	48	8.5 U	43.3 U	39.5 U	40.8 U	39 U	42.5 U	47.1 U	41.7 U	39.8 U	45.9 U
Anthracene	200 U	220 U	170	33	3430	158 J	52.7 U	50.5 U	2130	60.9 U	54 U	257 J	59.4 U
Benzo (a) anthracene	200 U	220 U	9.5	8.5 U	**3,030**	118 J	759	48 U	**1,830**	538 J	51.3 U	**1,040**	150 J
Benzo (a) pyrene	200 U	220 U	8.1 U	8.5 U	**5,840**	189 J	782	59.1 U	**1,460**	865	63.2 U	**1,090**	180 J
Benzo (b) fluoranthene	200 U	220 U	8.1 U	8.5 U	**2,760**	70 J	630	47.1 U	**1,110**	592 J	50.4 U	873	139 J
Benzo (g,h,i) perylene	200 U	220 U	8.1 U	8.5 U	7140	152 J	814	86.6 U	1290	886	92.7 U	709	102 U
Benzo (k) fluoranthene	200 U	220 U	8.1 U	8.5 U	**3,520**	96.4 J	615	86.3 U	**1,140**	601 J	92.4 U	**906**	167 J
Benzyl alcohol	400 U	440 U	200 U	210 U	244 J	67.7 U	69.9 U	66.9 U	72.8 U	80.7 U	71.6 U	68.2 U	78.8 U
bis(2-chloroethoxy)methane	200 U	220 U	220 U	230 U	123 J	47.5 U	49.1 U	46.9 U	51.1 U	56.6 U	50.2 U	47.9 U	55.3 U
bis(2-ethylhexyl)phthalate	400 U	440 U	200 U	210 U	82.4 U	123 J	185 J	74.3 U	3310	89.6 U	79.5 U	75.7 U	87.4 U
Butylbenzylphthalate	200 U	220 U	200 U	210 U	66.4 U	60.6 U	62.6 U	59.9 U	65.2 U	72.2 U	64.1 U	61 U	70.5 U
Carbozole	200 U	220 U	200 U	210 U	72.5 U	66.1 U	68.2 U	65.3 U	71.1 U	78.8 U	69.9 U	93.6 J	76.9 U
Chrysene	200 U	220 U	9.1	8.5 U	**3,240**	130 J	882	60 U	**1,960**	554 J	64.2 U	**1,060**	170 J
Dibenzo (a,h) anthracene	120 U	130 U	8.1 U	8.5 U	**668**	64.1 U	66.1 U	63.3 U	68.9 U	76.3 U	67.7 U	64.5 U	74.5 U
Dibenzofuran	200 U	220 U	200 U	210 U	42 U	38.3 U	549 J	37.9 U	1390	45.7 U	40.5 U	38.6 U	44.6 U
Fluoranthene	200 U	220 U	38	29	69.3 U	276 J	2000	62.5 U	7630	952	98.3 J	2040	174 J
Fluorene	200 U	220 U	480	8.6	5750	93 J	1070	45.6 U	3160	55 U	48.8 U	96 J	53.7 U
Hexachloroethane	200 U	220 U	32 U	34 U	56 U	51.1 U	999	50.5 U	54.9 U	60.9 U	54 U	51.4 U	59.4 U
Indeno (1,2,3-cd) pyrene	200 U	220 U	8.1 U	8.5 U	**3,570**	80.4 J	**582 J**	52.4 U	**915**	**744**	56.1 U	**644**	80.1 J
Isophorone	200 U	220 U	180 U	190 U	2750	52.5 U	313 J	51.8 U	56.4 U	62.5 U	55.5 U	52.8 U	61 U
n-Nitrosodiphenylamine	600 U	660 U	160 U	170 U	68.6 U	62.6 U	64.6 U	61.8 U	67.3 U	74.6 U	66.1 U	63 U	72.8 U
Naphthalene	200 U	220 U	4000.0 E	8.5 U	50.6 U	46.2 U	927	45.6 U	1900	55 U	48.8 U	46.5 U	53.7 U
Nitrobenzene	200 U	220 U	180 U	190 U	797	44.4 U	126 J	43.9 U	47.8 U	52.9 U	47 U	44.7 U	51.7 U
o-Cresol(s) (2-Methylphenol)	240 U	260 U	200 U	210 U	45 U	41.1 U	42.4 U	40.6 U	44.2 U	49 U	43.4 U	41.4 U	47.8 U
m,p-Cresol(s) (3&4-Methylphenol)	240 U	260 U	290 U	310 U	38.9 U	35.5 U	36.6 U	35 U	38.1 U	42.3 U	37.5 U	35.7 U	41.3 U
p-Cresol(s) (4-Methylphenol)	NA	NA	NA	NA	38.9 U	35.5 U	36.6 U	35 U	38.1 U	42.3 U	37.5 U	35.7 U	41.3 U
Pentachlorophenol	***800 U***	***880 U***	32 U	34 U	477 U	435 U	449 U	430 U	468 U	518 U	460 U	438 U	506 U
Phenanthrene	200 U	220 U	730	160	8940	436 J	2360	51.6 U	8630	2000	55.2 U	1050	60.7 U
Phenol	280 U	310 U	200 U	210 U	32.8 U	30 U	30.9 U	29.6 U	32.2 U	35.7 U	31.7 U	30.2 U	34.8 U
Pyrene	200 U	220 U	36	29	13600 E	441 J	1940	42 U	7160	1190	135 J	1780	180 J
TPH - Diesel Range Organics (DRO)													
Fuel Oil #2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total DRO TPH	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown DRO TPH	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCBs/Pesticides													
Aroclor 1242	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1248	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1260	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total PCBs/Pesticides	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals													
Aluminum	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury (elemental)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Consultant:	Zeb Environmental										
Sample ID:	P-3	P-3	P-4	P-4	P-5	P-5	P-6	P-6	P-7	P-7	P-8
Laboratory Sample Number:	1204166-5	1204166-6	1204166-7	1204166-8	1204166-9	1204166-10	1204166-11	1204166-12	1204166-13	1204166-14	1204166-15
Sampling Date:	4/11/2012	4/11/2012	4/11/2012	4/11/2012	4/11/2012	4/11/2012	4/11/2012	4/11/2012	4/11/2012	4/11/2012	4/11/2012
Sampling Depth (ft):	3.5-5	7-7.5	3.5-5	6-7	3.5-5	7-7.5	4-5	6.5-7	4-5	7-7.5	4-5
Units:	ug/kg Q	ug/kg Q	ug/kg Q	ug/kg Q	ug/kg Q	ug/kg Q	ug/kg Q	ug/kg Q	ug/kg Q	ug/kg Q	ug/kg Q
Volatile Organic Compounds (VOCs)											
1,1,1-Trichloroethane	258 U	11.4 U	164 U	10.1 U	13.6 U	232 U	83.7 U	2.06 U	178 U	2.06 U	108 U
1,1-Dichloroethane	149 U	10 U	94.5 U	8.91 U	12 U	134 U	48.3 U	1.81 U	103 U	1.81 U	62.1 U
1,1-Dichloroethene	184 U	11.9 U	117 U	10.5 U	14.2 U	165 U	59.6 U	2.14 U	127 U	2.14 U	76.6 U
1,2-Dichloroethane	***248 U***	12.6 U	***158 U***	11.2 U	15.1 U	***224 U***	***80.5 U***	2.27 U	***172 U***	2.27 U	***104 U***
1,2-Dichloroethene (cis)	209 U	11.6 U	132 U	10.3 U	13.9 U	188 U	67.6 U	2.09 U	144 U	2.09 U	**374 J**
1,2-Dichloroethene (trans)	134 U	11.4 U	85.1 U	10.1 U	13.6 U	121 U	43.5 U	2.06 U	92.6 U	2.06 U	55.9 U
1,2,3-Trichlorobenzene	179 U	11 U	113 U	9.8 U	13.2 U	161 U	58 U	1.99 U	123 U	1.99 U	74.5 U
1,2,3-Trichloropropane	1710 J	11.3 U	170 U	10 U	13.5 U	1200 J	86.9 U	2.03 U	970 J	2.03 U	112 U
1,2,4-Trichlorobenzene	224 U	11.7 U	142 U	10.4 U	13.9 U	201 U	72.4 U	2.1 U	154 U	2.1 U	93.2 U
1,2,4-Trimethylbenzene	219 U	13.7 U	401 J	12.1 U	16.3 U	197 U	159 J	2.46 U	3080	2.46 U	161 J
1,3,5-Trimethylbenzene	214 U	13.5 U	135 U	12 U	16.2 U	192 U	69.2 U	2.44 U	1360 J	2.44 U	89 U
4-Isopropyltoluene	169 U	13.5 U	1010 J	12 U	16.1 U	152	54.7	2.43 U	219 J	2.43 U	70.4 U
Acetone	***1450 U***	42.3 U	***920 U***	37.6 U	**420**	***1310 U***	***470 U***	7.63 U	***1000 U***	7.63 U	***604 U***
Benzene	***214 U***	11.7 U	***135 U***	10.4 U	37.6	***192 U***	***69.2 U***	2.11 U	**378 J**	2.11 U	**388 J**
n-Butylbenzene	950 J	13.5 U	320 J	12 U	230	980 J	69.2 U	2.43 U	1090 J	2.43 U	1530
Carbon Disulfide	199 U	36.9	126 U	7.3 U	56.7	179 U	64.4 U	1.48 U	137 U	1.48 U	82.8 U
Carbon tetrachloride	219 U	11.3 U	139 U	10.1 U	13.6 U	197 U	70.8 U	2.05 U	151 U	2.05 U	91.1 U
Chlorobenzene	239 U	13.4 U	151 U	11.9 U	16 U	215 U	77.3 U	2.42 U	165 U	2.42 U	99.4 U
Chloroform	229 U	12.7 U	145 U	11.3 U	15.1 U	206 U	74.1 U	2.28 U	158 U	2.28 U	95.2 U
Diethylbenzene-p	194 U	12.4 U	123 U	11 U	111	906 J	62.8 U	2.24 U	781 J	2.24 U	2710
Ethylbenzene	204 U	11.1 U	129 U	9.86 U	13.3 U	183 U	66 U	2 U	**1,980**	2 U	84.9 U
p-Ethyltoluene	194 U	13.4 U	222 J	11.9 U	42	174 U	62.8 U	2.42 U	1390 J	2.42 U	150 J
Isopropyl Benzene	310 J	13.3 U	139 U	11.8 U	15.9 U	357 J	70.8 U	2.4 U	674 J	2.4 U	916 J
p-Isopropyltoluene	169 U	13.5 U	1010 J	12 U	16.1 U	152 U	54.7 U	2.43 U	219 J	2.43 U	70.4 U
Methyl ethyl ketone (MEK / 2-butanone)	***954 U***	30.5 J	***605 U***	20.2 U	27.2 U	***858 U***	***309 U***	4.1 U	***659 U***	4.95 J	***397 U***
Methylene chloride	***194 U***	11.8 U	***123 U***	**54.5**	**132**	***174 U***	***62.8 U***	2.12 U	***134 U***	10.5	***80.7 U***
4-Methyl-2-Pentanone	905 U	30.5 U	573 U	27.1 U	36.4 U	814 U	293 U	5.49 U	624 U	5.49 U	377 U
Naphthalene	164 U	8.72 U	730 J	46.1	10.4 U	148 U	53.1 U	1.57 U	69700	11.2	1980
Propylbenzene-n	471 J	12.2 U	129 U	10.9 U	193	834 J	66 U	2.2 U	920 J	2.2 U	1710
Sec-Butylbenzene	179 U	13.7 U	113 U	12.1 U	16.3 U	161 U	58 U	2.46 U	1560 J	2.46 U	2070
Tert-Butylbezene	995 J	13 U	139 U	11.6 U	131	400 J	70.8 U	2.35 U	438 J	2.35 U	656 J
Tetrachloroethene	293 U	13.4 U	186 U	24.7 J	35 J	264 U	95 U	2.42 U	202 U	4.55 J	122 U
Toluene	224 U	11.9 U	142 U	10.6 U	16.4 J	201 U	72.4 U	2.15 U	**973 J**	2.15 U	188 J
Trichloroethene	229 U	10.9 U	145 U	9.69 U	13 J	206 U	74.1 U	1.97 U	158 U	1.97 U	95.2 U
Tetramethylbenzene-1,2,4,5	2920	38.3	1660	31.2	950	4910	112 J	6.23	4910	6.72	6270
Vinyl Chloride	***214 U***	13.8 U	***135 U***	12.3 U	16.5 U	***192 U***	***69.2 U***	2.49 U	***147 U***	2.49 U	***89 U***
1,2-Xylene (o-Xylene)	184 U	13.7 U	117 U	12.2 U	16.4 U	165 U	59.6 U	2.47 U	**1,110 J**	2.47 U	76.6 U
1,3-Xylene (m-Xylene)	***427 U***	26.2 U	***271 U***	23.3 U	31.3 U	***384 U***	138 U	4.72 U	**2,900 J**	4.72 U	**328 J**
Xylene (m,p-Xylene)	***427 U***	26.2 U	***271 U***	23.3 U	31.3 U	***384 U***	138 U	4.72 U	**2,900 J**	4.72 U	**328 J**
Xylene (total)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Semi-Volatile Organic Compounds (SVOCs)											
1,2-Dichlorobenzene	40.9 U	38.7 U	38.9 U	34.4 U	46.3 U	55.3 U	39.8 U	34.9 U	42.4 U	35 U	51.2 U
1,2-Diphenylhydrazine	122 J	37.8 U	38 U	33.7 U	45.2 U	54 U	38.9 U	34.1 U	41.5 U	34.2 U	50 U
1,2,4-Trichlorobenzene	244 J	52.1 U	52.4 U	46.4 U	62.3 U	74.4 U	53.5 U	47 U	57.1 U	47.1 U	68.9 U
2-Methylnaphthalene	1670	49.7 U	1030	44.3 U	59.4 U	71 U	51.1 U	44.8 U	4390	45 U	65.7 U
2-Nitrophenol	40.3 U	38.1 U	38.3 U	33.9 U	45.5 U	54.4 U	299 J	34.3 U	41.8 U	34.4 U	50.3 U
2,4-Dimethylphenol	1430	52.4 U	436 J	46.6 U	412 J	202 J	53.8 U	47.2 U	308 J	47.3 U	142 J
2,6-Dinitrotoluene	54.6 U	51.6 U	51.9 U	45.9 U	61.7 U	200 J	53 U	46.5 U	56.6 U	46.7 U	68.2 U
3-Nitroanaline	22.8 U	21.6 U	21.7 U	19.2 U	213 J	179 J	88.8 J	19.4 U	552 J	19.5 U	180 J
4-Chloroanaline	50.5 U	47.7 U	549 J	42.5 U	457 J	243 J	70.8 J	43 U	52.3 U	43.1 U	63.1 U
4-Nitroaniline	690	123 U	361 J	109 U	146 U	175 U	126 U	110 U	134 U	111 U	162 U
Acenaphthene	3620	52.8 U	802	46.9 U	681 J	211 J	54.2 U	47.5 U	6750	47.7 U	364 J
Acenaphthylene	45.6 U	43.1 U	43.3 U	38.4 U	51.5 U	61.5 U	44.3 U	38.8 U	47.3 U	39 U	639 J
Anthracene	58.9 U	55.8 U	56 U	49.6 U	66.6 U	79.6 U	57.3 U	50.2 U	1180	50.4 U	924
Benzo (a) anthracene	**11,300 E**	53 U	**1,360**	47.2 U	412 J	75.7 U	54.4 U	47.7 U	**1,130**	47.9 U	**2,560**
Benzo (a) pyrene	**14,600 E**	65.3 U	**1,150**	58.1 U	452 J	93.2 U	67.1 U	58.8 U	757	59 U	**5,570**
Benzo (b) fluoranthene	**10,400**	52 U	**1,010**	46.3 U	352 J	74.2 U	53.4 U	46.8 U	587 J	47 U	**2,330**
Benzo (g,h,i) perylene	7560	95.7 U	1060	85.2 U	458 J	137 U	98.3 U	86.2 U	743	86.5 U	5780
Benzo (k) fluoranthene	**11900 E**	95.4 U	**1,040**	84.8 U	365 J	136 U	97.9 U	85.9 U	637 J	86.2 U	**2,980**
Benzyl alcohol	78.1 U	73.9 U	74.3 U	65.8 U	88.3 U	106 U	75.9 U	66.6 U	90.7 J	66.8 U	97.7 U
bis(2-chloroethoxy)methane	54.8 U	51.9 U	52.1 U	46.2 U	62 U	74.1 U	53.3 U	46.7 U	56.9 U	46.9 U	68.5 U
bis(2-ethylhexyl)phthalate	86.8 U	82.1 U	82.5 U	73 U	139 J	117 U	84.3 U	73.9 U	92 J	74.2 U	108 U
Butylbenzylphthalate	69.9 U	66.2 U	66.5 U	58.9 U	79 U	94.5 U	68 U	59.6 U	72.5 U	59.8 U	87.4 U
Carbozole	76.3 U	72.2 U	72.5 U	64.2 U	86.2 U	103 U	74.1 U	65 U	514 J	65.2 U	95.4 U
Chrysene	**10,500**	66.3 U	**1,400**	59 U	437 J	94.6 U	68.1 U	59.7 U	**1,010**	59.9 U	**2,560**
Dibenzo (a,h) anthracene	**3,870**	69.9 U	70.3 U	62.2 U	83.5 U	99.8 U	71.8 U	63 U	76.6 U	63.2 U	92.4 U
Dibenzofuran	44.2 U	41.9 U	42.1 U	37.2 U	50 U	370 J	43 U	37.7 U	3830	37.8 U	55.3 U
Fluoranthene	12100 E	69 U	3020	61.4 U	984	157 J	70.9 U	62.2 U	8060	62.4 U	4570
Fluorene	4360	50.4 U	50.6 U	44.8 U	581 J	553 J	51.7 U	45.4 U	4120	45.5 U	384 J
Hexachloroethane	58.9 U	55.8 U	56 U	49.6 U	1620	79.6 U	57.3 U	50.2 U	61.1 U	50.4 U	220 J
Indeno (1,2,3-cd) pyrene	61.2 U	57.9 U	**780**	51.5 U	323 J	82.6 U	59.5 U	52.1 U	496 J	52.3 U	**3,160**
Isophorone	60.5 U	57.3 U	57.6 U	50.9 U	68.4 U	81.8 U	87.5 J	51.6 U	62.8 U	51.8 U	75.7 U
n-Nitrosodiphenylamine	72.2 U	68.3 U	68.6 U	60.8 U	81.6 U	97.5 U	70.1 U	61.5 U	452 J	61.7 U	90.2 U
Naphthalene	53.2 U	50.4 U	533 J	44.8 U	60.2 U	71.9 U	51.7 U	45.4 U	4320	45.5 U	381 J
Nitrobenzene	51.3 U	48.5 U	48.7 U	43.1 U	202 J	69.2 U	49.8 U	43.7 U	229 J	43.8 U	64.1 U
o-Cresol(s) (2-Methylphenol)	47.4 U	44.9 U	45.1 U	39.9 U	53.6 U	64 U	46.1 U	40.4 U	49.2 U	40.5 U	59.3 U
m,p-Cresol(s) (3&4-Methylphenol)	282	38.7 U	38.9 U	34.4 U	91.3	55.3 U	39.8 U	34.9 U	42.4 U	35 U	51.2 U
p-Cresol(s) (4-Methylphenol)	282	38.7 U	38.9 U	34.4 U	91.3	55.3 U	39.8 U	34.9 U	42.4 U	35 U	51.2 U
Pentachlorophenol	502 U	475 U	477 U	423 U	567 U	678 U	488 U	428 U	521 U	429 U	627 U
Phenanthrene	60.3 U	57 U	3460	50.7 U	68.1 U	447 J	58.6 U	51.4 U	12300 E	51.5 U	947
Phenol	34.6 U	32.7 U	32.9 U	29.1 U	39.1 U	46.7 U	33.6 U	29.5 U	35.9 U	29.6 U	43.2 U
Pyrene	13000 E	46.4 U	3910	41.2 U	1140	250 J	47.6 U	41.8 U	5430	41.9 U	7270
TPH - Diesel Range Organics (DRO)											
Fuel Oil #2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total DRO TPH	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unknown DRO TPH	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCBs/Pesticides											
Aroclor 1242	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1248	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1260	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total PCBs/Pesticides	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals											
Aluminum	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury (elemental)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

NOTES:
Subpart 375-6 (Revised Brownfields) criteria are from the NYSDEC Soil Cleanup Objective Tables 375-6.8(a) and 375-6.8(b), last revised 14 December 2006.
— : No criteria identified

Sample data for ELM, Cosmos, and Tradewind were provided in the Phase II Investigation Report, 400 Carroll Street by ELM dated May 2005.
Sample data for PW Grosser were provided in the PW Grosser Draft Subsurface Investigation Summary Report dated 16 June 2011.
Sample data for Zeb Environmental were provided in an environmental investigatiton provided by Sive Padget & Riesel, LLP.
ND:Not detected
NA: Not analyzed
E:Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument
J:Estimated result
U: Indicates that the result is lower than the MDL
B: Analyte detected in method blank

Italicized and **Bold *results*** indicate method detection limits (MDL) greater than or equal to the most stringent criteria.

Cosmos Environmental Services Samples:
^ : EcoTest Laboratories reported that it could not separate the isonomers for benzo(b)fluoranthene and benzo(k)fluoranthene. Therefore, the sum is split evenly between

TABLE 3
HISTORICAL SOIL ANALYTICAL RESULTS
388 CARROLL STREET
Brooklyn, New York

Consultant:			Subpart 375-6 (Revised Brownfields)				Cosmos Environmental							Tradewinds			
Sample ID:			Protection of Public Health				P-8	TP-1	TP-3	TP-6[5]	TP-7[6]	TP-8	Composite[4]	NE Corner	NW Corner	SE Corner	SW Corner
Laboratory Sample Number:	CAS No.	Unrestricted Use Objectives	Residential	Restricted - Residential	Restricted - Commercial	Restricted - Industrial	1204166-16	C974508/1	C974508/2	C974508/3	C974508/4	C974508/5	C974508/7	0209069-02A/B	0209069-03A/B	0209069-04A/B	0209069-05A/B
Sampling Date:							4/11/2012	10/26/1997	10/26/1997	10/26/1997	10/26/1997	10/26/1997	10/26/1997	9/20/2002	9/20/2002	9/20/2002	9/20/2002
Sampling Depth (ft):							7-7.5										
Units:		ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg Q	ug/kg Q	ug/kg Q	ug/kg Q	ug/kg Q	ug/kg Q	ug/kg Q	ug/kg Q	ug/kg Q	ug/kg Q	ug/kg Q
Volatile Organic Compounds (VOCs)																	
1,1,1-Trichloroethane	71-55-6	680	100,000	100,000	500,000	1,000,000	10.7 U	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U	5 U
1,1-Dichloroethane	75-34-3	270	19,000	26,000	240,000	480,000	9.38 U	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U	5 U
1,1-Dichloroethene	75-35-4	330	100,000	100,000	500,000	1,000,000	11.1 U	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U	5 U
1,2-Dichloroethane	107-06-2	20	2,300	3,100	30,000	60,000	11.8 U	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U	5 U
1,2-Dichloroethene (cis)	156-59-2	250	59,000	100,000	500,000	1,000,000	10.8 U	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U	5 U
1,2-Dichloroethene (trans)	156-60-5	190	100,000	100,000	500,000	1,000,000	10.7 U	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U	5 U
1,2,3-Trichlorobenzene	87-61-6	—	—	—	—	—	10.3 U	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U	5 U
1,2,3-Trichloropropane	96-18-4	—	—	—	—	—	10.5 U	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U	5 U
1,2,4-Trichlorobenzene	120-82-1	—	—	—	—	—	10.9 U	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U	5 U
1,2,4-Trimethylbenzene	95-63-6	3,600	47,000	52,000	190,000	380,000	12.8 U	1100	55	110	140	250	NA	5 U	5 U	5 U	5 U
1,3,5-Trimethylbenzene	108-67-8	8,400	47,000	52,000	190,000	380,000	12.7 U	290	150	70	65	120	NA	5 U	5 U	5 U	5 U
4-Isopropyltoluene	99-87-6	—	—	—	—	—	12.6 U	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U	9.2
Acetone	67-64-1	50	100,000	100,000	500,000	1,000,000	39.6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	71-43-2	60	2,900	4,800	44,000	89,000	11 U	**1,100**	**270**	**200**	**150**	**1,300**	NA	5 U	5 U	5 U	5 U
n-Butylbenzene	104-51-8	12,000	100,000	100,000	500,000	1,000,000	12.8 U	4300	1100	1900	1000	990	NA	5 U	5 U	5 U	5 U
Carbon Disulfide	75-15-0	—	—	—	—	—	7.88 U	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U	5 U
Carbon tetrachloride	56-23-5	760	1,400	2,400	22,000	44,000	10.6 U	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U	5 U
Chlorobenzene	108-90-7	1,100	100,000	100,000	500,000	1,000,000	12.5 U	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U	5 U
Chloroform	67-66-3	370	10,000	49,000	350,000	700,000	11.8 U	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U	5 U
Diethylbenzene-p	105-05-5	—	—	—	—	—	11.6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	100-41-4	1,000	30,000	41,000	390,000	780,000	10.4 U	**1,200**	95	120	50	360	NA	5 U	5 U	5 U	5 U
p-Ethyltoluene	622-96-8	—	—	—	—	—	12.5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isopropyl Benzene	98-82-8	—	—	—	—	—	12.4 U	4200	1200	490	520	1100	NA	5 U	5 U	5 U	5 U
p-Isopropyltoluene	99-87-6	—	—	—	—	—	12.6 U	220	70	60	50	610	NA	NA	NA	NA	NA
Methyl ethyl ketone (MEK / 2-butanone)	78-93-3	120	100,000	100,000	500,000	1,000,000	21.3 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methylene chloride	75-09-2	50	51,000	100,000	500,000	1,000,000	**83**	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U	5 U
4-Methyl-2-Pentanone	108-10-1	—	—	—	—	—	28.5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	91-20-3	—	—	—	—	—	8.15 U	2100	380	290	310	350	NA	5 U	5 U	5 U	5 U
Propylbenzene-n	103-65-1	3,900	100,000	100,000	500,000	1,000,000	11.4 U	**8,400**	2000	310	840	1400	NA	5 U	5 U	5 U	5 U
Sec-Butylbenzene	135-98-8	11,000	100,000	100,000	500,000	1,000,000	12.8 U	5800	1100	2800	890	1100	NA	5 U	5 U	5 U	5 U
Tert-Butylbenzene	98-06-6	5,900	100,000	100,000	500,000	1,000,000	12.2 U	2500	470	1200	390	880	NA	9.1	5 U	5 U	5.4
Tetrachloroethene	127-18-4	1,300	5,500	19,000	150,000	300,000	34.2	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U	5 U
Toluene	108-88-3	700	100,000	100,000	500,000	1,000,000	11.1 U	**780**	110	190	130	280	NA	5 U	5 U	5 U	5 U
Trichloroethene	79-01-6	470	10,000	21,000	200,000	400,000	10.2 U	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U	5 U
Tetramethylbenzene-1,2,4,5	95-93-2	—	—	—	—	—	36.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vinyl Chloride	75-01-4	20	210	900	13,000	27,000	12.9 U	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U	5 U
1,2-Xylene (o-Xylene)	95-47-6	260	100,000	100,000	500,000	1,000,000	12.8 U	**280**	50 U	60	65	85	NA	5 U	5 U	5 U	5 U
1,3-Xylene (m-Xylene)	108-38-3	260	100,000	100,000	500,000	1,000,000	24.5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Xylene (m,p-Xylene)	108-38-3	260	100,000	100,000	500,000	1,000,000	24.5 U	**2,400**	**270**	**350**	**290**	**650**	NA	10 U	10 U	10 U	10 U
Xylene (total)	1330-20-7	260	100,000	100,000	500,000	1,000,000	NA	**2,700**	**310**	**410**	**350**	**730**	NA	NA	NA	NA	NA
Semi-Volatile Organic Compounds (SVOCs)																	
1,2-Dichlorobenzene	95-50-1	1,100	100,000	100,000	500,000	1,000,000	36.2 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Diphenylhydrazine	122-66-7	—	—	—	—	—	35.4 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	120-82-1	—	—	—	—	—	48.8 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	91-57-6	—	—	—	—	—	46.5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitrophenol	88-75-5	—	—	—	—	—	35.6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dimethylphenol	105-67-9	—	—	—	—	—	49 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	606-20-2	—	—	—	—	—	48.3 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-Nitroanaline	99-09-2	—	—	—	—	—	20.2 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloroanaline	106-47-8	—	—	—	—	—	44.7 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitroaniline	100-01-6	—	—	—	—	—	115 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	83-32-9	20,000	100,000	100,000	500,000	1,000,000	49.4 U	1900	6500	300 U	300 U	5600	NA	170	300	330	460
Acenaphthylene	208-96-8	100,000	100,000	100,000	500,000	1,000,000	40.3 U	NA	NA	NA	NA	NA	NA	94	270	190	300
Anthracene	120-12-7	100,000	100,000	100,000	500,000	1,000,000	52.2 U	1500	2100	300 U	300 U	3900	NA	250	610	370	1300
Benzo (a) anthracene	56-55-3	1,000	1,000	1,000	5,600	11,000	49.6 U	**2,400**	**1,100**	300 U	300 U	**4,300**	NA	770	**1,200**	**1,200**	**2,700**
Benzo (a) pyrene	50-32-8	1,000	1,000	1,000	1,000	1,100	61.1 U	**2,800**	**1,500**	300 U	300 U	**3,700**	NA	880	**1,500**	**1,200**	**2,500**
Benzo (b) fluoranthene	205-99-2	1,000	1,000	1,000	5,600	11,000	48.7 U	**2,400** ^	950 ^	300 U	300 U	**3,200** ^	NA	**1,000**	**1,800**	**1,500**	**3,200**
Benzo (g,h,i) perylene	191-24-2	100,000	100,000	100,000	500,000	1,000,000	89.6 U	1100	600	300 U	300 U	1300	NA	650	1200	830	1900
Benzo (k) fluoranthene	207-08-9	800	1,000	3,900	56,000	110,000	89.2 U	**2,400** ^	**950** ^	300 U	300 U	**3,300** ^	NA	420	750	680	**1,800**
Benzyl alcohol	100-51-6	—	—	—	—	—	69.2 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-chloroethoxy)methane	111-91-1	—	—	—	—	—	48.5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-ethylhexyl)phthalate	117-81-7	—	—	—	—	—	76.8 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Butylbenzylphthalate	85-68-7	—	—	—	—	—	61.9 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbozole	86-74-8	—	—	—	—	—	67.5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	218-01-9	1,000	1,000	3,900	56,000	110,000	62 U	**2,400**	**1,300**	300 U	300 U	**4,200**	NA	880	**1,400**	**1,300**	**2,900**
Dibenzo (a,h) anthracene	53-70-3	330	330	330	560	1,100	65.4 U	**480**	300 U	300 U	300 U	**710**	NA	190	**330**	250	**580**
Dibenzofuran	132-64-9	—	—	—	—	—	39.2 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	206-44-0	100,000	100,000	100,000	500,000	1,000,000	64.6 U	4300	2600	620	350	9200	NA	1600	2700	2800	6300
Fluorene	86-73-7	30,000	100,000	100,000	500,000	1,000,000	47.1 U	1700	3900	2000	300 U	4000	NA	1100	290	330	550
Hexachloroethane	67-72-1	—	—	—	—	—	52.2 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indeno (1,2,3-cd) pyrene	193-39-5	500	500	500	5,600	11,000	54.2 U	**1,100**	360	300 U	300 U	**1,200**	NA	**640**	**1,000**	**730**	**1,700**
Isophorone	78-59-1	—	—	—	—	—	53.6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
n-Nitrosodiphenylamine	86-30-6	—	—	—	—	—	63.9 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	91-20-3	12,000	100,000	100,000	500,000	1,000,000	47.1 U	300 U	7800	300 U	300 U	300 U	NA	80 U	190	170	440
Nitrobenzene	98-95-3	—	—	—	—	—	45.4 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
o-Cresol(s) (2-Methylphenol)	95-48-7	330	100,000	100,000	500,000	1,000,000	42 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
m,p-Cresol(s) (3&4-Methylphenol)	106-44-5	330	34,000	100,000	500,000	1,000,000	36.2 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
p-Cresol(s) (4-Methylphenol)	106-44-5	330	34,000	100,000	500,000	1,000,000	36.2 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pentachlorophenol	87-86-5	800	2,400	6,700	6,700	55,000	444 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	85-01-8	100,000	100,000	100,000	500,000	1,000,000	53.3 U	5400	7100	1700	300 U	22000	NA	810	2300	930	5600
Phenol	108-95-2	330	100,000	100,000	500,000	1,000,000	30.6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	129-00-0	100,000	100,000	100,000	500,000	1,000,000	43.4 U	6200	5700	1300	860	13000	NA	1400	2300	2200	4300
TPH - Diesel Range Organics (DRO)																	
Fuel Oil #2		—	—	—	—	—	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	270000
Total DRO TPH		—	—	—	—	—	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	490000
Unknown DRO TPH		—	—	—	—	—	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	220000
PCBs/Pesticides																	
Aroclor 1242	53469-21-9	100	1,000	1,000	1,000	25,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1248	12672-29-6	100	1,000	1,000	1,000	25,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1260	11096-82-5	100	1,000	1,000	1,000	25,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total PCBs/Pesticides	—	—	—	—	—	—	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals																	
Aluminum	7429-90-5	—	—	—	—	—	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	7440-38-2	13,000	16,000	16,000	16,000	16,000	NA	NA	NA	NA	NA	NA	1400	NA	NA	NA	NA
Barium	7440-39-3	350,000	350,000	400,000	400,000	10,000,000	NA	NA	NA	NA	NA	NA	28000	NA	NA	NA	NA
Beryllium	7440-41-7	7,200	14,000	72,000	590,000	2,700,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	7440-43-9	2,500	2,500	4,300	9,300	60,000	NA	NA	NA	NA	NA	NA	100 U	NA	NA	NA	NA
Calcium	7440-70-2	—	—	—	—	—	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	7440-47-3	—	—	—	—	—	NA	NA	NA	NA	NA	NA	2800	NA	NA	NA	NA
Cobalt	7440-48-4	—	—	—	—	—	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	7440-50-8	50,000	270,000	270,000	270,000	10,000,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	7439-89-6	—	—	—	—	—	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	7439-92-1	63,000	400,000	400,000	1,000,000	3,900,000	NA	NA	NA	NA	NA	NA	6600	NA	NA	NA	NA
Magnesium	7439-95-4	—	—	—	—	—	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	7439-96-5	1,600,000	2,000,000	2,000,000	10,000,000	10,000,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury (elemental)	7439-97-6	180	810	810	2,800	5,700	NA	NA	NA	NA	NA	NA	**2,600**	NA	NA	NA	NA
Nickel	7440-02-0	30,000	140,000	310,000	310,000	10,000,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	7440-09-7	—	—	—	—	—	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	7782-49-2	3,900	36,000	180,000	1,500,000	6,800,000	NA	NA	NA	NA	NA	NA	960	NA	NA	NA	NA
Silver	7440-22-4	2,000	36,000	180,000	1,500,000	6,800,000	NA	NA	NA	NA	NA	NA	200 U	NA	NA	NA	NA
Sodium	7440-23-5	—	—	—	—	—	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	7440-62-2	—	—	—	—	—	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	7440-66-6	109,000	2,200,000	10,000,000	10,000,000	10,000,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

NOTES:
Subpart 375-6 (Revised Brownfields) criteria are from the NYSDEC Soil Cleanup Objective Tables 375-6.8(a) and 375-6.8(b), last revised 14 December 2006.
— : No criteria identified

Sample data for ELM, Cosmos, and Tradewind were provided in the Phase II Investigation Report, 400 Carroll Street by ELM dated May 2005.
Sample data for PW Grosser were provided in the PW Grosser Draft Subsurface Investigation Summary Report dated 16 June 2011.
Sample data for Zeb Environmental were provided in an environmental investigatiton provided by Sive Padget & Riesel, LLP.
ND:Not detected
NA: Not analyzed
E:Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument
J:Estimated result
U: Indicates that the result is lower than the MDL
B: Analyte detected in method blank

Italicized and ***Bold results*** indicate method detection limits (MDL) greater than or equal to the most stringent criteria.

Cosmos Environmental Services Samples:
^ : EcoTest Laboratories reported that it could not separate the isonomers for benzo(b)fluoranthene and benzo(k)fluoranthene. Therefore, the sum is split evenly between t

TABLE 4
SUMMARY OF HISTORICAL GROUNDWATER ANALYTICAL RESULTS
363 BOND STREET
Brooklyn, New York

Consultant:			Environmental Liability Management of New York, LLC (ELM)							
Sample ID:		Ground Water Quality Standards	MW-1		MW-2		MW-4		MW-5	
Langan Sample Number:										
Laboratory Sample Number:	CAS No.		209387-001		209387-002		209387-003		209387-004	
Sampling Date:			4/28/2005		4/28/2005		4/28/2005		4/28/2005	
Sampling Depth (ft):										
Units:		ug/l	ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q
Volatile Organic Compounds (VOCs)										
1,1,2-Trichloroethane	79-00-5	1	0.6	U	0.6	U	0.6	U	***3***	***U***
1,2-Dichloroethane	107-06-2	0.6	***0.6***	U	***0.6***	U	***0.6***	U	***3***	***U***
1,2-Dichloroethene (cis)	156-59-2	5	0.6	U	0.6	U	1.5	J	**450**	
Acetone	67-64-1	50	14		2.4	J	1.4	U	11	J
Benzene	71-43-2	1	0.4	U	0.4	U	**1**	**J**	**59**	
Bromomethane	74-83-9	5	1.2	U	1.2	U	1.2	U	***6***	***U***
Carbon tetrachloride	56-23-5	5	1	U	1	U	1	U	***5***	U
Ethylbenzene	100-41-4	5	1	U	1	U	1	U	**19**	**J**
Methyl ethyl ketone (MEK / 2-butanone)	78-93-3	50	1.2	U	1.2	U	1.2	U	21	J
Methylene chloride	75-09-2	5	0.4	UB	0.4	UB	0.4	UB	2.9	JB
Toluene	108-88-3	5	0.3	U	0.3	U	0.3	U	**38**	
Trichloroethene	79-01-6	5	0.7	U	0.7	U	2.2	J	3.5	U
Vinyl Chloride	75-01-4	2	0.8	U	0.8	U	1.7	J	**320**	
Xylene (mixed)	1330-20-7	5	1	U	1	U	1	U	**94**	
Total VOC	---	--	23.8		12.2		15.1		1035.4	
		--								
Semi-Volatile Organic Compounds (SVOCs)		--								
1,2,4-Trichlorobenzene	120-82-1	5	0.6	U	0.6	U	0.7	U	***7***	***U***
2-Chlorophenol	95-57-8	2	1	U	1	U	1	U	***12***	***U***
2-Methylnaphthalene	91-57-6	---	0.6	U	6	C	0.7	U	150	
2-Nitroaniline	88-74-4	5	1	U	1	U	1	U	***10***	***U***
2-Nitrophenol	88-75-5	2	1	U	1	U	1	U	***13***	***U***
2,4-Dichlorophenol	120-83-2	5	1	U	1	U	1	U	***11***	***U***
2,4-Dimethylphenol	105-67-9	2	0.9	U	0.9	U	0.9	U	**260**	
2,4-Dinitrophenol	51-28-5	2	***2***	U	***2***	U	***2***	U	***20***	***U***
2,4-Dinitrotoluene	121-14-2	5	1	U	1	U	1	U	***11***	***U***
2,4,5-Trichlorophenol	95-95-4	2	1	U	1	U	1	U	***10***	***U***
2,6-Dinitrotoluene	606-20-2	5	0.6	U	0.6	U	0.7	U	***7***	***U***
3-Nitroaniline	99-09-2	5	0.7	U	0.7	U	0.8	U	***8***	***U***
3,3'-Dichlorobenzidine	91-94-1	5	0.7	U	0.7	U	0.8	U	***8***	***U***
4-Chloroaniline	106-47-8	5	0.6	U	0.6	U	0.7	U	***7***	***U***
4-Nitroaniline	100-01-6	5	0.9	U	0.9	U	0.9	U	***9***	***U***
4-Nitrophenol	100-02-7	2	0.9	U	0.9	U	0.9	U	***9***	***U***
Acenaphthene	83-32-9	20	0.7	U	7	J	0.8	U	**90**	**J**
Anthracene	120-12-7	50	0.9	U	2	J	0.9	U	20	J
Benzo(a)anthracene	56-55-3	0.002	***0.4***	***U***	***0.4***	***U***	***0.5***	***U***	**10**	**J**
Benzo(a)pyrene	50-32-8	---	0.5	U	0.5	U	0.6	U	8	J
Benzo(b)fluoranthene	205-99-2	0.002	***1***	***U***	***1***	***U***	***1***	***U***	***11***	***U***
Benzo(k)fluoranthene	207-08-9	0.002	***2***	***U***	***2***	***U***	***2***	***U***	***18***	***U***
bis(2-Chloroethyl)ether	111-44-4	1	0.5	U	0.5	U	0.6	U	***6***	***U***
bis(2-Ethylhexyl)phthalate	117-81-7	5	3	U	3	U	3	U	***28***	***U***
Carbazole		--	0.3	U	5	J	0.3	U	89	J
Chrysene	218-01-9	0.002	***0.5***	***U***	***0.5***	***U***	***0.6***	***U***	**11**	**J**
Dibenzofuran	132-64-9	---	0.9	U	3	J	0.9	U	53	J
Fluoranthene	206-44-0	50	0.6	U	2	J	0.7	J	42	J
Fluorene	86-73-7	50	0.7	U	6	J	0.8	U	**59**	**J**
Hexachlorobenzene	118-74-1	0.04	***0.7***	***U***	***0.7***	***U***	***0.8***	***U***	***8***	***U***
Hexachlorobutadiene	87-68-3	0.5	***1***	***U***	***1***	***U***	***1***	***U***	***12***	***U***
Hexachlorocyclopentadiene	77-47-4	5	***6***	***U***	***6***	***U***	***7***	***U***	***64***	***U***
Hexachloroethane	67-72-1	5	1	U	1	U	1	U	***10***	***U***
Indeno(1,2,3-cd)pyrene	193-39-5	0.002	***0.7***	***U***	***0.7***	***U***	***0.8***	***U***	***8***	***U***
Naphthalene	91-20-3	10	0.7	U	**23**		0.8	J	**620**	
Nitrobenzene	98-95-3	0.4	***0.5***	***U***	***0.5***	***U***	***0.6***	***U***	***6***	***U***
o-Cresol(s) (2-Methylphenol)	95-48-7	2	1	U	1	U	1	U	**47**	**J**
p-Cresol(s) (4-Methylphenol)	106-44-5	--	2	U	2	U	2	U	29	J
Pentachlorophenol	87-86-5	1	***2***	***U***	***2***	***U***	***2***	***U***	***18***	***U***
Phenanthrene	85-01-8	50	0.5	U	10	J	0.6	J	**110**	**J**
Phenol	108-95-2	1	0.5	U	0.5	U	0.6	U	**7**	**J**
Pyrene	129-00-0	50	0.4	U	2	J	0.6	J	37	J
Total SVOCs	---	--	ND		109.8		54.8		2051	
		--								
Pesticides		--								
4,4'-DDE	72-55-9	--	0.01	U	0.0098	U	0.0096	U	0.22	
Aldrin	309-00-2	--	0.0067	U	0.0064	U	0.0063	U	0.049	J
Beta-BHC	319-85-7	--	0.015	U	0.014	U	0.014	U	0.13	
Endosulfan Sulfate	1031-07-8	--	0.016	U	0.016	U	0.015	U	0.076	J
Total Endosulfan	1031-07-8	--	ND		ND		ND		0.076	J
Heptachlor epoxide	1024-57-3	--	0.0066	U	0.0063	U	0.0062	U	0.58	
Total Pesticides	---	--	ND		ND		ND		1.055	

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363 BOND STREET
Brooklyn, New York

Consultant:			Environmental Liability Management of New York, LLC (ELM)							
Sample ID:		**Ground Water Quality Standards**	MW-1		MW-2		MW-4		MW-5	
Langan Sample Number:										
Laboratory Sample Number:	**CAS No.**		209387-001		209387-002		209387-003		209387-004	
Sampling Date:			4/28/2005		4/28/2005		4/28/2005		4/28/2005	
Sampling Depth (ft):										
Units:		**ug/l**	ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q
Total Metals										
Aluminum	7429-90-5	3	**97.7**	**J**	***92***	***U***	***92***	***U***	**924**	
Antimony	7440-36-0	3	***5.4***	***U***	***5.4***	***U***	***5.4***	***U***	***5.4***	***U***
Arsenic	7440-38-2	25	3.9	U	10	J	3.9	U	**35.7**	**J**
Barium	7440-39-3	1000	145		224		21.9		157	
Beryllium	7440-41-7	3	ND		ND		ND		ND	
Boron	7440-42-8	---								
Cadmium	7440-43-9	5	1.1	U	1.1	U	**16.4**		1.7	J
Calcium	7440-70-2	---	87,900		108,000		70,300		28,300	
Chromium	7440-47-3	50	1.3	U	1.3	U	1.3	U	21.2	
Cobalt	7440-48-4	---	1.8	U	2.1	J	1.8	U	7.1	J
Copper	7440-50-8	200	4.3	U	4.3	U	8.3	J	17.2	
Iron	7439-89-6	300	**5,990**		**3,730**		270		**3,600**	
Iron and Manganese	7493-89-6/7439-96-5	---	6,946		4,274		330		3,771	
Lead	7439-92-1	25	3	U	3.6	J	3	U	**227**	
Magnesium	7439-95-4	35000	10,600		32,800		5,800		23,500	
Manganese	7439-96-5	500	**956**		**544**		60		171	
Mercury (elemental)	7439-97-6	---	0.07	U	0.07	U	0.07	U	0.49	
Nickel	7440-02-0	100	1.9	U	4.1	J	3.7	J	43.2	
Potassium	7440-09-7	---	14,000		50,300		6,550		79,100	
Sodium	7440-23-5	20000	**105,000**		**155,000**		**28,400**		**187,000**	
Thallium	7440-28-0	0.5	***10***	***U***	***10***	***U***	***10***	***U***	***10***	***U***
Vanadium	7440-62-2	---	1.5	U	1.5	U	5.7	J	19.8	
Zinc	7440-66-6	2000	11	U	11	U	27	J	165	
Dissolved Metals										
Antimony	7440-36-0	3	***5.4***	***U***	***5.4***	***U***	***5.4***	***U***	***5.4***	***U***
Arsenic	7440-38-2	25	3.9	U	7.5	J	3.9	U	**30.5**	**J**
Barium	7440-39-3	1000	110		158		20.9		123	
Cadmium	7440-43-9	5	1.1	U	1.1	U	**15.3**		1.1	U
Calcium	7440-70-2	---	91,400		107,000		73,100		27,600	
Chromium	7440-47-3	50	1.3	U	1.3	U	1.3	U	16.5	
Cobalt	7440-48-4	---	1.8	U	2.4	J	1.8	U	6.5	J
Copper	7440-50-8	200	4.3	U	4.3	U	5.1	J	6.2	J
Iron	7439-89-6	300	**1,290**		54	U	70.9	J	**1,830**	
Iron and Manganese	7493-89-6/7439-96-5	---	2,267		512		132.1		1,982	
Lead	7439-92-1	25	3	U	3	U	3	U	**135**	
Magnesium	7439-95-4	35000	11,200		32,200		5970		23,200	
Manganese	7439-96-5	500	**977**		**512**		61.2		152	
Nickel	7440-02-0	100	1.9	U	4.6	J	3.9	J	41.9	
Potassium	7440-09-7	---	15100		50,400		6690		80,300	
Sodium	7440-23-5	20000	**111,000**		**156,000**		**29,000**		**184,000**	
Thallium	7440-28-0	0.5	***10***	***U***	***10***	***U***	***10***	***U***	***10***	***U***
Vanadium	7440-62-2	--	1.5	U	1.5	U	5.2	J	17.1	
Zinc	7440-66-6	2000	11	U	11	U	34.9	J	62.9	

NOTES:

Groundwater Quality Standards are a combination of values from the NYSDEC Part 703, Table 1 (cf. section 703.5), last revised 17 January 2008 and NYSDEC Technical & Operational Guidance Series (TOGS) 1.1.1 Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, last revised June 2004.
--- : No criteria established
J: Estimated value
U: Indicates that the result is lower than the MDL
B: Analyte detected in the method blank
C: GC target hit confirmed by Mass Spectometry

Sample data were provided in the Phase II Investigation Report, 363 Bond Street by ELM dated May 2005.

Italicized and **Bold *results*** indicate method detection limit (MDL) exceedances of the most stringent criteria.

TABLE 5
SUMMARY OF HISTORICAL GROUNDWATER ANALYTICAL RESULTS
388 CARROLL STREET
Brooklyn, New York

Consultant:			Environmental Liability Management of New York, LLC (ELM)																Cosmos		Tradewind	
Sample ID:	**CAS No.**	**Ground Water Quality Standards**	MW-1		SB-2/TW		SB-3/W		SB-6/TW		SB-7/TW		SB-11/TW		SB-12/TW		PPW-3		W1	
Laboratory Sample Number:			207936-006		207935-013		207935-014		207935-015		207935-016		207935-017		207935-018		C974508/6		0209069-01A	
Sampling Date:			10/25/2004		10/27/2004		10/27/2004		10/27/2004		10/27/2004		10/27/2004		10/27/2004		10/26/1997		9/20/2002	
Units:		**ug/l**	ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q
Volatile Organic Compounds (VOCs)																				
1,1,1-Trichloroethane	71-55-6	5	0.9	U	***5***	***U***	***5***	***U***	***5***	***U***	***5***	***U***	***5***	***U***	***5***	***U***	NA		NA	
1,1-Dichloroethane	75-34-3	5	0.4	U	***5***	***U***	***5***	***U***	***5***	***U***	***5***	***U***	***5***	***U***	***5***	***U***	1	U	1	U
1,1-Dichloroethene	75-35-4	5	0.8	U	***5***	***U***	***5***	***U***	***5***	***U***	***5***	***U***	***5***	***U***	***5***	***U***	1	U	1	U
1,1,1-Trichloroethane	71-55-6	5	0.8	U	***5***	***U***	***5***	***U***	***5***	***U***	***5***	***U***	***5***	***U***	***5***	***U***	1	U	1	U
1,1,2-Trichloroethane	79-00-5	1	0.8	U	***5***	***U***	***5***	***U***	***5***	***U***	***5***	***U***	***5***	***U***	***5***	***U***	***1***	***U***	***1***	***U***
1,1,2,2-Tetrachloroethane	79-34-5	5	0.7	U	***5***	***U***	***5***	***U***	***5***	***U***	***5***	***U***	***5***	***U***	***5***	***U***	1	U	1	U
1,2-Dichloroethane	107-06-2	0.6	***0.6***	***U***	***5***	***U***	***5***	***U***	***5***	***U***	***5***	***U***	***5***	***U***	***5***	***U***	***1***	***U***	***1***	***U***
1,2-Dichloroethene (cis)	156-59-2	5	0.7	U	***5***	***U***	***5***	***U***	***5***	***U***	***5***	***U***	***5***	***U***	***5***	***U***	NA		1	U
1,2-Dichloroethene (trans)	156-60-5	5	0.5	U	***5***	***U***	***5***	***U***	***5***	***U***	***5***	***U***	***5***	***U***	***5***	***U***	1	U	1	U
1,2-Dichloropropane	78-87-5	1	0.7	U	***5***	***U***	***5***	***U***	***5***	***U***	***5***	***U***	***5***	***U***	***5***	***U***	***1***	***U***	***1***	***U***
1,2,4-Trimethylbenzene	95-63-6	5	NA		NA		NA		NA		NA		NA		NA		NA		**5.3**	
Acetone	67-64-1	50	10		6.6	J	13		8.4	J	7.4	J	9.6	J	4.3	J	NA		1	U
Benzene	71-43-2	1	**3.2**	**J**	**8.8**		**1.7**	**J**	**1**	**J**	***5***	***U***	**33**		0.63	J	**52**		**7.4**	
Bromomethane	74-83-9	5	2.7	U	***5***	***U***	***5***	***U***	***5***	***U***	***5***	***U***	***5***	***U***	***5***	***U***	1	U	1	U
Carbon tetrachloride	56-23-5	5	0.6	U	***5***	***U***	***5***	***U***	***5***	***U***	***5***	***U***	***5***	***U***	***5***	***U***	1	U	1	U
Chlorobenzene	108-90-7	5	0.5	U	***5***	***U***	***5***	***U***	***5***	***U***	***5***	***U***	***5***	***U***	***5***	***U***	1	U	1	U
Chloroethane	75-00-3	5	1.7	U	***5***	***U***	***5***	***U***	***5***	***U***	***5***	***U***	***5***	***U***	***5***	***U***	1	U	1	U
Chloroform	67-66-3	7	0.6	U	5	U	5	U	5	U	5	U	2.8	J	0.82	J	1	U	1	U
Ethylbenzene	100-41-4	5	0.5	U	***5***	***U***	***5***	***U***	***5***	***U***	***5***	***U***	3.7	J	***5***	***U***	1		1	U
Isopropyl Benzene	98-82-8	5	NA		NA		NA		NA		NA		NA		NA		NA		**12**	
Methylene chloride	75-09-2	5	0.6	UB	***5***	***U***	***5***	***U***	***5***	***U***	***5***	***U***	***5***	***U***	***5***	***U***	1	U	1	U
Propylbenzene-n	103-65-1	5	NA		NA		NA		NA		NA		NA		NA		NA		**7.9**	
Sec-Butylbenzene	135-98-8	5	NA		NA		NA		NA		NA		NA		NA		NA		**17**	
Styrene	100-42-5	5	0.7	U	***5***	***U***	***5***	***U***	***5***	***U***	***5***	***U***	***5***	***U***	***5***	***U***	NA		1	U
Tert-Butylbezene	98-06-6	5	NA		NA		NA		NA		NA		NA		NA		NA		**6.7**	
Tetrachloroethene	127-18-4	5	0.4	U	***5***	***U***	***5***	***U***	***5***	***U***	***5***	***U***	***5***	***U***	***5***	***U***	1	U	1	U
Toluene	108-88-3	5	0.57	J	1	J	***5***	***U***	***5***	***U***	***5***	***U***	**5.5**		***5***	***U***	3		1	U
Trichloroethene	79-01-6	5	0.8	U	***5***	***U***	***5***	***U***	***5***	***U***	***5***	***U***	***5***	***U***	***5***	***U***	1	U	1	U
Vinyl Chloride	75-01-4	2	0.6	U	***5***	***U***	***5***	***U***	***5***	***U***	***5***	***U***	***5***	***U***	***5***	***U***	1	U	1	U
Xylene (mixed)	1330-20-7	5	0.9	U	1	J	***5***	***U***	***5***	***U***	1	J	**17**		***5***	***U***	NA		NA	
Total VOC	---	--	37.07		172.4		179.7		174.4		173.4		212.6		165.75					
Semi-Volatile Organic Compounds (SVOCs)		--																		
1,2,4-Trichlorobenzene	120-82-1	5	0.6	U	***10***	***U***	***10***	***U***	***10***	***U***	***10***	***U***	***20***	***U***	***10***	***U***	NA		NA	
2-Chlorophenol	95-57-8	2	1	U	***10***	***U***	***10***	***U***	***10***	***U***	***10***	***U***	***20***	***U***	***10***	***U***	NA		NA	
2-Methylnaphthalene	91-57-6	---	0.6	U	10	U	10	U	10	U	10	U	1	J	10	U	NA		NA	
2-Nitroaniline	88-74-4	5	0.9	U	***50***	***U***	***50***	***U***	***50***	***U***	***50***	***U***	***100***	***U***	***50***	***U***	NA		NA	
2-Nitrophenol	88-75-5	2	1	U	***10***	***U***	***10***	***U***	***10***	***U***	***10***	***U***	***20***	***U***	***10***	***U***	NA		NA	
2,4-Dichlorophenol	120-83-2	5	1	U	***10***	***U***	***10***	***U***	***10***	***U***	***10***	***U***	***20***	***U***	***10***	***U***	NA		NA	
2,4-Dimethylphenol	105-67-9	2	0.8	U	***10***	***U***	***10***	***U***	***10***	***U***	***10***	***U***	***20***	***U***	***10***	***U***	NA		NA	
2,4-Dinitrophenol	51-28-5	2	***2***	***U***	***50***	***U***	***50***	***U***	***50***	***U***	***50***	***U***	***100***	***U***	***50***	***U***	NA		NA	
2,4-Dinitrotoluene	121-14-2	5	1	U	***10***	***U***	***10***	***U***	***10***	***U***	***10***	***U***	***20***	***U***	***10***	***U***	NA		NA	
2,4,5-Trichlorophenol	95-95-4	2	0.9	U	***50***	***U***	***50***	***U***	***50***	***U***	***50***	***U***	***100***	***U***	***50***	***U***	NA		NA	
2,4,6-Trichlorophenol	88-06-2	2	***2***	***U***	***10***	***U***	***10***	***U***	***10***	***U***	***10***	***U***	***20***	***U***	***10***	***U***	NA		NA	
2,6-Dinitrotoluene	606-20-2	5	0.6	U	***10***	***U***	***10***	***U***	***10***	***U***	***10***	***U***	***20***	***U***	***10***	***U***	NA		NA	
3-Nitroaniline	99-09-2	5	0.7	U	***50***	***U***	***50***	***U***	***50***	***U***	***50***	***U***	***100***	***U***	***50***	***U***	NA		NA	
3,3'-Dichlorobenzidine	91-94-1	5	0.7	U	***20***	***U***	***20***	***U***	***20***	***U***	***20***	***U***	***40***	***U***	***20***	***U***	NA		NA	
4-Chloroaniline	106-47-8	5	0.6	U	***10***	***U***	***10***	***U***	***10***	***U***	***10***	***U***	***20***	***U***	***10***	***U***	NA		NA	
4-Nitroaniline	100-01-6	5	0.8	U	***20***	***U***	***20***	***U***	***20***	***U***	***20***	***U***	***40***	***U***	***20***	***U***	NA		NA	
4-Nitrophenol	100-02-7	2	0.8	U	***50***	***U***	***50***	***U***	***50***	***U***	***50***	***U***	***100***	***U***	***50***	***U***	NA		NA	
Acenaphthene	83-32-9	20	0.7	U	2	J	1	J	3	J	9	J	**89**		0.7	J	NA		NA	
Anthracene	120-12-7	50	0.8	U	10	U	10	U	10	U	1	J	5	J	10	U	NA		NA	
Benzo(a)anthracene	56-55-3	0.002	***0.4***	***U***	***10***	***U***	***10***	***U***	***10***	***U***	**0.6**	**J**	**2**	**J**	***10***	***U***	NA		NA	
Benzo(a)pyrene	50-32-8	---	0.5	U	10	U	10	U	10	U	10	U	2	J	10	U	NA		NA	
Benzo(b)fluoranthene	205-99-2	0.002	***1***	***U***	***10***	***U***	***10***	***U***	***10***	***U***	***10***	***U***	***20***	***U***	***10***	***U***	NA		NA	
Benzo(g,h,i)perylene	191-24-2	---	0.6	U	10	U	10	U	10	U	10	U	2	J	10	U	NA		NA	
Benzo(k)fluoranthene	207-08-9	0.002	***2***	***U***	***10***	***U***	***10***	***U***	***10***	***U***	***10***	***U***	***20***	***U***	***10***	***U***	NA		NA	
bis(2-Chloroethyl)ether	111-44-4	1	0.5	U	***10***	***U***	***10***	***U***	***10***	***U***	***10***	***U***	***20***	***U***	***10***	***U***	NA		NA	
bis(2-Ethylhexyl)phthalate	117-81-7	5	2	U	***10***	***U***	***10***	***U***	***10***	***U***	***10***	***U***	***20***	***U***	***10***	***U***	NA		NA	
Chrysene	218-01-9	0.002	***0.5***	***U***	***10***	***U***	***10***	***U***	***10***	***U***	***10***	***U***	**1**	**J**	***10***	***U***	NA		NA	
Dibenzofuran	132-64-9	---	0.8	U	10	U	0.8	J	10	U	10	U	20	U	10	U	NA		NA	
Fluoranthene	206-44-0	50	0.6	U	10	U	10	U	0.8	J	2	J	7	J	10	U	NA		NA	
Fluorene	86-73-7	50	0.7	U	10	U	1	J	ND		4	J	31		10	U	NA		NA	
Hexachlorobenzene	118-74-1	0.04	***0.7***	***U***	***10***	***U***	***10***	***U***	***10***	***U***	***10***	***U***	***20***	***U***	***10***	***U***	NA		NA	
Hexachlorobutadiene	87-68-3	0.5	***1***	***U***	***10***	***U***	***10***	***U***	***10***	***U***	***10***	***U***	***20***	***U***	***10***	***U***	NA		NA	
Hexachlorocyclopentadiene	77-47-4	5	***6***	***U***	***10***	***U***	***10***	***U***	***10***	***U***	***10***	***U***	***20***	***U***	***10***	***U***	NA		NA	
Hexachloroethane	67-72-1	5	0.9	U	***10***	***U***	***10***	***U***	***10***	***U***	***10***	***U***	***20***	***U***	***10***	***U***	NA		NA	
Indeno(1,2,3-cd)pyrene	193-39-5	0.002	***0.7***	***U***	***10***	***U***	***10***	***U***	***10***	***U***	***10***	***U***	***20***	***U***	***10***	***U***	NA		NA	
Isophorone	78-59-1	50	0.6	U	10	U	10	U	10	U	10	U	2	J	10	U	NA		NA	
Naphthalene	91-20-3	10	0.7	U	***10***	***U***	***10***	***U***	***10***	***U***	***10***	***U***	**10**	**J**	***10***	***U***	NA		NA	
Nitrobenzene	98-95-3	0.4	***0.5***	***U***	***10***	***U***	***10***	***U***	***10***	***U***	***10***	***U***	***20***	***U***	***10***	***U***	NA		NA	
o-Cresol(s) (2-Methylphenol)	95-48-7	2	0.9	U	***10***	***U***	***10***	***U***	***10***	***U***	***10***	***U***	***20***	***U***	***10***	***U***	NA		NA	
Pentachlorophenol	87-86-5	1	***2***	***U***	***50***	***U***	***50***	***U***	***50***	***U***	***50***	***U***	***100***	***U***	***50***	***U***	NA		NA	
Phenanthrene	85-01-8	50	0.5	U	10	U	10	U	0.7	J	5	J	47		0.5	J	NA		NA	
Phenol	108-95-2	1	0.5	U	***10***	***U***	***10***	***U***	***10***	***U***	***10***	***U***	***20***	***U***	***10***	***U***	NA		NA	
Pyrene	129-00-0	50	0.4	U	10	U	10	U	0.9	J	3	J	10	J	10	U	NA		NA	
Total SVOCs	---	--	ND		942		922.8		905.4		904.6		1849		931.2		NA		NA	
		--																		
PCBs		--																		
Aroclor 1260	11096-82-5	--	0.12	U	1.1	U	1	U	1	U	0.11	J	1	U	1	U	NA		NA	
		--																		
Metals		--																		
Aluminum	7429-90-5	3	**114**	**J**	***500***	***U***	***500***	***U***	***500***	***U***	***500***	***U***	**379**	**B**	***500***	***U***	NA		NA	
Antimony	7440-36-0	3	***5.4***	***U***	***20***	***U***	***20***	***U***	**8.3**	**J**	***20***	***U***	***20***	***U***	***20***	***U***	NA		NA	
Arsenic	7440-38-2	25	6.7	J	***40***	***U***	***40***	***U***	9.7	J	***40***	***U***	***40***	***U***	***40***	***U***	NA		**930**	
Barium	7440-39-3	1,000	222		101		115		369		287		219		211		NA		**8,680**	
Beryllium	7440-41-7	3	0.54	U	***5***	***U***	***5***	***U***	***5***	***U***	***5***	***U***	***5***	***U***	***5***	***U***	NA		NA	
Cadmium	7440-43-9	5	1.1	U	***10***	***U***	***10***	***U***	***10***	***U***	***10***	***U***	***10***	***U***	***10***	***U***	NA		**134**	
Calcium	7440-70-2	---	187,000		174,000		171,000		264,000		233,000		237,000		237,000		NA		NA	
Iron	7439-89-6	300	**10,100**		80.7	J	**426**		**4,900**		**3,540**		**751**		**1,540**		NA		NA	
Lead	7439-92-1	25	6.1	J	10	U	10	U	6.7	J	10	U	4.4	J	10	U	NA		**109,000**	
Magnesium	7439-95-4	35000	12,800		28,400		14,700		**141,000**		32,600		29,200		**38,400**		NA		NA	
Manganese	7439-96-5	500	**3,870**		218		440		**621**		315		161		344		NA		NA	
Nickel	7440-02-0	100	2.9	J	10	U	10	U	10	U	10	U	1.9	J	10	U	NA		NA	
Potassium	7440-09-7	---	28,300		26,200		16,100		84,500		23,600		24,500		29,100		NA		NA	
Selenium	7782-49-2	10	5	U	***30***	***U***	***30***	***U***	***30***	***U***	***30***	***U***	***30***	***U***	***30***	***U***	NA		**77**	
Sodium	7440-23-5	--	303,000		83,000		20,100		913,000		83,300		57,600		93,400		NA		NA	
Thallium	7440-28-0	0.5	***10***	***U***	***40***	***U***	***40***	***U***	***40***	***U***	***40***	***U***	***40***	***U***	***40***	***U***	NA		NA	
Vanadium	7440-62-2	--	2.3	J	4.3	J	6	U	6	U	6	U	1.6	J	1.5	J	NA		NA	

NOTES:
Groundwater Quality Standards are a combination of values from the NYSDEC Part 703, Table 1 (cf. section 703.5), last revised 17 January 2008 and NYSDEC Technical & Operational Guidance Series (TOGS) 1.1.1 Ambient Water Quality Standards and Guidance Values and
--- : No criteria established
J: Estimated value
U: Indicates that the result is lower than the MDL
B: Analyte detected in the method blank
NA: Not analyzed

Sample data for ELM, Cosmos, and Tradewind were provided in the Phase II Investigation Report, 400 Carroll Street by ELM dated May 2005.

Italicized and **Bold *results*** indicate method detection limit (MDL) exceedances of the most stringent criteria.

TABLE 6
SUMMARY OF LANGAN SOIL ANALYTICAL RESULTS
363 BOND STREET AND 388 CARROLL STREET
Brooklyn, New York

Investigation Phase:		Subpart 375-6 SCOs (Revised Brownfields)					Due Dilligence						
Address:			Protection of Public Health				363 Bond Street						
Location ID:	CAS No.	Unrestricted Use Objectives	Residential	Restricted - Residential	Restricted - Commercial	Restricted - Industrial	LSB-1	LSB-2	LSB-2	LSB-3	LSB-3	LSB-4	LSB-4
Sample ID:							002/001	003/004	005/006	007/008	009/010	011/012	013/014
Sample Date:							8/21/2012	8/21/2012	8/21/2012	8/22/2012	8/22/2012	8/22/2012	8/22/2012
Sampling Depth/VOC Sampling Depth (ft bgs):							7.5-9.5/8-8.5	6.5-8.5/6.5-7	11.5-13.5/11.5-12	6-8/6-6.5	12-14/12-12.5	7-9/8.5-9	7-9/8.5-9
Units:		ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg Q	ug/kg Q	ug/kg Q	ug/kg Q	ug/kg Q	ug/kg Q	ug/kg Q
Volatile Organic Compounds (VOCs)													
1,1,1-Trichloroethane	71-55-6	680	100,000	100,000	500,000	1,000,000	310 U	5.4 U	5.5 U	270 U	320 U	280 U	330 U
1,1-Dichloroethane	75-34-3	270	19,000	26,000	240,000	480,000	***310 U***	5.4 U	5.5 U	***270 U***	***320 U***	***280 U***	***330 U***
1,1-Dichloroethene	75-35-4	330	100,000	100,000	500,000	1,000,000	310 U	5.4 U	5.5 U	270 U	320 U	280 U	***330 U***
1,2,4-Trimethylbenzene	95-63-6	3,600	47,000	52,000	190,000	380,000	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloroethane	107-06-2	20	2,300	3,100	30,000	60,000	***61 U***	1.1 U	1.1 U	***55 U***	***64 U***	***56 U***	***67 U***
1,4-Dioxane (P-Dioxane)	123-91-1	100	9,800	13,000	130,000	250,000	***7700 U***	***130 U***	***140 U***	***6800 U***	***8000 U***	***7000 U***	***8300 U***
Acetone	67-64-1	50	100,000	100,000	500,000	1,000,000	**217 J**	25.4	35.7	***550 U***	***640 U***	***560 U***	***670 U***
Benzene	71-43-2	60	2,900	4,800	44,000	89,000	20.2 J	1.1 U	1.1 U	55 U	***64 U***	12 J	36 J
Carbon Tetrachloride	56-23-5	760	1,400	2,400	22,000	44,000	310 U	5.4 U	5.5 U	270 U	320 U	280 U	330 U
Chloroform	67-66-3	370	10,000	49,000	350,000	700,000	310 U	5.4 U	5.5 U	270 U	320 U	280 U	330 U
Cis-1,2-Dichloroethylene	156-59-2	250	59,000	100,000	500,000	1,000,000	68.1 J	5.4 U	5.5 U	37.6 J	***320 U***	135 J	188 J
Ethylbenzene	100-41-4	1,000	30,000	41,000	390,000	780,000	**2,260**	1.1 U	1.1 U	55 U	64 U	151	310
M And P Xylenes	179601-23-1	260	100,000	100,000	500,000	100,000	**17,100**	1.1 U	1.1 U	55 U	64 U	**437**	**875**
Methyl Ethyl Ketone (2-Butanone)	78-93-3	120	100,000	100,000	500,000	1,000,000	***610 U***	11 U	11 U	***550 U***	***640 U***	***560 U***	***670 U***
P-Cymene (P-Isopropyltoluene)	CYMP	—	—	—	—	—	NA	NA	NA	NA	NA	NA	NA
Toluene	108-88-3	700	100,000	100,000	500,000	1,000,000	18.4 J	1.1 U	1.1 U	55 U	64 U	38.1 J	83.7
Trans-1,2-Dichloroethene	156-60-5	190	100,000	100,000	500,000	1,000,000	***310 U***	5.4 U	5.5 U	***270 U***	***320 U***	50.1 J	62.2 J
Trichloroethylene (TCE)	79-01-6	470	10,000	21,000	200,000	400,000	60.5 J	5.4 U	5.5 U	75 J	21.1 J	280 U	330 U
Vinyl Chloride	75-01-4	20	210	900	13,000	27,000	***310 U***	5.4 U	5.5 U	***270 U***	***320 U***	***280 U***	***330 U***
Semi-Volatile Organic Compounds (SVOCs)													
2-Methylphenol (O-Cresol)	95-48-7	330	100,000	100,000	500,000	1,000,000	**1,500**	67 U	68 U	71 U	74 U	74 U	78 U
Acenaphthene	83-32-9	20,000	100,000	100,000	500,000	1,000,000	**72,200**	184	235	759	1810	975	291
Anthracene	120-12-7	100,000	100,000	100,000	500,000	1,000,000	**151,000**	604	740	1180	3230	1490	552
Benzo(A)Anthracene	56-55-3	1,000	1,000	1,000	5,600	11,000	**168,000**	**2,670**	**2,620**	**1,580**	**6,450**	**1,660**	989
Benzo(A)Pyrene	50-32-8	1,000	1,000	1,000	1,000	1,100	**152,000**	**3,080**	**2,910**	**1,410**	**6,170**	**1,320**	902
Benzo(B)Fluoranthene	205-99-2	1,000	1,000	1,000	5,600	11,000	**150,000**	**3,000**	**2,840**	**1,490**	**4,960**	**1,240**	754
Benzo(G,H,I)Perylene	191-24-2	100,000	100,000	100,000	500,000	1,000,000	96,000	2,100	1,910	802	3,680	731	539
Benzo(K)Fluoranthene	207-08-9	800	1,000	3,900	56,000	110,000	**76,700**	**1,360**	**1,370**	722	**4,510**	**864**	619
Chrysene	218-01-9	1,000	1,000	3,900	56,000	110,000	**166,000**	**2,670**	**2,580**	**1,550**	**6,090**	**1,580**	**1,030**
Cresols, M & P	MEPH1314	330	34,000	100,000	500,000	1,000,000	**4,600**	67 U	68 U	71 U	74 U	74 U	78 U
Dibenz(A,H)Anthracene	53-70-3	330	330	330	560	1,100	**36,900**	**774**	**686**	300	**1,310**	309	201
Dibenzofuran	132-64-9	7,000	14,000	59,000	350,000	1,000,000	**62,100**	90.4	104	448	1170	335	156
Fluoranthene	206-44-0	100,000	100,000	100,000	500,000	1,000,000	**473,000**	5640	5240	5030	16200	4970	2480
Fluorene	86-73-7	30,000	100,000	100,000	500,000	1,000,000	**84,200**	231	260	924	2050	1110	361
Hexachlorobenzene	118-74-1	330	330	1,200	6,000	12,000	***700 U***	67 U	68 U	71 U	74 U	74 U	78 U
Indeno(1,2,3-C,D)Pyrene	193-39-5	500	500	500	5,600	11,000	**89,900**	**1,910**	**1,750**	**762**	**3,550**	**718**	**503**
Naphthalene	91-20-3	12,000	100,000	100,000	500,000	1,000,000	**102,000**	56.3	77.1	291	1040	1010	242
Pentachlorophenol	87-86-5	800	2,400	6,700	6,700	55,000	***3,500 U***	330 U	340 U	360 U	370 U	370 U	390 U
Phenanthrene	85-01-8	100,000	100,000	100,000	500,000	1,000,000	**539,000**	1910	2360	5370	13300	6150	2290
Phenol	108-95-2	330	100,000	100,000	500,000	1,000,000	**1,910**	67 U	68 U	71 U	74 U	74 U	78 U
Pyrene	129-00-0	100,000	100,000	100,000	500,000	1,000,000	**340,000**	4300	4330	3280	12100	3250	2000
Pesticides													
Gamma Chlordane	12789-03-6						NA	NA	NA	NA	NA	NA	NA
4,4'-DDE	72-55-9	3	1,800	8,900	62,000	120,000	NA	NA	NA	NA	NA	NA	NA
4,4'-DDT	50-29-3	3	1,700	7,900	47,000	94,000	NA	NA	NA	NA	NA	NA	NA
Polychlorinated biphenyls (PCBs)													
PCB-1254 (Aroclor 1254)	11097-69-1	100	1,000	1,000	1,000	25,000	NA	NA	NA	NA	NA	NA	NA
Total PCBS	1336-36-3	100	1,000	1,000	1,000	25,000	NA	NA	NA	NA	NA	NA	NA
Metals													
Antimony	7440-36-0	—	—	—	—	—	NA	NA	NA	NA	NA	NA	NA
Arsenic	7440-38-2	13,000	16,000	16,000	16,000	16,000	NA	NA	NA	NA	NA	NA	NA
Barium	7440-39-3	350,000	350,000	400,000	400,000	10,000,000	NA	NA	NA	NA	NA	NA	NA
Beryllium	7440-41-7	7,200	14,000	72,000	590,000	2,700,000	NA	NA	NA	NA	NA	NA	NA
Cadmium	7440-43-9	2,500	2,500	4,300	9,300	60,000	NA	NA	NA	NA	NA	NA	NA
Calcium	7440-70-2	—	—	—	—	—	NA	NA	NA	NA	NA	NA	NA
Chromium, Total	7440-47-3	—	—	—	—	—	NA	NA	NA	NA	NA	NA	NA
Cobalt	7440-48-4	—	—	—	—	—	NA	NA	NA	NA	NA	NA	NA
Copper	7440-50-8	50,000	270,000	270,000	270,000	10,000,000	NA	NA	NA	NA	NA	NA	NA
Iron	7439-89-6	—	—	—	—	—	NA	NA	NA	NA	NA	NA	NA
Lead	7439-92-1	63,000	400,000	400,000	1,000,000	3,900,000	**435,000**	NA	NA	NA	NA	NA	NA
Magnesium	7439-95-4	—	—	—	—	—	NA	NA	NA	NA	NA	NA	NA
Manganese	7439-96-5	1,600,000	2,000,000	2,000,000	10,000,000	10,000,000	NA	NA	NA	NA	NA	NA	NA
Mercury	7439-97-6	180	810	810	2,800	5,700	NA	NA	NA	NA	NA	NA	NA
Nickel	7440-02-0	30,000	140,000	310,000	310,000	10,000,000	NA	NA	NA	NA	NA	NA	NA
Potassium	7440-09-7	—	—	—	—	—	NA	NA	NA	NA	NA	NA	NA
Selenium	7782-49-2	3,900	36,000	180,000	1,500,000	6,800,000	NA	NA	NA	NA	NA	NA	NA
Silver	7440-22-4	2,000	36,000	180,000	1,500,000	6,800,000	NA	NA	NA	NA	NA	NA	NA
Sodium	7440-23-5	—	—	—	—	—	NA	NA	NA	NA	NA	NA	NA
Vanadium	7440-62-2	—	—	—	—	—	NA	NA	NA	NA	NA	NA	NA
Zinc	7440-66-6	109,000	2,200,000	10,000,000	10,000,000	10,000,000	NA	NA	NA	NA	NA	NA	NA

Notes:
Subpart 375-6 SCOs (Revised Brownfields) criteria are from the NYSDEC Soil Cleanup Objective Tables 375-6.8(a) and 375-6.8(b), last revised 14 December 2006.
ft bgs - feet below ground surface
NA: Not analyzed
U: The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the RL or the sample concentration for results impacted by blank contamination.
J: The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample.
UJ: The analyte was not detected at a level greater than or equal to the reporting limit (RL); however, the reported RL is approximate and may be inaccurate or imprecise.

Italicized and **Bold *results*** indicate Reporting Limits (RL) greater than or equal to the most stringent criteria.
Data has been subject to third party validation.

TABLE 6
SUMMARY OF LANGAN SOIL ANALYTICAL RESULTS
363 BOND STREET AND 388 CARROLL STREET
Brooklyn, New York

Investigation Phase:		Subpart 375-6 SCOs (Revised Brownfields)					Remedial Investigation															
Address:			Protection of Public Health				363 Bond Street															
Location ID:							LSB-7		LSB-7		LSB-8		LSB-9		LSB-9		LSB-10		LSB-22		LSB-22		LSB-22	
Sample ID:	CAS No.	Unrestricted Use Objectives	Residential	Restricted - Residential	Restricted - Commercial	Restricted - Industrial	072-LSB-7-20130906		073-LSB-7-20130906		075-LSB-8-20130906		079-LSB-9-20130909		080-LSB-9-20130909		085-LSB-10-20130909		081-LSB-22-20130909		083-DUP-2-20130909		082-084-LSB-22-20130909	
Sample Date:							9/6/2013		9/6/2013		9/6/2013		9/9/2013		9/9/2013		9/9/2013		9/9/2013		9/9/2013		9/9/2013	
Sampling Depth/VOC Sampling Depth (ft bgs):							0-2/1.5-2		13-15/14-14.5		10-12/11.5-12		0-2/1-1.5		4-6/5.5-6		0-2/1-1.5		0-2/1-1.5		0-2/1-1.5		4-6/5.5-6	
Units:		ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	Q	ug/kg	Q	ug/kg	Q	ug/kg	Q	ug/kg	Q	ug/kg	Q	ug/kg	Q	ug/kg	Q	ug/kg	Q
Volatile Organic Compounds (VOCs)																								
1,1,1-Trichloroethane	71-55-6	680	100,000	100,000	500,000	1,000,000	2.2	U	2.2	U	300	U	2.7	U	640	U	4.2	U	4.3	U	3.2	U	***790***	***U***
1,1-Dichloroethane	75-34-3	270	19,000	26,000	240,000	480,000	2.2	U	2.2	U	***300***	***U***	2.7	U	***640***	***U***	4.2	U	4.3	U	3.2	U	***790***	***U***
1,1-Dichloroethene	75-35-4	330	100,000	100,000	500,000	1,000,000	2.2	U	2.2	U	300	U	2.7	U	***640***	***U***	4.2	U	4.3	U	3.2	U	***790***	***U***
1,2,4-Trimethylbenzene	95-63-6	3,600	47,000	52,000	190,000	380,000	2.2	U	2.2	U	300	U	2.7	U	**19,000**		56		4.3	U	3.2	U	790	U
1,2-Dichloroethane	107-06-2	20	2,300	3,100	30,000	60,000	2.2	U	2.2	U	***300***	***U***	2.7	U	***640***	***U***	4.2	U	4.3	U	3.2	U	***790***	***U***
1,4-Dioxane (P-Dioxane)	123-91-1	100	9,800	13,000	130,000	250,000	11	UJ	12	UJ	***1600***	***UJ***	14	U	***3400***	***U***	22	U	23	U	17	U	***4200***	***U***
Acetone	67-64-1	50	100,000	100,000	500,000	1,000,000	25	J	11	J	**320**	**J**	27		***640***	***U***	**150**		**79**		48		***790***	***U***
Benzene	71-43-2	60	2,900	4,800	44,000	89,000	2.2	U	2.2	U	***300***	***U***	2.7	U	**1,000**	**J**	4.2	U	4.3	U	3.2	U	***790***	***U***
Carbon Tetrachloride	56-23-5	760	1,400	2,400	22,000	44,000	2.2	U	2.2	U	300	U	2.7	U	640	U	4.2	U	4.3	U	3.2	U	***790***	***U***
Chloroform	67-66-3	370	10,000	49,000	350,000	700,000	2.2	U	2.2	U	300	U	2.7	U	***640***	***U***	4.2	U	4.3	U	3.2	U	***790***	***U***
Cis-1,2-Dichloroethylene	156-59-2	250	59,000	100,000	500,000	1,000,000	2.2	U	2.2	U	***300***	***U***	5.3	J	**950**	**J**	4.2	U	4.3	U	3.2	U	**1,700**	
Ethylbenzene	100-41-4	1,000	30,000	41,000	390,000	780,000	2.2	U	2.2	U	300	U	2.7	U	**3,000**		4.2	U	4.3	U	3.2	U	790	U
M And P Xylenes	179601-23-1	260	100,000	100,000	500,000	100,000	2.2	U	2.2	U	***300***	***U***	2.7	U	**8,000**		6.9	J	4.3	U	3.2	U	**1,000**	**J**
Methyl Ethyl Ketone (2-Butanone)	78-93-3	120	100,000	100,000	500,000	1,000,000	2.2	U	2.2	U	***300***	***U***	2.7	U	***640***	***U***	4.2	U	4.3	U	3.2	U	***790***	***U***
P-Cymene (P-Isopropyltoluene)	CYMP	---	---	---	---	---	2.2	U	2.2	U	300	U	2.7	U	8000		5.3	J	4.3	U	3.2	U	790	U
Toluene	108-88-3	700	100,000	100,000	500,000	1,000,000	2.2	U	2.2	U	300	U	2.7	U	**1,500**		4.2	U	4.3	U	3.2	U	***790***	***U***
Trans-1,2-Dichloroethene	156-60-5	190	100,000	100,000	500,000	1,000,000	2.2	U	2.2	U	***300***	***U***	2.7	U	***640***	***U***	4.2	U	4.3	U	3.2	U	***790***	***U***
Trichloroethylene (TCE)	79-01-6	470	10,000	21,000	200,000	400,000	2.2	U	2.2	U	300	U	54		**3,500**		87		6.2	J	9.4		**1,500**	**J**
Vinyl Chloride	75-01-4	20	210	900	13,000	27,000	2.2	U	2.2	U	***300***	***U***	2.7	U	***640***	***U***	4.2	U	4.3	U	3.2	U	***790***	***U***
Semi-Volatile Organic Compounds (SVOCs)																								
2-Methylphenol (O-Cresol)	95-48-7	330	100,000	100,000	500,000	1,000,000	90.7	U	***491***	***U***	***1010***	***U***	93.3	U	***5210***	***U***	***445***	***UJ***	181	U	***453***	***UJ***	***5460***	***UJ***
Acenaphthene	83-32-9	20,000	100,000	100,000	500,000	1,000,000	50.7	J	606	J	504	U	95.5	J	**53,500**		222	U	141	J	226	U	4880	J
Anthracene	120-12-7	100,000	100,000	100,000	500,000	1,000,000	144	J	1550		504	U	226		80500		222	U	245	J	390	J	6370	J
Benzo(A)Anthracene	56-55-3	1,000	1,000	1,000	5,600	11,000	351		**2,010**		524	J	571		**122,000**		224	J	754	J	1000	J	**10,400**	**J**
Benzo(A)Pyrene	50-32-8	1,000	1,000	1,000	1,000	1,100	362		**1,980**		504	U	625		**103,000**		247	J	851	J	991	J	**11,700**	**J**
Benzo(B)Fluoranthene	205-99-2	1,000	1,000	1,000	5,600	11,000	335		**1,230**		508	J	642		**50,400**		305	J	753	J	878	J	**13,000**	
Benzo(G,H,I)Perylene	191-24-2	100,000	100,000	100,000	500,000	1,000,000	118	J	503	J	1010	U	114	J	20,800		445	U	239	J	453	UJ	5,460	U
Benzo(K)Fluoranthene	207-08-9	800	1,000	3,900	56,000	110,000	203		**1,160**		504	U	660		**74,500**		307	J	**1,100**		**1,350**		**11,200**	**J**
Chrysene	218-01-9	1,000	1,000	3,900	56,000	110,000	353		**1,900**		536	J	604		**124,000**		279	J	773	J	998	J	**10,200**	**J**
Cresols, M & P	MEPH1314	330	34,000	100,000	500,000	1,000,000	NA		NA		NA		NA		NA		NA		NA		NA		NA	
Dibenz(A,H)Anthracene	53-70-3	330	330	330	560	1,100	45.3	U	245	U	***504***	***U***	56.6	J	**17,200**	**J**	222	U	136	J	226	U	***2730***	***UJ***
Dibenzofuran	132-64-9	7,000	14,000	59,000	350,000	1,000,000	45.7	J	623	J	504	U	46.6	U	**29,700**		222	U	90.7	U	226	U	3190	J
Fluoranthene	206-44-0	100,000	100,000	100,000	500,000	1,000,000	948		4140		1120	J	1370		**245,000**		459	J	1390		2000		24400	
Fluorene	86-73-7	30,000	100,000	100,000	500,000	1,000,000	59.4	J	1080		504	U	74	J	**63,400**		222	U	171	J	278	J	6180	J
Hexachlorobenzene	118-74-1	330	330	1,200	6,000	12,000	45.3	U	245	U	***504***	***U***	46.6	U	***2610***	***U***	222	U	90.7	U	226	U	***2730***	***U***
Indeno(1,2,3-C,D)Pyrene	193-39-5	500	500	500	5,600	11,000	121	J	**594**	**J**	***504***	***U***	140	J	**26,300**	**J**	222	U	297	J	361	J	***2730***	***U***
Naphthalene	91-20-3	12,000	100,000	100,000	500,000	1,000,000	59.4	J	653	J	504	U	78.8	J	**105,000**		222	U	90.7	U	226	U	2730	U
Pentachlorophenol	87-86-5	800	2,400	6,700	6,700	55,000	90.7	U	491	U	***1010***	***U***	93.3	UJ	***5210***	***U***	445	UJ	181	U	453	UJ	***5460***	***UJ***
Phenanthrene	85-01-8	100,000	100,000	100,000	500,000	1,000,000	686		4660		1120	J	845		**279,000**		318	J	550	J	1010	J	23300	
Phenol	108-95-2	330	100,000	100,000	500,000	1,000,000	45.3	U	245	U	***504***	***U***	46.6	U	***2610***	***U***	222	UJ	90.7	U	226	UJ	***2730***	***UJ***
Pyrene	129-00-0	100,000	100,000	100,000	500,000	1,000,000	791		3010		912	J	1030		**198,000**		374	J	1250		1930		19800	
Pesticides																								
Gamma Chlordane	12789-03-6						1.78	U	1.93	U	NA		1.83	U	2.05	U	3.5	U	1.78	U	1.78	U	2.15	U
4,4'-DDE	72-55-9	3	1,800	8,900	62,000	120,000	1.78	U	1.93	U	NA		1.83	U	2.05	U	**548**		**4.39**	**J**	2.59	J	2.15	U
4,4'-DDT	50-29-3	3	1,700	7,900	47,000	94,000	1.78	U	1.93	U	NA		1.83	U	2.05	U	***3.5***	***U***	**9.56**	**J**	**7.73**	**J**	2.15	U
Polychlorinated biphenyls (PCBs)																								
PCB-1254 (Aroclor 1254)	11097-69-1	100	1,000	1,000	1,000	25,000	**330**		19.9	U	NA		**6,240**		21.1	U	18	U	18.4	U	18.3	U	22.1	UJ
Total PCBS	1336-36-3	100	1,000	1,000	1,000	25,000	**330**		19.9	U	NA		**6,240**		21.1	U	18	U	53.8		31.9		22.1	UJ
Metals																								
Antimony	7440-36-0	---	---	---	---	---	540	U	584	U	NA		555	U	4380		530	U	540	UJ	539	UJ	2050	
Arsenic	7440-38-2	13,000	16,000	16,000	16,000	16,000	3470		5540		NA		4580		11100		2780		3960	J	5060	J	10400	
Barium	7440-39-3	350,000	350,000	400,000	400,000	10,000,000	43800		29600		NA		78200		114000		53300		154000		143000		129000	
Beryllium	7440-41-7	7,200	14,000	72,000	590,000	2,700,000	108	U	117	U	NA		111	U	124	U	106	U	562	J	108	UJ	130	U
Cadmium	7440-43-9	2,500	2,500	4,300	9,300	60,000	678		351	U	NA		**62,300**		**213,000**		318	U	886		586		726	
Calcium	7440-70-2	---	---	---	---	---	8160000		2840000		NA		15200000		51600000		80800000		50500000		52800000		12100000	
Chromium, Total	7440-47-3	---	---	---	---	---	13700		9260		NA		15800		248000		23100		53300	J	18500	J	12600	
Cobalt	7440-48-4	---	---	---	---	---	6250		3960		NA		5650		1970		4310		17300	J	7110	J	4310	
Copper	7440-50-8	50,000	270,000	270,000	270,000	10,000,000	22100		13700		NA		**57,600**		23500		11700		**487,000**	**J**	**1,090,000**	**J**	**105,000**	
Iron	7439-89-6	---	---	---	---	---	11800000		8540000		NA		11900000		16800000		8620000		22700000	J	13100000	J	7780000	J
Lead	7439-92-1	63,000	400,000	400,000	1,000,000	3,900,000	20800		28900		**169,000**		**142,000**		**2,990,000**		13900		**656,000**		**572,000**		**321,000**	
Magnesium	7439-95-4	---	---	---	---	---	2890000		2710000		NA		3840000		5410000		4090000		3830000		3280000		2510000	
Manganese	7439-96-5	1,600,000	2,000,000	2,000,000	10,000,000	10,000,000	250000		108000		NA		231000		407000		114000		230000		162000		98200	
Mercury	7439-97-6	180	810	810	2,800	5,700	83.8		119		NA		**661**		**884**		39.2		**828**	**J**	**2010**	**J**	**4,320**	
Nickel	7440-02-0	30,000	140,000	310,000	310,000	10,000,000	28800		26600		NA		**30,900**		19000		13500		**61,700**	**J**	**35,400**	**J**	12800	
Potassium	7440-09-7	---	---	---	---	---	935000		596000		NA		1210000		727000		1110000		1410000		1150000		530000	
Selenium	7782-49-2	3,900	36,000	180,000	1,500,000	6,800,000	1080	U	1170	U	NA		1110	U	1240	U	1060	U	1320		1230		1860	
Silver	7440-22-4	2,000	36,000	180,000	1,500,000	6,800,000	540	U	584	U	NA		555	U	621	U	530	U	540	U	539	U	650	U
Sodium	7440-23-5	---	---	---	---	---	426000		364000		NA		792000	J	1080000	J	1030000	J	1340000	J	1180000	J	868000	J
Vanadium	7440-62-2	---	---	---	---	---	19700		13100		NA		16900		9000		12100		17700		16400		8720	
Zinc	7440-66-6	109,000	2,200,000	10,000,000	10,000,000	10,000,000	38000		22800		NA		**277,000**		**6,800,000**		21000		**2,670,000**	**J**	**874,000**	**J**	**1,680,000**	

Notes:
Subpart 375-6 SCOs (Revised Brownfields) criteria are from the NYSDEC Soil Cleanup Objective Tables 375-6.8(a) and 375-6.8(b), last revised 14 December 2006.
ft bgs - feet below ground surface
NA: Not analyzed
U: The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the RL or the sample concentration for results impacted by bla
J: The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample.
UJ: The analyte was not detected at a level greater than or equal to the reporting limit (RL); however, the reported RL is approximate and may be inaccurate or imp

Italicized and **Bold *results*** indicate Reporting Limits (RL) greater than or equal to the most stringent criteria.
Data has been subject to third party validation.

TABLE 6
SUMMARY OF LANGAN SOIL ANALYTICAL RESULTS
363 BOND STREET AND 388 CARROLL STREET
Brooklyn, New York

Investigation Phase:		Subpart 375-6 SCOs (Revised Brownfields)					Remedial Investigation											
Address:			Protection of Public Health				363 Bond Street						388 Carroll Street					
Location ID:							LSB-23		LSB-24		LSB-25		LSB-21		LSB-21		LSB-21	
Sample ID:							076-LSB-23-20130906		086-LSB-24-20130909		074-LSB-25-20130906		123-LSB-21-20130912		124-LSB-2120130912		125-DUP-3-20130912	
Sample Date:							9/6/2013		9/9/2013		9/6/2013		9/12/2013		9/12/2013		9/12/2013	
Sampling Depth/VOC Sampling Depth (ft bgs):							2-4/3-3.5		0-4/3.5-4		5.5-7.5/5.5-6		0-2/1.5-2		7-9/8.5-9		7-9/8.5-9	
Units:	CAS No.	Unrestricted Use Objectives ug/kg	Residential ug/kg	Restricted - Residential ug/kg	Restricted - Commercial ug/kg	Restricted - Industrial ug/kg	ug/kg	Q	ug/kg	Q	ug/kg	Q	ug/kg	Q	ug/kg	Q	ug/kg	Q
Volatile Organic Compounds (VOCs)																		
1,1,1-Trichloroethane	71-55-6	680	100,000	100,000	500,000	1,000,000	4.9	U	5.2	U	230	U	2.9	U	2.6	U	2.3	U
1,1-Dichloroethane	75-34-3	270	19,000	26,000	240,000	480,000	4.9	U	5.2	U	230	U	2.9	U	2.6	U	2.3	U
1,1-Dichloroethene	75-35-4	330	100,000	100,000	500,000	1,000,000	4.9	U	5.2	U	230	U	2.9	U	2.6	U	2.3	U
1,2,4-Trimethylbenzene	95-63-6	3,600	47,000	52,000	190,000	380,000	4.9	U	5.2	U	440	J	2.9	U	2.6	UJ	5.6	J
1,2-Dichloroethane	107-06-2	20	2,300	3,100	30,000	60,000	4.9	U	5.2	U	***230***	***U***	2.9	U	2.6	U	2.3	U
1,4-Dioxane (P-Dioxane)	123-91-1	100	9,800	13,000	130,000	250,000	26	UJ	27	U	***1200***	***UJ***	15	UJ	14	UJ	12	UJ
Acetone	67-64-1	50	100,000	100,000	500,000	1,000,000	**65**	**J**	**150**		**270**	**J**	12	U	33	U	**110**	**J**
Benzene	71-43-2	60	2,900	4,800	44,000	89,000	4.9	U	5.2	U	***230***	***U***	2.9	U	2.6	U	2.3	U
Carbon Tetrachloride	56-23-5	760	1,400	2,400	22,000	44,000	4.9	U	5.2	U	230	U	2.9	U	2.6	U	2.3	U
Chloroform	67-66-3	370	10,000	49,000	350,000	700,000	4.9	U	5.2	U	230	U	2.9	U	2.6	U	2.3	U
Cis-1,2-Dichloroethylene	156-59-2	250	59,000	100,000	500,000	1,000,000	4.9	U	5.2	U	**440**	**J**	2.9	U	2.6	U	2.3	U
Ethylbenzene	100-41-4	1,000	30,000	41,000	390,000	780,000	4.9	U	5.2	U	**1,100**		2.9	U	2.6	U	2.3	U
M And P Xylenes	179601-23-1	260	100,000	100,000	500,000	100,000	4.9	U	5.2	U	**2,000**		7.3	J	6.1	U	2.9	U
Methyl Ethyl Ketone (2-Butanone)	78-93-3	120	100,000	100,000	500,000	1,000,000	4.9	U	5.2	U	***230***	***U***	2.9	U	4.8	J	6.3	J
P-Cymene (P-Isopropyltoluene)	CYMP	---	---	---	---	---	4.9	U	5.2	U	230	U	3.4	U	3.1	U	2.9	U
Toluene	108-88-3	700	100,000	100,000	500,000	1,000,000	4.9	U	5.2	U	230	U	2.9	U	2.6	U	2.3	U
Trans-1,2-Dichloroethene	156-60-5	190	100,000	100,000	500,000	1,000,000	4.9	U	5.2	U	***230***	***U***	2.9	U	2.6	U	2.3	U
Trichloroethylene (TCE)	79-01-6	470	10,000	21,000	200,000	400,000	4.9	U	20		**480**		2.9	U	2.6	U	2.3	U
Vinyl Chloride	75-01-4	20	210	900	13,000	27,000	4.9	U	5.2	U	***230***	***U***	2.9	U	2.6	U	2.3	U
Semi-Volatile Organic Compounds (SVOCs)																		
2-Methylphenol (O-Cresol)	95-48-7	330	100,000	100,000	500,000	1,000,000	***1220***	***U***	***444***	***UJ***	***9770***	***U***	87.6	U	96.5	U	97.4	U
Acenaphthene	83-32-9	20,000	100,000	100,000	500,000	1,000,000	1500	J	324	J	**20,200**		43.8	U	48.3	U	48.7	U
Anthracene	120-12-7	100,000	100,000	100,000	500,000	1,000,000	4210		414	J	38800		43.8	U	48.3	U	48.7	U
Benzo(A)Anthracene	56-55-3	1,000	1,000	1,000	5,600	11,000	**11,700**		558	J	**75,100**		43.8	U	48.3	U	48.7	U
Benzo(A)Pyrene	50-32-8	1,000	1,000	1,000	1,000	1,100	**9,820**		483	J	**71,300**		43.8	U	48.3	U	48.7	U
Benzo(B)Fluoranthene	205-99-2	1,000	1,000	1,000	5,600	11,000	**9,010**		558	J	**41,300**		43.8	U	48.3	U	48.7	U
Benzo(G,H,I)Perylene	191-24-2	100,000	100,000	100,000	500,000	1,000,000	3,230		444	U	18,400	J	87.6	U	96.5	U	97.4	U
Benzo(K)Fluoranthene	207-08-9	800	1,000	3,900	56,000	110,000	**11,700**		433	J	**39,700**		43.8	U	48.3	U	48.7	U
Chrysene	218-01-9	1,000	1,000	3,900	56,000	110,000	**9,590**		518	J	**74,800**		43.8	U	48.3	U	48.7	U
Cresols, M & P	MEPH1314	330	34,000	100,000	500,000	1,000,000	NA		NA		NA		NA		NA		NA	
Dibenz(A,H)Anthracene	53-70-3	330	330	330	560	1,100	**1,670**	**J**	222	U	***4890***	***U***	43.8	U	48.3	U	48.7	U
Dibenzofuran	132-64-9	7,000	14,000	59,000	350,000	1,000,000	1060	J	222	U	**18,500**	**J**	43.8	U	48.3	U	48.7	U
Fluoranthene	206-44-0	100,000	100,000	100,000	500,000	1,000,000	18100		1350		**160,000**		80.7	J	48.3	U	52.2	J
Fluorene	86-73-7	30,000	100,000	100,000	500,000	1,000,000	1210	J	382	J	28300		43.8	U	48.3	U	48.7	U
Hexachlorobenzene	118-74-1	330	330	1,200	6,000	12,000	***612***	***U***	222	U	***4890***	***U***	43.8	U	48.3	U	48.7	U
Indeno(1,2,3-C,D)Pyrene	193-39-5	500	500	500	5,600	11,000	**3,230**		299	J	**19,700**		43.8	U	48.3	U	48.7	U
Naphthalene	91-20-3	12,000	100,000	100,000	500,000	1,000,000	927	J	222	U	**49,200**		43.8	U	48.3	U	48.7	U
Pentachlorophenol	87-86-5	800	2,400	6,700	6,700	55,000	***1220***	***U***	444	UJ	***9770***	***U***	87.6	U	96.5	U	97.4	U
Phenanthrene	85-01-8	100,000	100,000	100,000	500,000	1,000,000	13700		1550		**162,000**		62.9	J	48.3	U	48.7	U
Phenol	108-95-2	330	100,000	100,000	500,000	1,000,000	***612***	***U***	222	UJ	***4890***	***U***	43.8	U	48.3	U	48.7	U
Pyrene	129-00-0	100,000	100,000	100,000	500,000	1,000,000	14800		1110		**149,000**		60.1	J	48.3	U	48.7	U
Pesticides																		
Gamma Chlordane	12789-03-6						2.4	U	1.74	U	NA		1.73	U	1.94	U	1.72	U
4,4'-DDE	72-55-9	3	1,800	8,900	62,000	120,000	2.4	U	**3.44**		NA		1.72	U	1.9	U	1.91	U
4,4'-DDT	50-29-3	3	1,700	7,900	47,000	94,000	2.4	U	3.27		NA		1.72	U	1.9	U	1.91	U
Polychlorinated biphenyls (PCBs)																		
PCB-1254 (Aroclor 1254)	11097-69-1	100	1,000	1,000	1,000	25,000	24.8	U	18	U	NA		NA		NA		NA	
Total PCBS	1336-36-3	100	1,000	1,000	1,000	25,000	24.8	U	18	U	NA		NA		NA		NA	
Metals																		
Antimony	7440-36-0	---	---	---	---	---	1040		528	U	NA		NA		NA		NA	
Arsenic	7440-38-2	13,000	16,000	16,000	16,000	16,000	9440		3790		NA		NA		NA		NA	
Barium	7440-39-3	350,000	350,000	400,000	400,000	10,000,000	113000		127000		NA		NA		NA		NA	
Beryllium	7440-41-7	7,200	14,000	72,000	590,000	2,700,000	146	U	106	U	NA		NA		NA		NA	
Cadmium	7440-43-9	2,500	2,500	4,300	9,300	60,000	**21,000**		**50,000**		NA		NA		NA		NA	
Calcium	7440-70-2	---	---	---	---	---	28400000		53500000		NA		NA		NA		NA	
Chromium, Total	7440-47-3	---	---	---	---	---	29900		19600		NA		NA		NA		NA	
Cobalt	7440-48-4	---	---	---	---	---	4620		7950		NA		NA		NA		NA	
Copper	7440-50-8	50,000	270,000	270,000	270,000	10,000,000	49000		**135,000**		NA		NA		NA		NA	
Iron	7439-89-6	---	---	---	---	---	13500000		12100000		NA		NA		NA		NA	
Lead	7439-92-1	63,000	400,000	400,000	1,000,000	3,900,000	**167,000**		**110,000**		**430,000**		NA		NA		NA	
Magnesium	7439-95-4	---	---	---	---	---	5510000		3240000		NA		NA		NA		NA	
Manganese	7439-96-5	1,600,000	2,000,000	2,000,000	10,000,000	10,000,000	234000		119000		NA		NA		NA		NA	
Mercury	7439-97-6	180	810	810	2,800	5,700	1.17	U	67.1		NA		NA		NA		NA	
Nickel	7440-02-0	30,000	140,000	310,000	310,000	10,000,000	16000		22100		NA		NA		NA		NA	
Potassium	7440-09-7	---	---	---	---	---	969000		677000		NA		NA		NA		NA	
Selenium	7782-49-2	3,900	36,000	180,000	1,500,000	6,800,000	1460	U	1370		NA		NA		NA		NA	
Silver	7440-22-4	2,000	36,000	180,000	1,500,000	6,800,000	728	U	528	U	NA		NA		NA		NA	
Sodium	7440-23-5	---	---	---	---	---	1260000		962000		NA		NA		NA		NA	
Vanadium	7440-62-2	---	---	---	---	---	15800		11200		NA		NA		NA		NA	
Zinc	7440-66-6	109,000	2,200,000	10,000,000	10,000,000	10,000,000	**197,000**		**691,000**		NA		NA		NA		NA	

Investigation Phase:		Remedial Investigation																
Address:		388 Carroll Street																
Location ID:		LSB-21		LSB-27		LSB-27												
Sample ID:		128-LSB-27-20130913		129-LSB-27-20130913														
Sample Date:		9/13/2013		9/13/2013														
Sampling Depth/VOC Sampling Depth (ft bgs):		0-2/0.5-1		5-7/5-5.5														
Units:	CAS No.	ug/kg	Q	ug/kg	Q													
Volatile Organic Compounds (VOCs)																		
1,1,1-Trichloroethane	71-55-6	3.4	U	3.1	U													
1,1-Dichloroethane	75-34-3	3.4	U	3.1	U													
1,1-Dichloroethene	75-35-4	3.4	U	3.1	U													
1,2,4-Trimethylbenzene	95-63-6	3.4	U	3.1	U													
1,2-Dichloroethane	107-06-2	3.4	U	3.1	U													
1,4-Dioxane (P-Dioxane)	123-91-1	69	UJ	61	UJ													
Acetone	67-64-1	***52***	***U***	30	U													
Benzene	71-43-2	5.2	J	3.1	U													
Carbon Tetrachloride	56-23-5	3.4	U	3.1	U													
Chloroform	67-66-3	3.4	U	3.1	U													
Cis-1,2-Dichloroethylene	156-59-2	9.6		19														
Ethylbenzene	100-41-4	3.4	U	3.1	U													
M And P Xylenes	179601-23-1	2.6	U	2.3	U													
Methyl Ethyl Ketone (2-Butanone)	78-93-3	5.2	J	3.1	U													
P-Cymene (P-Isopropyltoluene)	CYMP	2.6	U	2.3	U													
Toluene	108-88-3	10		3.1	U													
Trans-1,2-Dichloroethene	156-60-5	3.4	U	3.1	U													
Trichloroethylene (TCE)	79-01-6	3.5	J	11														
Vinyl Chloride	75-01-4	3.4	U	**23**														
Semi-Volatile Organic Compounds (SVOCs)																		
2-Methylphenol (O-Cresol)	95-48-7	177	UJ	98.5	U													
Acenaphthene	83-32-9	88.3	U	49.3	U													
Anthracene	120-12-7	147	J	57.1	J													
Benzo(A)Anthracene	56-55-3	312	J	171	J													
Benzo(A)Pyrene	50-32-8	425		219														
Benzo(B)Fluoranthene	205-99-2	416		193	J													
Benzo(G,H,I)Perylene	191-24-2	248	J	99.3	J													
Benzo(K)Fluoranthene	207-08-9	378		232														
Chrysene	218-01-9	343	J	197														
Cresols, M & P	MEPH1314	NA		NA														
Dibenz(A,H)Anthracene	53-70-3	121	J	49.3	U													
Dibenzofuran	132-64-9	88.3	U	49.3	U													
Fluoranthene	206-44-0	596		320														
Fluorene	86-73-7	88.3	U	49.3	U													
Hexachlorobenzene	118-74-1	88.3	U	49.3	U													
Indeno(1,2,3-C,D)Pyrene	193-39-5	276	J	99.3	J													
Naphthalene	91-20-3	144	J	53.6	J													
Pentachlorophenol	87-86-5	177	UJ	98.5	U													
Phenanthrene	85-01-8	455		217														
Phenol	108-95-2	88.3	UJ	49.3	U													
Pyrene	129-00-0	455		252														
Pesticides																		
Gamma Chlordane	12789-03-6	1.9	U	1.91	U													
4,4'-DDE	72-55-9	1.73	U	1.94	U													
4,4'-DDT	50-29-3	1.73	U	1.94	U													
Polychlorinated biphenyls (PCBs)																		
PCB-1254 (Aroclor 1254)	11097-69-1	NA		NA														
Total PCBS	1336-36-3	NA		NA														
Metals																		
Antimony	7440-36-0	NA		NA														
Arsenic	7440-38-2	NA		NA														
Barium	7440-39-3	NA		NA														
Beryllium	7440-41-7	NA		NA														
Cadmium	7440-43-9	NA		NA														
Calcium	7440-70-2	NA		NA														
Chromium, Total	7440-47-3	NA		NA														
Cobalt	7440-48-4	NA		NA														
Copper	7440-50-8	NA		NA														
Iron	7439-89-6	NA		NA														
Lead	7439-92-1	NA		NA														
Magnesium	7439-95-4	NA		NA														
Manganese	7439-96-5	NA		NA														
Mercury	7439-97-6	NA		NA														
Nickel	7440-02-0	NA		NA														
Potassium	7440-09-7	NA		NA														
Selenium	7782-49-2	NA		NA														
Silver	7440-22-4	NA		NA														
Sodium	7440-23-5	NA		NA														
Vanadium	7440-62-2	NA		NA														
Zinc	7440-66-6	NA		NA														

Notes:
Subpart 375-6 SCOs (Revised Brownfields) criteria are from the NYSDEC Soil Cleanup Objective Tables 375-6.8(a) and 375-6.8(b), last revised 14 December 2006.
ft bgs - feet below ground surface
NA: Not analyzed
U: The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the RL or the sample concentration for results impacted by bla
J: The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample.
UJ: The analyte was not detected at a level greater than or equal to the reporting limit (RL); however, the reported RL is approximate and may be inaccurate or imp

Italicized and **Bold *results*** indicate Reporting Limits (RL) greater than or equal to the most stringent criteria.
Data has been subject to third party validation.

TABLE 7
SUMMARY OF LANGAN GROUNDWATER ANALYTICAL RESULTS
363 BOND STREET AND 400 CARROLL STREET
Brooklyn, New York

Investigation Phase:			Due Diligence		Remedial Investigation		Due Diligence		Remedial Investigation															
Address:			363 Bond Street		363 Bond Street		363 Bond Street		363 Bond Street		363 Bond Street		363 Bond Street		363 Bond Street		363 Bond Street		363 Bond Street		400 Carroll Street		400 Carroll Street	
Location ID:			MW-2		MW-2		MW-4		MW-4		MW-1		MW-3		MW-3		MW-5		MW-5		LMW-6		LMW-7		LMW-9		LMW-10	
Sample ID:			031		134-MW-2-20130913		29		156-MW-4-20130917		151-MW-1-20130917		143-MW-3-20130916		145-DUP-1-20130916		148-MW-5-20130917		149-DUP-2-20130917		147-LMW-6-20130917		150-LMW-7-20130917		154-LMW-9-20130917		155-LMW-10-20130917	
Sample Date:			8/30/2012		9/13/2013		8/30/2012		9/17/2013		9/17/2013		9/16/2013		9/16/2013		9/17/2013		9/17/2013		9/17/2013		9/17/2013		9/17/2013	
Sample Depth (ft bgs):			7		7		10		14		9		12		12		12		12		12		12.5		12		10	
Units:		**ug/l**	ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q
Volatile Organic Compounds (VOCs)																												
1,1,1,2-Tetrachloroethane	630-20-6	5	NA		0.071	U	NA		0.2	U	0.2	U	5	U	0.2	U	2	U	2	U	1	U	***100***	***U***	0.2	U	0.2	U
1,1,1-Trichloroethane	71-55-6	5	1	U	0.024	U	1	U	0.2	U	0.2	U	5	U	0.2	UJ	2	U	2	U	1	U	***100***	***U***	0.2	U	0.2	U
1,1,2,2-Tetrachloroethane	79-34-5	5	1	U	0.17	U	1	U	0.2	U	0.2	U	5	UJ	0.2	U	2	U	2	U	1	U	***100***	***U***	0.2	U	0.2	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	5	5	U	0.074	U	5	U	0.2	U	0.2	U	5	U	0.2	UJ	2	U	2	U	1	U	***100***	***U***	0.2	U	0.2	U
1,1,2-Trichloroethane	79-00-5	1	1	U	0.07	U	1	U	0.2	U	0.2	U	***5***	***U***	0.2	U	***2***	***U***	***2***	***U***	1	U	***100***	***U***	0.2	U	0.2	U
1,1-Dichloroethane	75-34-3	5	1	U	0.044	U	1	U	0.2	U	0.2	U	5	U	0.2	UJ	2	U	2	U	1	U	***100***	***U***	0.2	U	0.2	U
1,1-Dichloroethene	75-35-4	5	1	U	0.044	U	1	U	0.2	U	0.2	U	5	U	0.2	UJ	2	U	2	U	1	U	***100***	***U***	0.2	U	0.2	U
1,2,4-Trichlorobenzene	120-82-1	5	NA		0.11	U	NA		0.2	U	0.2	U	5	UJ	0.2	U	2	U	2	U	1	U	***100***	***U***	0.2	U	0.2	U
1,2,4-Trimethylbenzene	95-63-6	5	NA		0.068	U	NA		**8.6**		1.3		5	UJ	0.4	J	**160**		**160**		**24**		**6,000**		0.32	J	0.48	J
1,2-Dibromo-3-Chloropropane	96-12-8	0.04	***10***	***U***	***0.46***	***U***	***10***	***U***	***0.2***	***U***	***0.2***	***U***	***5***	***UJ***	***0.2***	***U***	***2***	***U***	***2***	***U***	***1***	***U***	***100***	***U***	***0.2***	***U***	***0.2***	***U***
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	0.0006	***2***	***U***	***0.15***	***U***	***2***	***U***	***0.2***	***U***	***0.2***	***U***	***5***	***U***	***0.2***	***U***	***2***	***U***	***2***	***U***	***1***	***U***	***100***	***U***	***0.2***	***U***	***0.2***	***U***
1,2-Dichlorobenzene	95-50-1	3	1	U	0.071	U	1	U	0.2	U	0.2	U	***5***	***UJ***	0.2	U	2	U	2	U	1	U	***100***	***U***	0.2	U	0.2	U
1,2-Dichloroethane	107-06-2	0.6	***1***	***U***	0.12	U	***1***	***U***	0.2	U	0.2	U	***5***	***U***	0.2	UJ	***2***	***U***	***2***	***U***	***1***	***U***	***100***	***U***	0.2	U	0.2	U
1,2-Dichloropropane	78-87-5	1	1	U	0.051	U	1	U	0.2	U	0.2	U	***5***	***U***	0.2	U	***2***	***U***	***2***	***U***	1	U	***100***	***U***	0.2	U	0.2	U
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	5	NA		0.059	U	NA		2.1		0.4	J	5	UJ	0.2	U	**42**		**42**		1.8	J	**1,900**		0.2	U	0.2	U
1,3-Dichlorobenzene	541-73-1	3	1	U	0.048	U	1	U	0.2	U	0.2	U	***5***	***UJ***	0.2	U	2	U	2	U	1	U	***100***	***U***	0.2	U	0.2	U
1,4-Dichlorobenzene	106-46-7	3	1	U	0.048	U	1	U	0.2	U	0.2	U	***5***	***UJ***	0.2	U	2	U	2	U	1	U	***100***	***U***	0.2	U	0.2	U
1,4-Dioxane (P-Dioxane)	123-91-1	—	130	U	4.1	U	130	U	40	U	40	U	1000	U	40	U	400	U	400	U	200	U	20000	U	40	U	40	U
2-Hexanone	591-78-6	50	5	U	0.24	U	5	U	0.2	U	0.2	U	5	U	0.2	U	2	U	2	U	1	U	***100***	***U***	0.2	U	0.2	U
Acetone	67-64-1	50	10	U	1.5	U	10	U	1	UJ	1	UJ	**130**	**J**	1	UJ	10	UJ	10	UJ	8.1	J	***500***	***UJ***	1.3	J	1.5	U
Acrolein	107-02-8	5	NA		0.81	U	NA		0.2	U	0.2	U	5	U	0.2	UJ	2	U	2	U	1	U	***100***	***U***	0.2	U	0.2	U
Acrylonitrile	107-13-1	5	NA		0.73	U	NA		0.2	U	0.2	U	5	U	0.2	UJ	2	U	2	U	1	U	***100***	***U***	0.2	U	0.2	U
Benzene	71-43-2	1	1	U	0.044	U	0.39	J	0.33	J	0.2	U	***5***	***U***	0.2	UJ	**39**		**39**		**39**		***100***	***U***	**1.9**		0.2	U
Benzoic Acid	65-85-0	—	NA		25.6	UJ	NA		25.6	UJ	26.3	UJ	26.3	UJ	29.4	UJ	1470	UJ	1390	UJ	128	UJ	53800	U	30.3	UJ	28.6	U
Bromodichloromethane	75-27-4	50	1	U	0.054	U	1	U	0.2	U	0.2	U	5	U	0.2	UJ	2	U	2	U	1	U	***100***	***U***	0.2	U	0.2	U
Bromoform	75-25-2	50	4	U	0.079	U	4	U	0.2	U	0.2	U	5	UJ	0.2	U	2	U	2	U	1	U	***100***	***U***	0.2	U	0.2	U
Bromomethane	74-83-9	5	2	U	0.2	U	2	U	0.2	U	0.2	U	5	U	0.2	UJ	2	U	2	U	1	U	***100***	***U***	0.2	U	0.2	U
Carbon Disulfide	75-15-0	60	2	U	0.065	U	2	U	0.2	U	0.2	U	7.8	J	0.2	UJ	2	U	2	U	1	U	***100***	***U***	0.2	U	0.2	U
Carbon Tetrachloride	56-23-5	5	1	U	0.085	U	1	U	0.2	U	0.2	U	5	U	0.2	UJ	2	U	2	U	1	U	***100***	***U***	0.2	U	0.2	U
Chlorobenzene	108-90-7	5	1	U	0.063	U	1	U	0.2	U	0.2	U	5	U	0.2	U	2	U	2	U	1	U	***100***	***U***	0.2	U	0.2	U
Chloroethane	75-00-3	5	1	U	0.09	U	1	U	0.2	U	0.2	U	5	U	0.2	UJ	2	U	2	U	1	U	***100***	***U***	0.2	U	0.2	U
Chloroform	67-66-3	7	1	U	0.079	U	1	U	0.2	U	0.2	U	5	U	0.2	UJ	2	U	2	U	1	U	***100***	***U***	0.2	U	0.2	U
Chloromethane	74-87-3	—	1	U	0.076	U	1	U	0.2	U	0.2	U	5	U	0.2	UJ	2	U	2	U	1	U	100	U	0.2	U	0.22	J
Cis-1,2-Dichloroethylene	156-59-2	5	1	U	0.069	U	1	U	0.2	U	0.2	U	5	U	0.2	UJ	2	U	2	U	1	U	***100***	***U***	**8.1**		0.2	U
Cis-1,3-Dichloropropene	10061-01-5	0.4	***1***	***U***	0.067	U	***1***	***U***	0.2	U	0.2	U	***5***	***U***	0.2	U	***2***	***U***	***2***	***U***	***1***	***U***	***100***	***U***	0.2	U	0.2	U
Dibromochloromethane	124-48-1	50	1	U	0.053	U	1	U	0.2	U	0.2	U	5	U	0.2	U	2	U	2	U	1	U	***100***	***U***	0.2	U	0.2	U
Dibromomethane	74-95-3	5	NA		0.12	U	NA		0.2	U	0.2	U	5	U	0.2	U	2	U	2	U	1	U	***100***	***U***	0.2	U	0.2	U
Dichlorodifluoromethane	75-71-8	5	5	U	0.092	U	5	U	0.2	U	0.2	U	5	U	0.2	UJ	2	U	2	U	1	U	***100***	***U***	0.2	U	0.2	U
Ethylbenzene	100-41-4	5	1	U	0.057	U	1	U	0.56		0.2	U	5	U	0.2	U	**63**		**64**		**11**		**360**		0.2	U	0.2	U
Hexachlorobutadiene	87-68-3	0.5	***1***	***U***	0.12	U	***1***	***U***	0.2	U	0.2	U	***5***	***UJ***	0.2	U	***2***	***U***	***2***	***U***	***1***	***U***	***100***	***U***	0.2	U	0.2	U
Isopropylbenzene (Cumene)	98-82-8	5	2	U	0.056	U	1.3	J	1.4		0.32	J	**14**	**J**	1.1	J	**16**		**15**		**14**		**410**		0.68		0.2	U
Methyl Acetate	79-20-9	—	5	U	0.62	U	5	U	0.2	U	0.2	U	5	U	0.2	UJ	2	U	2	U	1	U	100	U	0.2	U	0.2	U
Methyl Ethyl Ketone (2-Butanone)	78-93-3	50	10	U	1	U	10	U	0.5	UJ	0.5	U	12	U	0.5	UJ	5	UJ	5	UJ	2.5	UJ	***250***	***U***	0.5	UJ	0.5	UJ
Methylene Chloride	75-09-2	5	2	U	0.26	U	2	U	1	UJ	1	UJ	***25***	***U***	1	UJ	***10***	***UJ***	***10***	***UJ***	5	UJ	***500***	***UJ***	1	UJ	1	UJ
N-Butylbenzene	104-51-8	5	NA		0.083	U	NA		1.2		0.2	U	**6.8**	**J**	0.24	J	2	U	2	U	3		**580**		0.2	U	0.2	U
N-Propylbenzene	103-65-1	5	NA		0.068	U	NA		0.98		0.2	U	**19**	**J**	0.37	J	**17**		**16**		**11**		**610**		0.54		0.2	U
O-Xylene (1,2-Dimethylbenzene)	95-47-6	5	1	U	0.05	U	0.25	J	4.5		0.98		5	U	0.34	J	**90**		**93**		**14**		**3,200**		0.2	U	0.2	U
Sec-Butylbenzene	135-98-8	5	NA		0.05	U	NA		1.3		0.71		5	UJ	0.66	J	4.2	J	4.2	J	2.3	J	**320**		0.58		0.2	U
Styrene	100-42-5	5	5	U	0.043	U	5	U	0.2	U	0.2	U	5	U	0.2	U	2	U	2	U	1	U	***100***	***U***	0.2	U	0.2	U
T-Butylbenzene	98-06-6	5	NA		0.05	U	NA		1.1		1.5		5	UJ	0.65	J	2.5	J	2	U	1	U	***100***	***U***	0.97		0.2	U
Tert-Butyl Alcohol	75-65-0	—	NA		6.1	U	NA		2		0.5	U	12	U	0.5	UJ	5	U	5	U	4.4	J	250	U	2.3		0.85	J
Tert-Butyl Methyl Ether	1634-04-4	10	0.31	J	0.48	U	0.53	J	0.2	U	0.42	J	5	U	0.2	U	2	U	2	U	1	U	***100***	***U***	0.2	U	0.2	U
Tetrachloroethylene (PCE)	127-18-4	5	1	U	0.07	U	1	U	0.2	U	0.2	U	5	U	0.2	U	2	U	2	U	1	U	***100***	***U***	1.1		0.2	U
Toluene	108-88-3	5	1	U	0.042	U	1	U	3		0.31	J	5	U	0.2	U	**31**	**J**	**30**	**J**	**6.1**	**J**	**1,800**		0.23	J	0.2	UJ
Trans-1,2-Dichloroethene	156-60-5	5	1	U	0.085	U	1	U	0.2	U	0.2	U	5	U	0.2	UJ	2	U	2	U	1	U	***100***	***U***	0.67		0.2	U
Trans-1,3-Dichloropropene	10061-02-6	0.4	***1***	***U***	0.06	U	***1***	***U***	0.2	U	0.2	U	***5***	***U***	0.2	U	***2***	***U***	***2***	***U***	***1***	***U***	***100***	***U***	0.2	U	0.2	U
Trichloroethylene (TCE)	79-01-6	5	1	U	0.071	U	1	U	0.2	U	0.2	U	5	U	0.2	U	2	U	2	U	1	U	***100***	***U***	**6.6**		0.2	U
Trichlorofluoromethane	75-69-4	5	5	U	0.094	U	5	U	0.2	U	0.2	U	5	U	0.2	UJ	2	U	2	U	1	U	***100***	***U***	0.2	U	0.2	U
Vinyl Chloride	75-01-4	2	1	U	0.062	U	1	U	0.5	U	0.5	U	***12***	***U***	0.5	UJ	**11**		**10**		***2.5***	***U***	***250***	***U***	**4.6**		0.5	U

TABLE 7
SUMMARY OF LANGAN GROUNDWATER ANALYTICAL RESULTS
363 BOND STREET AND 400 CARROLL STREET
Brooklyn, New York

Investigation Phase:			Due Diligence		Remedial Investigation		Due Diligence		Remedial Investigation													
Address:		**Ground Water Quality Standards**	363 Bond Street		363 Bond Street		363 Bond Street		363 Bond Street		363 Bond Street		363 Bond Street		363 Bond Street		363 Bond Street		400 Carroll Street		400 Carroll Street	
Location ID:			MW-2		MW-2		MW-4		MW-4		MW-1		MW-3		MW-5		MW-5		LMW-6		LMW-7		LMW-9		LMW-10	
Sample ID:	**CAS No.**		031		134-MW-2-20130913		29		156-MW-4-20130917		151-MW-1-20130917		143-MW-3-20130916		148-MW-5-20130917		149-DUP-2-20130917		147-LMW-6-20130917		150-LMW-7-20130917		154-LMW-9-20130917		155-LMW-10-20130917	
Sample Date:			8/30/2012		9/13/2013		8/30/2012		9/17/2013		9/17/2013		9/16/2013		9/17/2013		9/17/2013		9/17/2013		9/17/2013		9/17/2013		9/17/2013	
Sample Depth (ft bgs):			7		7		10		14		9		12		12		12		12		12.5		12		10	
Units:		**ug/l**	ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q
Semi-Volatile Organic Compounds (SVOCs)																										
2,4,5-Trichlorophenol	95-95-4	2	***5.2***	***U***	***2.56***	***U***	***5.2***	***U***	***2.56***	***U***	***2.63***	***U***	***2.63***	***U***	***2.94***	***U***	***147***	***U***	***139***	***U***	***12.8***	***U***	***5380***	***U***	***3.03***	***U***	***2.86***	***U***
2,4,6-Trichlorophenol	88-06-2	2	***5.2***	***U***	***2.56***	***U***	***5.2***	***U***	***2.56***	***U***	***2.63***	***U***	***2.63***	***U***	***2.94***	***U***	***147***	***U***	***139***	***U***	***12.8***	***U***	***5380***	***U***	***3.03***	***U***	***2.86***	***U***
2,4-Dichlorophenol	120-83-2	5	***5.2***	***U***	2.56	U	***5.2***	***U***	2.56	U	2.63	U	2.63	U	2.94	U	***147***	***U***	***139***	***U***	***12.8***	***U***	***5380***	***U***	3.03	U	2.86	U
2,4-Dimethylphenol	105-67-9	2	***5.2***	***U***	***2.56***	***U***	***5.2***	***U***	***2.56***	***U***	***2.63***	***U***	***2.63***	***U***	***2.94***	***U***	***147***	***U***	***139***	***U***	***12.8***	***U***	***5380***	***U***	***3.03***	***U***	***2.86***	***U***
2,4-Dinitrophenol	51-28-5	2	***21***	***U***	***2.56***	***U***	***21***	***U***	***2.56***	***U***	***2.63***	***U***	***2.63***	***U***	***2.94***	***U***	***147***	***U***	***139***	***U***	***12.8***	***U***	***5380***	***U***	***3.03***	***U***	***2.86***	***U***
2,4-Dinitrotoluene	121-14-2	5	2.1	U	2.56	U	2.1	U	2.56	U	2.63	U	2.63	U	2.94	U	***147***	***U***	***139***	***U***	***12.8***	***U***	***5380***	***U***	3.03	U	2.86	U
2,6-Dinitrotoluene	606-20-2	5	2.1	U	2.56	U	2.1	U	2.56	U	2.63	U	2.63	U	2.94	U	***147***	***U***	***139***	***U***	***12.8***	***U***	***5380***	***U***	3.03	U	2.86	U
2-Chloronaphthalene	91-58-7	5	2.1	U	2.56	U	2.1	U	2.56	U	2.63	U	2.63	U	2.94	U	***147***	***U***	***139***	***U***	***12.8***	***U***	***5380***	***U***	3.03	U	2.86	U
2-Chlorophenol	95-57-8	2	***5.2***	***U***	***2.56***	***U***	***5.2***	***U***	***2.56***	***U***	***2.63***	***U***	***2.63***	***U***	***2.94***	***U***	***147***	***U***	***139***	***U***	***12.8***	***U***	***5380***	***U***	***3.03***	***U***	***2.86***	***U***
2-Methylnaphthalene	91-57-6	—	1	U	2.56	U	1	U	2.56	U	2.63	U	41.6	J	2.94	UJ	1890		1480		95.4		61000		3.03	U	2.86	U
2-Methylphenol (O-Cresol)	95-48-7	2	***2.1***	***U***	***2.56***	***U***	***2.1***	***U***	***2.56***	***U***	***2.63***	***U***	***2.63***	***U***	***2.94***	***U***	***147***	***U***	***139***	***U***	***12.8***	***U***	***5380***	***U***	***3.03***	***U***	***2.86***	***U***
2-Nitroaniline	88-74-4	5	***5.2***	***U***	2.56	U	***5.2***	***U***	2.56	U	2.63	U	2.63	U	2.94	U	***147***	***U***	***139***	***U***	***12.8***	***U***	***5380***	***U***	3.03	U	2.86	U
2-Nitrophenol	88-75-5	2	***5.2***	***U***	***2.56***	***U***	***5.2***	***U***	***2.56***	***U***	***2.63***	***U***	***2.63***	***U***	***2.94***	***U***	***147***	***U***	***139***	***U***	***12.8***	***U***	***5380***	***U***	***3.03***	***U***	***2.86***	***U***
3- And 4- Methylphenol (Total)	MEPH3MEPH4	–	NA		2.56	U	NA		2.56	U	2.63	U	2.63	U	2.94	U	147	U	139	U	12.8	U	5380	U	3.03	U	2.86	U
3,3'-Dichlorobenzidine	91-94-1	5	***5.2***	***U***	2.56	U	***5.2***	***U***	2.56	U	2.63	U	2.63	U	2.94	U	***147***	***U***	***139***	***U***	***12.8***	***U***	***5380***	***U***	3.03	U	2.86	U
3-Nitroaniline	99-09-2	5	***5.2***	***U***	2.56	U	***5.2***	***U***	2.56	U	2.63	U	2.63	U	2.94	U	***147***	***U***	***139***	***U***	***12.8***	***U***	***5380***	***U***	3.03	U	2.86	U
4-Chloro-3-Methylphenol	59-50-7	2	***5.2***	***U***	NA		***5.2***	***U***	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
4-Chloroaniline	106-47-8	5	***5.2***	***U***	NA		***5.2***	***U***	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
4-Nitroaniline	100-01-6	5	***5.2***	***U***	2.56	U	***5.2***	***U***	2.56	U	2.63	U	2.63	U	2.94	U	***147***	***U***	***139***	***U***	***12.8***	***U***	***5380***	***U***	3.03	U	2.86	U
4-Nitrophenol	100-02-7	2	***10***	***U***	***2.56***	***U***	***10***	***U***	***2.56***	***U***	***2.63***	***U***	***2.63***	***U***	***2.94***	***U***	***147***	***U***	***139***	***U***	***12.8***	***U***	***5380***	***U***	***3.03***	***U***	***2.86***	***U***
Acenaphthene	83-32-9	20	3.4		2.97		1	U	0.0513	U	0.0526	U	1.93	J	0.694	J	**1,020**		**781**		**63.9**		***108***	***U***	0.0606	U	0.0571	U
Acenaphthylene	208-96-8	—	1	U	0.0513	U	1	U	0.0513	U	0.0526	U	0.726	J	0.0588	UJ	50.6	J	47.8	J	0.256	U	108	U	0.0606	U	0.0571	U
Anthracene	120-12-7	50	1.2		0.779		1	U	0.0513	U	0.0526	U	0.347	J	0.0588	UJ	**675**		**507**		9.13	J	***108***	***U***	0.0606	U	0.0571	U
Atrazine	1912-24-9	7.5	5.2	U	2.56	U	5.2	U	2.56	U	2.63	U	2.63	U	2.94	U	***147***	***U***	***139***	***U***	***12.8***	***U***	***5380***	***U***	3.03	U	2.86	U
Benzidine	92-87-5	5	NA		***10.3***	***U***	NA		***10.3***	***U***	***10.5***	***U***	***10.5***	***U***	***11.8***	***U***	***588***	***U***	***556***	***U***	***51.3***	***U***	***21500***	***U***	***12.1***	***U***	***11.4***	***U***
Benzo(A)Anthracene	56-55-3	0.002	***1***	***U***	***0.0513***	***U***	***1***	***U***	***0.0513***	***U***	***0.0526***	***U***	***0.0526***	***U***	***0.0588***	***U***	**376**		**336**		***0.256***	***U***	***108***	***U***	***0.0606***	***U***	***0.0571***	***U***
Benzo(A)Pyrene	50-32-8	—	1	U	0.0513	U	1	U	0.0513	U	0.0526	U	0.0526	U	0.0588	U	253	J	254	J	0.256	U	108	U	0.0606	U	0.0571	U
Benzo(B)Fluoranthene	205-99-2	0.002	***1***	***U***	***0.0513***	***U***	***1***	***U***	***0.0513***	***U***	***0.0526***	***U***	***0.0526***	***U***	***0.0588***	***U***	**242**	**J**	**214**	**J**	***0.256***	***U***	***108***	***U***	***0.0606***	***U***	***0.0571***	***U***
Benzo(G,H,I)Perylene	191-24-2	—	1	U	0.0513	U	1	U	0.0513	U	0.0526	U	0.0526	U	0.0588	U	64.1	J	41.1	J	0.256	U	108	U	0.0606	U	0.0571	U
Benzo(K)Fluoranthene	207-08-9	0.002	***1***	***U***	***0.0513***	***U***	***1***	***U***	***0.0513***	***U***	***0.0526***	***U***	***0.0526***	***U***	***0.0588***	***U***	**236**	**J**	**184**	**J**	***0.256***	***U***	***108***	***U***	***0.0606***	***U***	***0.0571***	***U***
Benzyl Butyl Phthalate	85-68-7	50	2.1	U	2.56	U	2.1	U	2.56	U	2.63	U	2.63	U	2.94	U	***147***	***U***	***139***	***U***	12.8	U	***5380***	***U***	3.03	U	2.86	U
Biphenyl (Diphenyl)	92-52-4	5	1	U	2.56	U	1	U	2.56	U	2.63	U	2.63	U	2.94	U	***147***	***U***	***139***	***U***	***12.8***	***U***	***5380***	***U***	3.03	U	2.86	U
Bis(2-Chloroethoxy) Methane	111-91-1	5	2.1	U	2.56	U	2.1	U	2.56	U	2.63	U	2.63	U	2.94	U	***147***	***U***	***139***	***U***	***12.8***	***U***	***5380***	***U***	3.03	U	2.86	U
Bis(2-Chloroethyl) Ether (2-Chloroethyl Ether)	111-44-4	1	***2.1***	***U***	***2.56***	***U***	***2.1***	***U***	***2.56***	***U***	***2.63***	***U***	***2.63***	***U***	***2.94***	***U***	***147***	***U***	***139***	***U***	***12.8***	***U***	***5380***	***U***	***3.03***	***U***	***2.86***	***U***
Bis(2-Chloroisopropyl) Ether	108-60-1	5	NA		2.56	U	NA		2.56	U	2.63	U	2.63	U	2.94	U	***147***	***U***	***139***	***U***	***12.8***	***U***	***5380***	***U***	3.03	U	2.86	U
Bis(2-Ethylhexyl) Phthalate	117-81-7	5	2.1	U	2.56	U	2.1	U	2.56	U	2.63	U	2.63	U	2.94	U	***147***	***U***	***139***	***U***	***12.8***	***U***	***5380***	***U***	3.03	U	2.86	U
Caprolactam	105-60-2	—	2.1	U	2.56	UJ	2.1	U	2.56	UJ	2.63	UJ	2.63	UJ	2.94	UJ	147	UJ	139	UJ	12.8	UJ	5380	U	3.03	UJ	2.86	U
Carbazole	86-74-8	—	1	U	2.56	U	1	U	2.56	U	2.63	U	2.63	U	2.94	U	295		288		12.8	U	5380	U	3.03	U	2.86	U
Chrysene	218-01-9	0.002	***1***	***U***	***0.0513***	***U***	***1***	***U***	***0.0513***	***U***	***0.0526***	***U***	***0.0526***	***U***	***0.0588***	***U***	**346**		**310**		***0.256***	***U***	***108***	***U***	***0.0606***	***U***	***0.0571***	***U***
Dibenz(A,H)Anthracene	53-70-3	—	1	U	0.0513	U	1	U	0.0513	U	0.0526	U	0.0526	U	0.0588	U	53.5	J	34.4	J	0.256	U	108	U	0.0606	U	0.0571	U
Dibenzofuran	132-64-9	—	5.2	U	2.56	U	5.2	U	2.56	U	2.63	U	2.63	U	2.94	U	717		139	U	12.8	U	5380	U	3.03	U	2.86	U
Diethyl Phthalate	84-66-2	50	2.1	U	2.56	U	2.1	U	2.56	U	2.63	U	2.63	U	2.94	U	***147***	***U***	***139***	***U***	12.8	U	***5380***	***U***	3.03	U	2.86	U
Dimethyl Phthalate	131-11-3	50	2.1	U	2.56	U	2.1	U	2.56	U	2.63	U	2.63	U	2.94	U	***147***	***U***	***139***	***U***	12.8	U	***5380***	***U***	3.03	U	2.86	U
Di-N-Butyl Phthalate	84-74-2	50	2.1	U	2.56	U	2.1	U	2.56	U	2.63	U	2.63	U	2.94	U	***147***	***U***	***139***	***U***	12.8	U	***5380***	***U***	3.03	U	2.86	U
Di-N-Octylphthalate	117-84-0	50	2.1	U	2.56	U	2.1	U	2.56	U	2.63	U	2.63	U	2.94	U	***147***	***U***	***139***	***U***	12.8	U	***5380***	***U***	3.03	U	2.86	U
Fluoranthene	206-44-0	50	2		1.13		1	U	0.0513	U	0.0526	U	0.305	J	0.0588	UJ	**1,360**		**1,130**		6.41	J	***108***	***U***	0.0606	U	0.171	
Fluorene	86-73-7	50	2.7		0.0513	U	1	U	0.0513	U	0.0526	U	3.43	J	1.05	J	**1,030**		**800**		31.7		***108***	***U***	0.0606	U	0.0571	U
Hexachlorobenzene	118-74-1	0.04	***1***	***U***	***0.041***	***U***	***1***	***U***	***0.041***	***U***	***0.0421***	***U***	***0.0421***	***U***	***0.0471***	***U***	***2.35***	***U***	***2.22***	***U***	***0.205***	***U***	***86.2***	***U***	***0.0485***	***U***	***0.0457***	***U***
Hexachlorocyclopentadiene	77-47-4	5	***10***	***U***	2.56	U	***10***	***U***	2.56	U	2.63	U	2.63	U	2.94	U	***147***	***U***	***139***	***U***	***12.8***	***U***	***5380***	***U***	3.03	U	2.86	U
Hexachloroethane	67-72-1	5	2.1	U	2.56	U	2.1	U	2.56	U	2.63	U	2.63	U	2.94	U	***147***	***U***	***139***	***U***	***12.8***	***U***	***5380***	***U***	3.03	U	2.86	U
Indeno(1,2,3-C,D)Pyrene	193-39-5	0.002	***1***	***U***	***0.0513***	***U***	***1***	***U***	***0.0513***	***U***	***0.0526***	***U***	***0.0526***	***U***	***0.0588***	***U***	**84.7**	**J**	**57.8**	**J**	***0.256***	***U***	***108***	***U***	***0.0606***	***U***	***0.0571***	***U***
Isophorone	78-59-1	50	2.1	U	2.56	U	2.1	U	2.56	U	2.63	U	2.63	U	2.94	U	***147***	***U***	***139***	***U***	12.8	U	***5380***	***U***	3.03	U	2.86	U
Naphthalene	91-20-3	10	1	U	0.0513	U	1	U	0.0513	U	0.232		0.0526	UJ	1.08	J	**1,880**		**1,460**		**139**		**43,700**		0.0606	U	0.0571	U
Nitrobenzene	98-95-3	0.4	***2.1***	***U***	***2.56***	***U***	***2.1***	***U***	***2.56***	***U***	***2.63***	***U***	***2.63***	***U***	***2.94***	***U***	***147***	***U***	***139***	***U***	***12.8***	***U***	***5380***	***U***	***3.03***	***U***	***2.86***	***U***
N-Nitrosodiphenylamine	86-30-6	50	5.2	U	2.56	U	5.2	U	2.56	U	2.63	U	2.63	U	2.94	U	***147***	***U***	***139***	***U***	12.8	U	***5380***	***U***	3.03	U	2.86	U
Pentachlorophenol	87-86-5	1	***10***	***U***	***1.03***	***U***	***10***	***U***	***1.03***	***U***	***1.05***	***U***	***1.05***	***U***	***1.18***	***U***	***58.8***	***U***	***55.6***	***U***	***5.13***	***U***	***2150***	***U***	***1.21***	***U***	***1.14***	***U***
Phenanthrene	85-01-8	50	3.5		0.359		1	U	0.0513	U	0.0526	U	2.8	J	0.553	J	**2,250**		**1,900**		30.9		***108***	***U***	0.0606	U	0.48	
Phenol	108-95-2	1	***2.1***	***U***	***2.56***	***U***	***2.1***	***U***	***2.56***	***U***	***2.63***	***U***	***2.63***	***U***	***2.94***	***U***	***147***	***U***	***139***	***U***	***12.8***	***U***	***5380***	***U***	***3.03***	***U***	***2.86***	***U***
Pyrene	129-00-0	50	1.5		0.769		1	U	0.0513	U	0.0526	U	0.211	J	0.0588	UJ	**976**		**866**		4.92	J	***108***	***U***	0.0606	U	0.103	

TABLE 7
SUMMARY OF LANGAN GROUNDWATER ANALYTICAL RESULTS
363 BOND STREET AND 400 CARROLL STREET
Brooklyn, New York

Investigation Phase:			Due Diligence		Remedial Investigation		Due Diligence		Remedial Investigation													
Address:		Ground Water Quality Standards	363 Bond Street		363 Bond Street		363 Bond Street		363 Bond Street		363 Bond Street		363 Bond Street		363 Bond Street		363 Bond Street		400 Carroll Street		400 Carroll Street	
Location ID:			MW-2		MW-2		MW-4		MW-4		MW-1		MW-3		MW-3		MW-5		MW-5		LMW-6		LMW-7		LMW-9		LMW-10	
Sample ID:	CAS No.		031		134-MW-2-20130913		29		156-MW-4-20130917		151-MW-1-20130917		143-MW-3-20130916		145-DUP-1-20130916		148-MW-5-20130917		149-DUP-2-20130917		147-LMW-6-20130917		150-LMW-7-20130917		154-LMW-9-20130917		155-LMW-10-20130917	
Sample Date:			8/30/2012		9/13/2013		8/30/2012		9/17/2013		9/17/2013		9/16/2013		9/16/2013		9/17/2013		9/17/2013		9/17/2013		9/17/2013		9/17/2013		9/17/2013	
Sample Depth (ft bgs):			7		7		10		14		9		12		12		12		12		12		12.5		12		10	
Units:		ug/l	ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q
Pesticides																												
Aldrin	309-00-2	ND	NA		0.00118	UJ	NA		0.001	UJ	0.00114	U	0.00125	UJ	0.00118	U	0.00114	UJ	0.00114	U	0.001	UJ	0.0138	U	0.00108	UJ	0.00111	U
Alpha Bhc (Alpha Hexachlorocyclohexane)	319-84-6	--	NA		0.00118	UJ	NA		0.001	UJ	0.00114	U	0.00125	UJ	0.00118	U	0.00114	UJ	0.00114	U	0.001	UJ	0.0138	U	0.00108	UJ	0.00111	U
Alpha Endosulfan	959-98-8	--	NA		0.00118	UJ	NA		0.001	UJ	0.00114	U	0.00125	UJ	0.00118	U	0.00114	UJ	0.00114	U	0.001	UJ	0.0138	U	0.00108	UJ	0.00111	U
Alpha-Chlordane	5103-71-9	--	NA		0.00118	UJ	NA		0.001	UJ	0.00114	U	0.00125	UJ	0.00118	U	0.00114	UJ	0.00114	U	0.001	UJ	0.0138	U	0.00108	UJ	0.00111	U
Beta Bhc (Beta Hexachlorocyclohexane)	319-85-7	--	NA		0.00118	UJ	NA		0.001	UJ	0.00114	U	0.00125	UJ	0.00118	U	0.00114	UJ	0.00114	U	0.001	UJ	0.0138	U	0.00108	UJ	0.00111	U
Beta Endosulfan	33213-65-9	--	NA		0.00118	UJ	NA		0.001	UJ	0.00114	U	0.00125	UJ	0.00118	U	0.00114	UJ	0.00114	U	0.001	UJ	0.0138	U	0.00108	UJ	0.00111	U
Chlordane	57-74-9	0.05	NA		0.0471	UJ	NA		0.04	UJ	0.0457	U	0.05	UJ	0.0471	U	0.0457	UJ	0.0457	U	0.04	UJ	***0.552***	***U***	0.0432	UJ	0.0444	U
Delta Bhc (Delta Hexachlorocyclohexane)	319-86-8	--	NA		0.00118	UJ	NA		0.001	UJ	0.00114	U	0.00125	UJ	0.00118	U	0.00114	UJ	0.00114	U	0.001	UJ	0.0138	U	0.00108	UJ	0.00111	U
Dieldrin	60-57-1	0.004	NA		0.00118	UJ	NA		0.001	UJ	0.00114	U	0.00125	UJ	0.00118	U	0.00114	UJ	0.00114	U	0.001	UJ	***0.0138***	***U***	0.00108	UJ	0.00111	U
Endosulfan Sulfate	1031-07-8	--	NA		0.00118	UJ	NA		0.001	UJ	0.00114	U	0.00125	UJ	0.00118	U	0.00114	UJ	0.00114	U	0.001	UJ	0.0138	U	0.00108	UJ	0.00111	U
Endrin	72-20-8	ND	NA		0.00118	UJ	NA		0.001	UJ	0.00114	U	0.00125	UJ	0.00118	U	0.00114	UJ	0.00114	U	0.001	UJ	0.0138	U	0.00108	UJ	0.00111	U
Endrin Aldehyde	7421-93-4	5	NA		0.00118	UJ	NA		0.001	UJ	0.00114	U	0.00125	UJ	0.00118	U	0.00114	UJ	0.00114	U	0.001	UJ	0.0138	U	0.00108	UJ	0.00111	U
Endrin Ketone	53494-70-5	5	NA		0.00118	UJ	NA		0.001	UJ	0.00114	U	0.00125	UJ	0.00118	U	0.00114	UJ	0.00114	U	0.001	UJ	0.0138	U	0.00108	UJ	0.00111	U
Gamma Bhc (Lindane)	58-89-9	--	NA		0.00118	UJ	NA		0.001	UJ	0.00114	U	0.00125	UJ	0.00118	U	0.00114	UJ	0.00114	U	0.001	UJ	0.0138	U	0.00108	UJ	0.00111	U
Heptachlor	76-44-8	0.04	NA		0.00118	UJ	NA		0.001	UJ	0.00114	U	0.00125	UJ	0.00118	U	0.00114	UJ	0.00114	U	0.001	UJ	0.0138	U	0.00108	UJ	0.00111	U
Heptachlor Epoxide	1024-57-3	0.03	NA		0.00118	UJ	NA		0.001	UJ	0.00114	U	0.00125	UJ	0.00118	U	0.00114	UJ	0.00114	U	0.001	UJ	0.0138	U	0.00108	UJ	0.00111	U
Methoxychlor	72-43-5	35	NA		0.00118	UJ	NA		0.001	UJ	0.00114	U	0.00125	UJ	0.00118	U	0.00114	UJ	0.00114	U	0.001	UJ	0.0138	U	0.00108	UJ	0.00111	U
P,P'-Ddd	72-54-8	0.3	NA		0.00118	UJ	NA		0.001	UJ	0.00114	U	0.00125	UJ	0.00118	U	0.00114	UJ	0.00114	U	0.001	UJ	0.0138	U	0.00108	UJ	0.00111	U
P,P'-Dde	72-55-9	0.2	NA		0.00118	UJ	NA		0.001	UJ	0.00114	U	0.00125	UJ	0.00118	U	0.00114	UJ	0.00114	U	0.001	UJ	0.0138	U	0.00108	UJ	0.00111	U
P,P'-Ddt	50-29-3	0.2	NA		0.00118	UJ	NA		0.001	UJ	0.00114	U	0.00125	UJ	0.00118	U	0.00114	UJ	0.00114	U	0.001	UJ	0.0138	U	0.00108	UJ	0.00111	U
Toxaphene	8001-35-2	0.06	NA		***0.118***	***UJ***	NA		***0.1***	***UJ***	***0.114***	***U***	***0.125***	***UJ***	***0.118***	***U***	***0.114***	***UJ***	***0.114***	***U***	***0.1***	***UJ***	***1.38***	***U***	***0.108***	***UJ***	***0.111***	***U***
Polychlorinated biphenyls (PCBs)																												
Pcb-1016 (Aroclor 1016)	12674-11-2	0.09	NA		0.0588	UJ	NA		0.05	U	0.0571	U	0.0625	U	0.0588	U	0.0571	UJ	0.0571	U	0.05	UJ	***0.69***	***U***	0.0541	U	0.0556	U
Pcb-1221 (Aroclor 1221)	11104-28-2	0.09	NA		0.0588	U	NA		0.05	U	0.0571	U	0.0625	U	0.0588	U	0.0571	UJ	0.0571	U	0.05	UJ	***0.69***	***U***	0.0541	U	0.0556	U
Pcb-1232 (Aroclor 1232)	11141-16-5	0.09	NA		0.0588	U	NA		0.05	U	0.0571	U	0.0625	U	0.0588	U	0.0571	UJ	0.0571	U	0.05	UJ	***0.69***	***U***	0.0541	U	0.0556	U
Pcb-1242 (Aroclor 1242)	53469-21-9	0.09	NA		0.0588	U	NA		0.05	U	0.0571	U	0.0625	U	0.0588	U	0.0571	UJ	0.0571	U	0.05	UJ	***0.69***	***U***	0.0541	U	0.0556	U
Pcb-1248 (Aroclor 1248)	12672-29-6	0.09	NA		0.0588	U	NA		0.05	U	0.0571	U	0.0625	U	0.0588	U	0.0571	UJ	0.0571	U	0.05	UJ	***0.69***	***U***	0.0541	U	0.0556	U
Pcb-1254 (Aroclor 1254)	11097-69-1	0.09	NA		0.0588	UJ	NA		0.05	U	0.0571	U	0.0625	U	0.0588	U	0.0571	UJ	0.0571	U	0.05	UJ	**9.35**		0.0541	U	0.0556	U
Pcb-1260 (Aroclor 1260)	11096-82-5	0.09	NA		0.0588	UJ	NA		0.05	U	0.0571	U	0.0625	U	0.0588	U	0.0571	UJ	0.0571	U	0.05	UJ	***0.69***	***U***	0.0541	U	0.0556	U
Metals																												
Aluminum	7429-90-5	3	NA		**38**		NA		**10**		***10***	***UJ***	**10**	**J**	**1,150**	**J**	**37**	**J**	**198**	**J**	**448**	**J**	***219***	***UJ***	**502**		**145**	
Aluminum (Dissolved)	7429-90-5	3	NA		***10***	***U***	NA		***10***	***U***	***10***	***U***	***10***	***U***	***10***	***U***	**12**		***10***	***U***	**28**		***10***	***U***	**14**		***10***	***U***
Barium	7440-39-3	1000	NA		830		NA		128		291		460		380		540		575		271		327		131		325	
Barium (Dissolved)	7440-39-3	1000	NA		712		NA		129		239		348	J	207	J	454		509		193		321		130		320	
Calcium	7440-70-2	--	NA		234000		NA		160000		121000		238000	J	118000	J	94900		99700		88200		601000		615000		218000	
Calcium (Dissolved)	7440-70-2	--	NA		235000		NA		161000		123000		221000	J	117000	J	104000		107000		90300		607000		616000		218000	
Chromium, Total	7440-47-3	50	NA		5	U	NA		5	U	5	U	5	U	5	U	5	U	5	U	7		5	U	5	U	5	U
Chromium, Total (Dissolved)	7440-47-3	50	NA		5	U	NA		5	U	5	U	5	U	5	U	5	U	5	U	6		5	U	5	U	5	U
Cobalt	7440-48-4	--	NA		5	U	NA		5	U	5	U	5	U	5	U	5	U	5	U	25		5	U	5	U	5	U
Cobalt (Dissolved)	7440-48-4	--	NA		5	U	NA		5	U	5	U	5	U	5	U	5	U	5	U	26		5	U	5	U	5	U
Copper	7440-50-8	200	NA		3	U	NA		3	U	3	U	3	U	3	U	7		5		14		3	U	3	U	3	U
Copper (Dissolved)	7440-50-8	200	NA		3	U	NA		3	U	3	U	3	U	3	U	3		3	U	7		3	U	3	U	3	U
Iron	7439-89-6	300	NA		**5,230**		NA		**5,120**		**2,530**		**25,200**	**J**	**14,500**	**J**	**3,180**		**3,400**		**3,000**		**5,940**		**707**		**1,890**	
Iron (Dissolved)	7439-89-6	300	NA		64	J	NA		**5,110**		57		**2,450**	**J**	**504**	**J**	**900**		**766**		**1,020**		82		185		**1,790**	
Lead	7439-92-1	25	NA		13		NA		3	U	3	U	3	U	3		**27**		**30**		**31**		**39**		4		5	
Lead (Dissolved)	7439-92-1	25	NA		3	U	NA		3	U	3	U	3	U	3	U	5		4		9		3	U	4		3	U
Magnesium	7439-95-4	35000	NA		**91,900**		NA		31700		32200		20800	J	**76,000**	**J**	**74,800**		**79,200**		**40,800**		**406,000**		**217,000**		**50,400**	
Magnesium (Dissolved)	7439-95-4	35000	NA		**91,100**		NA		32100		32100		20200	J	**73,800**	**J**	**80,600**		**83,400**		**40,500**		**409,000**		**221,000**		**50,000**	
Manganese	7439-96-5	500	NA		**1,750**		NA		**651**		**963**		**4,650**	**J**	**811**	**J**	294		316		221		**757**		139		**668**	
Manganese (Dissolved)	7439-96-5	500	NA		**1,730**		NA		**659**		**936**		**4,480**	**J**	**741**	**J**	313		306		213		**805**		134		**658**	
Selenium	7782-49-2	10	NA		**13**		NA		10	U	10	U	10	U	**11**		**13**		**14**		**19**		10	U	10	U	**11**	**J**
Selenium (Dissolved)	7782-49-2	10	NA		**11**		NA		10	U	10	U	10	U	**21**		**47**		**39**		**50**		10	U	10	U	**18**	**J**
Vanadium	7440-62-2	--	NA		10	U	NA		10	U	10	U	10	U	10	U	10	U	10	U	10		10	U	10	U	10	U
Vanadium (Dissolved)	7440-62-2	--	NA		10	U	NA		10	U	10	U	10	U	10	U	10		10	U	10	U	10	U	10	U	10	U
Zinc	7440-66-6	2000	NA		50		NA		15		13		23		29		33		33		148		47		18		21	
Zinc (Dissolved)	7440-66-6	2000	NA		10	U	NA		12		10	U	10	U	10	U	10	U	10	U	22		12		14		17	

NOTES:
Groundwater Quality Standards are a combination of values from the NYSDEC Part 703, Table 1 (cf. section 703.5), last revised 17 January 2008 and NYSDEC Technical & Operational Guidance Series (TOGS) 1.1.1 Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, last revised June 2004.
-- : No criteria established
ft bgs - feet below ground surface
NA - Compound not analyzed
U - The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the reporting limit (RL) or the sample concentration for results impacted by blank contamination.
J - The analyte was detected in the sample. The result should be considered an estimate.
UJ - The analyte was not detected at a level greater than or equal to the RL; however, the reported RL is approximate and may be inaccurate or imprecise.
B - The analyte was detected in the method blank.

Italicized and **Bold *results*** indicate Reporting Limit (RL) exceedances of the most stringent criteria.
Data has been subject to third party validation.

TABLE 8
SUMMARY OF LANGAN SOIL VAPOR ANALYTICAL RESULTS
363 BOND STREET AND 388 CARROLL STREET
Brooklyn, New York

Investigation Phase:				Due Dilligence		Remedial Investigation											
Address:		NYSDOH [1]	USEPA[2] 90th Percentile	363 Bond Street	363 Bond Street	363 Bond Street	363 Bond Street	363 Bond Street	363 Bond Street	363 Bond Street	363 Bond Street	363 Bond Street	363 Bond Street	363 Bond Street	363 Bond Street	363 Bond Street	363 Bond Street
Location ID:				LSV-1	LSV-2	LSV-1	LSV-1	LSV-2	LSV-2	LSV-3	LSV-3	LSV-4	LSV-4	LSV-4	LSV-5	LSV-5	LSV-16
Sample ID:	CAS No.			033	034	095-LSV-1-20130910	121-LSV-1-20130912	090-LSV-2-20130909	115-LSV-2-20130912	094-LSV-3-20130910	112-LSV-3-20130912	098-LSV-4-20130910	118-LSV-4-20130912	122-DUP-1-20130912	089-LSV-5-20130909	117-LSV-5-20130912	097-LSV-16-20130910
Sample Date:				8/30/2012	8/30/2012	9/10/2013	9/12/2013	9/9/2013	9/12/2013	9/10/2013	9/12/2013	9/10/2013	9/12/2013	9/12/2013	9/9/2013	9/12/2013	9/10/2013
Sampling Depth (ft bgs):				0.5	0.5	4	1	3	1	4	1	4	1	1	4	1	4
Units:		ug/m3	ug/m3	ug/m3 Q	ug/m3 Q	ug/m3 Q	ug/m3 Q	ug/m3 Q	ug/m3 Q	ug/m3 Q	ug/m3 Q	ug/m3 Q	ug/m3 Q	ug/m3 Q	ug/m3 Q	ug/m3 Q	ug/m3 Q
Volatile Organic Compounds (VOCs)																	
1,1-Dichloroethane	75-34-3	0.38	---	***3.2*** **U**	***3.2*** **U**	***7.3*** **U**	***9.9*** **U**	***7.7*** **U**	***15*** **U**	***7*** **U**	***7*** **U**	***6.9*** **U**	***11*** **U**	***6.9*** **U**	***8.1*** **U**	***11*** **U**	***8.8*** **U**
1,1-Dichloroethene	75-35-4	0.4	---	***3.2*** **U**	***3.2*** **U**	***7.1*** **U**	***9.7*** **U**	***7.5*** **U**	***15*** **U**	***6.8*** **U**	***6.9*** **U**	***6.8*** **U**	***11*** **U**	***6.8*** **U**	***7.9*** **U**	***10*** **U**	***8.6*** **U**
Benzene	71-43-2	13	9.4	3.2	1.9 J	5.7 U	7.8 U	**10**	***12*** **U**	**28**	6.1	5.5 U	8.6 U	5.5 U	7.7	**10**	7 U
Ethylbenzene	100-41-4	6.4	5.7	3.5 U	3.4 J	***7.8*** **U**	***11*** **U**	***8.2*** **U**	***16*** **U**	***7.5*** **U**	***7.5*** **U**	***7.4*** **U**	***12*** **U**	***7.4*** **U**	***8.7*** **U**	**23**	***9.5*** **U**
M And P Xylenes	79601-23-1	11	22.2	4.3	7.4	***16*** **U**	**22**	***16*** **U**	***33*** **U**	***15*** **U**	***15*** **U**	***15*** **U**	***23*** **U**	***15*** **U**	***17*** **U**	**100**	***19*** **U**
O-Xylene (1,2-Dimethylbenzene)	95-47-6	7.1	7.9	1.7 J	4.8	***7.8*** **U**	**12**	***8.2*** **U**	***16*** **U**	***7.5*** **U**	**8.3**	***7.4*** **U**	***12*** **U**	***7.4*** **U**	***8.7*** **U**	**98**	***9.5*** **U**
Tetrachloroethylene (PCE)	127-18-4	2.5	15.9	**4,160**	**1,010**	**180**	***17*** **U**	**420**	**400** J	**1,600**	**2,400** J	**3,700**	**1,400** J	**740** J	**300**	**340** J	**2,700**
Toluene	108-88-3	57	43	4.5	8.7	6.8 U	22	16	14 U	16	18	34	41	24	16	**56**	8.2 U
Total Xylenes	133-02-07	11	22.2	6.1	**12**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichloroethylene (TCE)	79-01-6	0.46	4.2	**379**	**2,180**	**240**	**77** J	**940**	**780** J	**5,700**	**4,900** J	**1,300**	**550** J	**300** J	**1,400**	**5,400** J	**1,300**

Investigation Phase:				Remedial Investigation												
Address:		NYSDOH [1]	USEPA[2] 90th Percentile	363 Bond Street	363 Bond Street	363 Bond Street	363 Bond Street	363 Bond Street	363 Bond Street	363 Bond Street	363 Bond Street	388 Carroll Street	388 Carroll Street	388 Carroll Street	388 Carroll Street	388 Carroll Street
Location ID:				LSV-17	LSV-17	LSV-18	LSV-18	LSV-19	LSV-19	LSV-20	LSV-20	LSV-11	LSV-12	LSV-13	LSV-14	LSV-15
Sample ID:	CAS No.			096-LSV-17-20130910	120-LSV-17-20130912	099-LSV-18-20130910	113-LSV-18-20130912	093-LSV-19-20130910	114-LSV-19-20130912	088-LSV-20-20130909	116-LSV-20-20130912	109-LSV-11-20130911	111-LSV-12-20130911	110-LSV-13-20130911	108-LSV-14-20130911	107-LSV-15-20130911
Sample Date:				9/10/2013	9/12/2013	9/10/2013	9/12/2013	9/10/2013	9/12/2013	9/9/2013	9/12/2013	9/11/2013	9/11/2013	9/11/2013	9/11/2013	9/11/2013
				4	1	4	1	3.5	1	4	1	3	3	3	3	2.5
Units:		ug/m3	ug/m3	ug/m3 Q	ug/m3 Q	ug/m3 Q	ug/m3 Q	ug/m3 Q	ug/m3 Q	ug/m3 Q	ug/m3 Q	ug/m3 Q	ug/m3 Q	ug/m3 Q	ug/m3 Q	ug/m3 Q
Volatile Organic Compounds (VOCs)																
1,1-Dichloroethane	75-34-3	0.38	---	***11*** **U**	***8.6*** **U**	***6.9*** **U**	***9.4*** **U**	***8.4*** **U**	***6.9*** **U**	***8.5*** **U**	***10*** **U**	***10*** **U**	***8.3*** **U**	***9.9*** **U**	***8.3*** **U**	***8.3*** **U**
1,1-Dichloroethene	75-35-4	0.4	---	***11*** **U**	***8.5*** **U**	***6.8*** **U**	***9.2*** **U**	***8.3*** **U**	***6.8*** **U**	***10*** **U**	***10*** **U**	***10*** **U**	***8.1*** **U**	***9.7*** **U**	***8.1*** **U**	***8.1*** **U**
Benzene	71-43-2	13	9.4	**35**	6.8 U	**45**	7.4 U	**41**	5.5 U	**10**	**16**	8.2 U	**850**	**190**	**190**	**89**
Ethylbenzene	100-41-4	6.4	5.7	***12*** **U**	***9.3*** **U**	***7.4*** **U**	***10*** **U**	***9*** **U**	***7.4*** **U**	***9.1*** **U**	***11*** **U**	**310**	**690**	**450**	**320**	**150**
M And P Xylenes	79601-23-1	11	22.2	***24*** **U**	***19*** **U**	***15*** **U**	***20*** **U**	***18*** **U**	***15*** **U**	**24**	**27**	**1,200**	**2,000**	**1,900**	**1,800**	**700**
O-Xylene (1,2-Dimethylbenzene)	95-47-6	7.1	7.9	***12*** **U**	**9.3**	**8.9**	***10*** **U**	***9*** **U**	***7.4*** **U**	**10**	**13**	**190**	**430**	**340**	**590**	**120**
Tetrachloroethylene (PCE)	127-18-4	2.5	15.9	**74**	**430** J	**1,100**	**17** J	***14*** **U**	**22** J	**170**	**2,800** J	***17*** **U**	**18**	***17*** **U**	***14*** **U**	**68**
Toluene	108-88-3	57	43	20	10	**46**	8.8 U	16	11	31	25	**1,500**	**2,000**	**1,700**	**1,100**	**790**
Total Xylenes	133-02-07	11	22.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichloroethylene (TCE)	79-01-6	0.46	4.2	**200**	**1,600** J	**680**	**13** J	**120**	**110** J	**6,400**	**56,000** J	***6.9*** **U**	***5.5*** **U**	***6.6*** **U**	***5.5*** **U**	**30**

Notes:

1: NYSDOH 2006: Study of Volatile Organic Chemicals in Air of Fuel Oil Heated Homes (Upper Fence criteria)
2: USEPA 2001: Building Assessment and Survey Evaluation (BASE) Database using Summa Cannister Method, 90th Percentile Criteria
--- : No criteria identified
NA - Compound not analyzed
U: The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the RL or the sample concentration for results impacted by blank contamination.
J: The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample.
UJ: The analyte was not detected at a level greater than or equal to the RL; however, the reported RL is approximate and may be inaccurate or imprecise.

Italicized and **Bold *results*** indicate the Reporting Limit (RL) is greater than or equal to the most stringent criteria.
Data has been subject to third party validation.

Table 9
Soil Sample QA/QC Results
363 BOND STREET AND 388 CARROLL STREET
Brooklyn, New York

Investigation Phase:		DUE DILIGENCE		REMEDIAL INVESTIGATION																							
Sample ID:		027		061-FB-1-20130904		070-FB-2-20130905		077-FB-3-20130906		091-FB-4-20130909		127-FB-5-20130912		172-FB-20140129		062-TB-1-20130904		071-TB-2-20130905		078-TB-3-20130906		092-TB-4-20130909		126-TB-5-20130912		133-TB-6-20130913		171-TB-20140129		179-TB-20140130	
Sample Date:		8/27/2012		9/4/2013		9/5/2013		9/6/2013		9/9/2013		9/12/2013		1/29/2014		9/4/2013		9/5/2013		9/6/2013		9/9/2013		9/12/2013		9/13/2013		1/29/2014		1/30/2014	
Units:		ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q
Chemical Name	CAS No.	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
VOLATILE ORGANIC COMPOUNDS																															
1,1,1,2-TETRACHLOROETHANE	630-20-6	NA		0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.2	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.2	U	0.2	U	0.2	U
1,1,1-TRICHLOROETHANE	71-55-6	1	U	0.024	U	0.024	U	0.024	U	0.024	U	0.024	U	0.2	U	0.024	U	0.024	U	0.024	U	0.024	U	0.024	U	0.2	U	0.2	U	0.2	U
1,1,2,2-TETRACHLOROETHANE	79-34-5	1	U	0.17	U	0.17	U	0.17	U	0.17	U	0.17	U	0.2	U	0.17	U	0.17	U	0.17	U	0.17	U	0.17	U	0.2	U	0.2	U	0.2	U
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	5	U	0.074	U	0.074	U	0.074	U	0.074	U	0.074	U	0.2	U	0.074	U	0.074	U	0.074	U	0.074	U	0.074	U	0.2	U	0.2	U	0.2	U
1,1,2-TRICHLOROETHANE	79-00-5	1	U	0.07	U	0.07	U	0.07	U	0.07	U	0.07	U	0.2	U	0.07	U	0.07	U	0.07	U	0.07	U	0.07	U	0.2	U	0.2	U	0.2	U
1,1-DICHLOROETHANE	75-34-3	1	U	0.044	U	0.044	U	0.044	U	0.044	U	0.044	U	0.2	U	0.044	U	0.044	U	0.044	U	0.044	U	0.044	U	0.2	U	0.2	U	0.2	U
1,1-DICHLOROETHENE	75-35-4	1	U	0.044	U	0.044	U	0.044	U	0.044	U	0.044	U	0.2	U	0.044	U	0.044	U	0.044	U	0.044	U	0.044	U	0.2	U	0.2	U	0.2	U
1,2,3-TRICHLOROBENZENE	87-61-6	5	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
1,2,4-TRICHLOROBENZENE	120-82-1	5	U	0.11	U	0.11	U	0.11	U	0.11	U	0.11	U	0.2	U	0.11	U	0.11	U	0.11	U	0.11	U	0.11	U	0.2	U	0.2	U	0.2	U
1,2,4-TRICHLOROBENZENE	63697-18-7	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
1,2,4-TRIMETHYLBENZENE	95-63-6	NA		0.068	UJ	0.068	U	0.068	U	0.068	UJ	0.068	U	0.2	U	0.068	U	0.068	UJ	0.068	U	0.068	UJ	0.068	U	0.2	U	0.2	U	0.82	
1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	10	U	0.46	U	0.46	U	0.46	U	0.46	U	0.46	U	0.2	U	0.46	U	0.46	U	0.46	U	0.46	U	0.46	U	0.2	U	0.2	U	0.2	U
1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE)	106-93-4	2	U	0.15	U	0.15	U	0.15	U	0.15	U	0.15	U	0.2	U	0.15	U	0.15	U	0.15	U	0.15	U	0.15	U	0.2	U	0.2	U	0.2	U
1,2-DICHLOROBENZENE	95-50-1	1	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.2	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.2	U	0.2	U	0.2	U
1,2-DICHLOROETHANE	107-06-2	1	U	0.12	U	0.12	U	0.12	U	0.12	U	0.12	U	0.2	U	0.12	U	0.12	U	0.12	U	0.12	U	0.12	U	0.2	U	0.2	U	0.2	U
1,2-DICHLOROPROPANE	78-87-5	1	U	0.051	U	0.051	U	0.051	U	0.051	U	0.051	U	0.2	U	0.051	U	0.051	U	0.051	U	0.051	U	0.051	U	0.2	U	0.2	U	0.2	U
1,3,5-TRIMETHYLBENZENE (MESITYLENE)	108-67-8	NA		0.059	U	0.059	U	0.059	U	0.059	UJ	0.059	U	0.2	U	0.059	U	0.059	U	0.059	U	0.059	UJ	0.059	U	0.2	U	0.2	U	0.2	U
1,3-DICHLOROBENZENE	541-73-1	1	U	0.048	U	0.048	U	0.048	U	0.048	U	0.048	U	0.2	U	0.048	U	0.048	U	0.048	U	0.048	U	0.048	U	0.2	U	0.2	U	0.2	U
1,4-DICHLOROBENZENE	106-46-7	1	U	0.048	U	0.048	U	0.048	U	0.048	U	0.048	U	0.2	U	0.048	U	0.048	U	0.048	U	0.048	U	0.048	U	0.2	U	0.2	U	0.2	U
1,4-DIOXANE (P-DIOXANE)	123-91-1	130	U	4.1	UJ	4.1	U	4.1	U	4.1	U	4.1	U	40	U	4.1	UJ	4.1	U	4.1	U	4.1	U	4.1	U	40	UJ	40	U	40	U
2,2-OXYBIS(2-CHLOROPROPANE)	39638-32-9	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
2-HEXANONE	591-78-6	5	U	0.24	U	0.24	U	0.24	U	0.24	U	0.24	U	0.2	U	0.24	U	0.24	U	0.24	U	0.24	U	0.24	U	0.2	U	0.2	U	0.2	U
ACETONE	67-64-1	10	U	2	U	2	U	2	U	2.1	U	2	U	1	U	2	U	2	U	2	U	2	U	2.2	U	1	U	1.2	JB	5.8	
ACROLEIN	107-02-8	NA		0.81	U	0.81	U	0.81	U	0.81	U	0.81	U	0.2	U	0.81	U	0.81	U	0.81	U	0.81	U	0.81	U	0.2	U	0.2	U	0.2	U
ACRYLONITRILE	107-13-1	NA		0.73	U	0.73	U	0.73	U	0.73	U	0.73	U	0.2	U	0.73	U	0.73	U	0.73	U	0.73	U	0.73	U	0.2	U	0.2	U	0.2	U
BENZENE	71-43-2	1	U	0.044	U	0.044	U	0.044	U	0.044	U	0.044	U	0.2	U	0.044	U	0.044	U	0.044	U	0.044	U	0.044	U	0.2	U	0.2	U	0.2	U
BENZOIC ACID	65-85-0	NA		25.6	UJ	30.3	UJ	25.6	UJ	26.3	UJ	26.3	UJ	25	U	NA		NA		NA		NA		NA		NA		NA		NA	
BENZYL ALCOHOL	100-51-6	NA		2.56	U	3.03	U	2.56	U	2.63	U	2.63	U	2.5	U	NA		NA		NA		NA		NA		NA		NA		NA	
BROMOCHLOROMETHANE	74-97-5	5	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
BROMODICHLOROMETHANE	75-27-4	1	U	0.054	U	0.054	U	0.054	U	0.054	U	0.054	U	0.2	U	0.054	U	0.054	U	0.054	U	0.054	U	0.054	U	0.2	U	0.2	U	0.2	U
BROMOFORM	75-25-2	4	U	0.079	U	0.079	U	0.079	U	0.079	U	0.079	U	0.2	U	0.079	U	0.079	U	0.079	U	0.079	U	0.079	U	0.2	U	0.2	U	0.2	U
BROMOMETHANE	74-83-9	2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	UJ	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	UJ	0.2	UJ	0.2	U	0.2	U
CARBON DISULFIDE	75-15-0	2	U	0.065	U	0.065	U	0.065	U	0.065	U	0.065	U	0.2	U	0.065	U	0.065	U	0.065	U	0.065	U	0.065	U	0.2	U	0.21	J	0.2	U
CARBON TETRACHLORIDE	56-23-5	1	U	0.085	U	0.085	U	0.085	U	0.085	U	0.085	U	0.2	U	0.085	U	0.085	U	0.085	U	0.085	U	0.085	U	0.2	U	0.2	U	0.2	U
CHLOROBENZENE	108-90-7	1	U	0.063	U	0.063	U	0.063	U	0.063	U	0.063	U	0.2	U	0.063	U	0.063	U	0.063	U	0.063	U	0.063	U	0.2	U	0.22	J	0.2	U
CHLOROETHANE	75-00-3	1	U	0.09	U	0.09	U	0.09	U	0.09	U	0.09	U	0.2	U	0.09	U	0.09	U	0.09	U	0.09	U	0.09	U	0.2	U	0.2	U	0.2	U
CHLOROFORM	67-66-3	1	U	0.079	U	0.079	U	0.079	U	0.079	U	0.079	U	0.2	U	0.079	U	0.079	U	0.079	U	0.079	U	0.079	U	0.2	U	0.2	U	0.2	U
CHLOROMETHANE	74-87-3	1	U	0.076	U	0.076	U	0.076	U	0.076	U	0.076	U	0.2	U	0.076	U	0.076	U	0.076	U	0.076	U	0.076	U	0.2	U	0.2	U	0.2	U
CIS-1,2-DICHLOROETHYLENE	156-59-2	1	U	0.069	U	0.069	U	0.069	U	0.069	U	0.069	U	0.2	U	0.069	U	0.069	U	0.069	U	0.069	U	0.069	U	0.2	U	0.2	U	0.2	U
CIS-1,3-DICHLOROPROPENE	10061-01-5	1	U	0.067	U	0.067	U	0.067	U	0.067	U	0.067	U	0.2	U	0.067	U	0.067	U	0.067	U	0.067	U	0.067	U	0.2	U	0.2	U	0.2	U
CYCLOHEXANE	110-82-7	5	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
DIBROMOCHLOROMETHANE	124-48-1	1	U	0.053	U	0.053	U	0.053	U	0.053	U	0.053	U	0.2	U	0.053	U	0.053	U	0.053	U	0.053	U	0.053	U	0.2	U	0.2	U	0.2	U
DIBROMOMETHANE	74-95-3	NA		0.12	U	0.12	U	0.12	U	0.12	U	0.12	U	0.2	U	0.12	U	0.12	U	0.12	U	0.12	U	0.12	U	0.2	U	0.2	U	0.2	U
DICHLORODIFLUOROMETHANE	75-71-8	5	U	0.092	U	0.092	U	0.092	U	0.092	U	0.092	U	0.2	U	0.092	U	0.092	U	0.092	U	0.092	U	0.092	U	0.2	U	0.2	U	0.2	U
ETHYLBENZENE	100-41-4	1	U	0.057	U	0.057	U	0.057	U	0.057	U	0.057	U	0.2	U	0.057	U	0.057	U	0.057	U	0.057	U	0.057	U	0.2	U	0.2	U	0.2	U
HEXACHLOROBUTADIENE	87-68-3	1	U	0.12	U	0.12	U	0.12	U	0.12	U	0.12	U	0.2	U	0.12	U	0.12	U	0.12	U	0.12	U	0.12	U	0.2	U	0.2	U	0.2	U
ISOPROPYLBENZENE (CUMENE)	98-82-8	2	U	0.056	U	0.056	U	0.056	UJ	0.056	U	0.056	U	0.2	U	0.056	U	0.056	U	0.056	UJ	0.056	U	0.056	U	0.2	U	0.2	U	0.2	U
M AND P XYLENES	79601-23-1	NA		0.09	U	0.09	U	0.09	U	0.09	U	0.09	U	0.5	U	0.09	U	0.09	U	0.09	U	0.09	U	0.09	U	0.5	U	0.5	U	0.5	U
M,P-XYLENES	179601-23-1	1	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
METHYL ACETATE	79-20-9	5	U	0.62	U	0.62	U	0.62	U	0.62	U	0.62	U	0.2	U	0.62	U	0.62	U	0.62	U	0.62	U	0.62	U	0.2	U	0.2	U	0.2	U
METHYL ETHYL KETONE (2-BUTANONE)	78-93-3	10	U	1	U	1	U	1	U	1	U	1	U	0.5	U	1	U	1	U	1	U	1	U	1	U	0.5	U	0.5	U	0.5	U
METHYL ISOBUTYL KETONE (4-METHYL-2-PENTANO	108-10-1	5	U	0.17	U	0.17	U	0.17	U	0.17	U	0.17	U	0.2	U	0.17	U	0.17	U	0.17	U	0.17	U	0.17	U	0.2	U	0.2	U	0.2	U
METHYLCYCLOHEXANE	108-87-2	5	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
METHYLENE CHLORIDE	75-09-2	2	U	0.26	U	0.26	U	0.38	J	0.26	U	0.36	J	1	U	0.26	U	0.26	U	0.26	U	0.63	J	0.26	U	1	U	1	U	1	U
N-BUTYLBENZENE	104-51-8	NA		0.083	U	0.083	U	0.083	U	0.083	U	0.083	U	0.2	U	0.083	U	0.083	U	0.083	U	0.083	U	0.083	U	0.2	U	0.2	U	0.2	U
N-PROPYLBENZENE	103-65-1	NA		0.068	U	0.068	UJ	0.068	U	0.068	UJ	0.068	UJ	0.2	U	0.068	U	0.068	UJ	0.068	U	0.068	UJ	0.068	UJ	0.2	U	0.2	U	0.2	U
O-XYLENE (1,2-DIMETHYLBENZENE)	95-47-6	1	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.2	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.2	U	0.2	U	0.2	U
P-CYMENE (P-ISOPROPYLTOLUENE)	CYMP	NA		0.044	U	0.044	U	0.044	U	0.044	U	0.044	U	0.2	U	0.044	U	0.044	U	0.044	U	0.044	U	0.044	U	0.2	U	0.2	U	0.2	U
SEC-BUTYLBENZENE	135-98-8	NA		0.05	U	0.05	U	0.05	U	0.05	UJ	0.05	UJ	0.2	U	0.05	U	0.05	U	0.05	U	0.05	UJ	0.05	UJ	0.2	U	0.2	U	0.2	U
STYRENE	100-42-5	5	U	0.043	UJ	0.043	UJ	0.043	U	0.043	U	0.043	U	0.2	U	0.043	UJ	0.043	UJ	0.043	U	0.043	U	0.043	U	0.2	U	0.2	U	0.2	U
T-BUTYLBENZENE	98-06-6	NA		0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.2	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.2	U	0.2	U	0.2	U
TERT-BUTYL ALCOHOL	75-65-0	NA		6.1	UJ	6.1	UJ	6.1	UJ	6.1	UJ	6.1	UJ	0.5	U	6.1	UJ	6.1	UJ	6.1	UJ	6.1	UJ	6.1	UJ	0.5	U	0.5	U	0.5	U
TERT-BUTYL METHYL ETHER	1634-04-4	1	U	0.48	U	0.48	U	0.48	U	0.48	U	0.48	U	0.2	U	0.48	U	0.48	U	0.48	U	0.48	U	0.48	U	0.2	U	0.2	U	0.2	U
TETRACHLOROBENZENE (MIXED)	12408-10-5	2.1	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
TETRACHLOROETHYLENE(PCE)	127-18-4	1	U	0.07	U	0.07	U	0.07	U	0.07	U	0.07	U	0.2	U	0.07	U	0.07	U	0.07	U	0.07	U	0.07	U	0.2	U	0.2	U	0.2	U
TOLUENE	108-88-3	1	U	0.042	U	0.042	U	0.042	U	0.042	U	0.042	U	0.2	U	0.042	U	0.042	U	0.042	U	0.042	U	0.042	U	0.2	U	0.2	U	0.2	U
TRANS-1,2-DICHLOROETHENE	156-60-5	1	U	0.085	U	0.085	U	0.085	U	0.085	U	0.085	U	0.2	U	0.085	U	0.085	U	0.085	U	0.085	U	0.085	U	0.2	U	0.2	U	0.2	U
TRANS-1,3-DICHLOROPROPENE	10061-02-6	1	U	0.06	U	0.06	U	0.06	U	0.06	U	0.06	U	0.2	U	0.06	U	0.06	U	0.06	U	0.06	U	0.06	U	0.2	U	0.2	U	0.2	U
TRICHLOROETHYLENE (TCE)	79-01-6	1	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.2	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.2	U	0.2	U	0.2	U
TRICHLOROFLUOROMETHANE	75-69-4	5	U	0.094	U	0.094	U	0.094	U	0.094	U	0.094	U	0.2	U	0.094	U	0.094	U	0.094	U	0.094	U	0.094	U	0.2	U	0.2	U	0.2	U
VINYL CHLORIDE	75-01-4	1	U	0.062	U	0.062	U	0.062	U	0.062	U	0.062	U	0.5	U	0.062	U	0.062	U	0.062	U	0.062	U	0.062	U	0.5	U	0.5	U	0.5	U
XYLENES, TOTAL	XYLENES	NA		0.12	U	0.12	U	0.12	U	0.12	U	0.12	U	0.6	U	0.12	U	0.12	U	0.12	U	0.12	U	0.12	U	0.6	U	0.6	U	0.6	U

Table 9
Soil Sample QA/QC Results
363 BOND STREET AND 388 CARROLL STREET
Brooklyn, New York

Investigation Phase:		DUE DILIGENCE		REMEDIAL INVESTIGATION																									
Sample ID:		027		061-FB-1-20130904		070-FB-2-20130905		077-FB-3-20130906		091-FB-4-20130909		127-FB-5-20130912		172-FB-20140129		062-TB-1-20130904		071-TB-2-20130905		078-TB-3-20130906		092-TB-4-20130909		126-TB-5-20130912		133-TB-6-20130913		171-TB-20140129		179-TB-20140130	
Sample Date:		8/27/2012		9/4/2013		9/5/2013		9/6/2013		9/9/2013		9/12/2013		1/29/2014		9/4/2013		9/5/2013		9/6/2013		9/9/2013		9/12/2013		9/13/2013		1/29/2014		1/30/2014	
Units:		ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q
Chemical Name	CAS No.	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
SEMI-VOLATILE ORGANIC COMPOUNDS																															
1,2-DIPHENYLHYDRAZINE	122-66-7	NA		2.56	U	3.03	U	2.56	U	2.63	U	2.63	U	2.5	U	NA		NA		NA		NA		NA		NA		NA		NA	
2,3,4,6-TETRACHLOROPHENOL	58-90-2	5.1	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
2,4,5-TRICHLOROPHENOL	95-95-4	5.1	U	2.56	U	3.03	U	2.56	U	2.63	U	2.63	U	2.5	U	NA		NA		NA		NA		NA		NA		NA		NA	
2,4,6-TRICHLOROPHENOL	88-06-2	5.1	U	2.56	U	3.03	U	2.56	U	2.63	U	2.63	U	2.5	U	NA		NA		NA		NA		NA		NA		NA		NA	
2,4-DICHLOROPHENOL	120-83-2	5.1	U	2.56	U	3.03	U	2.56	U	2.63	UJ	2.63	U	2.5	U	NA		NA		NA		NA		NA		NA		NA		NA	
2,4-DIMETHYLPHENOL	105-67-9	5.1	U	2.56	U	3.03	U	2.56	U	2.63	U	2.63	U	2.5	U	NA		NA		NA		NA		NA		NA		NA		NA	
2,4-DINITROPHENOL	51-28-5	21	U	2.56	UJ	3.03	UJ	2.56	UJ	2.63	U	2.63	U	2.5	U	NA		NA		NA		NA		NA		NA		NA		NA	
2,4-DINITROTOLUENE	121-14-2	2.1	U	2.56	UJ	3.03	UJ	2.56	U	2.63	U	2.63	U	2.5	U	NA		NA		NA		NA		NA		NA		NA		NA	
2,6-DINITROTOLUENE	606-20-2	2.1	U	2.56	UJ	3.03	UJ	2.56	U	2.63	U	2.63	U	2.5	U	NA		NA		NA		NA		NA		NA		NA		NA	
2-CHLORONAPHTHALENE	91-58-7	2.1	U	2.56	U	3.03	U	2.56	U	2.63	U	2.63	U	2.5	U	NA		NA		NA		NA		NA		NA		NA		NA	
2-CHLOROPHENOL	95-57-8	5.1	U	2.56	U	3.03	U	2.56	U	2.63	U	2.63	U	2.5	U	NA		NA		NA		NA		NA		NA		NA		NA	
2-METHYLNAPHTHALENE	91-57-6	1	U	2.56	U	3.03	U	2.56	U	2.63	U	2.63	U	2.5	U	NA		NA		NA		NA		NA		NA		NA		NA	
2-METHYLPHENOL (O-CRESOL)	95-48-7	2.1	U	2.56	U	3.03	U	2.56	U	2.63	U	2.63	U	2.5	U	NA		NA		NA		NA		NA		NA		NA		NA	
2-NITROANILINE	88-74-4	5.1	U	2.56	U	3.03	U	2.56	U	2.63	U	2.63	U	2.5	U	NA		NA		NA		NA		NA		NA		NA		NA	
2-NITROPHENOL	88-75-5	5.1	U	2.56	UJ	3.03	UJ	2.56	U	2.63	U	2.63	U	2.5	U	NA		NA		NA		NA		NA		NA		NA		NA	
3- AND 4- METHYLPHENOL (TOTAL)	MEPH3MEPH	NA		2.56	U	3.03	U	2.56	U	2.63	U	2.63	U	2.5	U	NA		NA		NA		NA		NA		NA		NA		NA	
3,3'-DICHLOROBENZIDINE	91-94-1	5.1	U	2.56	U	3.03	U	2.56	U	2.63	U	2.63	U	2.5	U	NA		NA		NA		NA		NA		NA		NA		NA	
3-NITROANILINE	99-09-2	5.1	U	2.56	U	3.03	U	2.56	U	2.63	U	2.63	U	2.5	U	NA		NA		NA		NA		NA		NA		NA		NA	
4,6-DINITRO-2-METHYLPHENOL	534-52-1	21	U	2.56	UJ	3.03	UJ	2.56	UJ	2.63	UJ	2.63	U	2.5	U	NA		NA		NA		NA		NA		NA		NA		NA	
4-BROMOPHENYL PHENYL ETHER	101-55-3	2.1	U	2.56	U	3.03	U	2.56	U	2.63	U	2.63	U	2.5	U	NA		NA		NA		NA		NA		NA		NA		NA	
4-CHLORO-3-METHYLPHENOL	59-50-7	5.1	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
4-CHLOROANILINE	106-47-8	5.1	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
4-CHLOROPHENYL PHENYL ETHER	7005-72-3	2.1	U	2.56	U	3.03	U	2.56	U	2.63	U	2.63	U	2.5	U	NA		NA		NA		NA		NA		NA		NA		NA	
4-METHYLPHENOL (P-CRESOL)	106-44-5	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
4-NITROANILINE	100-01-6	5.1	U	2.56	U	3.03	U	2.56	U	2.63	U	2.63	U	2.5	U	NA		NA		NA		NA		NA		NA		NA		NA	
4-NITROPHENOL	100-02-7	10	U	2.56	UJ	3.03	UJ	2.56	U	2.63	U	2.63	U	2.5	U	NA		NA		NA		NA		NA		NA		NA		NA	
ACENAPHTHENE	83-32-9	1	U	0.0513	UJ	0.0606	U	0.0513	U	0.0526	UJ	0.0526	UJ	0.05	U	NA		NA		NA		NA		NA		NA		NA		NA	
ACENAPHTHYLENE	208-96-8	1	U	0.0513	U	0.0606	U	0.0513	U	0.0526	U	0.0526	U	0.05	U	NA		NA		NA		NA		NA		NA		NA		NA	
ACETOPHENONE	98-86-2	2.1	U	2.56	U	3.03	U	2.56	U	2.63	U	2.63	U	2.5	U	NA		NA		NA		NA		NA		NA		NA		NA	
ANTHRACENE	120-12-7	1	U	0.0513	U	0.0606	U	0.0513	U	0.0526	U	0.0526	U	0.05	U	NA		NA		NA		NA		NA		NA		NA		NA	
ATRAZINE	1912-24-9	5.1	U	2.56	U	3.03	U	2.56	U	2.63	U	2.63	U	2.5	U	NA		NA		NA		NA		NA		NA		NA		NA	
BENZALDEHYDE	100-52-7	5.1	U	2.56	U	3.03	U	2.56	U	2.63	U	2.63	U	2.5	U	NA		NA		NA		NA		NA		NA		NA		NA	
BENZIDINE	92-87-5	NA		10.3	UJ	12.1	UJ	10.3	UJ	10.5	UJ	10.5	UJ	10	U	NA		NA		NA		NA		NA		NA		NA		NA	
BENZO(A)ANTHRACENE	56-55-3	1	U	0.0513	UJ	0.0606	U	0.0513	UJ	0.0526	UJ	0.0526	U	0.05	U	NA		NA		NA		NA		NA		NA		NA		NA	
BENZO(A)PYRENE	50-32-8	1	U	0.0513	U	0.0606	U	0.0513	U	0.0526	U	0.0526	U	0.05	U	NA		NA		NA		NA		NA		NA		NA		NA	
BENZO(B)FLUORANTHENE	205-99-2	1	U	0.0513	UJ	0.0606	U	0.0513	UJ	0.0526	UJ	0.0526	UJ	0.05	U	NA		NA		NA		NA		NA		NA		NA		NA	
BENZO(G,H,I)PERYLENE	191-24-2	1	U	0.0513	UJ	0.0606	U	0.0513	UJ	0.0526	UJ	0.0526	UJ	0.05	U	NA		NA		NA		NA		NA		NA		NA		NA	
BENZO(K)FLUORANTHENE	207-08-9	1	U	0.0513	UJ	0.0606	U	0.0513	UJ	0.0526	UJ	0.0526	UJ	0.05	U	NA		NA		NA		NA		NA		NA		NA		NA	
BENZYL BUTYL PHTHALATE	85-68-7	2.1	U	2.56	U	3.03	U	2.56	U	2.63	U	2.63	U	2.5	U	NA		NA		NA		NA		NA		NA		NA		NA	
BIPHENYL (DIPHENYL)	92-52-4	1	U	2.56	U	3.03	U	2.56	U	2.63	U	2.63	U	2.5	U	NA		NA		NA		NA		NA		NA		NA		NA	
BIS(2-CHLOROETHOXY) METHANE	111-91-1	2.1	U	2.56	U	3.03	U	2.56	U	2.63	U	2.63	U	2.5	U	NA		NA		NA		NA		NA		NA		NA		NA	
BIS(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETH	111-44-4	2.1	U	2.56	U	3.03	U	2.56	U	2.63	U	2.63	U	2.5	U	NA		NA		NA		NA		NA		NA		NA		NA	
BIS(2-CHLOROISOPROPYL) ETHER	108-60-1	2.1	U	2.56	U	3.03	U	2.56	U	2.63	U	2.63	U	2.5	U	NA		NA		NA		NA		NA		NA		NA		NA	
BIS(2-ETHYLHEXYL) PHTHALATE	117-81-7	2.1	U	2.56	U	3.03	U	2.56	U	2.63	U	2.63	U	2.5	U	NA		NA		NA		NA		NA		NA		NA		NA	
CAPROLACTAM	105-60-2	2.1	U	2.56	UJ	3.03	UJ	2.56	UJ	2.63	UJ	2.63	UJ	2.5	U	NA		NA		NA		NA		NA		NA		NA		NA	
CARBAZOLE	86-74-8	1	U	2.56	U	3.03	U	2.56	U	2.63	U	2.63	U	2.5	U	NA		NA		NA		NA		NA		NA		NA		NA	
CHRYSENE	218-01-9	1	U	0.0513	U	0.0606	U	0.0513	U	0.0526	U	0.0526	U	0.05	U	NA		NA		NA		NA		NA		NA		NA		NA	
CRESOLS, M & P	MEPH1314	2.1	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
DIBENZ(A,H)ANTHRACENE	53-70-3	1	U	0.0513	U	0.0606	U	0.0513	U	0.0526	U	0.0526	U	0.05	U	NA		NA		NA		NA		NA		NA		NA		NA	
DIBENZOFURAN	132-64-9	5.1	U	2.56	U	3.03	U	2.56	U	2.63	U	2.63	U	2.5	U	NA		NA		NA		NA		NA		NA		NA		NA	
DIETHYL PHTHALATE	84-66-2	2.1	U	2.56	U	3.03	U	2.56	U	2.63	U	2.63	U	2.5	U	NA		NA		NA		NA		NA		NA		NA		NA	
DIMETHYL PHTHALATE	131-11-3	2.1	U	2.56	U	3.03	U	2.56	U	2.63	U	2.63	U	2.5	U	NA		NA		NA		NA		NA		NA		NA		NA	
DI-N-BUTYL PHTHALATE	84-74-2	2.1	U	2.56	U	3.03	U	2.56	U	2.63	U	2.63	U	2.5	U	NA		NA		NA		NA		NA		NA		NA		NA	
DI-N-OCTYLPHTHALATE	117-84-0	2.1	U	2.56	U	3.03	U	2.56	U	2.63	U	2.63	U	2.5	U	NA		NA		NA		NA		NA		NA		NA		NA	
FLUORANTHENE	206-44-0	1	U	0.0513	U	0.0606	U	0.0513	U	0.0526	U	0.0526	U	0.05	U	NA		NA		NA		NA		NA		NA		NA		NA	
FLUORENE	86-73-7	1	U	0.0513	U	0.0606	U	0.0513	U	0.0526	U	0.0526	U	0.05	U	NA		NA		NA		NA		NA		NA		NA		NA	
HEXACHLOROBENZENE	118-74-1	1	U	0.041	U	0.0485	U	0.041	UJ	0.0421	U	0.0421	U	0.04	U	NA		NA		NA		NA		NA		NA		NA		NA	
HEXACHLOROCYCLOPENTADIENE	77-47-4	10	U	2.56	UJ	3.03	UJ	2.56	UJ	2.63	U	2.63	UJ	2.5	U	NA		NA		NA		NA		NA		NA		NA		NA	
HEXACHLOROETHANE	67-72-1	2.1	U	2.56	U	3.03	U	2.56	U	2.63	U	2.63	U	2.5	U	NA		NA		NA		NA		NA		NA		NA		NA	
INDENO(1,2,3-C,D)PYRENE	193-39-5	1	U	0.0513	U	0.0606	U	0.0513	UJ	0.0526	UJ	0.0526	U	0.05	U	NA		NA		NA		NA		NA		NA		NA		NA	
ISOPHORONE	78-59-1	2.1	U	2.56	U	3.03	U	2.56	U	2.63	U	2.63	U	2.5	U	NA		NA		NA		NA		NA		NA		NA		NA	
NAPHTHALENE	91-20-3	1	U	0.0513	U	0.0606	U	0.0513	U	0.0526	U	0.0526	U	0.05	U	NA		NA		NA		NA		NA		NA		NA		NA	
NITROBENZENE	98-95-3	2.1	U	2.56	U	3.03	U	2.56	U	2.63	U	2.63	U	2.5	U	NA		NA		NA		NA		NA		NA		NA		NA	
N-NITROSODIMETHYLAMINE	62-75-9	NA		2.56	U	3.03	U	2.56	U	2.63	U	2.63	U	2.5	U	NA		NA		NA		NA		NA		NA		NA		NA	
N-NITROSODI-N-PROPYLAMINE	621-64-7	2.1	U	2.56	U	3.03	U	2.56	U	2.63	U	2.63	U	2.5	U	NA		NA		NA		NA		NA		NA		NA		NA	
N-NITROSODIPHENYLAMINE	86-30-6	5.1	U	2.56	U	3.03	U	2.56	U	2.63	U	2.63	U	2.5	U	NA		NA		NA		NA		NA		NA		NA		NA	
PENTACHLOROPHENOL	87-86-5	10	U	1.03	UJ	1.21	UJ	1.03	U	1.05	U	1.05	UJ	1	U	NA		NA		NA		NA		NA		NA		NA		NA	
PHENANTHRENE	85-01-8	1	U	0.0513	U	0.0606	U	0.0513	U	0.0526	U	0.0526	U	0.05	U	NA		NA		NA		NA		NA		NA		NA		NA	
PHENOL	108-95-2	2.1	U	2.56	U	3.03	U	2.56	U	2.63	U	2.63	U	2.5	U	NA		NA		NA		NA		NA		NA		NA		NA	
PYRENE	129-00-0	1	U	0.0513	U	0.0606	U	0.0513	U	0.0526	U	0.0526	U	0.05	U	NA		NA		NA		NA		NA		NA		NA		NA	

Table 9
Soil Sample QA/QC Results
363 BOND STREET AND 388 CARROLL STREET
Brooklyn, New York

Investigation Phase:		DUE DILIGENCE		REMEDIAL INVESTIGATION																							
Sample ID:		027		061-FB-1-20130904		070-FB-2-20130905		077-FB-3-20130906		091-FB-4-20130909		127-FB-5-20130912		172-FB-20140129		062-TB-1-20130904		071-TB-2-20130905		078-TB-3-20130906		092-TB-4-20130909		126-TB-5-20130912		133-TB-6-20130913		171-TB-20140129		179-TB-20140130	
Sample Date:		8/27/2012		9/4/2013		9/5/2013		9/6/2013		9/9/2013		9/12/2013		1/29/2014		9/4/2013		9/5/2013		9/6/2013		9/9/2013		9/12/2013		9/13/2013		1/29/2014		1/30/2014	
Units:		ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q
Chemical Name	CAS No.	Result		Result		Result		Result		Result		Result		Result		Result		Result		Result		Result		Result		Result		Result		Result	
PESTICIDES																															
ALDRIN	309-00-2	NA		0.0103	U	0.01	U	0.00108	UJ	0.00103	U	0.00105	U	NA		NA		NA		NA		NA		NA		NA		NA		NA	
ALPHA BHC (ALPHA HEXACHLOROCYCLOHEXANE)	319-84-6	NA		0.0103	U	0.01	U	0.00108	UJ	0.00103	U	0.00105	U	NA		NA		NA		NA		NA		NA		NA		NA		NA	
ALPHA ENDOSULFAN	959-98-8	NA		0.0103	U	0.01	U	0.00108	U	0.00103	U	0.00105	U	NA		NA		NA		NA		NA		NA		NA		NA		NA	
ALPHA-CHLORDANE	5103-71-9	NA		0.0103	U	0.01	U	0.00108	UJ	0.00103	U	0.00105	U	NA		NA		NA		NA		NA		NA		NA		NA		NA	
BETA BHC (BETA HEXACHLOROCYCLOHEXANE)	319-85-7	NA		0.0103	U	0.01	U	0.00108	UJ	0.00103	U	0.00105	U	NA		NA		NA		NA		NA		NA		NA		NA		NA	
BETA ENDOSULFAN	33213-65-9	NA		0.0103	U	0.01	U	0.00108	UJ	0.00103	U	0.00105	U	NA		NA		NA		NA		NA		NA		NA		NA		NA	
CHLORDANE	57-74-9	NA		0.041	U	0.04	U	0.0432	U	0.041	U	0.0421	U	NA		NA		NA		NA		NA		NA		NA		NA		NA	
DELTA BHC (DELTA HEXACHLOROCYCLOHEXANE)	319-86-8	NA		0.0103	U	0.01	U	0.00108	UJ	0.00103	UJ	0.00105	U	NA		NA		NA		NA		NA		NA		NA		NA		NA	
DIELDRIN	60-57-1	NA		0.0103	U	0.01	U	0.00108	U	0.00103	U	0.00105	U	NA		NA		NA		NA		NA		NA		NA		NA		NA	
ENDOSULFAN SULFATE	1031-07-8	NA		0.0103	U	0.01	U	0.00108	U	0.00103	U	0.00105	U	NA		NA		NA		NA		NA		NA		NA		NA		NA	
ENDRIN	72-20-8	NA		0.0103	U	0.01	U	0.00108	U	0.00103	U	0.00105	U	NA		NA		NA		NA		NA		NA		NA		NA		NA	
ENDRIN ALDEHYDE	7421-93-4	NA		0.0103	U	0.01	U	0.00108	U	0.00103	U	0.00105	U	NA		NA		NA		NA		NA		NA		NA		NA		NA	
ENDRIN KETONE	53494-70-5	NA		0.0103	U	0.01	U	0.00108	U	0.00103	U	0.00105	U	NA		NA		NA		NA		NA		NA		NA		NA		NA	
GAMMA BHC (LINDANE)	58-89-9	NA		0.0103	U	0.01	U	0.00108	UJ	0.00103	U	0.00105	U	NA		NA		NA		NA		NA		NA		NA		NA		NA	
GAMMA-CHLORDANE	12789-03-6	NA		0.0103	U	0.01	U	0.00108	UJ	0.00103	U	0.00105	U	NA		NA		NA		NA		NA		NA		NA		NA		NA	
HEPTACHLOR	76-44-8	NA		0.0103	U	0.01	U	0.00108	U	0.00103	U	0.00105	U	NA		NA		NA		NA		NA		NA		NA		NA		NA	
HEPTACHLOR EPOXIDE	1024-57-3	NA		0.0103	U	0.01	U	0.00108	UJ	0.00103	U	0.00105	U	NA		NA		NA		NA		NA		NA		NA		NA		NA	
METHOXYCHLOR	72-43-5	NA		0.0513	U	0.05	U	0.00108	U	0.00103	U	0.00105	U	NA		NA		NA		NA		NA		NA		NA		NA		NA	
P,P'-DDD	72-54-8	NA		0.0103	U	0.01	U	0.00108	U	0.00103	U	0.00105	U	NA		NA		NA		NA		NA		NA		NA		NA		NA	
P,P'-DDE	72-55-9	NA		0.0103	U	0.01	U	0.00108	UJ	0.00103	U	0.00105	U	NA		NA		NA		NA		NA		NA		NA		NA		NA	
P,P'-DDT	50-29-3	NA		0.0103	U	0.01	U	0.00108	U	0.00103	U	0.00105	U	NA		NA		NA		NA		NA		NA		NA		NA		NA	
TOXAPHENE	8001-35-2	NA		0.513	U	0.5	U	0.108	U	0.103	U	0.105	U	NA		NA		NA		NA		NA		NA		NA		NA		NA	
PCBs																															
PCB-1016 (AROCLOR 1016)	12674-11-2	NA		0.0513	U	0.05	U	0.0541	U	0.0513	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
PCB-1221 (AROCLOR 1221)	11104-28-2	NA		0.0513	U	0.05	U	0.0541	U	0.0513	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
PCB-1232 (AROCLOR 1232)	11141-16-5	NA		0.0513	U	0.05	U	0.0541	U	0.0513	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
PCB-1242 (AROCLOR 1242)	53469-21-9	NA		0.0513	U	0.05	U	0.0541	U	0.0513	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
PCB-1248 (AROCLOR 1248)	12672-29-6	NA		0.0513	U	0.05	U	0.0541	U	0.0513	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
PCB-1254 (AROCLOR 1254)	11097-69-1	NA		0.0513	U	0.05	U	0.0541	U	0.0513	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
PCB-1260 (AROCLOR 1260)	11096-82-5	NA		0.0513	U	0.05	U	0.0541	U	0.0513	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
TOTAL PCBS	1336-36-3	NA		0.0513	U	0.05	U	0.0541	U	0.0513	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
METALS																															
ALUMINUM	7429-90-5	NA		10	U	10	U	10	U	10	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
ANTIMONY	7440-36-0	NA		5	U	5	U	5	U	5	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
ARSENIC	7440-38-2	NA		4	U	4	U	4	U	4	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
BARIUM	7440-39-3	NA		10	U	10	U	10	U	10	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
BERYLLIUM	7440-41-7	NA		1	U	1	U	1	U	1	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
CADMIUM	7440-43-9	NA		3	U	3	U	3	U	3	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
CALCIUM	7440-70-2	NA		50	U	50	U	50	U	50	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
CHROMIUM, TOTAL	7440-47-3	NA		5	U	5	U	5	U	5	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
COBALT	7440-48-4	NA		5	U	5	U	5	U	5	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
COPPER	7440-50-8	NA		3	U	3	U	3	U	3	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
IRON	7439-89-6	NA		20	U	20	U	20	U	20	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
LEAD	7439-92-1	3	U	3	U	3	U	3	U	3	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
MAGNESIUM	7439-95-4	NA		50	U	50	U	50	U	50	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
MANGANESE	7439-96-5	NA		5	U	5	U	5	U	5	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
MERCURY	7439-97-6	NA		0.2	U	0.2	U	0.05	U	0.05	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
NICKEL	7440-02-0	NA		5	U	5	U	5	U	5	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
POTASSIUM	7440-09-7	NA		50	U	50	U	50	U	50	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
SELENIUM	7782-49-2	NA		10	U	10	U	10	U	10	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
SILVER	7440-22-4	NA		5	U	5	U	5	U	5	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
SODIUM	7440-23-5	NA		100	U	100	UJ	100	U	100	UJ	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
THALLIUM	7440-28-0	NA		5	U	5	U	5	U	5	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
VANADIUM	7440-62-2	NA		10	U	10	U	10	U	10	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
ZINC	7440-66-6	NA		10		12		10	U	10		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	

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

Data has been subject to third party validation.

Table 10
Groundwater Sample QA/QC Results
363 BOND STREET AND 388 CARROLL STREET
Brooklyn, New York

Investigation Phase:		DUE DILIGENCE				REMEDIAL INVESTIGATION							
Sample ID:		043		045		146-TB-7-20130916		153-TB-8-20130917		183-FB-20140206		184-TB-20140206	
Sample Date:		8/31/2012		8/31/2012		9/16/2013		9/17/2013		2/6/2014		2/6/2014	
Units:		ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q
VOLATILE ORGANIC COMPOUNDS	CAS No.												
1,1,1,2-TETRACHLOROETHANE	630-20-6	NA		NA		0.2	U	0.2	U	0.2	U	0.2	U
1,1,1-TRICHLOROETHANE	71-55-6	1	U	1	U	0.2	U	0.2	U	0.2	U	0.2	U
1,1,2,2-TETRACHLOROETHANE	79-34-5	1	U	1	U	0.2	U	0.2	U	0.2	U	0.2	U
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	5	U	5	U	0.2	U	0.2	U	0.2	U	0.2	U
1,1,2-TRICHLOROETHANE	79-00-5	1	U	1	U	0.2	U	0.2	U	0.2	U	0.2	U
1,1-DICHLOROETHANE	75-34-3	1	U	1	U	0.2	U	0.2	U	0.2	U	0.2	U
1,1-DICHLOROETHENE	75-35-4	1	U	1	U	0.2	U	0.2	U	0.2	U	0.2	U
1,2,3-TRICHLOROBENZENE	87-61-6	5	U	5	U	NA		NA		NA		NA	
1,2,4-TRICHLOROBENZENE	120-82-1	NA		NA		0.2	U	0.2	U	0.2	U	0.2	U
1,2,4-TRICHLOROBENZENE	63697-18-7	5	U	5	U	NA		NA		NA		NA	
1,2,4-TRIMETHYLBENZENE	95-63-6	NA		NA		0.2	U	0.2	U	0.2	U	0.2	U
1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	10	U	10	U	0.2	U	0.2	U	0.2	U	0.2	U
1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE)	106-93-4	2	U	2	U	0.2	U	0.2	U	0.2	U	0.2	U
1,2-DICHLOROBENZENE	95-50-1	1	U	1	U	0.2	U	0.2	U	0.2	U	0.2	U
1,2-DICHLOROETHANE	107-06-2	1	U	1	U	0.2	U	0.2	U	0.2	U	0.2	U
1,2-DICHLOROPROPANE	78-87-5	1	U	1	U	0.2	U	0.2	U	0.2	U	0.2	U
1,3,5-TRIMETHYLBENZENE (MESITYLENE)	108-67-8	NA		NA		0.2	U	0.2	U	0.2	U	0.2	U
1,3-DICHLOROBENZENE	541-73-1	1	U	1	U	0.2	U	0.2	U	0.2	U	0.2	U
1,4-DICHLOROBENZENE	106-46-7	1	U	1	U	0.2	U	0.2	U	0.2	U	0.2	U
1,4-DIOXANE (P-DIOXANE)	123-91-1	130	U	130	U	40	U	40	U	40	U	40	U
2,2-OXYBIS(2-CHLOROPROPANE)	39638-32-9	2.1	U	NA		NA		NA		NA		NA	
2-HEXANONE	591-78-6	5	U	5	U	0.2	U	0.2	U	0.2	U	0.2	U
ACETONE	67-64-1	10	U	10	U	1.7	JB	1	UJ	1	U	1	U
ACROLEIN	107-02-8	NA		NA		0.2	U	0.2	U	0.2	U	0.2	U
ACRYLONITRILE	107-13-1	NA		NA		0.2	U	0.2	U	0.2	U	0.2	U
BENZENE	71-43-2	1	U	1	U	0.2	U	0.2	U	0.2	U	0.2	U
BENZOIC ACID	65-85-0	NA		NA		NA		NA		27.8	U	NA	
BENZYL ALCOHOL	100-51-6	NA		NA		NA		NA		2.78	U	NA	
BROMOCHLOROMETHANE	74-97-5	5	U	5	U	NA		NA		NA		NA	
BROMODICHLOROMETHANE	75-27-4	1	U	1	U	0.2	U	0.2	U	0.2	U	0.2	U
BROMOFORM	75-25-2	4	U	4	U	0.2	U	0.2	U	0.2	U	0.2	U
BROMOMETHANE	74-83-9	2	U	2	U	0.2	U	0.2	U	0.2	U	0.2	U
CARBON DISULFIDE	75-15-0	2	U	2	U	0.2	U	0.2	U	0.2	U	0.2	U
CARBON TETRACHLORIDE	56-23-5	1	U	1	U	0.2	U	0.2	U	0.2	U	0.2	U
CHLOROBENZENE	108-90-7	1	U	1	U	0.2	U	0.2	U	0.2	U	0.2	U
CHLOROETHANE	75-00-3	1	U	1	U	0.2	U	0.2	U	0.2	U	0.2	U
CHLOROFORM	67-66-3	1	U	1	U	0.2	U	0.2	U	0.2	U	0.2	U
CHLOROMETHANE	74-87-3	1	U	1	U	0.2	U	0.2	U	0.2	U	0.2	U
CIS-1,2-DICHLOROETHYLENE	156-59-2	1	U	1	U	0.2	U	0.2	U	0.2	U	0.2	U
CIS-1,3-DICHLOROPROPENE	10061-01-5	1	U	1	U	0.2	U	0.2	U	0.2	U	0.2	U
CYCLOHEXANE	110-82-7	5	U	5	U	NA		NA		NA		NA	
DIBROMOCHLOROMETHANE	124-48-1	1	U	1	U	0.2	U	0.2	U	0.2	U	0.2	U
DIBROMOMETHANE	74-95-3	NA		NA		0.2	U	0.2	U	0.2	U	0.2	U
DICHLORODIFLUOROMETHANE	75-71-8	5	U	5	U	0.2	U	0.2	U	0.2	U	0.2	U
ETHYLBENZENE	100-41-4	1	U	1	U	0.2	U	0.2	U	0.2	U	0.2	U
HEXACHLOROBUTADIENE	87-68-3	1	U	NA		0.2	U	0.2	U	0.2	U	0.2	U
ISOPROPYLBENZENE (CUMENE)	98-82-8	2	U	2	U	0.2	U	0.2	U	0.2	U	0.2	U
M AND P XYLENES	79601-23-1	NA		NA		0.5	U	0.5	U	0.5	U	0.5	U
M,P-XYLENES	179601-23-1	1	U	1	U	NA		NA		NA		NA	
METHYL ACETATE	79-20-9	5	U	5	U	0.2	U	0.2	U	0.2	U	0.2	U
METHYL ETHYL KETONE (2-BUTANONE)	78-93-3	10	U	10	U	0.5	U	0.5	U	0.5	U	0.5	U
METHYL ISOBUTYL KETONE (4-METHYL-2-PENTANON	108-10-1	5	U	5	U	0.2	U	0.2	U	0.2	U	0.2	U
METHYLCYCLOHEXANE	108-87-2	5	U	5	U	NA		NA		NA		NA	
METHYLENE CHLORIDE	75-09-2	2	U	2	U	1	U	1	UJ	1	U	1	U
N-BUTYLBENZENE	104-51-8	NA		NA		0.2	U	0.2	U	0.2	U	0.2	U
N-PROPYLBENZENE	103-65-1	NA		NA		0.2	U	0.2	U	0.2	U	0.2	U
O-XYLENE (1,2-DIMETHYLBENZENE)	95-47-6	1	U	1	U	0.2	U	0.2	U	0.2	U	0.2	U
P-CYMENE (P-ISOPROPYLTOLUENE)	CYMP	NA		NA		0.2	U	0.2	U	0.2	U	0.2	U
SEC-BUTYLBENZENE	135-98-8	NA		NA		0.2	U	0.2	U	0.2	U	0.2	U
STYRENE	100-42-5	5	U	5	U	0.2	U	0.2	U	0.2	U	0.2	U
T-BUTYLBENZENE	98-06-6	NA		NA		0.2	U	0.2	U	0.2	U	0.2	U
TERT-BUTYL ALCOHOL	75-65-0	NA		NA		0.5	U	0.5	U	0.5	U	0.5	U
TERT-BUTYL METHYL ETHER	1634-04-4	1	U	1	U	0.2	U	0.2	U	0.2	U	0.2	U
TETRACHLOROBENZENE (MIXED)	12408-10-5	2.1	U	NA		NA		NA		NA		NA	
TETRACHLOROETHYLENE(PCE)	127-18-4	1	U	1	U	0.2	U	0.2	U	0.2	U	0.2	U
TOLUENE	108-88-3	1	U	1	U	0.2	U	0.2	U	0.2	U	0.2	U
TRANS-1,2-DICHLOROETHENE	156-60-5	1	U	1	U	0.2	U	0.2	U	0.2	U	0.2	U
TRANS-1,3-DICHLOROPROPENE	10061-02-6	1	U	1	U	0.2	U	0.2	U	0.2	U	0.2	U
TRICHLOROETHYLENE (TCE)	79-01-6	1	U	1	U	0.2	U	0.2	U	0.2	U	0.2	U
TRICHLOROFLUOROMETHANE	75-69-4	5	U	5	U	0.2	U	0.2	U	0.2	U	0.2	U
VINYL CHLORIDE	75-01-4	1	U	1	U	0.5	U	0.5	U	0.5	U	0.5	U
XYLENES, TOTAL	XYLENES	NA		NA		0.6	U	0.6	U	0.6	U	0.6	U
SEMI-VOLATILE ORGANIC COMPOUNDS													
1,2-DIPHENYLHYDRAZINE	122-66-7	NA		NA		NA		NA		2.78	U	NA	
2,3,4,6-TETRACHLOROPHENOL	58-90-2	5.2	U	NA		NA		NA		NA		NA	
2,4,5-TRICHLOROPHENOL	95-95-4	5.2	U	NA		NA		NA		2.78	U	NA	
2,4,6-TRICHLOROPHENOL	88-06-2	5.2	U	NA		NA		NA		2.78	U	NA	
2,4-DICHLOROPHENOL	120-83-2	5.2	U	NA		NA		NA		2.78	U	NA	
2,4-DIMETHYLPHENOL	105-67-9	5.2	U	NA		NA		NA		2.78	U	NA	
2,4-DINITROPHENOL	51-28-5	21	U	NA		NA		NA		2.78	U	NA	
2,4-DINITROTOLUENE	121-14-2	2.1	U	NA		NA		NA		2.78	U	NA	
2,6-DINITROTOLUENE	606-20-2	2.1	U	NA		NA		NA		2.78	U	NA	
2-CHLORONAPHTHALENE	91-58-7	2.1	U	NA		NA		NA		2.78	U	NA	
2-CHLOROPHENOL	95-57-8	5.2	U	NA		NA		NA		2.78	U	NA	
2-METHYLNAPHTHALENE	91-57-6	1	U	NA		NA		NA		2.78	U	NA	
2-METHYLPHENOL (O-CRESOL)	95-48-7	2.1	U	NA		NA		NA		2.78	U	NA	
2-NITROANILINE	88-74-4	5.2	U	NA		NA		NA		2.78	U	NA	
2-NITROPHENOL	88-75-5	5.2	U	NA		NA		NA		2.78	U	NA	
3- AND 4- METHYLPHENOL (TOTAL)	MEPH3MEPH4	NA		NA		NA		NA		2.78	U	NA	
3,3'-DICHLOROBENZIDINE	91-94-1	5.2	U	NA		NA		NA		2.78	U	NA	
3-NITROANILINE	99-09-2	5.2	U	NA		NA		NA		2.78	U	NA	
4,6-DINITRO-2-METHYLPHENOL	534-52-1	21	U	NA		NA		NA		2.78	U	NA	
4-BROMOPHENYL PHENYL ETHER	101-55-3	2.1	U	NA		NA		NA		2.78	U	NA	
4-CHLORO-3-METHYLPHENOL	59-50-7	5.2	U	NA		NA		NA		NA		NA	
4-CHLOROANILINE	106-47-8	5.2	U	NA		NA		NA		NA		NA	
4-CHLOROPHENYL PHENYL ETHER	7005-72-3	2.1	U	NA		NA		NA		2.78	U	NA	
4-METHYLPHENOL (P-CRESOL)	106-44-5	2.1	U	NA		NA		NA		NA		NA	
4-NITROANILINE	100-01-6	5.2	U	NA		NA		NA		2.78	U	NA	
4-NITROPHENOL	100-02-7	10	U	NA		NA		NA		2.78	U	NA	
ACENAPHTHENE	83-32-9	1	U	NA		NA		NA		0.0556	U	NA	
ACENAPHTHYLENE	208-96-8	1	U	NA		NA		NA		0.0556	U	NA	
ACETOPHENONE	98-86-2	2.1	U	NA		NA		NA		2.78	U	NA	
ANTHRACENE	120-12-7	1	U	NA		NA		NA		0.0556	U	NA	
ATRAZINE	1912-24-9	5.2	U	NA		NA		NA		2.78	U	NA	
BENZALDEHYDE	100-52-7	5.2	U	NA		NA		NA		2.78	U	NA	
BENZIDINE	92-87-5	NA		NA		NA		NA		11.1	U	NA	
BENZO(A)ANTHRACENE	56-55-3	1	U	NA		NA		NA		0.0556	U	NA	
BENZO(A)PYRENE	50-32-8	1	U	NA		NA		NA		0.0556	U	NA	
BENZO(B)FLUORANTHENE	205-99-2	1	U	NA		NA		NA		0.0556	U	NA	
BENZO(G,H,I)PERYLENE	191-24-2	1	U	NA		NA		NA		0.0556	U	NA	
BENZO(K)FLUORANTHENE	207-08-9	1	U	NA		NA		NA		0.0556	U	NA	
BENZYL BUTYL PHTHALATE	85-68-7	2.1	U	NA		NA		NA		2.78	U	NA	
BIPHENYL (DIPHENYL)	92-52-4	1	U	NA		NA		NA		2.78	U	NA	
BIS(2-CHLOROETHOXY) METHANE	111-91-1	2.1	U	NA		NA		NA		2.78	U	NA	
BIS(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHE	111-44-4	2.1	U	NA		NA		NA		2.78	U	NA	
BIS(2-CHLOROISOPROPYL) ETHER	108-60-1	NA		NA		NA		NA		2.78	U	NA	
BIS(2-ETHYLHEXYL) PHTHALATE	117-81-7	2.1	U	NA		NA		NA		2.78	U	NA	
CAPROLACTAM	105-60-2	2.1	U	NA		NA		NA		2.78	U	NA	
CARBAZOLE	86-74-8	1	U	NA		NA		NA		2.78	U	NA	
CHRYSENE	218-01-9	1	U	NA		NA		NA		0.0556	U	NA	
CRESOLS, M & P	MEPH1314	NA		NA		NA		NA		NA		NA	
DIBENZ(A,H)ANTHRACENE	53-70-3	1	U	NA		NA		NA		0.0556	U	NA	
DIBENZOFURAN	132-64-9	5.2	U	NA		NA		NA		2.78	U	NA	
DIETHYL PHTHALATE	84-66-2	2.1	U	NA		NA		NA		2.78	U	NA	
DIMETHYL PHTHALATE	131-11-3	2.1	U	NA		NA		NA		2.78	U	NA	
DI-N-BUTYL PHTHALATE	84-74-2	2.1	U	NA		NA		NA		2.78	U	NA	
DI-N-OCTYLPHTHALATE	117-84-0	2.1	U	NA		NA		NA		2.78	U	NA	
FLUORANTHENE	206-44-0	1	U	NA		NA		NA		0.0556	U	NA	
FLUORENE	86-73-7	1	U	NA		NA		NA		0.0556	U	NA	
HEXACHLOROBENZENE	118-74-1	1	U	NA		NA		NA		0.0444	U	NA	
HEXACHLOROCYCLOPENTADIENE	77-47-4	10	U	NA		NA		NA		2.78	U	NA	
HEXACHLOROETHANE	67-72-1	2.1	U	NA		NA		NA		2.78	U	NA	
INDENO(1,2,3-C,D)PYRENE	193-39-5	1	U	NA		NA		NA		0.0556	U	NA	
ISOPHORONE	78-59-1	2.1	U	NA		NA		NA		2.78	U	NA	
NAPHTHALENE	91-20-3	1	U	NA		NA		NA		0.189		NA	
NITROBENZENE	98-95-3	2.1	U	NA		NA		NA		2.78	U	NA	
N-NITROSODIMETHYLAMINE	62-75-9	NA		NA		NA		NA		2.78	U	NA	
N-NITROSODI-N-PROPYLAMINE	621-64-7	2.1	U	NA		NA		NA		2.78	U	NA	
N-NITROSODIPHENYLAMINE	86-30-6	5.2	U	NA		NA		NA		2.78	U	NA	
PENTACHLOROPHENOL	87-86-5	10	U	NA		NA		NA		1.11	U	NA	
PHENANTHRENE	85-01-8	1	U	NA		NA		NA		0.0556	U	NA	
PHENOL	108-95-2	2.1	U	NA		NA		NA		2.78	U	NA	
PYRENE	129-00-0	1	U	NA		NA		NA		0.0556	U	NA	

Table 10
Groundwater Sample QA/QC Results
363 BOND STREET AND 388 CARROLL STREET
Brooklyn, New York

Investigation Phase:		DUE DILIGENCE				REMEDIAL INVESTIGATION							
Sample ID:		043		045		146-TB-7-20130916		153-TB-8-20130917		183-FB-20140206		184-TB-20140206	
Sample Date:		8/31/2012		8/31/2012		9/16/2013		9/17/2013		2/6/2014		2/6/2014	
Units:		ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q
PESTICIDES													
ALDRIN	309-00-2	NA		NA		NA		NA		NA		NA	
ALPHA BHC (ALPHA HEXACHLOROCYCLOHEXANE)	319-84-6	NA		NA		NA		NA		NA		NA	
ALPHA ENDOSULFAN	959-98-8	NA		NA		NA		NA		NA		NA	
ALPHA-CHLORDANE	5103-71-9	NA		NA		NA		NA		NA		NA	
BETA BHC (BETA HEXACHLOROCYCLOHEXANE)	319-85-7	NA		NA		NA		NA		NA		NA	
BETA ENDOSULFAN	33213-65-9	NA		NA		NA		NA		NA		NA	
CHLORDANE	57-74-9	NA		NA		NA		NA		NA		NA	
DELTA BHC (DELTA HEXACHLOROCYCLOHEXANE)	319-86-8	NA		NA		NA		NA		NA		NA	
DIELDRIN	60-57-1	NA		NA		NA		NA		NA		NA	
ENDOSULFAN SULFATE	1031-07-8	NA		NA		NA		NA		NA		NA	
ENDRIN	72-20-8	NA		NA		NA		NA		NA		NA	
ENDRIN ALDEHYDE	7421-93-4	NA		NA		NA		NA		NA		NA	
ENDRIN KETONE	53494-70-5	NA		NA		NA		NA		NA		NA	
GAMMA BHC (LINDANE)	58-89-9	NA		NA		NA		NA		NA		NA	
GAMMA-CHLORDANE	12789-03-6	NA		NA		NA		NA		NA		NA	
HEPTACHLOR	76-44-8	NA		NA		NA		NA		NA		NA	
HEPTACHLOR EPOXIDE	1024-57-3	NA		NA		NA		NA		NA		NA	
METHOXYCHLOR	72-43-5	NA		NA		NA		NA		NA		NA	
P,P'-DDD	72-54-8	NA		NA		NA		NA		NA		NA	
P,P'-DDE	72-55-9	NA		NA		NA		NA		NA		NA	
P,P'-DDT	50-29-3	NA		NA		NA		NA		NA		NA	
TOXAPHENE	8001-35-2	NA		NA		NA		NA		NA		NA	
PCBs													
PCB-1016 (AROCLOR 1016)	12674-11-2	NA		NA		NA		NA		NA		NA	
PCB-1221 (AROCLOR 1221)	11104-28-2	NA		NA		NA		NA		NA		NA	
PCB-1232 (AROCLOR 1232)	11141-16-5	NA		NA		NA		NA		NA		NA	
PCB-1242 (AROCLOR 1242)	53469-21-9	NA		NA		NA		NA		NA		NA	
PCB-1248 (AROCLOR 1248)	12672-29-6	NA		NA		NA		NA		NA		NA	
PCB-1254 (AROCLOR 1254)	11097-69-1	NA		NA		NA		NA		NA		NA	
PCB-1260 (AROCLOR 1260)	11096-82-5	NA		NA		NA		NA		NA		NA	
TOTAL PCBS	1336-36-3	NA		NA		NA		NA		NA		NA	
METALS													
ALUMINUM	7429-90-5	NA		NA		NA		NA		NA		NA	
ANTIMONY	7440-36-0	NA		NA		NA		NA		NA		NA	
ARSENIC	7440-38-2	NA		NA		NA		NA		NA		NA	
BARIUM	7440-39-3	NA		NA		NA		NA		NA		NA	
BERYLLIUM	7440-41-7	NA		NA		NA		NA		NA		NA	
CADMIUM	7440-43-9	NA		NA		NA		NA		NA		NA	
CALCIUM	7440-70-2	NA		NA		NA		NA		NA		NA	
CHROMIUM, TOTAL	7440-47-3	NA		NA		NA		NA		NA		NA	
COBALT	7440-48-4	NA		NA		NA		NA		NA		NA	
COPPER	7440-50-8	NA		NA		NA		NA		NA		NA	
IRON	7439-89-6	NA		NA		NA		NA		NA		NA	
LEAD	7439-92-1	NA		NA		NA		NA		NA		NA	
MAGNESIUM	7439-95-4	NA		NA		NA		NA		NA		NA	
MANGANESE	7439-96-5	NA		NA		NA		NA		NA		NA	
MERCURY	7439-97-6	NA		NA		NA		NA		NA		NA	
NICKEL	7440-02-0	NA		NA		NA		NA		NA		NA	
POTASSIUM	7440-09-7	NA		NA		NA		NA		NA		NA	
SELENIUM	7782-49-2	NA		NA		NA		NA		NA		NA	
SILVER	7440-22-4	NA		NA		NA		NA		NA		NA	
SODIUM	7440-23-5	NA		NA		NA		NA		NA		NA	
THALLIUM	7440-28-0	NA		NA		NA		NA		NA		NA	
VANADIUM	7440-62-2	NA		NA		NA		NA		NA		NA	
ZINC	7440-66-6	NA		NA		NA		NA		NA		NA	

NOTES:
J: Estimated value
U: Indicates that the result is lower than the MDL
B: Analyte detected in the method blank
C: GC target hit confirmed by Mass Spectometry

Data has been subject to third party validation.

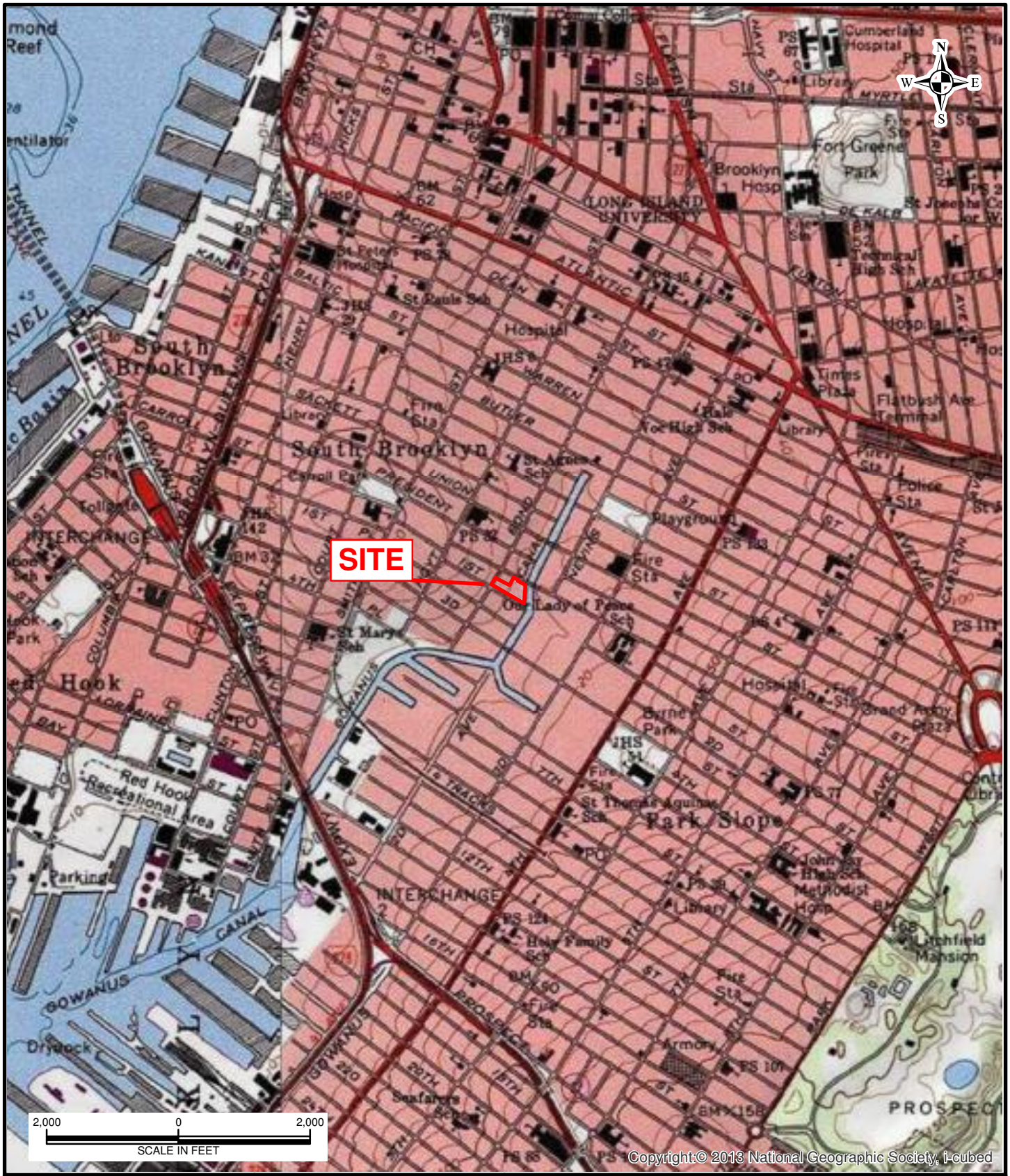
Table 11
Soil Vapor Sample QA/QC Results
363 BOND STREET AND 388 CARROLL STREET
Brooklyn, New York

Investigation Phase		DUE DILIGENCE				REMEDIAL INVESTIGATION			
Location ID:		AMBIENT-1		AMBIENT-2		AMBIENT-1		AMBIENT-3	
Sample ID:		032		039		087-AMBIENT-1-20130909		106-AMBIENT-3-20130911	
Sample Date:		8/30/2012		8/30/2012		9/9/2013		9/11/2013	
Units:		ug/m^3	Q	ug/m^3	Q	ug/m^3	Q	ug/m^3	Q
VOLATILE ORGANIC COMPOUNDS	CAS No.								
1,1,1-TRICHLOROETHANE	71-55-6	1.1	U	1.1	U	0.55	U	0.55	U
1,1,2,2-TETRACHLOROETHANE	79-34-5	1.4	U	1.4	U	0.7	U	0.7	U
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	1.5	U	1.5	U	0.78	U	0.78	U
1,1,2-TRICHLOROETHANE	79-00-5	1.1	U	1.1	U	0.55	U	0.55	U
1,1-DICHLOROETHANE	75-34-3	0.81	U	0.81	U	0.41	U	0.41	U
1,1-DICHLOROETHENE	75-35-4	0.79	U	0.79	U	0.4	U	0.4	U
1,2,4-TRICHLOROBENZENE	120-82-1	1.5	U	1.5	U	0.75	U	0.75	U
1,2,4-TRIMETHYLBENZENE	95-63-6	0.48	J	48		5.3		0.9	
1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE)	106-93-4	1.5	U	1.5	U	0.78	U	0.78	U
1,2-DICHLOROBENZENE	95-50-1	1.2	U	1.2	U	0.61	U	0.61	U
1,2-DICHLOROETHANE	107-06-2	0.81	U	0.81	U	0.41	U	0.41	U
1,2-DICHLOROPROPANE	78-87-5	0.92	U	0.92	U	0.47	U	0.47	U
1,2-DICHLOROTETRAFLUOROETHANE	76-14-2	1.4	U	1.4	U	0.71	U	0.71	U
1,3,5-TRIMETHYLBENZENE (MESITYLENE)	108-67-8	0.98	U	15		1.8		0.5	U
1,3-BUTADIENE	106-99-0	0.44	U	0.44	U	4.3		0.44	U
1,3-DICHLOROBENZENE	541-73-1	1.2	U	1.2	U	0.61	U	0.61	U
1,4-DICHLOROBENZENE	106-46-7	1.2	U	1.2	U	0.61	U	0.61	U
1,4-DIOXANE (P-DIOXANE)	123-91-1	0.72	U	0.72	U	0.37	U	0.37	U
2,2,4-TRIMETHYLPENTANE	540-84-1	0.93	U	56.5		NA		NA	
2-CHLOROTOLUENE	95-49-8	1	U	1	U	NA		NA	
2-HEXANONE	591-78-6	0.82	U	0.82	U	0.42	U	0.42	U
4-ETHYLTOLUENE	622-96-8	0.98	U	12		4.9		2.5	U
ACETONE	67-64-1	9.5		37.5		16		16	
ALLYL CHLORIDE (3-CHLOROPROPENE)	107-05-1	0.63	U	0.63	U	NA		NA	
BENZENE	71-43-2	0.3	J	16		12		1	
BENZYL CHLORIDE	100-44-7	1	U	1	U	0.53	U	0.53	U
BROMODICHLOROMETHANE	75-27-4	1.3	U	1.3	U	0.63	U	0.63	U
BROMOETHENE	593-60-2	0.87	U	0.87	U	NA		NA	
BROMOFORM	75-25-2	2.1	U	2.1	U	1.1	U	1.1	U
BROMOMETHANE	74-83-9	0.78	U	0.78	U	0.39	U	0.39	U
CARBON DISULFIDE	75-15-0	0.62	U	0.62	U	0.32	U	0.32	U
CARBON TETRACHLORIDE	56-23-5	1.3	U	1.3	U	0.32	U	0.32	U
CHLOROBENZENE	108-90-7	0.92	U	0.92	U	0.47	U	0.47	U
CHLOROETHANE	75-00-3	0.53	U	0.53	U	0.27	U	0.27	U
CHLOROFORM	67-66-3	0.98	U	0.98	U	0.5	U	0.5	U
CHLOROMETHANE	74-87-3	0.78		1.1		1.3		0.88	
CIS-1,2-DICHLOROETHYLENE	156-59-2	0.79	U	0.79	U	0.4	U	0.4	U
CIS-1,3-DICHLOROPROPENE	10061-01-5	0.91	U	0.91	U	0.46	U	0.46	U
CYCLOHEXANE	110-82-7	0.69	U	15		2.5		0.6	
DIBROMOCHLOROMETHANE	124-48-1	1.7	U	1.7	U	0.82	U	0.82	U
DICHLORODIFLUOROMETHANE	75-71-8	1.6		2.7		2.3		1.7	
ETHANOL	64-17-5	6.6		160	E	NA		NA	
ETHYL ACETATE	141-78-6	4.3		0.72	U	0.37	U	0.37	U
ETHYLBENZENE	100-41-4	0.87	U	33		4.8		0.71	
HEXACHLOROBUTADIENE	87-68-3	2.1	U	2.1	U	1.1	U	1.1	U
ISOPROPANOL	67-63-0	3.2		1.4		0.25	U	2.8	
M AND P XYLENES	79601-23-1	0.78	J	120		18		2	
METHYL ETHYL KETONE (2-BUTANONE)	78-93-3	1		3.5		5.1		2.7	
METHYL ISOBUTYL KETONE (4-METHYL-2-PENTANONE)	108-10-1	0.82	U	0.82	U	0.42	U	0.42	U
METHYL METHACRYLATE	80-62-6	0.82	U	0.82	U	0.42	U	0.42	U
METHYLENE CHLORIDE	75-09-2	0.87		1.3		1.7		1.6	U
N-HEPTANE	142-82-5	0.82	U	38		0.42	U	1	
N-HEXANE	110-54-3	0.7	U	54.6		9.6		1.8	
O-XYLENE (1,2-DIMETHYLBENZENE)	95-47-6	0.87	U	43		6.1		0.84	
PROPYLENE	115-07-1	0.52	J	3.8		13		1.8	
STYRENE	100-42-5	0.85	U	0.43	J	0.43	U	0.43	U
TERT-BUTYL ALCOHOL	75-65-0	0.61	U	0.61	U	NA		NA	
TERT-BUTYL METHYL ETHER	1634-04-4	0.72	U	0.72	U	0.37	U	0.37	U
TETRACHLOROETHYLENE(PCE)	127-18-4	1.4		0.88		0.69	U	2.1	
TETRAHYDROFURAN	109-99-9	0.59	U	0.59	U	4.7		0.3	U
TOLUENE	108-88-3	4.9		143		27		3.8	
TOTAL XYLENES	133-02-07	0.78	J	162		NA		NA	
TRANS-1,2-DICHLOROETHENE	156-60-5	0.79	U	0.79	U	0.4	U	0.4	U
TRANS-1,3-DICHLOROPROPENE	10061-02-6	0.91	U	0.91	U	0.46	U	0.46	U
TRICHLOROETHYLENE (TCE)	79-01-6	0.21	U	0.21	U	1.1		0.27	U
TRICHLOROFLUOROMETHANE	75-69-4	1	J	1.5		1.4		0.97	
VINYL ACETATE	108-05-4	0.7	U	0.7	U	0.36	U	0.36	U
VINYL CHLORIDE	75-01-4	0.51	U	0.51	U	0.26	U	0.26	U

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

Data has been subject to third party validation.

FIGURES



LANGAN

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Collectively known as Langan

NJ CERTIFICATE OF AUTHORIZATION No. 24GA27996400

Project

PROPOSED BOND STREET DEVELOPMENT

BLOCK No. 452, LOT Nos. 1 & 15

BROOKLYN

KINGS COUNTY NEW YORK

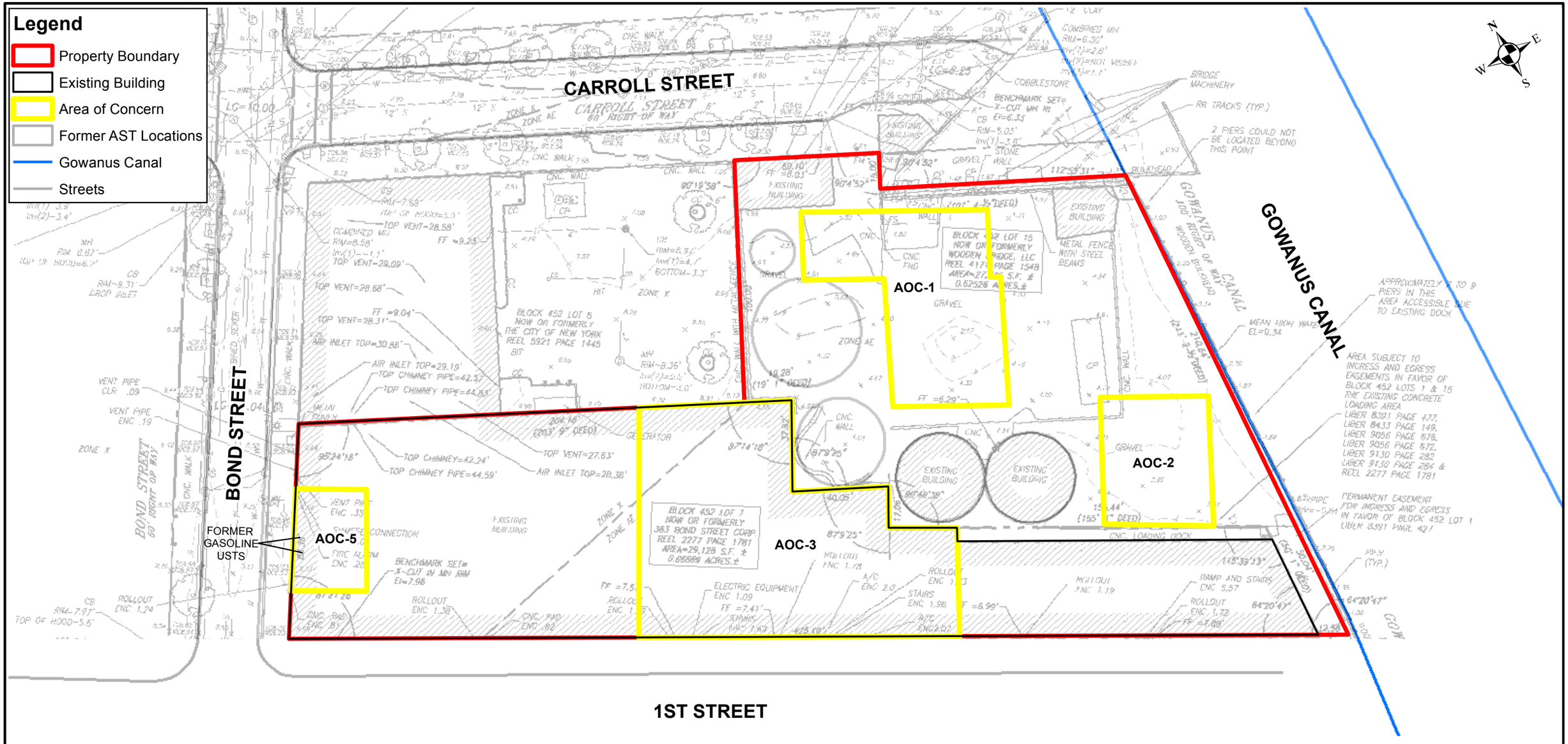
Drawing Title

SITE LOCATION MAP

Project No.	100287503
Date	10/19/2012
Scale	1"=2000'
Drawn By	amf
Last Revised	5/9/2014

Figure 1

Path: \\Langan.com\data\EP\data5\100287501\ArcGIS\ArcMap_Documents\2014-05 - NYSDEC RIR (363 Bond-388 Carroll)\Figure 1 - Site Location Plan.mxd



40 0 40

SCALE IN FEET

Notes:

1. Map features are based on aerial photographs, tax maps, and the following ELM reports: Phase II Investigation Report, 363 Bond Street (May 2005); and Phase II Investigation Report, 400 Carroll Street (May 2005).
2. AOC-1: Proposed Excavation Area - 388 Carroll Street, North; AOC-2: Proposed Excavation Area - 388 Carroll Street, South; AOC-3: Proposed Excavation Area - 363 Bond Street; AOC-5: Former UST Area
3. Site survey from "Topographic & Boundary Survey," by Langan, dated 18 January 2013.

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NJ CERTIFICATE OF AUTHORIZATION No. 24GA27996400

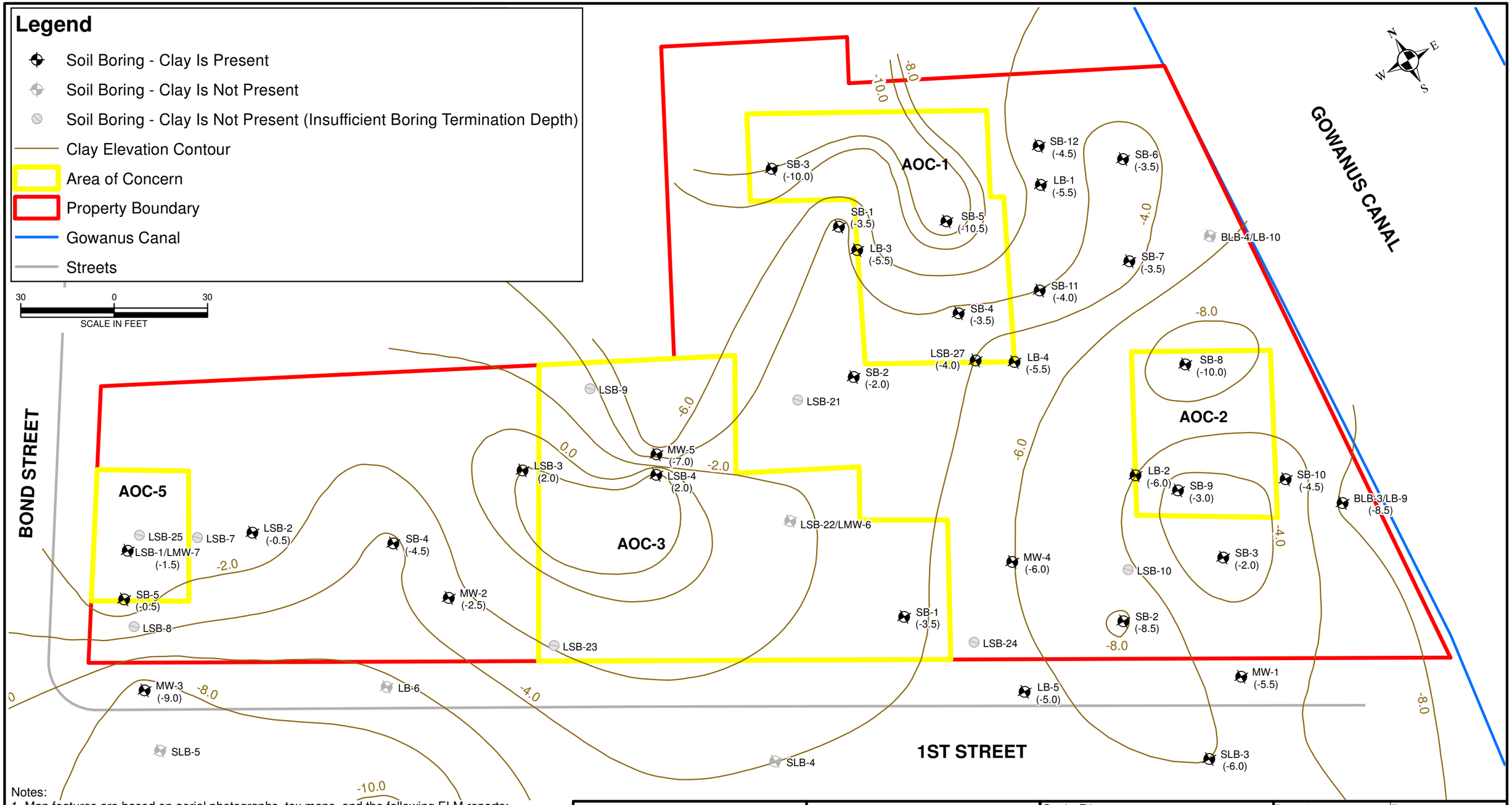
Project: PROPOSED BOND STREET DEVELOPMENT BLOCK No. 452, LOT Nos. 1 & 15 BROOKLYN KINGS COUNTY NEW YORK	Drawing Title: SITE PLAN	Project No.: 100287501 Date: 5/6/2014 Scale: 1"=40' Drawn By: atr Last Revised: 5/13/2014	Figure: 2

Path: \\Langan.com\data\EP\data5\100287501\ArcGIS\ArcMap_Documents\2014-05 - NYSDEC RIR (363 Bond-388 Carroll)\Figure 2 - Site Plan.mxd

Legend

- Soil Boring - Clay Is Present
- Soil Boring - Clay Is Not Present
- Soil Boring - Clay Is Not Present (Insufficient Boring Termination Depth)
- Clay Elevation Contour
- Area of Concern
- Property Boundary
- Gowanus Canal
- Streets

30 0 30
SCALE IN FEET



Notes:
1. Map features are based on aerial photographs, tax maps, and the following ELM reports: Phase II Investigation Report, 363 Bond Street (May 2005); and Phase II Investigation Report, 400 Carroll Street (May 2005).
2. All ELM sample locations are approximate and based on the reports identified in Note 1.
3. AOC-1: Proposed Excavation Area - 388 Carroll Street, North; AOC-2: Proposed Excavation Area - 388 Carroll Street, South; AOC-3: Proposed Excavation Area - 363 Bond Street; AOC-5: Former UST Area
4. Clay elevation information obtained from Langan environmental and geotechnical boring logs and boring logs provided in the reports identified in Note 1.
5. Elevations are provided in Brooklyn Highway Datum.

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PROPOSED BOND STREET DEVELOPMENT
BLOCK No. 452, LOT Nos. 1 & 15
BROOKLYN
KINGS COUNTY NEW YORK

Drawing Title
SUBSURFACE CLAY LAYER ELEVATION CONTOUR MAP

Project No.	100287503
Date	11/12/2013
Scale	1"=30'
Drawn By	amf
Last Revised	5/27/2014
Figure	3

Path: \\Langan.com\data\EP\data5\100287501\ArcGIS\ArcMap_Documents\2014-05 - NYSDEC RIR (363 Bond-388 Carroll)\Figure 3 - Clay Elevation Contour Map.mxd

Legend

- Monitoring Well Location (ELM)
- Monitoring Well Location (Langan)
- Groundwater Elevation Contour
- Inferred Groundwater Elevation Contour
- Groundwater Flow Direction
- (2.04) Groundwater Elevation
- Property Boundary
- Area of Concern
- Gowanus Canal
- Streets

CARROLL STREET

BOND STREET

1ST STREET

GOWANUS CANAL

AOC-1

AOC-2

AOC-3

AOC-5

LMW-10 (1.56)

LMW-9 (0.77)

LMW-6 (2.17)

LMW-7 (0.26)

MW-5 (0.80)

MW-2 (1.77)

MW-3 (2.04)

MW-4 (1.35)

MW-1 (0.63)

2.0

1.5

1.0

0.5

N E S W

40 0 40

SCALE IN FEET

Notes:
1. Map features are based on aerial photographs, tax maps, and the following ELM reports: Phase II Investigation Report, 363 Bond Street (May 2005); and Phase II Investigation Report, 400 Carroll Street (May 2005).
2. All ELM sample locations are approximate and based on the reports identified in Note 1.
3. AOC-1: Proposed Excavation Area - 388 Carroll Street, North; AOC-2: Proposed Excavation Area - 388 Carroll Street, South; AOC-3: Proposed Excavation Area - 363 Bond Street; AOC-5: Former UST Area

LANGAN

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Langan Engineering, Environmental, Surveying and Landscape Architecture, D.P.C.
Langan International LLC
Collectively known as Langan

NJ CERTIFICATE OF AUTHORIZATION No. 24GA27996400

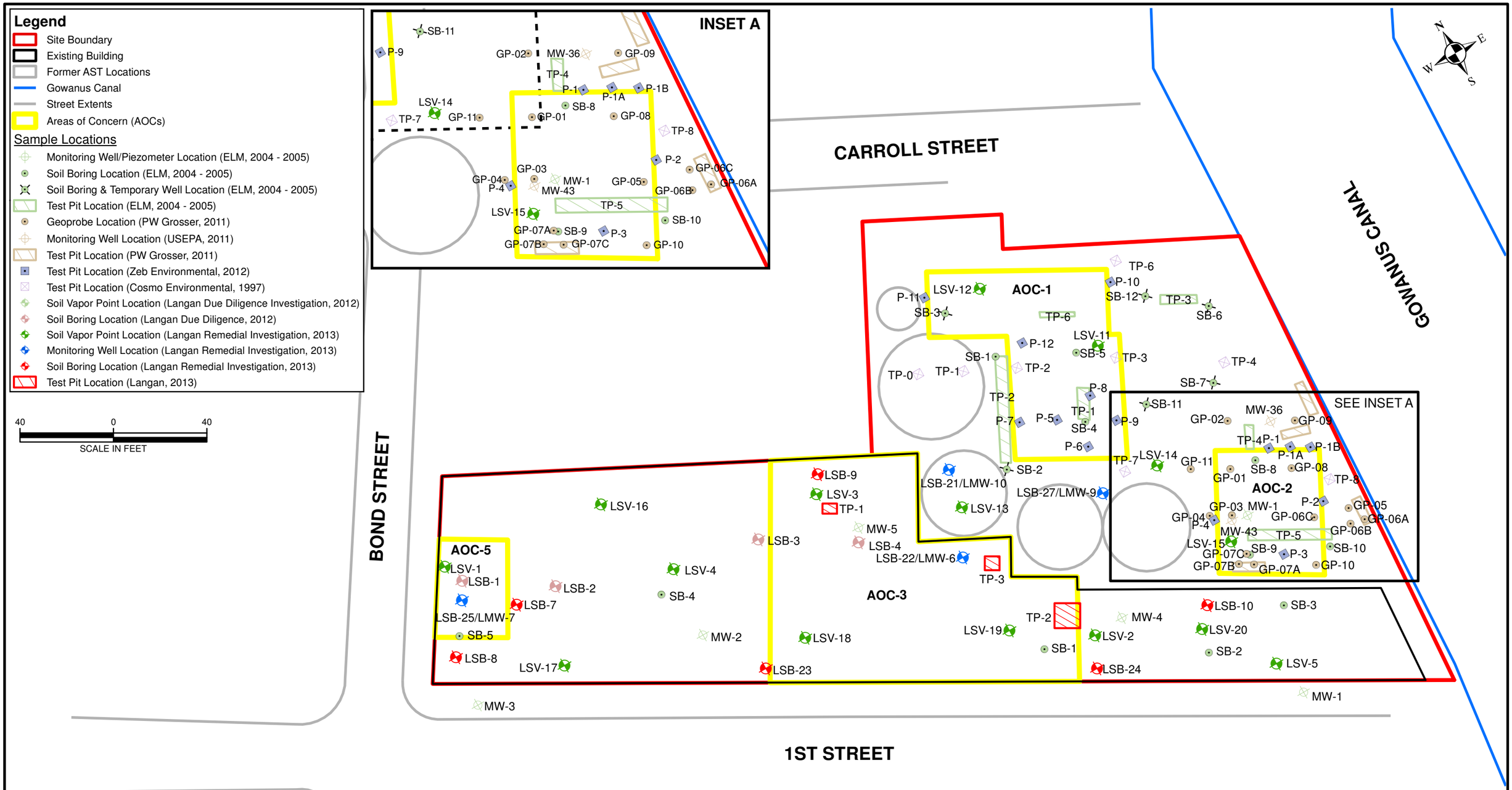
Project
PROPOSED BOND STREET DEVELOPMENT
BLOCK No. 452, LOT Nos. 1 & 15
BROOKLYN
KINGS COUNTY NEW YORK

Drawing Title
GROUNDWATER ELEVATION CONTOUR MAP

Project No.	100287503
Date	11/12/2013
Scale	1"=40'
Drawn By	amf
Last Revised	5/27/2014

Figure 4

Path: \\Langan.com\data\EP\data5\100287501\ArcGIS\ArcMap_Documents\2014-05 - NYSDEC RIR (363 Bond-388 Carroll)\Figure 4 - 363 Bond and 388 Carroll Groundwater Contour Map.mxd



Notes:
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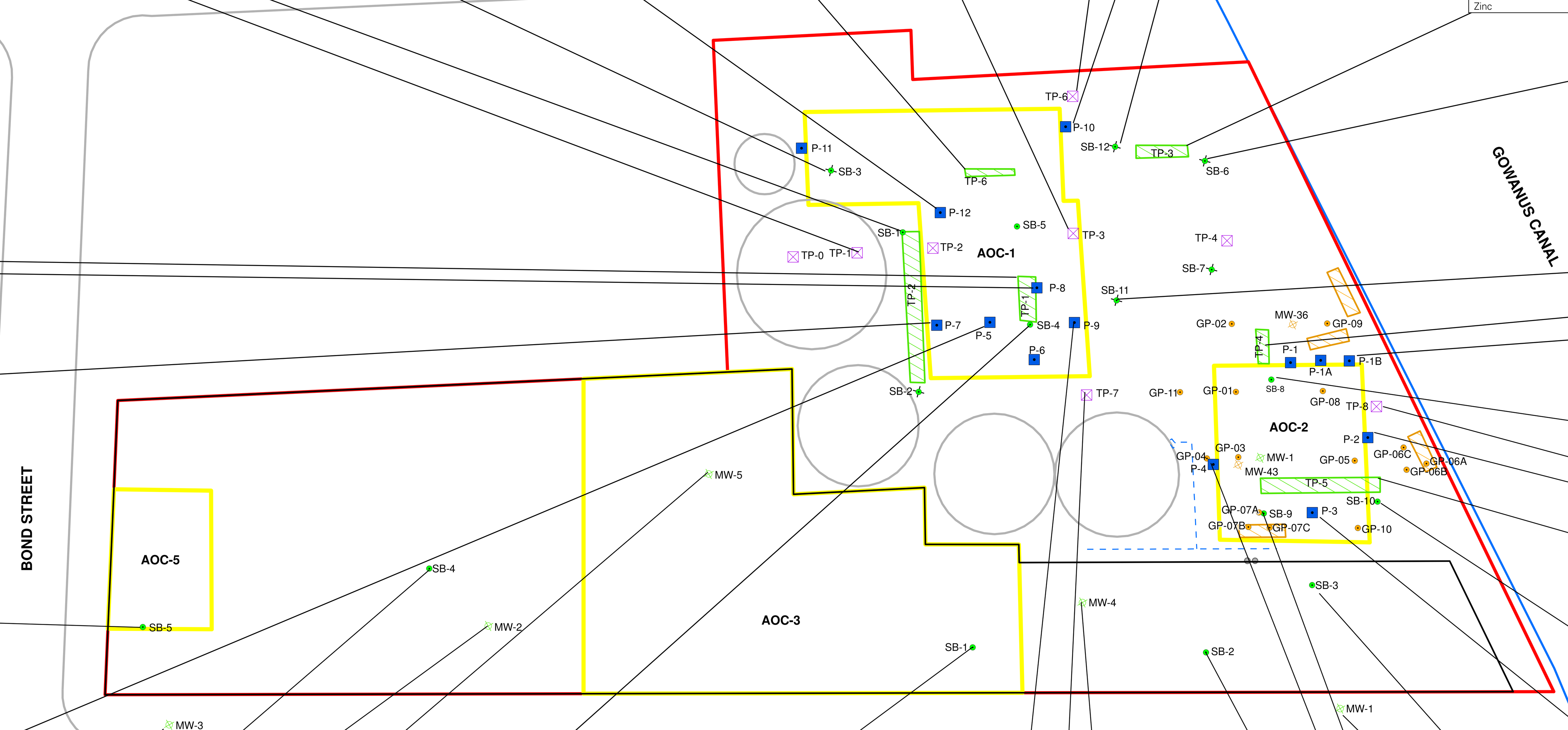
Project
PROPOSED BOND STREET DEVELOPMENT
BLOCK No. 452, LOT Nos. 1 & 15
BROOKLYN
KINGS COUNTY NEW YORK

Drawing Title
SAMPLE LOCATION PLAN

Project No.	100287503
Date	11/6/2012
Scale	1"=40'
Drawn By	amf
Last Revised	5/27/2014
Figure	5

Path: \\Langan.com\data\EP\data5\100287501\ArcGIS\ArcMap_Documents\2014-05 - NYSDEC RIR (363 Bond-388 Carroll)\Figure 5 - Sample Location Plan.mxd

SUBPART 375-6 (Revised Brownfields)	Unrestricted Use Objectives (ug/kg)	Protection of Public Health: Residential (ug/kg)	Restricted Residential (ug/kg)	Restricted Commercial (ug/kg)	Restricted Industrial (ug/kg)
VOCs					
1,1-Dichloroethane	270	19,000	26,000	240,000	480,000
1,1-Dichloroethene	330	100,000	100,000	500,000	1,000,000
1,2-Dichloroethane	20	2,300	3,100	30,000	60,000
1,2-Dichloroethene (cis)	250	59,000	100,000	500,000	1,000,000
1,2-Dichloroethene (trans)	190	100,000	100,000	500,000	1,000,000
Acetone	50	100,000	100,000	500,000	1,000,000
Benzene	60	2,900	4,800	44,000	89,000
Carbon tetrachloride	760	1,400	2,400	22,000	44,000
Chloroform	370	10,000	49,000	350,000	700,000
Ethylbenzene	1,000	30,000	41,000	390,000	780,000
Methyl ethyl ketone	120	100,000	100,000	500,000	1,000,000
Methylene chloride	50	51,000	100,000	500,000	1,000,000
Toluene	700	100,000	100,000	500,000	1,000,000
Trichloroethene	470	10,000	21,000	200,000	400,000
Vinyl Chloride	20	210	900	13,000	27,000
Xylene (total)	260	100,000	100,000	500,000	1,000,000
SVOCs					
1,2-Dichlorobenzene	1,100	100,000	100,000	500,000	1,000,000
Acenaphthene	20,000	100,000	100,000	500,000	1,000,000
Anthracene	100,000	100,000	100,000	500,000	1,000,000
Benzo (a) anthracene	1,000	1,000	1,000	5,600	11,000
Benzo (a) pyrene	1,000	1,000	1,000	1,000	1,100
Benzo (b) fluoranthene	1,000	1,000	1,000	5,600	11,000
Benzo (g,h,i) perylene	100,000	100,000	100,000	500,000	1,000,000
Benzo (k) fluoranthene	800	1,000	3,900	56,000	110,000
Chrysene	1,000	1,000	3,900	56,000	110,000
Dibenzo (a,h) anthracene	330	330	330	560	1,100
Fluoranthene	100,000	100,000	100,000	500,000	1,000,000
Fluorene	30,000	100,000	100,000	500,000	1,000,000
Indeno (1,2,3-cd) pyrene	500	500	500	5,600	11,000
Naphthalene	12,000	100,000	100,000	500,000	1,000,000
o-Cresol(s) (2-Methylphenol)	330	100,000	100,000	500,000	1,000,000
p-Cresol(s) (4-Methylphenol)	330	34,000	100,000	500,000	1,000,000
Pentachlorophenol	800	2,400	6,700	6,700	55,000
Phenanthrene	100,000	100,000	100,000	500,000	1,000,000
Phenol	330	100,000	100,000	500,000	1,000,000
Pyrene	100,000	100,000	100,000	500,000	1,000,000
PCBs/Pesticides					
4,4'-DDE	3.3	1,800	8,900	62,000	120,000
4,4'-DDT	3.3	1,700	7,900	47,000	94,000
4,4'-DDD	3.3	2,600	13,000	92,000	180,000
Aroclor 1254	100	1,000	1,000	1,000	25,000
Aldrin	5	19	97	680	1,400
Dieldrin	5	39	200	1,400	2,800
Polychlorinated biphenyls (PCBs)	100	1,000	1,000	1,000	25,000
Metals					
Arsenic	13,000	16,000	16,000	16,000	16,000
Barium	350,000	350,000	400,000	400,000	10,000,000
Cadmium	2,500	2,500	4,300	9,300	60,000
Copper	50,000	270,000	270,000	270,000	10,000,000
Lead	63,000	400,000	400,000	1,000,000	3,900,000
Mercury (elemental)	180	810	810	2,800	5,700
Nickel	30,000	140,000	310,000	310,000	10,000,000
Selenium	3,900	36,000	180,000	1,500,000	6,800,000
Zinc	109,000	2,200,000	10,000,000	10,000,000	10,000,000



Sample ID:	SB-1/4-5	
Laboratory Sample Number:	207935-001	
Sampling Date:	10/25/2004	
Sampling Depth (ft):	4-5	
Units:	ug/kg	Q
VOCs		
Benzene	86	J
Ethylbenzene	8,100	
Methylene chloride	110	JB
Xylene (total)	520	J
SVOCs		
Benzo (a) anthracene	1,800	
Benzo (a) pyrene	1,700	J
Benzo (b) fluoranthene	1,600	J
Benzo (k) fluoranthene	890	J
Chrysene	2,000.0	
Indeno (1,2,3-cd) pyrene	840	J
PCBs/Pesticides		
Aroclor 1242	150	
Metals		
Copper	159,000	
Lead	283,000	
Mercury (elemental)	840	
Nickel	34,500	
Zinc	779,000	

Sample ID:	SB-3/5-7	
Laboratory Sample Number:	207935-003	
Sampling Date:	10/25/2004	
Sampling Depth (ft):	5-7	
Units:	ug/kg	Q
VOCs		
Acetone	1,100	J
Benzene	130	J
Methylene chloride	120	JB
Metals		
Arsenic	43,200	
Lead	856,000	
Mercury (elemental)	1,900	
Selenium	17,400	J
Silver	5,900	
Zinc	1,090,000	

Sample ID:	TP-6/2.7-4.7	
Laboratory Sample Number:	207936-004	
Sampling Date:	10/27/2004	
Sampling Depth (ft):	2.7-4.7	
Units:	ug/kg	Q
VOCs		
Acetone	2,400	J
Benzene	460	J
Methylene chloride	670	JB
Xylene (total)	1,100	J
SVOCs		
Chrysene	1,000.0	
Metals		
Arsenic	20,000	
Lead	81,800	
Mercury (elemental)	2,700	
Nickel	75,500	
Zinc	997,000	

Sample ID:	P-12	
Laboratory Sample Number:	1204165-5	
Sampling Date:	4/12/2012	
Sampling Depth (ft):	4-5	
Units:	ug/kg	Q
VOCs		
Benzene	94.2	J
SVOCs		
Benzo (a) anthracene	1,830	
Benzo (a) pyrene	1,460	
Benzo (b) fluoranthene	1,110	
Benzo (k) fluoranthene	1,140	
Chrysene	1,960	
Indeno (1,2,3-cd) pyrene	915	

Sample ID:	TP-3	
Laboratory Sample Number:	C974508/2	
Sampling Date:	10/26/1997	
Sampling Depth (ft):		
Units:	ug/kg	Q
VOCs		
Benzene	270	
Xylene (m,p-Xylene)	270	
Xylene (total)	310	
SVOCs		
Benzo (a) anthracene	1,100	
Benzo (a) pyrene	1,500	
Benzo (k) fluoranthene	950	^
Chrysene	1,300	

Sample ID:	TP-6	
Laboratory Sample Number:	C974508/3	
Sampling Date:	10/26/1997	
Sampling Depth (ft):		
Units:	ug/kg	Q
VOCs		
Benzene	200	
Xylene (m,p-Xylene)	350	
Xylene (total)	410	

Sample ID:	P-10	
Laboratory Sample Number:	1204165-3	
Sampling Date:	4/12/2012	
Sampling Depth (ft):	3-4	
Units:	ug/kg	Q
VOCs		
Benzene	112	J
1,3-Xylene (m-Xylene)	273	J
Xylene (m,p-Xylene)	273	J
SVOCs		
Indeno (1,2,3-cd) pyrene	582	J

Sample ID:	SB-12/2-4	
Laboratory Sample Number:	207936-005	
Sampling Date:	10/25/2004	
Sampling Depth (ft):	2-4	
Units:	ug/kg	Q
Metals		
Lead	129,000	

Sample ID:	TP-3/4-7	
Laboratory Sample Number:	207936-001	
Sampling Date:	10/27/2004	
Sampling Depth (ft):	4-7	
Units:	ug/kg	Q
VOCs		
Acetone	63	
Metals		
Copper	79,000	
Lead	305,000	
Mercury (elemental)	650	
Zinc	131,000	

Sample ID:	SB-6/4-6	
Laboratory Sample Number:	207935-006	
Sampling Date:	10/25/2004	
Sampling Depth (ft):	4-6	
Units:	ug/kg	Q
VOCs		
Acetone	1,200	J
Methylene chloride	110	JB
Metals		
Copper	204,000	
Lead	265,000	
Mercury (elemental)	1,200	

Sample ID:	TP-1	
Laboratory Sample Number:	C974508/1	
Sampling Date:	10/26/1997	
Sampling Depth (ft):		
Units:	ug/kg	Q
VOCs		
Benzene	1,100	
Ethylbenzene	1,200	
Propylbenzene-n	8,400	
Toluene	760	
1,2-Xylene (o-Xylene)	280	
Xylene (m,p-Xylene)	2,400	
Xylene (total)	2,700	
SVOCs		
Benzo (a) anthracene	2,400	
Benzo (a) pyrene	2,800	
Benzo (b) fluoranthene	2,400	^
Benzo (k) fluoranthene	2,400	^
Chrysene	2,400	
Dibenzo (a,h) anthracene	480	
Indeno (1,2,3-cd) pyrene	1,100	

Sample ID:	TP-1/0.5-3	
Laboratory Sample Number:	207935-019	
Sampling Date:	10/27/2004	
Sampling Depth (ft):	0.5-3	
Units:	ug/kg	Q
VOCs		
Acetone	820	J
Methylene chloride	130	JB
Metals		
Arsenic	33,300	
Copper	85,000	
Lead	232,000	
Mercury (elemental)	490	
Selenium	6,000	J
Zinc	264,000	
Sample ID:	TP-1/3-3.5	
Laboratory Sample Number:	207935-020	
Sampling Date:	10/27/2004	
Sampling Depth (ft):	3-3.5	
Units:	ug/kg	Q
VOCs		
Methylene chloride	110	JB

Sample ID:	P-8	
Laboratory Sample Number:	1204166-15	
Sampling Date:	4/11/2012	
Sampling Depth (ft):	4-5	
Units:	ug/kg	Q
VOCs		
1,2-Dichloroethene (cis)	374	J
Benzene	388	J
1,3-Xylene (m-Xylene)	328	J
Xylene (m,p-Xylene)	328	J
SVOCs		
Benzo (a) anthracene	2,560	
Benzo (a) pyrene	5,570	
Benzo (b) fluoranthene	2,330	
Benzo (k) fluoranthene	2,980	
Chrysene	2,560	
Indeno (1,2,3-cd) pyrene	3,160	
Sample ID:	P-8	
Laboratory Sample Number:	1204166-16	
Sampling Date:	4/11/2012	
Sampling Depth (ft):	7-7.5	
Units:	ug/kg	Q
VOCs		
Methylene chloride	83	

Sample ID:	P-7	
Laboratory Sample Number:	1204166-13	
Sampling Date:	4/11/2012	
Sampling Depth (ft):	4-5	
Units:	ug/kg	Q
VOCs		
Benzene	378	J
Ethylbenzene	1,980	
Toluene	973	J
1,2-Xylene (o-Xylene)	1,110	J
1,3-Xylene (m-Xylene)	2,900	J
Xylene (m,p-Xylene)	2,900	J
SVOCs		
Benzo (a) anthracene	1,130	
Chrysene	1,010	

Sample ID:	SB-5/5-7	
Laboratory Sample Number:	209324-019	
Sampling Date:	4/21/2005	
Sampling Depth (ft):	5-7'	
Units:	ug/kg	Q
Metals		
Chromium	12,800	
Sample ID:	SB-5/7-8	
Laboratory Sample Number:	209324-020	
Sampling Date:	4/21/2005	
Sampling Depth (ft):	7-8'	
Units:	ug/kg	Q
SVOCs		
Benzo (a) anthracene	11,000	
Benzo (a) pyrene	16,000	
Benzo (b) fluoranthene	11,000	
Benzo (k) fluoranthene	10,000	
Chrysene	13,000	
Dibenzo (a,h) anthracene	3,200	
Indeno (1,2,3-cd) pyrene	7,600	
Metals		
Arsenic	39,200	
Chromium	7,800	
Copper	176,000	
Lead	582,000	
Mercury (elemental)	2,400	
Zinc	520,000	

Sample ID:	P-5	
Laboratory Sample Number:	1204166-9	
Sampling Date:	4/11/2012	
Sampling Depth (ft):	3.5-5	
Units:	ug/kg	Q
VOCs		
Acetone	420	
Methylene chloride	132	

Sample ID:	MW-3/4-6	
Laboratory Sample Number:	209324-005	
Sampling Date:	4/15/2005	
Sampling Depth (ft):	4-6'	
Units:	ug/kg	Q
VOCs		
Methyl ethyl ketone (MEK / 2-butanone)	8,000	B
Metals		
Chromium	9,400	
Sample ID:	MW-3/13-15	
Laboratory Sample Number:	209324-006	
Sampling Date:	4/15/2005	
Sampling Depth (ft):	13-15'	
Units:	ug/kg	Q
Metals		
Chromium	9,800	

Sample ID:	SB-4/9-10.5	
Laboratory Sample Number:	209324-017	
Sampling Date:	4/21/2005	
Sampling Depth (ft):	9-10.5'	
Units:	ug/kg	Q
VOCs		
Ethylbenzene	1,300	J
Methylene chloride	380	JB
Xylene (total)	5,700	
SVOCs		
Benzo (a) anthracene	8,200	
Benzo (a) pyrene	7,800	
Benzo (b) fluoranthene	4,800	J
Benzo (k) fluoranthene	5,100	J
Chrysene	7,900	
Dibenzo (a,h) anthracene	1,400	J
Indeno (1,2,3-cd) pyrene	3,100	J
Naphthalene	20,000	
PCBs/Pesticides		
4,4'-DDE	65	
Aldrin	17	
PCBs		
Aroclor 1254	880	
Metals		
Cadmium	32,400	
Chromium	10,700	
Lead	88,500	
Mercury (elemental)	460	
Zinc	350,000	
Sample ID:	SB-4/14-16	
Laboratory Sample Number:	209324-018	
Sampling Date:	4/21/2005	
Sampling Depth (ft):	14-16'	
Units:	ug/kg	Q
PCBs/Pesticides		
4,4'-DDE	6.3	
Metals		
Chromium	9,500	

Sample ID:	MW-2/1-3	
Laboratory Sample Number:	209324-003	
Sampling Date:	4/15/2005	
Sampling Depth (ft):	1-3'	
Units:	ug/kg	Q
VOCs		
Acetone	51	B
Toluene	2,900	J
SVOCs		
Benzo (a) anthracene	26,000	
Benzo (a) pyrene	26,000	
Benzo (b) fluoranthene	19,000	
Benzo (k) fluoranthene	19,000	
Chrysene	30,000	
Dibenzo (a,h) anthracene	6,800	J
Indeno (1,2,3-cd) pyrene	15,000	
Naphthalene	23,000	
PCBs/Pesticides		
Dieldrin	53	
Metals		
Arsenic	51,500	
Barium	524,000	
Chromium	11,900	
Copper	354,000	
Lead	851,000	
Mercury (elemental)	9,900	
Zinc	552,000	
Sample ID:	MW-2/9-10	
Laboratory Sample Number:	209324-004	
Sampling Date:	4/15/2005	
Sampling Depth (ft):	9-10'	
Units:	ug/kg	Q
SVOCs		
Benzo (a) anthracene	3,700	
Benzo (a) pyrene	3,700	
Benzo (b) fluoranthene	2,800	
Benzo (k) fluoranthene	2,400	
Chrysene	4,300	
Dibenzo (a,h) anthracene	710	J
Indeno (1,2,3-cd) pyrene	1,800	
Metals		
Arsenic	13,900	
Chromium	11,400	
Copper	69,200	
Lead	674,000	
Mercury (elemental)	680	
Zinc	138,000	

Sample ID:	SB-1/1-4	
Laboratory Sample Number:	209324-011	
Sampling Date:	4/20/2005	
Sampling Depth (ft):	1-4'	
Units:	ug/kg	Q
VOCs		
Ethylbenzene	1,900	J
Methylene chloride	270	JB
Toluene	890	J
Xylene (total)	3,700	
SVOCs		
Benzo (a) anthracene	62,000	
Benzo (a) pyrene	61,000	
Benzo (b) fluoranthene	38,000	
Benzo (k) fluoranthene	42,000	
Chrysene	61,000	
Dibenzo (a,h) anthracene	12,000	J
Fluoranthene	180,000	
Indeno (1,2,3-cd) pyrene	27,000	
Naphthalene	21,000	
Phenanthrene	190,000	
Pyrene	110,000	
Metals		
Cadmium	4,700	
Chromium	12,200	
Copper	76,900	
Lead	489,000	
Mercury (elemental)	1,500	
Zinc	243,000	
Sample ID:	SB-1/10-12	
Laboratory Sample Number:	209324-012	
Sampling Date:	4/20/2005	
Sampling Depth (ft):	10-12'	
Units:	ug/kg	Q
Metals		
Chromium	9,000	
Lead	106,000	

Sample ID:	SB-4/3-5	
Laboratory Sample Number:	207935-004	
Sampling Date:	10/25/2004	
Sampling Depth (ft):	3-5	
Units:	ug/kg	Q
VOCs		
Acetone	3,600	
Benzene	110	J
Methylene chloride	110	JB
Xylene (total)	410	J
Metals		
Lead	93,900	

Sample ID:	MW-5/7.5-9.5	
Laboratory Sample Number:	209324-009	
Sampling Date:	4/20/2005	
Sampling Depth (ft):	7.5-9.5'	
Units:	ug/kg	Q
VOCs		
Benzene	980	J
Ethylbenzene	1,300	J
Methylene chloride	290	JB
Xylene (total)	2,400	J
SVOCs		
Acenaphthene	200,000	
Anthracene	270,000	
Benzo (a) anthracene	340,000	
Benzo (a) pyrene	330,000	
Benzo (b) fluoranthene	210,000	
Benzo (g,h,i) perylene	200,000	
Benzo (k) fluoranthene	270,000	
Chrysene	410,000	
Dibenzo (a,h) anthracene	84,000	
Fluoranthene	950,000	
Fluorene	200,000	
Indeno (1,2,3-cd) pyrene	170,000	
Naphthalene	300,000	
Phenanthrene	1,100,000	
Pyrene	890,000	
PCBs/Pesticides		
4,4'-DDE	1,500	
Beta-BHC	120	
Metals		
Arsenic	80,300	
Barium	1,060,000	
Chromium	14,000	
Copper	2,680,000	
Lead	1,420,000	
Mercury (elemental)	19,500	
Zinc	1,270,000	
Sample ID:	MW-5/13-15	
Laboratory Sample Number:	209324-010	
Sampling Date:	4/20/2005	
Sampling Depth (ft):	13-15'	
Units:	ug/kg	Q
SVOCs		
Benzo (a) anthracene	16,000	
Benzo (a) pyrene	14,000	
Benzo (b) fluoranthene	11,000	
Benzo (k) fluoranthene	10,000	
Chrysene	18,000	
Dibenzo (a,h) anthracene	3,900	
Indeno (1,2,3-cd) pyrene	7,600	
PCBs/Pesticides		
4,4'-DDE	110	
Metals		
Chromium	4,400	
Zinc	1,050,000	

Sample ID:	P-9	
Laboratory Sample Number:	1204165-1	
Sampling Date:	4/12/2012	
Sampling Depth (ft):	3.5-5	
Units:	ug/kg	Q
VOCs		
Propylbenzene-n	9,200	
1,3-Xylene (m-Xylene)	771	J
Xylene (m,p-Xylene)	771	J
SVOCs		
Benzo (a) anthracene	3,030	
Benzo (a) pyrene	5,840	
Benzo (b) fluoranthene	2,760	
Benzo (k) fluoranthene	3,520	
Chrysene	3,240	
Dibenzo (a,h) anthracene	668.000	
Indeno (1,2,3-cd) pyrene	3,570	

Sample ID:	TP-7[1]	
Laboratory Sample Number:	C974508/4	
Sampling Date:	10/26/1997	
Sampling Depth (ft):		
Units:	ug/kg	Q
VOCs		
Benzene	150	
Xylene (m,p-Xylene)	290	
Xylene (total)	350	

Sample ID:	MW-4/6-8	
Laboratory Sample Number:	209324-007	
Sampling Date:	4/20/2005	
Sampling Depth (ft):	6-8'	
Units:	ug/kg	Q
Metals		
Arsenic	17,000	
Barium	502,000	
Chromium	9,400	
Copper	67,700	
Lead	1,290,000	
Mercury (elemental)	1,600	
Zinc	483,000	
Sample ID:	MW-4/12-14	
Laboratory Sample Number:	209324-008	
Sampling Date:	4/20/2005	
Sampling Depth (ft):	12-14'	
Units:	ug/kg	Q
PCBs/Pesticides		
4,4'-DDE	370	
4,4'-DDT	110	
Metals		
Chromium	7,100	
Lead	201,000	
Mercury (elemental)	840	

Sample ID:	SB-2/6-8	
Laboratory Sample Number:	209324-013	
Sampling Date:	4/20/2005	
Sampling Depth (ft):	6-8'	
Units:	ug/kg	Q
Metals		
Cadmium	3,400	B
Chromium	2,800	J
Lead	91,900	
Selenium	5,500	J
Sample ID:	SB-2/10-12	
Laboratory Sample Number:	209324-014	
Sampling Date:	4/20/2005	
Sampling Depth (ft):	10-12'	
Units:	ug/kg	Q
SVOCs		
Benzo (a) anthracene	1,900	
Benzo (a) pyrene	2,200	
Benzo (b) fluoranthene	1,600	
Benzo (k) fluoranthene	1,300	
Chrysene	2,200	
Dibenzo (a,h) anthracene	570	J
Indeno (1,2,3-cd) pyrene	1,100	
p-Cresol(s) (4-Methylphenol)	560	J
Metals		
Chromium	6,800	
Lead	1,450,000	
Mercury (elemental)	380	

Sample ID:	P-4	
Laboratory Sample Number:	1204166-7	
Sampling Date:	4/11/2012	
Sampling Depth (ft):	3.5-5	
Units:	ug/kg	Q
SVOCs		
Benzo (a) anthracene	1,360	
Benzo (a) pyrene	1,150	
Benzo (b) fluoranthene	1,010	
Benzo (k) fluoranthene	1,040	
Chrysene	1,400	
Indeno (1,2,3-cd) pyrene	780	
Sample ID:	P-4	
Laboratory Sample Number:	1204166-8	
Sampling Date:	4/11/2012	
Sampling Depth (ft):	6-7	
Units:	ug/kg	Q
VOCs		
Methylene chloride	54.5	

Sample ID:	MW-1/3-4	
Laboratory Sample Number:	209324-001	
Sampling Date:	4/15/2005	
Sampling Depth (ft):	3-4'	
Units:	ug/kg	Q
Metals		
Chromium	22,200	
Sample ID:	MW-1/9-10	
Laboratory Sample Number:	209324-002	
Sampling Date:	4/15/2005	
Sampling Depth (ft):	9-10'	
Units:	ug/kg	Q
Metals		
Chromium	21,200	

Sample ID:	SB-9/3-5	
Laboratory Sample Number:	207935-009	
Sampling Date:	10/25/2004	
Sampling Depth (ft):	3-5	
Units:	ug/kg	Q
VOCs		
Acetone	140	
Xylene (total)	280	
SVOCs		
Benzo (a) anthracene	7,500	
Benzo (a) pyrene	6,700	
Benzo (b) fluoranthene	5,500	
Benzo (k) fluoranthene	5,300	
Chrysene	7,500	
Dibenzo (a,h) anthracene	1,700	J
Indeno (1,2,3-cd) pyrene	3,800	

Sample ID:	SB-3/6-8	
Laboratory Sample Number:	209324-015	
Sampling Date:	4/21/2005	
Sampling Depth (ft):	6-8'	
Units:	ug/kg	Q
VOCs		
Benzene	3,100	J
Methylene chloride	320	JB
Toluene	2,700	J
Xylene (total)	3,900	
SVOCs		
Benzo (a) anthracene	22,000	
Benzo (a) pyrene	25,000	
Benzo (b) fluoranthene	15,000	
Benzo (k) fluoranthene	18,000	
Chrysene	27,000	
Dibenzo (a,h) anthracene	4,800	J
Indeno (1,2,3-cd) pyrene	12,000	
PCBs/Pesticides		
4,4'-DDE	75	
Metals		
Chromium	8,300	
Copper	78,500	
Lead	371,000	
Mercury (elemental)	970	
Zinc	147,000	
Sample ID:	SB-3/10-12	
Laboratory Sample Number:	209324-016	
Sampling Date:	4/21/2005	
Sampling Depth (ft):	10-12'	
Units:	ug/kg	Q
Metals		
Chromium	17,100	
Nickel	46,200	
Zinc	136,000	

Sample ID:	P-3	
Laboratory Sample Number:	1204166-5	
Sampling Date:	4/11/2012	
Sampling Depth (ft):	3.5-5	
Units:	ug/kg	Q
SVOCs		
Benzo (a) anthracene	11,300	E
Benzo (a) pyrene	14,600	E
Benzo (b) fluoranthene	10,400.0	
Benzo (k) fluoranthene	11,900	E
Chrysene	10,500	
Dibenzo (a,h) anthracene	3,870	

Sample ID:	P-1B	
Sampling Date:	4/11/2012	
Sampling Depth (ft):	4-5	
Units:	ug/kg	Q
SVOCs		
Indeno (1,2,3-cd) pyrene	744	

Sample ID:	TP-4/4-5	
Laboratory Sample Number:	207936-002	
Sampling Date:	10/27/2004	
Sampling Depth (ft):	4-5	
Units:	ug/kg	Q
VOCs		
Methylene chloride	160	JB
Metals		
Mercury (elemental)	180	

Sample ID:	SB-11/4-5	
Laboratory Sample Number:	207935-012	
Sampling Date:	10/25/2004	
Sampling Depth (ft):	4-5	
Units:	ug/kg	Q
VOCs		
Methylene chloride	560	JB
SVOCs		
Benzo (a) anthracene	4,100	
Benzo (a) pyrene	11,000	
Benzo (b) fluoranthene	4,500	
Benzo (k) fluoranthene	5,700	
Chrysene	4,200	
Dibenzo (a,h) anthracene	1,800	
Indeno (1,2,3-cd) pyrene	7,200	
Metals		
Copper	76,000	
Lead	139,000	
Zinc	211,000	

Sample ID:	SB-8/5-7	
Laboratory Sample Number:	207935-008	
Sampling Date:	10/25/2004	
Sampling Depth (ft):	5-7	
Units:	ug/kg	
VOCs		
Benzene	630	J
Methylene chloride	560	JB
Metals		
Mercury (elemental)	620	

Sample ID:	TP-8	
Laboratory Sample Number:	C974508/5	
Sampling Date:	10/26/1997	
Sampling Depth (ft):		
Units:	ug/kg	Q
VOCs		
Benzene	1,300	
Xylene (m,p-Xylene)	650	
Xylene (total)	730	
SVOCs		
Benzo (a) anthracene	4,300	
Benzo (a) pyrene	3,700	
Benzo (b) fluoranthene	3,300	^
Benzo (k) fluoranthene	3,300	^
Chrysene	4,200	
Dibenzo (a,h) anthracene	710	
Indeno (1,2,3-cd) pyrene	1,200	

Sample ID:	TP-5/1.5-3	
Laboratory Sample Number:	207936-003	
Sampling Date:	10/27/2004	
Sampling Depth (ft):	1.5-3	
Units:	ug/kg	Q
VOCs		
Acetone	2,200	J
Benzene	780	J
Methylene chloride	710	JB
Toluene	890	J
Xylene (total)	2,200	J
SVOCs		
Benzo (a) anthracene	1,500	
Benzo (a) pyrene	1,700	
Benzo (b) fluoranthene	2,700	
Chrysene	1,600	
Dibenzo (a,h) anthracene	540	
Indeno (1,2,3-cd) pyrene	920	
Metals		
Copper	153,000	
Lead	177,000	
Mercury (elemental)	1,600	
Zinc	132,000	

Sample ID:	P-2	
Laboratory Sample Number:	1204166-3	
Sampling Date:	4/11/2012	
Sampling Depth (ft):	4-5	
Units:	ug/kg	Q
SVOCs		
Benzo (a) anthracene	1,040	
Benzo (a) pyrene	1,090.00	
Benzo (k) fluoranthene	906	
Chrysene	1,060	
Indeno (1,2,3-cd) pyrene	644	

Sample ID:	SB-10/1-3	
Laboratory Sample Number:	207935-010	
Sampling Date:	10/25/2004	
Sampling Depth (ft):	1-3	
Units:	ug/kg	Q
VOCs		
Methylene chloride	99	JB
Xylene (total)	280	J
SVOCs		
Benzo (a) anthracene	3,900	
Benzo (a) pyrene	4,000	
Benzo (b) fluoranthene	3,000	
Benzo (k) fluoranthene	3,400	
Chrysene	4,200	
Dibenzo (a,h) anthracene	860	J
Indeno (1,2,3-cd) pyrene	2,000.0	
Metals		
Copper	131,000	
Lead	222,000	
Mercury (elemental)	280	

Legend
- Site Boundary
- Existing Building
- Former AST Locations
- Gowanus Canal
- Street Extents
- Area of Concern

Sample Locations
- Monitoring Well/Piezometer Location (ELM, 2004 - 2005)
- Soil Boring Location (ELM, 2004 - 2005)
- Soil Boring & Temporary Well Location (ELM, 2004 - 2005)
- Test Pit Location (ELM, 2004 - 2005)
- Geoprobe Location (PW Grosser, 2011)
- Monitoring Well Location (USEPA, 2011)
- Test Pit Location (PW Grosser, 2011)
- Test Pit Location (Zeb Environmental, 2012)
- Test Pit Location (Cosmo Environmental, 1997)

30 0 30
SCALE IN FEET

Notes:
1. Map features are based on aerial photographs, tax maps, and the following ELM reports: Phase II Investigation Report, 363 Bond Street (May 2005), and Phase II Investigation Report, 400 Carroll Street (May 2005).
2. All ELM sample locations are approximate and based on the reports identified in Note 1.
3. AOC-1: Proposed Excavation Area - 388 Carroll Street, North; AOC-2: Proposed Excavation Area - 388 Carroll Street, South; AOC-3: Proposed Excavation Area - 363 Bond Street; AOC-5: Former UST Area

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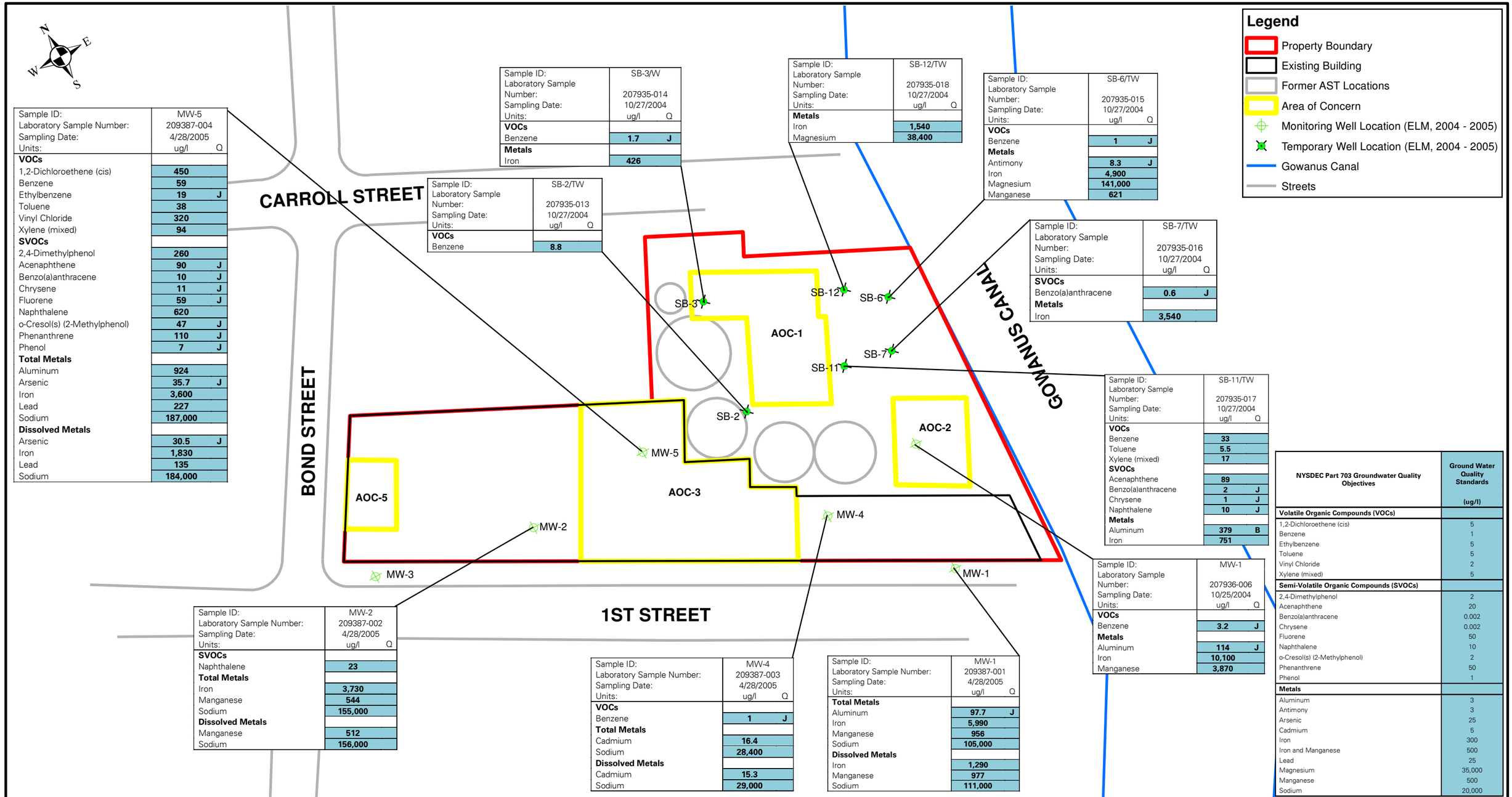
Collectively known as Langan
NJ CERTIFICATE OF AUTHORIZATION No. 24GA27996400

Project	Drawing Title	Project No. 100287501	Figure
PROPOSED BOND STREET DEVELOPMENT BLOCK No. 452 LOT Nos. 1 & 15 BROOKLYN KINGS COUNTY NEW YORK	SUMMARY OF HISTORIC SOIL ANALYTICAL RESULTS	Date 7/2/2012 Scale 1"=30' Drawn By atr Last Revised 5/27/2014	6



Sample ID:	MW-5	
Laboratory Sample Number:	209387-004	
Sampling Date:	4/28/2005	
Units:	ug/l	Q
VOCs		
1,2-Dichloroethene (cis)	450	
Benzene	59	
Ethylbenzene	19	J
Toluene	38	
Vinyl Chloride	320	
Xylene (mixed)	94	
SVOCs		
2,4-Dimethylphenol	260	
Acenaphthene	90	J
Benzo(a)anthracene	10	J
Chrysene	11	J
Fluorene	59	J
Naphthalene	620	
o-Cresol(s) (2-Methylphenol)	47	J
Phenanthrene	110	J
Phenol	7	J
Total Metals		
Aluminum	924	
Arsenic	35.7	J
Iron	3,600	
Lead	227	
Sodium	187,000	
Dissolved Metals		
Arsenic	30.5	J
Iron	1,830	
Lead	135	
Sodium	184,000	

Sample ID:	SB-3/W	
Laboratory Sample Number:	207935-014	
Sampling Date:	10/27/2004	
Units:	ug/l	Q
VOCs		
Benzene	1.7	J
Metals		
Iron	426	

Sample ID:	SB-2/TW	
Laboratory Sample Number:	207935-013	
Sampling Date:	10/27/2004	
Units:	ug/l	Q
VOCs		
Benzene	8.8	

Sample ID:	SB-12/TW	
Laboratory Sample Number:	207935-018	
Sampling Date:	10/27/2004	
Units:	ug/l	Q
Metals		
Iron	1,540	
Magnesium	38,400	

Sample ID:	SB-6/TW	
Laboratory Sample Number:	207935-015	
Sampling Date:	10/27/2004	
Units:	ug/l	Q
VOCs		
Benzene	1	J
Metals		
Antimony	8.3	J
Iron	4,900	
Magnesium	141,000	
Manganese	621	

Sample ID:	SB-7/TW	
Laboratory Sample Number:	207935-016	
Sampling Date:	10/27/2004	
Units:	ug/l	Q
SVOCs		
Benzo(a)anthracene	0.6	J
Metals		
Iron	3,540	

Sample ID:	SB-11/TW	
Laboratory Sample Number:	207935-017	
Sampling Date:	10/27/2004	
Units:	ug/l	Q
VOCs		
Benzene	33	
Toluene	5.5	
Xylene (mixed)	17	
SVOCs		
Acenaphthene	89	
Benzo(a)anthracene	2	J
Chrysene	1	J
Naphthalene	10	J
Metals		
Aluminum	379	B
Iron	751	

Sample ID:	MW-1	
Laboratory Sample Number:	207936-006	
Sampling Date:	10/25/2004	
Units:	ug/l	Q
VOCs		
Benzene	3.2	J
Metals		
Aluminum	114	J
Iron	10,100	
Manganese	3,870	

Sample ID:	MW-2	
Laboratory Sample Number:	209387-002	
Sampling Date:	4/28/2005	
Units:	ug/l	Q
SVOCs		
Naphthalene	23	
Total Metals		
Iron	3,730	
Manganese	544	
Sodium	155,000	
Dissolved Metals		
Manganese	512	
Sodium	156,000	

Sample ID:	MW-4	
Laboratory Sample Number:	209387-003	
Sampling Date:	4/28/2005	
Units:	ug/l	Q
VOCs		
Benzene	1	J
Total Metals		
Cadmium	16.4	
Sodium	28,400	
Dissolved Metals		
Cadmium	15.3	
Sodium	29,000	

Sample ID:	MW-1	
Laboratory Sample Number:	209387-001	
Sampling Date:	4/28/2005	
Units:	ug/l	Q
Total Metals		
Aluminum	97.7	J
Iron	5,990	
Manganese	956	
Sodium	105,000	
Dissolved Metals		
Iron	1,290	
Manganese	977	
Sodium	111,000	

NYSDEC Part 703 Groundwater Quality Objectives	Ground Water Quality Standards (ug/l)
Volatile Organic Compounds (VOCs)	
1,2-Dichloroethene (cis)	5
Benzene	1
Ethylbenzene	5
Toluene	5
Vinyl Chloride	2
Xylene (mixed)	5
Semi-Volatile Organic Compounds (SVOCs)	
2,4-Dimethylphenol	2
Acenaphthene	20
Benzo(a)anthracene	0.002
Chrysene	0.002
Fluorene	50
Naphthalene	10
o-Cresol(s) (2-Methylphenol)	2
Phenanthrene	50
Phenol	1
Metals	
Aluminum	3
Antimony	3
Arsenic	25
Cadmium	5
Iron	300
Iron and Manganese	500
Lead	25
Magnesium	35,000
Manganese	500
Sodium	20,000

Notes:
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NJ CERTIFICATE OF AUTHORIZATION No. 24GA27996400

Project
PROPOSED BOND STREET DEVELOPMENT
BLOCK No. 452, LOT No. 1 &15
BROOKLYN
KINGS COUNTY NEW YORK

Drawing Title
SUMMARY OF HISTORIC GROUNDWATER ANALYTICAL RESULTS

Project No.	Figure
100287501	7
Date: 7/2/2012	
Scale: 1"=75'	
Drawn By: atr	
Last Revised: 5/27/2014	

Path: \\Langan.com\data\EP\data5\100287501\ArcGIS\ArcMap_Documents\2014-05 - NYSDEC RIR (363 Bond-388 Carroll)\Figure 7 - 363 Bond and 388 Carroll Historic Groundwater.mxd

SUBPART 375-6 (Revised Brownfields)	UNRESTRICTED USE OBJECTIVES	RESTRICTED USE SOIL CLEANUP OBJECTIVES Protection of Public Health			
		Restricted Residential Use	Restricted - Residential	Restricted - Commercial	Restricted - Industrial
	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
VOCs					
1,2,4-Trimethylbenzene	3,600	47,000	52,000	190,000	380,000
Acetone	50	100,000	100,000	500,000	1,000,000
Benzene	60	2,900	4,800	44,000	89,000
Cis-1,2-Dichloroethylene	250	59,000	100,000	500,000	1,000,000
Ethylbenzene	1,000	30,000	41,000	390,000	780,000
M And P Xylenes	260	100,000	100,000	500,000	100,000
Toluene	700	100,000	100,000	500,000	1,000,000
Trichloroethylene (TCE)	470	10,000	21,000	200,000	400,000
Vinyl Chloride	20	210	900	13,000	27,000
SVOCs					
2-Methylphenol (O-Cresol)	330	100,000	100,000	500,000	1,000,000
Acenaphthene	20,000	100,000	100,000	500,000	1,000,000
Anthracene	100,000	100,000	100,000	500,000	1,000,000
Benzo(A)Anthracene	1,000	1,000	1,000	5,600	11,000
Benzo(A)Pyrene	1,000	1,000	1,000	1,000	1,100
Benzo(B)Fluoranthene	1,000	1,000	1,000	5,600	11,000
Benzo(K)Fluoranthene	800	1,000	3,900	56,000	110,000
Chrysene	1,000	1,000	3,900	56,000	110,000
Cresols, M & P	330	34,000	100,000	500,000	1,000,000
Dibenz(A,H)Anthracene	330	330	330	560	1,100
Dibenzofuran	7,000	14,000	59,000	350,000	1,000,000
Fluoranthene	100,000	100,000	100,000	500,000	1,000,000
Fluorene	30,000	100,000	100,000	500,000	1,000,000
Indeno(1,2,3-C,D)Pyrene	500	500	500	5,600	11,000
Naphthalene	12,000	100,000	100,000	500,000	1,000,000
Phenanthrene	100,000	100,000	100,000	500,000	1,000,000
Phenol	330	100,000	100,000	500,000	1,000,000
Pyrene	100,000	100,000	100,000	500,000	1,000,000
Pesticides					
4,4'-Dde	3.3	1,800	8,900	62,000	120,000
4,4'-Ddt	3.3	1,700	7,900	47,000	94,000
PCBs					
PCB-1254 (Aroclor 1254)	100	1,000	1,000	1,000	25,000
Metals					
Cadmium	2,500	2,500	4,300	9,300	60,000
Copper	50,000	270,000	270,000	270,000	10,000,000
Lead	63,000	400,000	400,000	1,000,000	3,900,000
Mercury	180	810	810	2,800	5,700
Zinc	109,000	2,200,000	10,000,000	10,000,000	10,000,000

Phase:	DUEDILIGENCE2012
Location:	LSB-1
Sample ID:	002/001
Sample Date:	8/21/2012
Sampling Depth (ft):	7.5-9.5/8-8.5
Units:	ug/kg Q
VOCs	
Acetone	217 J
Ethylbenzene	2260
M and P Xylenes	17,100
SVOCs	
2-Methylphenol (O-Cresol)	1,500
Acenaphthene	72,200
Anthracene	151,000
Benzo(A)Anthracene	168,000
Benzo(A)Pyrene	152,000
Benzo(B)Fluoranthene	150,000
Benzo(K)Fluoranthene	76,700
Chrysene	166,000
Dibenz(A,H)Anthracene	36,900
Dibenzofuran	82,100
Fluoranthene	473,000
Fluorene	84,200
Indeno(1,2,3-C,D)Pyrene	89,900
Naphthalene	102,000
Phenanthrene	53,9000
Phenol	1,910
Pyrene	340,000
Metals	
Lead	435,000

Phase:	RIFS		RIFS	
Location:	LSB-9		LSB-9	
Sample ID:	079-LSB-9-20130909		080-LSB-9-20130909	
Sample Date:	9/9/2013		9/9/2013	
Sampling Depth (ft):	0-2		4-6	
Units:	ug/kg	Q	ug/kg	Q
VOCs				
1,2,4-Trimethylbenzene	2.7	U	19000	
Benzene	2.7	U	1000	J
Cis-1,2-Dichloroethylene	5.3	J	950	J
Ethylbenzene	2.7	U	3000	
M and P Xylenes	2.7	U	8000	
Toluene	2.7	U	1500	
Trichloroethylene (TCE)	54		3500	
SVOCs				
Acenaphthene	95.5	J	53500	
Benzo(A)Anthracene	571		122000	
Benzo(A)Pyrene	625		103000	
Benzo(B)Fluoranthene	642		50400	
Benzo(K)Fluoranthene	660		74500	
Chrysene	604		124000	
Dibenz(A,H)Anthracene	56.6	J	17200	J
Dibenzofuran	46.6	U	29700	
Fluoranthene	1370		245000	
Fluorene	74	J	63400	
Indeno(1,2,3-C,D)Pyrene	140	J	26300	J
Naphthalene	78.8	J	105000	
Phenanthrene	845		279000	
Pyrene	1030		198000	
PCBs				
PCB-1254 (Aroclor 1254)	6240		21.1	U
Metals				
Cadmium	62100		213000	
Copper	57600		23500	
Lead	142000		2950000	
Mercury	661		884	
Nickel	30900		19000	
Zinc	277000		6800000	

Phase:	DUEDILIGENCE2012	DUEDILIGENCE2012
Location:	LSB-4	LSB-4
Sample ID:	012	014
Sample Date:	8/22/2012	8/22/2012
Sampling Depth (ft):	7-9	7-9
Units:	ug/kg Q	ug/kg Q
VOCs		
M and P Xylenes	437	875
SVOCs		
Benzo(A)Anthracene	1,660	989
Benzo(A)Pyrene	1320	902
Benzo(B)Fluoranthene	1,240	754
Benzo(K)Fluoranthene	864	619
Chrysene	1,580	1,030
Indeno(1,2,3-C,D)Pyrene	718	503

Phase:	DUEDILIGENCE2012	DUEDILIGENCE2012
Location:	LSB-3	LSB-3
Sample ID:	008	010
Sample Date:	8/22/2012	8/22/2012
Sampling Depth (ft):	6-8	12-14
Units:	ug/kg Q	ug/kg Q
SVOCs		
Benzo(A)Anthracene	1,580	6,450
Benzo(A)Pyrene	1,410	6,170
Benzo(B)Fluoranthene	1,490	4,960
Benzo(K)Fluoranthene	722	4,510
Chrysene	1,550	6,090
Dibenz(A,H)Anthracene	300	1,310
Indeno(1,2,3-C,D)Pyrene	762	3,550

Phase:	DUEDILIGENCE2012	DUEDILIGENCE2012
Location:	LSB-2	LSB-2
Sample ID:	004	006
Sample Date:	8/21/2012	8/21/2012
Sampling Depth (ft):	6.5-8.5	11.5-13.5
Units:	ug/kg Q	ug/kg Q
SVOCs		
Benzo(A)Anthracene	2,670	2,620
Benzo(A)Pyrene	3,080	2,910
Benzo(B)Fluoranthene	3,000	2,840
Benzo(K)Fluoranthene	1,360	1,370
Chrysene	2,670	2,580
Dibenz(A,H)Anthracene	774	688
Indeno(1,2,3-C,D)Pyrene	1,910	1,750

Phase:	RIFS	RIFS	RIFS
Location:	LSB-21	LSB-21	LSB-21
Sample ID:	123-LSB-21-20130912	124-LSB-2120130912	125-DUP-3-20130912
Sample Date:	9/12/2013	9/12/2013	9/12/2013
Sample Depth (ft):	0-2	7-9	7-9
Units:	ug/kg Q	ug/kg Q	ug/kg Q
VOCs			
Acetone	12 U	33 U	110 J

Phase:	RIFS	RIFS
Location:	LSB-27	LSB-27
Sample ID:	128-LSB-27-20130913	129-LSB-27-20130913
Sample Date:	9/13/2013	9/13/2013
Sample Depth (ft):	0-2	5-7
Units:	ug/kg Q	ug/kg Q
VOCs		
Vinyl Chloride	3.4 U	23

Phase:	RIFS
Location:	LSB-10
Sample ID:	085-LSB-10-20130909
Sample Date:	9/9/2013
Sample Depth (ft):	0-2
Units:	ug/kg Q
VOCs	
Acetone	150
Pesticides	
4,4'-DDE	548

Phase:	RIFS
Location:	LSB-25
Sample ID:	074-LSB-25-20130906
Sample Date:	9/6/2013
Sampling Depth (ft):	5.5-7.5
Units:	ug/kg Q
VOCs	
Acetone	270 J
Cis-1,2-Dichloroethylene	440 J
Ethylbenzene	1100
M and P Xylenes	2000
Trichloroethylene (TCE)	480
SVOCs	
Acenaphthene	20200
Benzo(A)Anthracene	75100
Benzo(A)Pyrene	71300
Benzo(B)Fluoranthene	41300
Benzo(K)Fluoranthene	39700
Chrysene	74800
Dibenzofuran	18500 J
Fluoranthene	160000
Indeno(1,2,3-C,D)Pyrene	19700
Naphthalene	49200
Phenanthrene	162000
Pyrene	149000
Metals	
Lead	430000

Phase:	RIFS
Location:	LSB-8
Sample ID:	075-LSB-8-20130906
Sample Date:	9/6/2013
Sampling Depth (ft):	10-12
Units:	ug/kg Q
VOCs	
Acetone	320 J
Metals	
Lead	169,000

Phase:	RIFS	RIFS
Location:	LSB-7	LSB-7
Sample ID:	072-LSB-7-20130906	073-LSB-7-20130906
Sample Date:	9/6/2013	9/6/2013
Sampling Depth (ft):	0-2	13-15
Units:	ug/kg Q	ug/kg Q
SVOCs		
Benzo(A)Anthracene	351	2,010
Benzo(A)Pyrene	362	1,980
Benzo(B)Fluoranthene	335	1,230
Benzo(K)Fluoranthene	203	1,160
Chrysene	353	1,900
Indeno(1,2,3-C,D)Pyrene	121 J	594 J
PCBs		
PCB-1254 (Aroclor 1254)	330	19.9 U

Location:	LSB-23
Sample ID:	076-LSB-23-20130906
Sample Date:	9/6/2013
Sampling Depth (ft):	2-4
Units:	ug/kg Q
VOCs	
Acetone	65 J
SVOCs	
Benzo(A)Anthracene	11,700
Benzo(A)Pyrene	9,820
Benzo(B)Fluoranthene	9,010
Benzo(K)Fluoranthene	11,700
Chrysene	9,590
Dibenz(A,H)Anthracene	1,670 J
Indeno(1,2,3-C,D)Pyrene	3,230
Metals	
Cadmium	21,000
Lead	167,000
Zinc	197,000

Phase:	RIFS	RIFS	RIFS
Location:	LSB-22	LSB-22	LSB-22
Sample ID:	081-LSB-22-20130909	083-DUP-2-20130909	082-084-LSB-22-20130909
Sample Date:	9/9/2013	9/9/2013	9/9/2013
Sampling Depth (ft):	0-2	0-2	4-6
Units:	ug/kg Q	ug/kg Q	ug/kg Q
VOCs			
Acetone	79	48	790 U
Cis-1,2-Dichloroethylene	4.3 U	3.2 U	1700
M and P Xylenes	4.3 U	3.2 U	1000
Trichloroethylene (TCE)	6.2 J	9.4	1500 J
SVOCs			
Benzo(A)Anthracene	754 J	1000 J	10400 J
Benzo(A)Pyrene	851 J	991 J	11700 J
Benzo(B)Fluoranthene	753 J	878 J	13000
Benzo(K)Fluoranthene	1100	1350	11200 J
Chrysene	773 J	998 J	10200 J
Pesticides			
P,P'-DDE	4.39 J	2.59 J	2.15 U
P,P'-DDT	9.56 J	7.73 J	2.15 U
Metals			
Copper	487000 J	1090000 J	105000
Lead	656000	572000	321000
Mercury	828 J	2010 J	4320
Nickel	61700 J	35400 J	12800
Zinc	2670000 J	874000 J	1680000

Phase:	RIFS
Location:	LSB-24
Sample ID:	086-LSB-24-20130909
Sample Date:	9/9/2013
Sampling Depth (ft):	0-4
Units:	ug/kg Q
VOCs	
Acetone	150
Pesticides	
P,P'-DDE	3.44
Metals	
Cadmium	50,000
Copper	135,000
Lead	110,000
Zinc	691,000

Legend

- Property Boundary
- Existing Building
- Former AST Locations
- Gowanus Canal
- Streets
- Area of Concern
- Due Diligence Investigation Soil Boring Location (Langan, 2012)
- Remedial Investigation Boring Location (Langan, 2013)
- Remedial Investigation Boring/Monitoring Well Location (Langan, 2013)

CARROLL STREET

BOND STREET

1ST STREET

GOWANUS CANAL

AOC-1

AOC-2

AOC-3

AOC-5

LSB-1 LSB-2 LSB-3 LSB-4 LSB-7 LSB-8 LSB-9 LSB-10 LSB-23 LSB-24 LSB-25/LMW-7 LSB-21/LMW-5 LSB-27/LMW-9 LSB-22/LMW-6

N E S W

75 0 75

SCALE IN FEET

Notes:
1. Map features are based on aerial photographs, tax maps, and the following ELM reports: Phase II Investigation Report, 363 Bond Street (May 2005), and Phase II Investigation Report, 400 Carroll Street (May 2005).
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Langan International LLC
Collectively known as Langan

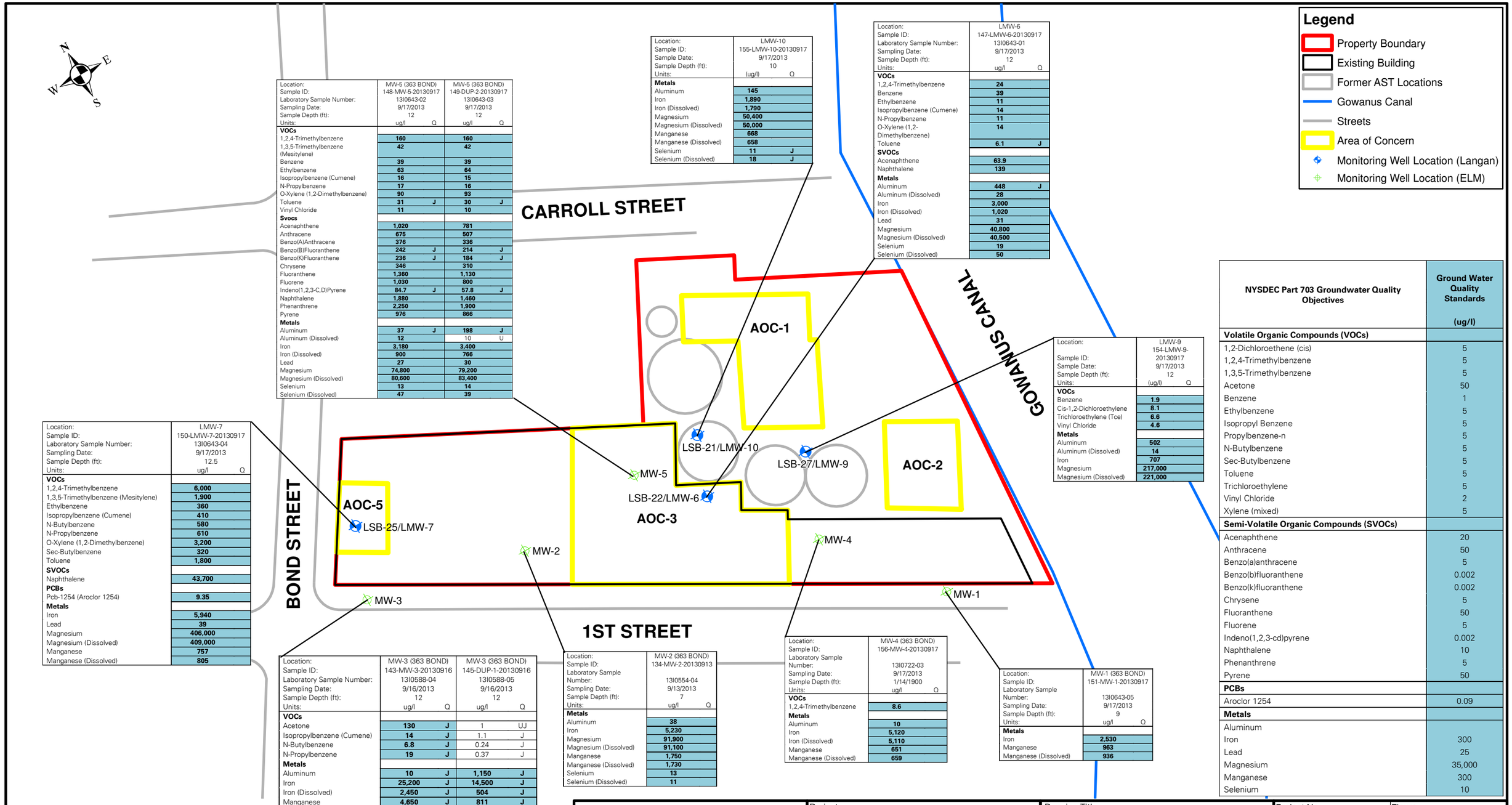
NJ CERTIFICATE OF AUTHORIZATION No. 24GA27996400

Project
PROPOSED BOND STREET DEVELOPMENT
BLOCK No. 452, LOT Nos. 1 & 15
BROOKLYN
KINGS COUNTY NEW YORK

Drawing Title
SUMMARY OF LANGAN SOIL ANALYTICAL RESULTS

Project No.	100287501
Date	7/2/2012
Scale	1"=75'
Drawn By	atr
Last Revised	5/27/2014
Figure	8

Path: \\Langan.com\data\EP\data5\100287501\ArcGIS\ArcMap_Documents\2014-05 - NYSDEC RIR (363 Bond-388 Carroll)\Figure 8 - 363 Bond and 388 Carroll Langan Soil.mxd



Location:	LMW-10
Sample ID:	155-LMW-10-20130917
Sample Date:	9/17/2013
Sample Depth (ft):	10
Units:	(ug/l) Q
Metals	
Aluminum	145
Iron	1,890
Iron (Dissolved)	1,790
Magnesium	50,400
Magnesium (Dissolved)	50,000
Manganese	668
Manganese (Dissolved)	658
Selenium	11 J
Selenium (Dissolved)	18 J

Location:	LMW-6
Sample ID:	147-LMW-6-20130917
Laboratory Sample Number:	13I0643-01
Sampling Date:	9/17/2013
Sample Depth (ft):	12
Units:	ug/l Q
VOCs	
1,2,4-Trimethylbenzene	24
Benzene	39
Ethylbenzene	11
Isopropylbenzene (Cumene)	14
N-Propylbenzene	11
O-Xylene (1,2-Dimethylbenzene)	14
Toluene	6.1 J
SVOCs	
Acenaphthene	63.9
Naphthalene	139
Metals	
Aluminum	448 J
Aluminum (Dissolved)	28
Iron	3,000
Iron (Dissolved)	1,020
Lead	31
Magnesium	40,800
Magnesium (Dissolved)	40,500
Selenium	19
Selenium (Dissolved)	50

Location:	MW-5 (363 BOND)		MW-5 (363 BOND)	
Sample ID:	148-MW-5-20130917		149-DUP-2-20130917	
Laboratory Sample Number:	13I0643-02		13I0643-03	
Sampling Date:	9/17/2013		9/17/2013	
Sample Depth (ft):	12		12	
Units:	ug/l	Q	ug/l	Q
VOCs				
1,2,4-Trimethylbenzene	160		160	
1,3,5-Trimethylbenzene (Mesitylene)	42		42	
Benzene	39		39	
Ethylbenzene	63		64	
Isopropylbenzene (Cumene)	16		15	
N-Propylbenzene	17		16	
O-Xylene (1,2-Dimethylbenzene)	90		93	
Toluene	31	J	30	J
Vinyl Chloride	11		10	
Svocs				
Acenaphthene	1,020		781	
Anthracene	675		507	
Benzo(A)Anthracene	376		338	
Benzo(B)Fluoranthene	242	J	214	J
Benzo(K)Fluoranthene	236	J	184	J
Chrysene	346		310	
Fluoranthene	1,360		1,130	
Fluorene	1,030		800	
Indeno(1,2,3-C,D)Pyrene	84.7	J	57.8	J
Naphthalene	1,880		1,460	
Phenanthrene	2,250		1,900	
Pyrene	976		866	
Metals				
Aluminum	37	J	198	J
Aluminum (Dissolved)	12		10	U
Iron	3,180		3,400	
Iron (Dissolved)	900		766	
Lead	27		30	
Magnesium	74,800		79,200	
Magnesium (Dissolved)	80,600		83,400	
Selenium	13		14	
Selenium (Dissolved)	47		39	

Location:	LMW-9
Sample ID:	154-LMW-9-20130917
Sample Date:	9/17/2013
Sample Depth (ft):	12
Units:	(ug/l) Q
VOCs	
Benzene	1.9
Cis-1,2-Dichloroethylene	8.1
Trichloroethylene (Tce)	6.6
Vinyl Chloride	4.6
Metals	
Aluminum	502
Aluminum (Dissolved)	14
Iron	707
Magnesium	217,000
Magnesium (Dissolved)	221,000

Location:	LMW-7
Sample ID:	150-LMW-7-20130917
Laboratory Sample Number:	13I0643-04
Sampling Date:	9/17/2013
Sample Depth (ft):	12.5
Units:	ug/l Q
VOCs	
1,2,4-Trimethylbenzene	6,000
1,3,5-Trimethylbenzene (Mesitylene)	1,900
Ethylbenzene	360
Isopropylbenzene (Cumene)	410
N-Butylbenzene	580
N-Propylbenzene	610
O-Xylene (1,2-Dimethylbenzene)	3,200
Sec-Butylbenzene	320
Toluene	1,800
SVOCs	
Naphthalene	43,700
PCBs	
Pcb-1254 (Aroclor 1254)	9.35
Metals	
Iron	5,940
Lead	39
Magnesium	406,000
Magnesium (Dissolved)	409,000
Manganese	757
Manganese (Dissolved)	805

Location:	MW-3 (363 BOND)		MW-3 (363 BOND)	
Sample ID:	143-MW-3-20130916		145-DUP-1-20130916	
Laboratory Sample Number:	13I0588-04		13I0588-05	
Sampling Date:	9/16/2013		9/16/2013	
Sample Depth (ft):	12		12	
Units:	ug/l	Q	ug/l	Q
VOCs				
Acetone	130	J	1	UJ
Isopropylbenzene (Cumene)	14	J	1.1	J
N-Butylbenzene	6.8	J	0.24	J
N-Propylbenzene	19	J	0.37	J
Metals				
Aluminum	10	J	1,150	J
Iron	25,200	J	14,500	J
Iron (Dissolved)	2,450	J	504	J
Manganese	4,650	J	811	J
Manganese (Dissolved)	4,480	J	741	J
Selenium	10	U	11	
Selenium (Dissolved)	10	U	21	

Location:	MW-2 (363 BOND)
Sample ID:	134-MW-2-20130913
Laboratory Sample Number:	13I0554-04
Sampling Date:	9/13/2013
Sample Depth (ft):	7
Units:	ug/l Q
Metals	
Aluminum	38
Iron	5,230
Magnesium	91,900
Magnesium (Dissolved)	91,100
Manganese	1,750
Manganese (Dissolved)	1,730
Selenium	13
Selenium (Dissolved)	11

Location:	MW-4 (363 BOND)
Sample ID:	156-MW-4-20130917
Laboratory Sample Number:	13I0722-03
Sampling Date:	9/17/2013
Sample Depth (ft):	1/14/1900
Units:	ug/l Q
VOCs	
1,2,4-Trimethylbenzene	8.6
Metals	
Aluminum	10
Iron	5,120
Iron (Dissolved)	5,110
Manganese	651
Manganese (Dissolved)	659

Location:	MW-1 (363 BOND)
Sample ID:	151-MW-1-20130917
Laboratory Sample Number:	13I0643-05
Sampling Date:	9/17/2013
Sample Depth (ft):	9
Units:	ug/l Q
Metals	
Iron	2,530
Manganese	963
Manganese (Dissolved)	936

NYSDEC Part 703 Groundwater Quality Objectives	Ground Water Quality Standards (ug/l)
Volatile Organic Compounds (VOCs)	
1,2-Dichloroethene (cis)	5
1,2,4-Trimethylbenzene	5
1,3,5-Trimethylbenzene	5
Acetone	50
Benzene	1
Ethylbenzene	5
Isopropyl Benzene	5
Propylbenzene-n	5
N-Butylbenzene	5
Sec-Butylbenzene	5
Toluene	5
Trichloroethylene	5
Vinyl Chloride	2
Xylene (mixed)	5
Semi-Volatile Organic Compounds (SVOCs)	
Acenaphthene	20
Anthracene	50
Benzo(a)anthracene	5
Benzo(b)fluoranthene	0.002
Benzo(k)fluoranthene	0.002
Chrysene	5
Fluoranthene	50
Fluorene	5
Indeno(1,2,3-cd)pyrene	0.002
Naphthalene	10
Phenanthrene	5
Pyrene	50
PCBs	
Aroclor 1254	0.09
Metals	
Aluminum	
Iron	300
Lead	25
Magnesium	35,000
Manganese	300
Selenium	10

Notes:
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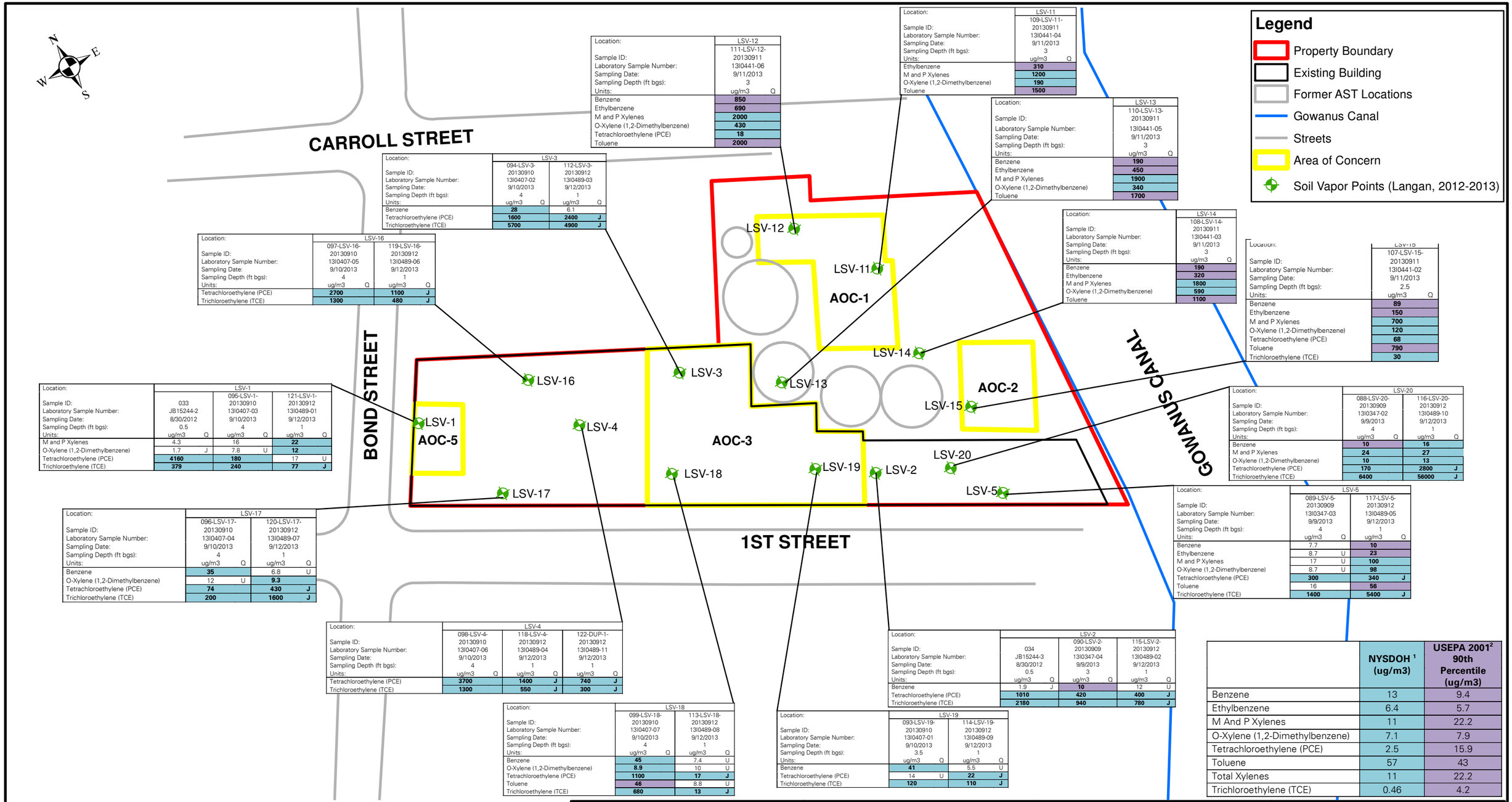
Collectively known as Langan
NJ CERTIFICATE OF AUTHORIZATION No. 24GA27996400

Project
PROPOSED BOND STREET DEVELOPMENT
BLOCK No. 452, LOT Nos. 1 & 15
BROOKLYN
KINGS COUNTY NEW YORK

Drawing Title
SUMMARY OF LANGAN GROUNDWATER ANALYTICAL RESULTS

Project No. 100287501
Date 5/8/2014
Scale 1"=75'
Drawn By atr
Last Revised 5/27/2014
Figure 9

Path: \\Langan.com\data\EP\data5\100287501\ArcGIS\ArcMap_Documents\2014-05 - NYSDEC RIR (363 Bond-388 Carroll)\Figure 9 - 363 Bond and 388 Carroll Langan Groundwater.mxd



Location:	LSV-12
Sample ID:	111-LSV-12-20130911
Laboratory Sample Number:	13I0441-06
Sampling Date:	9/11/2013
Sampling Depth (ft bgs):	3
Units:	ug/m3 Q
Benzene	850
Ethylbenzene	690
M and P Xylenes	2000
O-Xylene (1,2-Dimethylbenzene)	430
Tetrachloroethylene (PCE)	18
Toluene	2000

Location:	LSV-11
Sample ID:	109-LSV-11-20130911
Laboratory Sample Number:	13I0441-04
Sampling Date:	9/11/2013
Sampling Depth (ft bgs):	3
Units:	ug/m3 Q
Ethylbenzene	310
M and P Xylenes	1200
O-Xylene (1,2-Dimethylbenzene)	190
Toluene	1500

Location:	LSV-13
Sample ID:	110-LSV-13-20130911
Laboratory Sample Number:	13I0441-05
Sampling Date:	9/11/2013
Sampling Depth (ft bgs):	3
Units:	ug/m3 Q
Benzene	190
Ethylbenzene	450
M and P Xylenes	1900
O-Xylene (1,2-Dimethylbenzene)	340
Toluene	1700

Location:	LSV-3		
Sample ID:	094-LSV-3-20130910	112-LSV-3-20130912	
Laboratory Sample Number:	13I0407-02	13I0489-03	
Sampling Date:	9/10/2013	9/12/2013	
Sampling Depth (ft bgs):	4	1	
Units:	ug/m3 Q	ug/m3 Q	
Benzene	28	6.1	
Tetrachloroethylene (PCE)	1600	2400	J
Trichloroethylene (TCE)	5700	4900	J

Location:	LSV-14
Sample ID:	108-LSV-14-20130911
Laboratory Sample Number:	13I0441-03
Sampling Date:	9/11/2013
Sampling Depth (ft bgs):	3
Units:	ug/m3 Q
Benzene	190
Ethylbenzene	320
M and P Xylenes	1800
O-Xylene (1,2-Dimethylbenzene)	590
Toluene	1100

Location:	LSV-16		
Sample ID:	097-LSV-16-20130910	119-LSV-16-20130912	
Laboratory Sample Number:	13I0407-05	13I0489-06	
Sampling Date:	9/10/2013	9/12/2013	
Sampling Depth (ft bgs):	4	1	
Units:	ug/m3 Q	ug/m3 Q	
Tetrachloroethylene (PCE)	2700	1100	J
Trichloroethylene (TCE)	1300	480	J

Location:	LSV-15
Sample ID:	107-LSV-15-20130911
Laboratory Sample Number:	13I0441-02
Sampling Date:	9/11/2013
Sampling Depth (ft bgs):	2.5
Units:	ug/m3 Q
Benzene	89
Ethylbenzene	150
M and P Xylenes	700
O-Xylene (1,2-Dimethylbenzene)	120
Tetrachloroethylene (PCE)	68
Toluene	790
Trichloroethylene (TCE)	30

Location:	LSV-1					
Sample ID:	033		095-LSV-1-20130910		121-LSV-1-20130912	
Laboratory Sample Number:	JB15244-2		13I0407-03		13I0489-01	
Sampling Date:	8/30/2012		9/10/2013		9/12/2013	
Sampling Depth (ft bgs):	0.5		4		1	
Units:	ug/m3	Q	ug/m3	Q	ug/m3	Q
M and P Xylenes	4.3		16		22	
O-Xylene (1,2-Dimethylbenzene)	1.7	J	7.8	U	12	
Tetrachloroethylene (PCE)	4160		180		17	U
Trichloroethylene (TCE)	379		240		77	J

Location:	LSV-20			
Sample ID:	088-LSV-20-20130909		116-LSV-20-20130912	
Laboratory Sample Number:	13I0347-02		13I0489-10	
Sampling Date:	9/9/2013		9/12/2013	
Sampling Depth (ft bgs):	4		1	
Units:	ug/m3	Q	ug/m3	Q
Benzene	10		16	
M and P Xylenes	24		27	
O-Xylene (1,2-Dimethylbenzene)	10		13	
Tetrachloroethylene (PCE)	170		2800	J
Trichloroethylene (TCE)	6400		56000	J

Location:	LSV-17			
Sample ID:	096-LSV-17-20130910		120-LSV-17-20130912	
Laboratory Sample Number:	13I0407-04		13I0489-07	
Sampling Date:	9/10/2013		9/12/2013	
Sampling Depth (ft bgs):	4		1	
Units:	ug/m3	Q	ug/m3	Q
Benzene	35		6.8	U
O-Xylene (1,2-Dimethylbenzene)	12	U	9.3	
Tetrachloroethylene (PCE)	74		430	J
Trichloroethylene (TCE)	200		1600	J

Location:	LSV-5			
Sample ID:	089-LSV-5-20130909		117-LSV-5-20130912	
Laboratory Sample Number:	13I0347-03		13I0489-05	
Sampling Date:	9/9/2013		9/12/2013	
Sampling Depth (ft bgs):	4		1	
Units:	ug/m3	Q	ug/m3	Q
Benzene	7.7		10	
Ethylbenzene	8.7	U	23	
M and P Xylenes	17	U	100	
O-Xylene (1,2-Dimethylbenzene)	8.7	U	98	
Tetrachloroethylene (PCE)	300		340	J
Toluene	16		56	
Trichloroethylene (TCE)	1400		5400	J

Location:	LSV-4					
Sample ID:	098-LSV-4-20130910		118-LSV-4-20130912		122-DUP-1-20130912	
Laboratory Sample Number:	13I0407-06		13I0489-04		13I0489-11	
Sampling Date:	9/10/2013		9/12/2013		9/12/2013	
Sampling Depth (ft bgs):	4		1		1	
Units:	ug/m3	Q	ug/m3	Q	ug/m3	Q
Tetrachloroethylene (PCE)	3700		1400	J	740	J
Trichloroethylene (TCE)	1300		550	J	300	J

Location:	LSV-18			
Sample ID:	099-LSV-18-20130910		113-LSV-18-20130912	
Laboratory Sample Number:	13I0407-07		13I0489-08	
Sampling Date:	9/10/2013		9/12/2013	
Sampling Depth (ft bgs):	4		1	
Units:	ug/m3	Q	ug/m3	Q
Benzene	45		7.4	U
O-Xylene (1,2-Dimethylbenzene)	8.9		10	U
Tetrachloroethylene (PCE)	1100		17	J
Toluene	48		8.8	U
Trichloroethylene (TCE)	680		13	J

Location:	LSV-2					
Sample ID:	034		090-LSV-2-20130909		115-LSV-2-20130912	
Laboratory Sample Number:	JB15244-3		13I0347-04		13I0489-02	
Sampling Date:	8/30/2012		9/9/2013		9/12/2013	
Sampling Depth (ft bgs):	0.5		3		1	
Units:	ug/m3	Q	ug/m3	Q	ug/m3	Q
Benzene	1.9	J	10		12	U
Tetrachloroethylene (PCE)	1010		420		400	J
Trichloroethylene (TCE)	2180		940		780	J

Location:	LSV-19			
Sample ID:	093-LSV-19-20130910		114-LSV-19-20130912	
Laboratory Sample Number:	13I0407-01		13I0489-09	
Sampling Date:	9/10/2013		9/12/2013	
Sampling Depth (ft bgs):	3.5		1	
Units:	ug/m3	Q	ug/m3	Q
Benzene	41		5.5	U
Tetrachloroethylene (PCE)	14	U	22	J
Trichloroethylene (TCE)	120		110	J

	NYSDOH [1] (ug/m3)	USEPA 2001[2] 90th Percentile (ug/m3)
Benzene	13	9.4
Ethylbenzene	6.4	5.7
M And P Xylenes	11	22.2
O-Xylene (1,2-Dimethylbenzene)	7.1	7.9
Tetrachloroethylene (PCE)	2.5	15.9
Toluene	57	43
Total Xylenes	11	22.2
Trichloroethylene (TCE)	0.46	4.2

Notes:
1. Map features are based on aerial photographs, tax maps, and the following ELM reports: Phase II Investigation Report, 363 Bond Street (May 2005) and Phase II Investigation Report, 400 Carroll Street (May 2005).
2. AOC-1: Proposed Excavation Area - 400 Carroll Street, North; AOC-2: Proposed Excavation Area - 400 Carroll Street, South; AOC-3: Proposed Excavation Area - 363 Bond Street; AOC-5: Former UST Area.

LANGAN
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Langan Engineering, Environmental, Surveying and Landscape Architecture, D.P.C.
Langan International LLC
Collectively known as Langan
NJ CERTIFICATE OF AUTHORIZATION No. 24GA27996400

Project
PROPOSED BOND STREET DEVELOPMENT
BLOCK No. 452, LOT Nos. 1 & 15
BROOKLYN
KINGS COUNTY NEW YORK

Drawing Title
SUMMARY OF LANGAN SOIL VAPOR ANALYTICAL RESULTS

Project No. 100287501
Date 10/25/2012
Scale 1"=75'
Drawn By amf
Submission Date 5/27/2014
Figure 10

Path: \\Langan.com\data\EP\data5\100287501\ArcGIS\ArcMap_Documents\2014-05 - NYSDEC RIR (363 Bond-388 Carroll)\Figure 10 - 363 Bond and 388 Carroll Langan Soil Vapor.mxd

CARROLL STREET

BOND STREET

1ST STREET

GOWANUS CANAL

LMW-7	
Media:	Groundwater
Product Thickness:	3 ft
Depth To Product:	6.5 ft

LSB-8	
Media:	Soil
Product Thickness:	Sheen
Depth To Product:	8 ft

SB-2	
Media:	Soil
Product Thickness:	Sheen
Depth To Product:	2 ft / 8 ft

SB-3	
Media:	Soil
Product Thickness:	Sheen
Depth To Product:	4 ft

SB-5	
Media:	Soil
Product Thickness:	Sheen
Depth To Product:	2 ft

TP-3	
Media:	Groundwater
Product Thickness:	0.10 ft
Depth To Product:	7.5 ft

TP-6	
Media:	Groundwater
Product Thickness:	0.5 ft *
Depth To Product:	2.75 ft

GP-01	
Media:	Soil
Product Thickness:	0.67 ft
Depth To Product:	25 ft

LSB-1	
Media:	Soil
Product Thickness:	0.67 ft
Depth To Product:	8 ft / 10 ft

TP-1	
Media:	Soil
Product Thickness:	0.10 ft
Depth To Product:	5.4 ft

LSB-22	
Media:	Soil
Product Thickness:	0.5 ft
Depth To Product:	4 ft

MW-5	
Media:	Soil
Product Thickness:	0.5 ft
Depth To Product:	8 ft
Media:	Soil
Product Thickness:	0.5 ft *
Depth To Product:	7 ft
Media:	Groundwater
Product Thickness:	0.10 ft
Depth To Product:	Groundwater Interface

SB-8	
Media:	Soil
Product Thickness:	0.5 ft *
Depth To Product:	3.5 ft

GP-08	
Media:	Soil
Product Thickness:	0.67 ft
Depth To Product:	25 ft

GP-10	
Media:	Soil
Product Thickness:	0.33 ft
Depth To Product:	30 ft

SB-1	
Media:	Soil
Product Thickness:	Sheen
Depth To Product:	2 ft
Media:	Soil
Product Thickness:	0.5 ft
Depth To Product:	4 ft

TP-2	
Media:	Groundwater
Product Thickness:	Sheen
Depth To Product:	7.5 ft

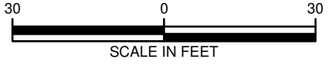
MW-3	
Media:	Groundwater
Product Thickness:	0.5 ft
Depth To Product:	Groundwater Interface

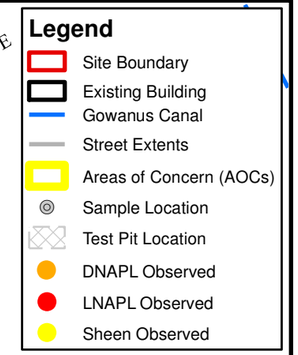
GP-05	
Media:	Soil
Product Thickness:	0.67 ft
Depth To Product:	25 ft

SB-10	
Media:	Soil
Product Thickness:	0.5 ft *
Depth To Product:	8 ft

AOC-1
AOC-2
AOC-3
AOC-5

P-10 SB-12 TP-3 SB-6 P-11 SB-3 TP-6 P-12 SB-5 SB-1 SB-7 TP-2 P-8 TP-1 SB-11 GP-02 MW-36 GP-09 P-5 SB-4 P-9 P-7 TP-4 P-1A P-6 P-1 P-1B SB-8 LSB-21/LMW-10 SB-2 GP-11 GP-01 GP-08 LSB-9 LSB-27/LMW-9 P-2 GP-03 MW-1 GP-06C GP-04 GP-05 GP-06A P-4 MW-43 TP-5 GP-06B SB-10 TP-1 MW-5 LSB-4 LSB-3 GP-07C SB-9 P-3 LSB-22/LMW-6 GP-07B GP-07A GP-10 TP-3 LSB-1 LSB-2 LSB-25/LMW-7 LSB-7 SB-4 LSB-10 SB-3 TP-2 MW-4 SB-5 MW-2 SB-1 LSB-8 LSB-24 SB-2 LSB-23 MW-1 MW-3





Notes:
1. Map features are based on aerial photographs, tax maps, and the following ELM reports: Phase II Investigation Report, 363 Bond Street (May 2005); and Phase II Investigation Report, 400 Carroll Street (May 2005).
2. All ELM sample locations are approximate and based on the reports identified in Note 1.
3. AOC-1: Proposed Excavation Area - 388 Carroll Street, North; AOC-2: Proposed Excavation Area - 388 Carroll Street, South; AOC-3: Proposed Excavation Area - 363 Bond Street; AOC-5: Former UST Area

* A specific product thickness was not provided. Therefore, an approximation of 0.5 feet has been provided.

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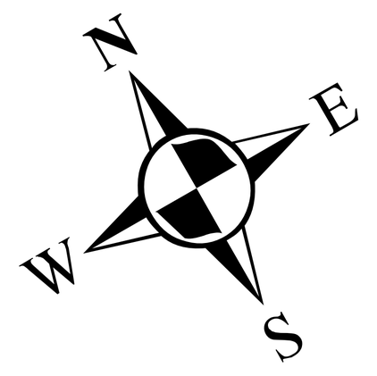
NJ CERTIFICATE OF AUTHORIZATION No. 24GA27996400

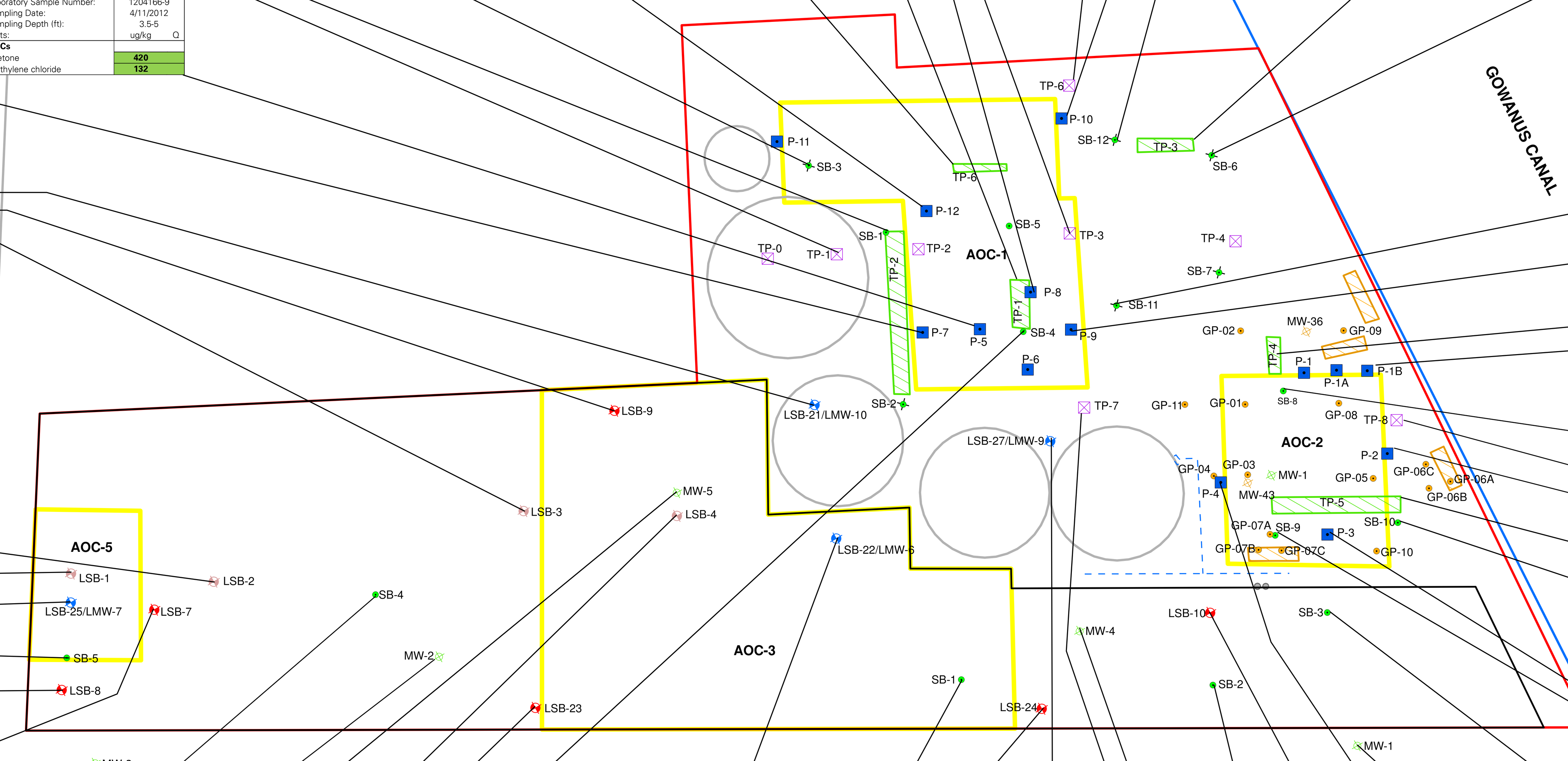
Project
PROPOSED BOND STREET DEVELOPMENT
BLOCK No. 452, LOT Nos. 1 & 15
BROOKLYN
KINGS COUNTY NEW YORK

Drawing Title
SUMMARY OF NAPL OBSERVATIONS

Project No.	100287503
Date	11/6/2012
Scale	1"=30'
Drawn By	amf
Last Revised	5/27/2014
Figure	11

Path: \\Langan.com\data\EP\data5\100287501\ArcGIS\ArcMap_Documents\2014-05 - NYSDEC RIR (363 Bond-388 Carroll)\Figure 11 - Summary of NAPL Observations.mxd





SUBPART 375-6 (Revised Brownfields)	Unrestricted Use Objectives (ug/kg)	Protection of Public Health: Residential (ug/kg)	Restricted Residential (ug/kg)	Restricted Commercial (ug/kg)	Restricted Industrial (ug/kg)
VOCs					
1,1-Dichloroethane	270	19,000	26,000	240,000	480,000
1,1-Dichloroethene	330	100,000	100,000	500,000	1,000,000
1,2-Dichloroethane	20	2,300	3,100	30,000	60,000
1,2-Dichloroethene (cis)	250	59,000	100,000	500,000	1,000,000
1,2-Dichloroethene (trans)	190	100,000	100,000	500,000	1,000,000
1,2,4-Trimethylbenzene	3,600	47,000	52,000	190,000	380,000
Acetone	50	100,000	100,000	500,000	1,000,000
Benzene	60	2,900	4,800	44,000	89,000
Carbon tetrachloride	760	1,400	2,400	22,000	44,000
Chloroform	370	10,000	49,000	350,000	700,000
Cis-1,2-Dichloroethylene	250	59,000	100,000	500,000	1,000,000
Ethylbenzene	1,000	30,000	41,000	390,000	780,000
Methyl ethyl ketone	120	100,000	100,000	500,000	1,000,000
Methylene chloride	50	51,000	100,000	500,000	1,000,000
Toluene	700	100,000	100,000	500,000	1,000,000
Trichloroethene	470	10,000	21,000	200,000	400,000
Vinyl Chloride	20	210	900	13,000	27,000
M And P Xylenes	260	100,000	100,000	500,000	1,000,000
Xylene (total)	260	100,000	100,000	500,000	1,000,000
SVOCs					
1,2-Dichlorobenzene	1,100	100,000	100,000	500,000	1,000,000
Acenaphthene	20,000	100,000	100,000	500,000	1,000,000
Anthracene	100,000	100,000	100,000	500,000	1,000,000
Benzo (a) anthracene	1,000	1,000	1,000	5,600	11,000
Benzo (a) pyrene	1,000	1,000	1,000	1,000	1,100
Benzo (b) fluoranthene	1,000	1,000	1,000	5,600	11,000
Benzo (g,h,i) perylene	100,000	100,000	100,000	500,000	1,000,000
Benzo (k) fluoranthene	800	1,000	3,900	56,000	110,000
Chrysene	1,000	1,000	3,900	56,000	110,000
Dibenzo (a,h) anthracene	330	330	330	560	1,100
Dibenzofuran	7,000	14,000	59,000	350,000	1,000,000
Fluoranthene	100,000	100,000	100,000	500,000	1,000,000
Fluorene	30,000	100,000	100,000	500,000	1,000,000
Indeno (1,2,3-cd) pyrene	500	500	500	5,600	11,000
Naphthalene	12,000	100,000	100,000	500,000	1,000,000
o-Cresol(s) (2-Methylphenol)	330	100,000	100,000	500,000	1,000,000
p-Cresol(s) (4-Methylphenol)	330	34,000	100,000	500,000	1,000,000
Pentachlorophenol	800	2,400	6,700	6,700	55,000
Phenanthrene	100,000	100,000	100,000	500,000	1,000,000
Phenol	330	100,000	100,000	500,000	1,000,000
Pyrene	100,000	100,000	100,000	500,000	1,000,000
PCBs/Pesticides					
4,4'-DDE	3.3	1,800	8,900	62,000	120,000
4,4'-DDT	3.3	1,700	7,900	47,000	94,000
4,4'-DDD	3.3	2,600	13,000	92,000	180,000
Aroclor 1254	100	1,000	1,000	1,000	25,000
Aldrin	5	19	97	680	1,400
Dieldrin	5	39	200	1,400	2,800
Total Polychlorinated biphenyls (PCBs)	100	1,000	1,000	1,000	25,000
Metals					
Arsenic	13,000	16,000	16,000	16,000	16,000
Barium	350,000	350,000	400,000	400,000	10,000,000
Cadmium	2,500	2,500	4,300	9,300	60,000
Copper	50,000	270,000	270,000	270,000	10,000,000
Lead	63,000	400,000	400,000	1,000,000	3,900,000
Mercury (elemental)	180	810	810	2,800	5,700
Nickel	30,000	140,000	310,000	310,000	10,000,000
Selenium	3,900	36,000	180,000	1,500,000	6,800,000
Zinc	109,000	2,200,000	10,000,000	10,000,000	10,000,000

Sample ID:	SB-1/4-5	Q
Laboratory Sample Number:	207935-001	
Sampling Date:	10/25/2004	
Sampling Depth (ft):	4-5	
Units:	ug/kg	Q
VOCs		
Benzene	86	J
Ethylbenzene	8,100	
Methylene chloride	110	JB
Xylene (total)	520	J
SVOCs		
Benzo (a) anthracene	1,800	
Benzo (a) pyrene	1,700	J
Benzo (b) fluoranthene	1,600	J
Benzo (k) fluoranthene	890	J
Chrysene	2,000.0	
Indeno (1,2,3-cd) pyrene	840	J
PCBs/Pesticides		
Aroclor 1242	150	
Metals		
Copper	159,000	
Lead	283,000	
Mercury (elemental)	840	
Nickel	34,500	
Zinc	779,000	

Sample ID:	SB-3/5-7	Q
Laboratory Sample Number:	207935-003	
Sampling Date:	10/25/2004	
Sampling Depth (ft):	5-7	
Units:	ug/kg	Q
VOCs		
Acetone	1,100	J
Benzene	130	J
Methylene chloride	120	JB
Metals		
Arsenic	43,200	
Lead	856,000	
Mercury (elemental)	1,900	
Selenium	17,400	J
Silver	5,900	
Zinc	1,090,000	

Sample ID:	TP-6/2.7-4.7	Q
Laboratory Sample Number:	207936-004	
Sampling Date:	10/27/2004	
Sampling Depth (ft):	2.7-4.7	
Units:	ug/kg	Q
VOCs		
Acetone	2,400	J
Benzene	460	J
Methylene chloride	670	JB
Xylene (total)	1,100	J
SVOCs		
Chrysene	1,000.0	
Metals		
Arsenic	20,000	
Lead	81,800	
Mercury (elemental)	2,700	
Nickel	75,500	
Zinc	997,000	

Sample ID:	TP-1/0.5-3	Q
Laboratory Sample Number:	207935-019	
Sampling Date:	10/27/2004	
Sampling Depth (ft):	0.5-3	
Units:	ug/kg	Q
VOCs		
Acetone	820	J
Methylene chloride	130	JB
Metals		
Arsenic	33,300	
Copper	85,000	
Lead	232,000	
Mercury (elemental)	490	
Selenium	6,000	J
Zinc	264,000	
Sample ID:	TP-1/3-3.5	
Laboratory Sample Number:	207935-020	
Sampling Date:	10/27/2004	
Sampling Depth (ft):	3-3.5	
Units:	ug/kg	Q
VOCs		
Methylene chloride	110	JB

Sample ID:	P-8	Q
Laboratory Sample Number:	1204166-15	
Sampling Date:	4/11/2012	
Sampling Depth (ft):	4-5	
Units:	ug/kg	Q
VOCs		
1,2-Dichloroethene (cis)	374	J
Benzene	388	J
1,3-Xylene (m-Xylene)	328	J
Xylene (m,p-Xylene)	328	J
SVOCs		
Benzo (a) anthracene	2,560	
Benzo (a) pyrene	5,570	
Benzo (b) fluoranthene	2,330	
Benzo (k) fluoranthene	2,980	
Chrysene	2,560	
Indeno (1,2,3-cd) pyrene	3,160	
Sample ID:	P-8	
Laboratory Sample Number:	1204166-16	
Sampling Date:	4/11/2012	
Sampling Depth (ft):	7-7.5	
Units:	ug/kg	Q
VOCs		
Methylene chloride	83	

Sample ID:	TP-6[1]	Q
Laboratory Sample Number:	C974508/3	
Sampling Date:	10/26/1997	
Sampling Depth (ft):		
Units:	ug/kg	Q
VOCs		
Benzene	200	
Xylene (m,p-Xylene)	350	
Xylene (total)	410	

Sample ID:	TP-3	Q
Laboratory Sample Number:	C974508/2	
Sampling Date:	10/26/1997	
Sampling Depth (ft):		
Units:	ug/kg	Q
VOCs		
Benzene	270	
Xylene (m,p-Xylene)	270	
Xylene (total)	310	
SVOCs		
Benzo (a) anthracene	1,100	
Benzo (a) pyrene	1,500	
Benzo (k) fluoranthene	950	^
Chrysene	1,300	

Sample ID:	P-10	Q
Laboratory Sample Number:	1204165-3	
Sampling Date:	4/12/2012	
Sampling Depth (ft):	3-4	
Units:	ug/kg	Q
VOCs		
Benzene	112	J
1,3-Xylene (m-Xylene)	273	J
Xylene (m,p-Xylene)	273	J
SVOCs		
Indeno (1,2,3-cd) pyrene	582	J

Sample ID:	SB-12/2-4	Q
Laboratory Sample Number:	207936-005	
Sampling Date:	10/25/2004	
Sampling Depth (ft):	2-4	
Units:	ug/kg	Q
Metals		
Lead	129,000	

Sample ID:	TP-3/4-7	Q
Laboratory Sample Number:	207936-001	
Sampling Date:	10/27/2004	
Sampling Depth (ft):	4-7	
Units:	ug/kg	Q
VOCs		
Acetone	63	
Metals		
Copper	79,000	
Lead	305,000	
Mercury (elemental)	650	
Zinc	131,000	

Sample ID:	SB-6/4-6	Q
Laboratory Sample Number:	207935-006	
Sampling Date:	10/25/2004	
Sampling Depth (ft):	4-6	
Units:	ug/kg	Q
VOCs		
Acetone	1,200	J
Methylene chloride	110	JB
Metals		
Copper	204,000	
Lead	265,000	
Mercury (elemental)	1,200	

Sample ID:	P-12	Q
Laboratory Sample Number:	1204165-5	
Sampling Date:	4/12/2012	
Sampling Depth (ft):	4-5	
Units:	ug/kg	Q
VOCs		
Benzene	94.2	J
SVOCs		
Benzo (a) anthracene	1,830	
Benzo (a) pyrene	1,460	
Benzo (b) fluoranthene	1,110	
Benzo (k) fluoranthene	1,140	
Chrysene	1,960	
Indeno (1,2,3-cd) pyrene	915	

Phase:	RIFS	Q	RIFS	Q
Location:	LSB-9		LSB-9	
Sample ID:	079-LSB-9-20130909		080-LSB-9-20130909	
Sample Date:	9/9/2013		9/9/2013	
Sampling Depth (ft):	0-2		4-6	
Units:	ug/kg	Q	ug/kg	Q
VOCs				
1,2,4-Trimethylbenzene	2.7	U	19,000	
Benzene	2.7	U	1,000	J
Cis-1,2-Dichloroethylene	5.3	J	950	J
Ethylbenzene	2.7	U	3,000	
Toluene	2.7	U	1,500	
Trichloroethylene (TCE)	54		3,500	
SVOCs				
Acenaphthene	95.5	J	53,500	
Benzo(A)Anthracene	571		122,000	
Benzo(A)Pyrene	625		103,000	
Benzo(B)Fluoranthene	642		50,400	
Benzo(K)Fluoranthene	660		74,500	
Chrysene	604		124,000	
Dibenz(A,H)Anthracene	56.6	J	17,200	J
Dibenzofuran	46.6	U	29,700	
Fluoranthene	1370		245,000	
Fluorene	74	J	63,400	
Indeno(1,2,3-C,D)Pyrene	140	J	26,300	J
Naphthalene	78.8	J	105,000	
Phenanthrene	845		279,000	
Pyrene	1,030		198,000	
PCBs				
PCB-1254 (Aroclor 1254)	6,240		21.1	U
Metals				
Cadmium	62,300		213,000	
Copper	57,600		23,500	
Lead	142,000		2,990,000	
Mercury	661		884	
Nickel	30,900		19,000	
Zinc	277,000		6,800,000	

Sample ID:	TP-1	Q
Laboratory Sample Number:	C974508/1	
Sampling Date:	10/26/1997	
Sampling Depth (ft):		
Units:	ug/kg	Q
VOCs		
Benzene	1,100	
Ethylbenzene	1,200	
Propylbenzene-n	8,400	
Toluene	760	
1,2-Xylene (o-Xylene)	280	
Xylene (m,p-Xylene)	2,400	
Xylene (total)	2,700	
SVOCs		
Benzo (a) anthracene	2,400	
Benzo (a) pyrene	2,800	
Benzo (b) fluoranthene	2,400	^
Benzo (k) fluoranthene	2,400	^
Chrysene	2,400	
Dibenzo (a,h) anthracene	480	
Indeno (1,2,3-cd) pyrene	1,100	

Sample ID:	P-7	Q
Laboratory Sample Number:	1204166-13	
Sampling Date:	4/11/2012	
Sampling Depth (ft):	4-5	
Units:	ug/kg	Q
VOCs		
Benzene	378	J
Ethylbenzene	1,980	
Toluene	973	J
1,2-Xylene (o-Xylene)	1,110	J
1,3-Xylene (m-Xylene)	2,900	J
Xylene (m,p-Xylene)	2,900	J
SVOCs		
Benzo (a) anthracene	1,130	
Chrysene	1,010	

Sample ID:	P-5	Q
Laboratory Sample Number:	1204166-9	
Sampling Date:	4/11/2012	
Sampling Depth (ft):	3.5-5	
Units:	ug/kg	Q
VOCs		
Acetone	420	
Methylene chloride	132	

Phase:	RIFS	Q	RIFS	Q	RIFS	Q
Location:	LSB-21		LSB-21		LSB-21	
Sample ID:	123-LSB-21-20130912		124-LSB-2120130912		125-DUP-3-20130912	
Sample Date:	9/12/2013		9/12/2013		9/12/2013	
Sample Depth (ft):	0-2		7-9		7-9	
Units:	ug/kg	Q	ug/kg	Q	ug/kg	Q
VOCs						
Acetone	12	U	33	U	110	J

Phase:	DUEDILIGENCE2012	Q
Location:	LSB-1	
Sample ID:	002/001	
Sample Date:	8/21/2012	
Sampling Depth (ft):	7.5-9.5/8-8.5	
Units:	ug/kg	Q
VOCs		
Acetone	217	J
Ethylbenzene	2,260	
M and P Xylenes	17,100	
SVOCs		
2-Methylphenol (O-Cresol)	1,500	
Acenaphthene	72,200	
Anthracene	151,000	
Benzo(A)Anthracene	168,000	
Benzo(A)Pyrene	152,000	
Benzo(B)Fluoranthene	150,000	
Benzo(K)Fluoranthene	76,700	
Chrysene	166,000	
Dibenz(A,H)Anthracene	36,900	
Dibenzofuran	62,100	
Fluoranthene	473,000	
Fluorene	84,200	
Indeno(1,2,3-C,D)Pyrene	89,900	
Naphthalene	102,000	
Phenanthrene	539,000	
Phenol	1,910	
Pyrene	340,000	
Metals		
Lead	435,000	

Phase:	DUEDILIGENCE2012	Q	DUEDILIGENCE2012	Q
Location:	LSB-3		LSB-3	
Sample ID:	008		010	
Sample Date:	8/22/2012		8/22/2012	
Sampling Depth (ft):	6-8		12-14	
Units:	ug/kg	Q	ug/kg	Q
SVOCs				
Benzo(A)Anthracene	1,580		6,450	
Benzo(A)Pyrene	1,410		6,170	
Benzo(B)Fluoranthene	1,490		4,960	
Benzo(K)Fluoranthene	722		4,510	
Chrysene	1,550		6,090	
Dibenz(A,H)Anthracene	300		1,310	
Indeno(1,2,3-C,D)Pyrene	762		3,550	

Phase:	DUEDILIGENCE2012	Q	DUEDILIGENCE2012	Q
Location:	LSB-2		LSB-2	
Sample ID:	004		006	
Sample Date:	8/21/2012		8/21/2012	
Sampling Depth (ft):	6.5-8.5		11.5-13.5	
Units:	ug/kg	Q	ug/kg	Q
SVOCs				
Benzo(A)Anthracene	2,670		2,620	
Benzo(A)Pyrene	3,080		2,910	
Benzo(B)Fluoranthene	3,000		2,840	
Benzo(K)Fluoranthene	1,360		1,370	
Chrysene	2,670		2,580	
Dibenz(A,H)Anthracene	774		686	
Indeno(1,2,3-C,D)Pyrene	1,910		1,750	

Phase:	RIFS	Q
Location:	LSB-25	
Sample ID:	074-LSB-25-20130906	
Sample Date:	9/6/2013	
Sampling Depth (ft):	5.5-7.5	
Units:	ug/kg	Q
VOCs		
Acetone	270	J
Cis-1,2-Dichloroethylene	440	J
Ethylbenzene	1,100	
Trichloroethylene (TCE)	480	
SVOCs		
Acenaphthene	20,200	
Benzo(A)Anthracene	75,100	
Benzo(A)Pyrene	71,300	
Benzo(B)Fluoranthene	41,300	
Benzo(K)Fluoranthene	39,700	
Chrysene	74,800	
Dibenzofuran	18,500	J
Fluoranthene	160,000	
Indeno(1,2,3-C,D)Pyrene	19,700	
Naphthalene	49,200	
Phenanthrene	162,000	
Pyrene	149,000	
Metals		
Lead	430,000	

Sample ID:	SB-5/5-7	Q
Laboratory Sample Number:	209324-019	
Sampling Date:	4/21/2005	
Sampling Depth (ft):	5-7'	
Units:	ug/kg	Q
Metals		
Chromium	12,800	
Sample ID:	SB-5/7-8	
Laboratory Sample Number:	209324-020	
Sampling Date:	4/21/2005	
Sampling Depth (ft):	7-8'	
Units:	ug/kg	Q
SVOCs		
Benzo (a) anthracene	11,000	
Benzo (a) pyrene	16,000	
Benzo (b) fluoranthene	11,000	
Benzo (k) fluoranthene	10,000	
Chrysene	13,000	
Dibenzo (a,h) anthracene	3,200	
Indeno (1,2,3-cd) pyrene	7,600	
Metals		
Arsenic	39,200	
Chromium	7,800	
Copper	176,000	
Lead	582,000	
Mercury (elemental)	2,400	
Zinc	520,000	

Phase:	RIFS	Q
Location:	LSB-8	
Sample ID:	075-LSB-8-20130906	
Sample Date:	9/6/2013	
Sampling Depth (ft):	10-12	
Units:	ug/kg	Q
VOCs		
Acetone	320	J
Metals		
Lead	169,000	

Phase:	RIFS	Q	RIFS	Q
Location:	LSB-7		LSB-7	
Sample ID:	072-LSB-7-20130906		073-LSB-7-20130906	
Sample Date:	9/6/2013		9/6/2013	
Sampling Depth (ft):	0-2		13-15	
Units:	ug/kg	Q	ug/kg	Q
SVOCs				
Benzo(A)Anthracene	351		2,010	
Benzo(A)Pyrene	362		1,980	
Benzo(B)Fluoranthene	335		1,230	
Benzo(K)Fluoranthene	203		1,160	
Chrysene	353		1,900	
Indeno(1,2,3-C,D)Pyrene	121	J	594	J
PCBs				
PCB-1254 (Aroclor 1254)	330		19.9	U

Sample ID:	MW-3/4-6	Q
Laboratory Sample Number:	209324-005	
Sampling Date:	4/15/2005	
Sampling Depth (ft):	4-6'	
Units:	ug/kg	Q
VOCs		
Methyl ethyl ketone (MEK / 2-butanone)	8,000	B
Metals		
Chromium	9,400	
Sample ID:	MW-3/13-15	
Laboratory Sample Number:	209324-006	
Sampling Date:	4/15/2005	
Sampling Depth (ft):	13-15'	
Units:	ug/kg	Q
Metals		
Chromium	9,800	

Sample ID:	SB-4/9-10.5	Q
Laboratory Sample Number:	209324-017	
Sampling Date:	4/21/2005	
Sampling Depth (ft):	9-10.5'	
Units:	ug/kg	Q
VOCs		
Ethylbenzene	1,300	J
Methylene chloride	380	JB
Xylene (total)	5,700	
SVOCs		
Benzo (a) anthracene	8,200	
Benzo (a) pyrene	7,800	
Benzo (b) fluoranthene	4,800	J
Benzo (k) fluoranthene	5,100	J
Chrysene	7,900	
Dibenzo (a,h) anthracene	1,400	J
Indeno (1,2,3-cd) pyrene	3,100	J
Naphthalene	20,000	
PCBs/Pesticides		
4,4'-DDE	65	
Aldrin	17	
PCBs		
Aroclor 1254	880	
Metals		
Cadmium	32,400	
Chromium	10,700	
Lead	88,500	
Mercury (elemental)	460	
Zinc	350,000	
Sample ID:	SB-4/14-16	
Laboratory Sample Number:	209324-018	
Sampling Date:	4/21/2005	
Sampling Depth (ft):	14-16'	
Units:	ug/kg	Q
PCBs/Pesticides		
4,4'-DDE	6.3	
Metals		
Chromium	9,500	

Sample ID:	MW-2/1-3	Q
Laboratory Sample Number:	209324-003	
Sampling Date:	4/15/2005	
Sampling Depth (ft):	1-3'	
Units:	ug/kg	Q
VOCs		
Acetone	51	B
Toluene	2,900	J
SVOCs		
Benzo (a) anthracene	26,000	
Benzo (a) pyrene	26,000	
Benzo (b) fluoranthene	19,000	
Benzo (k) fluoranthene	19,000	
Chrysene	30,000	
Dibenzo (a,h) anthracene	6,800	J
Indeno (1,2,3-cd) pyrene	15,000	
Naphthalene	23,000	
PCBs/Pesticides		
Dieldrin	53	
Metals		
Arsenic	51,500	
Barium	524,000	
Chromium	11,900	
Copper	354,000	
Lead	851,000	
Mercury (elemental)	9,900	
Zinc	552,000	
Sample ID:	MW-2/9-10	
Laboratory Sample Number:	209324-004	
Sampling Date:	4/15/2005	
Sampling Depth (ft):	9-10'	
Units:	ug/kg	Q
SVOCs		
Benzo (a) anthracene	3,700	
Benzo (a) pyrene	3,700	
Benzo (b) fluoranthene	2,800	
Benzo (k) fluoranthene	2,400	
Chrysene	4,300	
Dibenzo (a,h) anthracene	710	J
Indeno (1,2,3-cd) pyrene	1,800	
Metals		
Arsenic	13,900	
Chromium	11,400	
Copper	69,200	
Lead	674,000	
Mercury (elemental)	680	
Zinc	138,000	

Sample ID:	MW-5/7.5-9.5	Q
Laboratory Sample Number:	209324-009	
Sampling Date:	4/20/2005	
Sampling Depth (ft):	7.5-9.5'	
Units:	ug/kg	Q
VOCs		
Benzene	980	J
Ethylbenzene	1,300	J
Methylene chloride	290	JB
Xylene (total)	2,400	J
SVOCs		
Acenaphthene	200,000	
Anthracene	270,000	
Benzo (a) anthracene	340,000	
Benzo (a) pyrene	330,000	
Benzo (b) fluoranthene	210,000	
Benzo (g,h,i) perylene	200,000	
Benzo (k) fluoranthene	270,000	
Chrysene	410,000	
Dibenzo (a,h) anthracene	84,000	
Fluoranthene	950,000	
Fluorene	200,000	
Indeno (1,2,3-cd) pyrene	170,000	
Naphthalene	300,000	
Phenanthrene	1,100,000	
Pyrene	890,000	
PCBs/Pesticides		
4,4'-DDE	1,500	
Beta-BHC	120	
Metals		
Arsenic	80,300	
Barium	1,060,000	
Chromium	14,000	
Copper	2,680,000	
Lead	1,420,000	
Mercury (elemental)	19,500	
Zinc	1,270,000	
Sample ID:	MW-5/13-15	
Laboratory Sample Number:	209324-010	
Sampling Date:	4/20/2005	
Sampling Depth (ft):	13-15'	
Units:	ug/kg	Q
SVOCs		
Benzo (a) anthracene	16,000	
Benzo (a) pyrene	14,000	
Benzo (b) fluoranthene	11,000	
Benzo (k) fluoranthene	10,000	
Chrysene	18,000	
Dibenzo (a,h) anthracene	3,900	
Indeno (1,2,3-cd) pyrene	7,600	
PCBs/Pesticides		
4,4'-DDE	110	
Metals		
Chromium	4,400	
Zinc	1,050,000	

Location:	LSB-23	Q
Sample ID:	076-LSB-23-20130906	
Sample Date:	9/6/2013	
Sampling Depth (ft):	2-4	
Units:	ug/kg	Q
VOCs		
Acetone	65	J
SVOCs		
Benzo(A)Anthracene	11,700	
Benzo(A)Pyrene	9,820	
Benzo(B)Fluoranthene	9,010	
Benzo(K)Fluoranthene	11,700	
Chrysene	9,590	
Dibenz(A,H)Anthracene	1,870	J
Indeno(1,2,3-C,D)Pyrene	3,230	
Metals		
Cadmium	21,000	
Lead	167,000	
Zinc	197,000	

Phase:	RIFS	Q	RIFS	Q	RIFS	Q
Location:	LSB-22		LSB-22		LSB-22	
Sample ID:	081-LSB-22-20130909		083-DUP-2-20130909		082-084-LSB-22-20130909	
Sample Date:	9/9/2013		9/9/2013		9/9/2013	
Sampling Depth (ft):	0-2		0-2		4-6	
Units:	ug/kg	Q	ug/kg	Q	ug/kg	Q
VOCs						
Acetone	79		48		790	U
Cis-1,2-Dichloroethylene	4.3	U	3.2	U	1,700	
Trichloroethylene (TCE)	6.2	J	9.4			J
SVOCs						
Benzo(A)Anthracene	754	J	1,000	J	10,400	J
Benzo(A)Pyrene	851	J	991	J	11,700	J
Benzo(B)Fluoranthene	753	J	878	J	13,000	
Benzo(K)Fluoranthene	1,100		1,350		11,200	J
Chrysene	773	J	998	J	10,200	J
Pesticides						
P,P'-DDE	4.39	J	2.59	J	2.15	U
P,P'-DDT	9.56	J	7.73	J	2.15	U
Metals						
Copper	487,000	J	1,090,000	J	105,000	
Lead	656,000		572,000		321,000	
Mercury	828	J	2,010	J	4,320	
Nickel	61,700	J	35,400	J	12,800	
Zinc	2,670,000	J	874,000	J	1,680,000	

Phase:	DUEDILIGENCE2012	Q	DUEDILIGENCE2012	Q
Location:	LSB-4		LSB-4	
Sample ID:	012		014	
Sample Date:	8/22/2012		8/22/2012	
Sampling Depth (ft):	7-9		7-9	
Units:	ug/kg	Q	ug/kg	Q
VOCs				
M and P Xylenes	437		875	
SVOCs				
Benzo(A)Anthracene	1,660		989	
Benzo(A)Pyrene	1,320		902	
Benzo(B)Fluoranthene	1,240		754	
Benzo(K)Fluoranthene	864		619	
Chrysene	1,580		1,030	
Indeno(1,2,3-C,D)Pyrene	718		503	

Sample ID:	SB-4/3-5	Q
Laboratory Sample Number:	207935-004	
Sampling Date:	10/25/2004	
Sampling Depth (ft):	3-5	
Units:	ug/kg	Q
VOCs		
Acetone	3,600	
Benzene	110	J
Methylene chloride	110	JB
Xylene (total)	410	J
Metals		
Lead	93,900	

Phase:	RIFS	Q
Location:	LSB-24	
Sample ID:	086-LSB-24-20130909	
Sample Date:	9/9/2013	
Sampling Depth (ft):	0-4	
Units:	ug/kg	Q
VOCs		
Acetone	150	
Pesticides		
P,P'-DDE	3.44	
Metals		
Cadmium	50,000	
Copper	135,000	
Lead	110,000	
Zinc	691,000	

Sample ID:	SB-1/1-4	Q
Laboratory Sample Number:	209324-011	
Sampling Date:	4/20/2005	
Sampling Depth (ft):	1-4'	
Units:	ug/kg	Q
VOCs		
Ethylbenzene	1,900	J
Methylene chloride	270	JB
Toluene	890	J
Xylene (total)	3,700	
SVOCs		
Benzo (a) anthracene	62,000	
Benzo (a) pyrene	61,000	
Benzo (b) fluoranthene	38,000	
Benzo (k) fluoranthene	42,000	
Chrysene	61,000	
Dibenzo (a,h) anthracene	12,000	J
Fluoranthene	180,000	
Indeno (1,2,3-cd) pyrene	27,000	
Naphthalene	21,000	
Phenanthrene	190,000	
Pyrene	110,000	
Metals		
Cadmium	4,700	
Chromium	12,200	
Copper	76,900	
Lead	489,000	
Mercury (elemental)	1,500	
Zinc	243,000	
Sample ID:	SB-1/10-12	
Laboratory Sample Number:	209324-012	
Sampling Date:	4/20/2005	
Sampling Depth (ft):	10-12'	
Units:	ug/kg	Q
Metals		
Chromium	9,000	
Lead	106,000	

Sample ID:	TP-7[1]	Q
Laboratory Sample Number:	C974508/4	
Sampling Date:	10/26/1997	
Sampling Depth (ft):		
Units:	ug/kg	Q
VOCs		
Benzene	150	
Xylene (m,p-Xylene)	290	
Xylene (total)	350	

Phase:	RIFS	Q	RIFS	Q
Location:	LSB-27		LSB-27	
Sample ID:	128-LSB-27-20130913		129-LSB-27-20130913	
Sample Date:	9/13/2013		9/13/2013	
Sample Depth (ft):	0-2		5-7	
Units:	ug/kg	Q	ug/kg	Q
VOCs				
Vinyl Chloride	3.4	U	23	

Sample ID:	MW-4/6-8	Q
Laboratory Sample Number:	209324-007	
Sampling Date:	4/20/2005	
Sampling Depth (ft):	6-8'	
Units:	ug/kg	Q
Metals		
Arsenic	17,000	
Barium	502,000	
Chromium	9,400	
Copper	67,700	
Lead	1,290,000	
Mercury (elemental)	1,600	
Zinc	483,000	
Sample ID:	MW-4/12-14	
Laboratory Sample Number:	209324-008	
Sampling Date:	4/20/2005	
Sampling Depth (ft):	12-14'	
Units:	ug/kg	Q
PCBs/Pesticides		
4,4'-DDE	370	
4,4'-DDT	110	
Metals		
Chromium	7,100	
Lead	201,000	
Mercury (elemental)	840	

Sample ID:	SB-2/6-8	Q
Laboratory Sample Number:	209324-013	
Sampling Date:	4/20/2005	
Sampling Depth (ft):	6-8'	
Units:	ug/kg	Q
Metals		
Cadmium	3,400	B
Chromium	2,800	J
Lead	91,900	
Selenium	5,500	J
Sample ID:	SB-2/10-12	
Laboratory Sample Number:	209324-014	
Sampling Date:	4/20/2005	
Sampling Depth (ft):	10-12'	
Units:	ug/kg	Q
SVOCs		
Benzo (a) anthracene	1,900	
Benzo (a) pyrene	2,200	
Benzo (b) fluoranthene	1,600	
Benzo (k) fluoranthene	1,300	
Chrysene	2,200	
Dibenzo (a,h) anthracene	570	J
Indeno (1,2,3-cd) pyrene	1,100	
p-Cresol(s) (4-Methylphenol)	560	J
Metals		
Chromium	6,800	
Lead	1,450,000	
Mercury (elemental)	380	

Sample ID:	SB-11/4-5	Q
Laboratory Sample Number:	207935-012	
Sampling Date:	10/25/2004	
Sampling Depth (ft):	4-5	
Units:	ug/kg	Q
VOCs		
Methylene chloride	560	JB
SVOCs		
Benzo (a) anthracene	4,100	
Benzo (a) pyrene	11,000	
Benzo (b) fluoranthene	4,500	
Benzo (k) fluoranthene	5,700	
Chrysene	4,200	
Dibenzo (a,h) anthracene	1,800	
Indeno (1,2,3-cd) pyrene	7,200	
Metals		
Copper	76,000	
Lead	139,000	
Zinc	211,000	

Sample ID:	P-9	Q
Laboratory Sample Number:	1204165-1	
Sampling Date:	4/12/2012	
Sampling Depth (ft):	3.5-5	
Units:	ug/kg	Q
VOCs		
Propylbenzene-n	9,200	
1,3-Xylene (m-Xylene)	771	J
Xylene (m,p-Xylene)	771	J
SVOCs		
Benzo (a) anthracene	3,030	
Benzo (a) pyrene	5,840	
Benzo (b) fluoranthene	2,760	
Benzo (k) fluoranthene	3,520	
Chrysene	3,240	
Dibenzo (a,h) anthracene	668.000	
Indeno (1,2,3-cd) pyrene	3,570	

Sample ID:	TP-4/4-5	Q
Laboratory Sample Number:	207936-002	
Sampling Date:	10/27/2004	
Sampling Depth (ft):	4-5	
Units:	ug/kg	Q
VOCs		
Methylene chloride	160	JB
Metals		
Mercury (elemental)	180	

Sample ID:	P-1B	Q
Sampling Date:	4/11/2012	
Sampling Depth (ft):	4-5	
Units:	ug/kg	Q
SVOCs		
Indeno (1,2,3-cd) pyrene	744	

Sample ID:	SB-8/5-7	Q
Laboratory Sample Number:	207935-008	
Sampling Date:	10/25/2004	
Sampling Depth (ft):	5-7	
Units:	ug/kg	
VOCs		
Benzene	630	J
Methylene chloride	560	JB
Metals		
Mercury (elemental)	620	

Sample ID:	TP-8	Q
Laboratory Sample Number:	C974508/5	
Sampling Date:	10/26/1997	
Sampling Depth (ft):		
Units:	ug/kg	Q
VOCs		
Benzene	1,300	
Xylene (m,p-Xylene)	650	
Xylene (total)	730	
SVOCs		
Benzo (a) anthracene	4,300	
Benzo (a) pyrene	3,700	
Benzo (b) fluoranthene	3,300	^
Benzo (k) fluoranthene	3,300	^
Chrysene	4,200	
Dibenzo (a,h) anthracene	710	
Indeno (1,2,3-cd) pyrene	1,200	

Sample ID:	P-3	Q
Laboratory Sample Number:	1204166-5	
Sampling Date:	4/11/2012	
Sampling Depth (ft):	3.5-5	
Units:	ug/kg	Q
SVOCs		
Benzo (a) anthracene	11,300	E
Benzo (a) pyrene	14,600	E
Benzo (b) fluoranthene	10,400.0	
Benzo (k) fluoranthene	11,900	E
Chrysene	10,500	
Dibenzo (a,h) anthracene	3,870	

Sample ID:	SB-10/1-3	Q
Laboratory Sample Number:	207935-010	
Sampling Date:	10/25/2004	
Sampling Depth (ft):	1-3	
Units:	ug/kg	Q
VOCs		
Methylene chloride	99	JB
Xylene (total)	280	J
SVOCs		
Benzo (a) anthracene	3,900	
Benzo (a) pyrene	4,000	
Benzo (b) fluoranthene	3,000	
Benzo (k) fluoranthene	3,400	
Chrysene	4,200	
Dibenzo (a,h) anthracene	860	J
Indeno (1,2,3-cd) pyrene	2,000.0	
Metals		
Copper	131,000	
Lead	222,000	
Mercury (elemental)	280	

Sample ID:	TP-5/1.5-3	Q
Laboratory Sample Number:	207936-003	
Sampling Date:	10/27/2004	
Sampling Depth (ft):	1.5-3	
Units:	ug/kg	Q
VOCs		
Acetone	2,200	J
Benzene	780	J
Methylene chloride	710	JB
Toluene	890	J
Xylene (total)	2,200	J
SVOCs		
Benzo (a) anthracene	1,500	
Benzo (a) pyrene	1,700	
Benzo (b) fluoranthene	2,700	
Chrysene	1,600	
Dibenzo (a,h) anthracene	540	
Indeno (1,2,3-cd) pyrene	920	
Metals		
Copper	153,000	
Lead	177,000	
Mercury (elemental)	1,600	
Zinc	132,000	

Sample ID:	P-2	Q
Laboratory Sample Number:	1204166-3	
Sampling Date:	4/11/2012	
Sampling Depth (ft):	4-5	
Units:	ug/kg	Q
SVOCs		
Benzo (a) anthracene	1,040	
Benzo (a) pyrene	1,090.00	
Benzo (k) fluoranthene	906	
Chrysene	1,060	
Indeno (1,2,3-cd) pyrene	644	

Sample ID:	SB-9/3-5	Q
Laboratory Sample Number:	207935-009	
Sampling Date:	10/25/2004	
Sampling Depth (ft):	3-5	
Units:	ug/kg	Q
VOCs		
Acetone	140	
Xylene (total)	280	
SVOCs		
Benzo (a) anthracene	7,500	
Benzo (a) pyrene	8,700	
Benzo (b) fluoranthene	5,500	
Benzo (k) fluoranthene	5,300	
Chrysene	7,500	
Dibenzo (a,h) anthracene	1,700	J
Indeno (1,2,3-cd) pyrene	3,800	

Sample ID:	P-4	Q
Laboratory Sample Number:	1204166-7	
Sampling Date:	4/11/2012	
Sampling Depth (ft):	3.5-5	
Units:	ug/kg	Q
SVOCs		
Benzo (a) anthracene	1,360	
Benzo (a) pyrene	1,150	
Benzo (b) fluoranthene	1,010	
Benzo (k) fluoranthene	1,040	
Chrysene	1,400	
Indeno (1,2,3-cd) pyrene	780	
Sample ID:	P-4	
Laboratory Sample Number:	1204166-8	
Sampling Date:	4/11/2012	
Sampling Depth (ft):	6-7	
Units:	ug/kg	Q
VOCs		
Methylene chloride	54.5	

Sample ID:	MW-1/3-4	Q
Laboratory Sample Number:	209324-001	
Sampling Date:	4/15/2005	
Sampling Depth (ft):	3-4'	
Units:	ug/kg	Q
Metals		
Chromium	22,200	
Sample ID:	MW-1/9-10	
Laboratory Sample Number:	209324-002	
Sampling Date:	4/15/2005	
Sampling Depth (ft):	9-10'	
Units:	ug/kg	Q
Metals		
Chromium	21,200	

Sample ID:	SB-3/6-8	Q
Laboratory Sample Number:	209324-015	
Sampling Date:	4/21/2005	
Sampling Depth (ft):	6-8'	
Units:	ug/kg	Q
VOCs		
Benzene	3,100	J
Methylene chloride	320	JB
Toluene	2,700	J
Xylene (total)	3,900	
SVOCs		
Benzo (a) anthracene	22,000	
Benzo (a) pyrene	25,000	
Benzo (b) fluoranthene	15,000	
Benzo (k) fluoranthene	18,000	
Chrysene	27,000	
Dibenzo (a,h) anthracene	4,800	J
Indeno (1,2,3-cd) pyrene	12,000	
PCBs/Pesticides		
4,4'-DDE	75	
Metals		
Chromium	8,300	
Copper	78,500	
Lead	371,000	
Mercury (elemental)	970	
Zinc	147,000	
Sample ID:	SB-3/10-12	
Laboratory Sample Number:	209324-016	
Sampling Date:	4/21/2005	
Sampling Depth (ft):	10-12'	
Units:	ug/kg	Q
Metals		
Chromium	17,100	
Nickel	46,200	
Zinc	136,000	

Phase:	RIFS	Q
Location:	LSB-10	
Sample ID:	085-LSB-10-20130909	
Sample Date:	9/9/2013	
Sampling Depth (ft):	0-2	
Units:	ug/kg	Q
VOCs		
Acetone	150	
Pesticides		
P,P'-DDE	548	

Legend

- Site Boundary
- Former AST Locations
- Gowanus Canal
- Street Extents
- Area of Concern

Sample Locations

- Monitoring Well/Piezometer Location (ELM, 2004 - 2005)
- Soil Boring Location (ELM, 2004 - 2005)
- Soil Boring & Temporary Well Location (ELM, 2004 - 2005)
- Test Pit Location (ELM, 2004 - 2005)
- Geoprobe Location (PW Grosser, 2011)
- Monitoring Well Location (PW Grosser, 2011)
- Test Pit Location (PW Grosser, 2011)
- Test Pit Location (Zeb Environmental, 2012)
- Test Pit Location (Cosmo Environmental, 1997)

30 0 30
SCALE IN FEET

Notes:
1. Map features are based on aerial photographs, tax maps, and the following ELM reports: Phase II Investigation Report, 363 Bond Street (May 2005), and Phase II Investigation Report, 400 Carroll Street (May 2005).
2. All ELM sample locations are approximate and based on the reports identified in Note 1.
3. AOC-1: Proposed Excavation Area - 388 Carroll Street, North; AOC-2: Proposed Excavation Area - 388 Carroll Street, South; AOC-3: Proposed Excavation Area - 363 Bond Street; AOC-5: Former UST Area

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Langan Engineering & Environmental Services, Inc.
Langan Engineering, Environmental, Surveying and Landscape Architecture, D.P.C.
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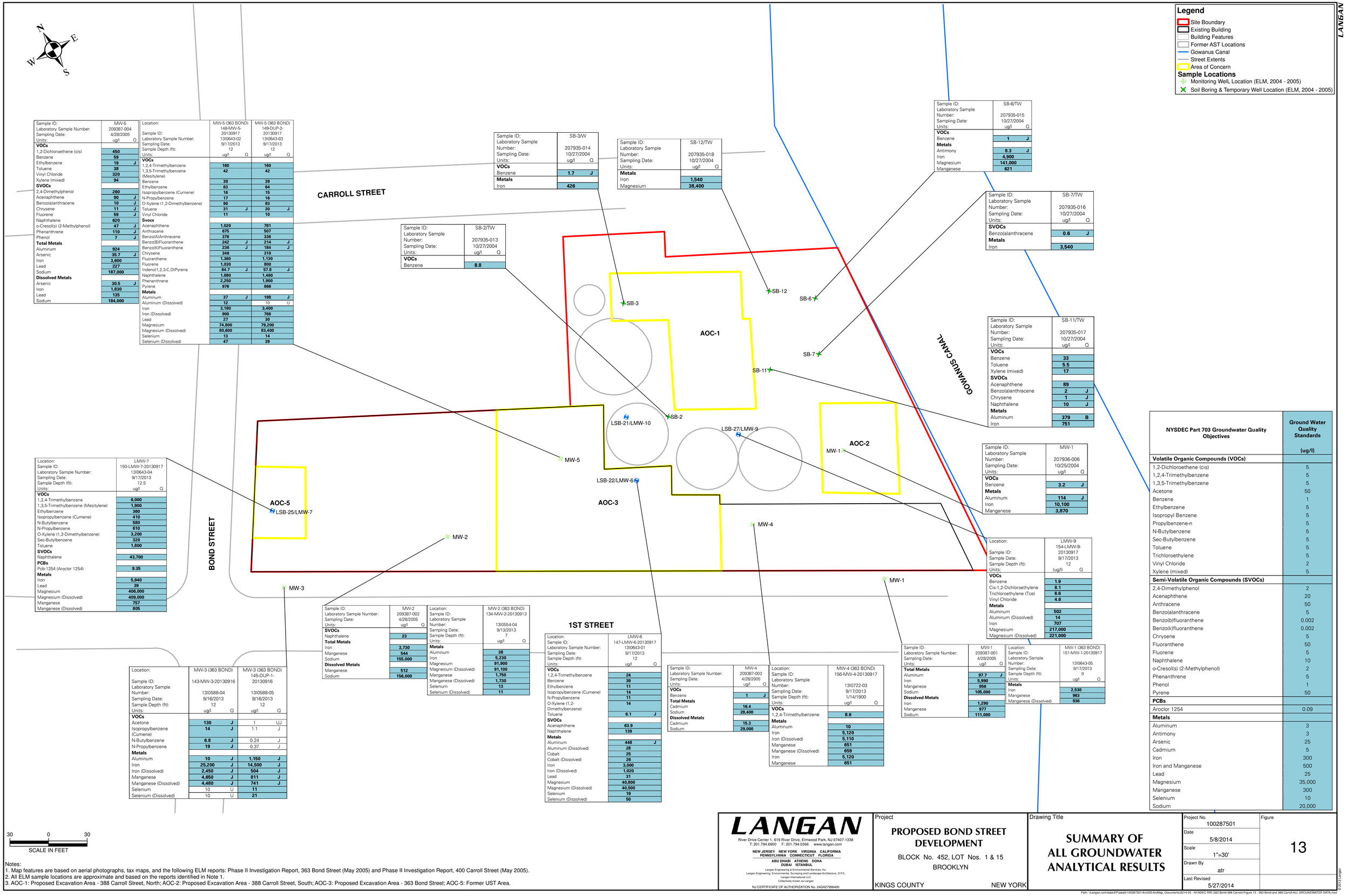
Collectively known as Langan
NJ CERTIFICATE OF AUTHORIZATION No. 24GA27996400

Project	Drawing Title	Project No.	Figure
PROPOSED BOND STREET DEVELOPMENT BLOCK No. 452 LOT Nos. 1 & 15 BROOKLYN KINGS COUNTY NEW YORK	SUMMARY OF ALL SOIL ANALYTICAL RESULTS	100287501 Date: 5/8/2014 Scale: 1"=30' Drawn By: atr Last Revised: 5/27/2014	12

Path: \\Langan.com\data\EP\data5\100287501\ArcGIS\ArcMap_Documents\2014-05 - NYSDEC RIR (363 Bond-388 Carroll)\Figure 12 - 363 Bond and 388 Carroll ALL SOIL DATA.mxd



Sample ID:	MW-5
Laboratory Sample Number:	209387-004
Sampling Date:	4/28/2005
Units:	ug/l Q
VOCs	
1,2-Dichloroethene (cis)	450
Benzene	59
Ethylbenzene	19 J
Toluene	38
Vinyl Chloride	320
Xylene (mixed)	94
SVOCs	
2,4-Dimethylphenol	260
Acenaphthene	90 J
Benzo(a)anthracene	10 J
Chrysene	11 J
Fluorene	59 J
Naphthalene	620
o-Cresol(s) (2-Methylphenol)	47 J
Phenanthrene	110 J
Phenol	7 J
Total Metals	
Aluminum	924
Arsenic	35.7 J
Iron	3,600
Lead	227
Sodium	187,000
Dissolved Metals	
Arsenic	30.5 J
Iron	1,830
Lead	135
Sodium	184,000

Location:	MW-5 (363 BOND)		MW-5 (363 BOND)	
Sample ID:	148-MW-5-20130917		149-DUP-2-20130917	
Laboratory Sample Number:	13I0643-02		13I0643-03	
Sampling Date:	9/17/2013		9/17/2013	
Sample Depth (ft):	12		12	
Units:	ug/l	Q	ug/l	Q
VOCs				
1,2,4-Trimethylbenzene	160		160	
1,3,5-Trimethylbenzene (Mesitylene)	42		42	
Benzene	39		39	
Ethylbenzene	63		64	
Isopropylbenzene (Cumene)	16		15	
N-Propylbenzene	17		16	
O-Xylene (1,2-Dimethylbenzene)	90		93	
Toluene	31	J	30	J
Vinyl Chloride	11		10	
Svocs				
Acenaphthene	1,020		781	
Anthracene	675		507	
Benzo(A)Anthracene	376		336	
Benzo(B)Fluoranthene	242	J	214	J
Benzo(K)Fluoranthene	236	J	184	J
Chrysene	346		310	
Fluoranthene	1,360		1,130	
Fluorene	1,030		800	
Indeno(1,2,3-C,D)Pyrene	84.7	J	57.8	J
Naphthalene	1,880		1,460	
Phenanthrene	2,250		1,900	
Pyrene	976		866	
Metals				
Aluminum	37	J	198	J
Aluminum (Dissolved)	12		10	U
Iron	3,180		3,400	
Iron (Dissolved)	900		766	
Lead	27		30	
Magnesium	74,800		79,200	
Magnesium (Dissolved)	80,600		83,400	
Selenium	13		14	
Selenium (Dissolved)	47		39	

Sample ID:	SB-3/W
Laboratory Sample Number:	207935-014
Sampling Date:	10/27/2004
Units:	ug/l Q
VOCs	
Benzene	1.7 J
Metals	
Iron	426

Sample ID:	SB-12/TW
Laboratory Sample Number:	207935-018
Sampling Date:	10/27/2004
Units:	ug/l Q
Metals	
Iron	1,540
Magnesium	38,400

Sample ID:	SB-6/TW
Laboratory Sample Number:	207935-015
Sampling Date:	10/27/2004
Units:	ug/l Q
VOCs	
Benzene	1 J
Metals	
Antimony	8.3 J
Iron	4,900
Magnesium	141,000
Manganese	621

Sample ID:	SB-7/TW
Laboratory Sample Number:	207935-016
Sampling Date:	10/27/2004
Units:	ug/l Q
SVOCs	
Benzo(a)anthracene	0.6 J
Metals	
Iron	3,540

Sample ID:	SB-2/TW
Laboratory Sample Number:	207935-013
Sampling Date:	10/27/2004
Units:	ug/l Q
VOCs	
Benzene	8.8

Sample ID:	SB-11/TW
Laboratory Sample Number:	207935-017
Sampling Date:	10/27/2004
Units:	ug/l Q
VOCs	
Benzene	33
Toluene	5.5
Xylene (mixed)	17
SVOCs	
Acenaphthene	89
Benzo(a)anthracene	2 J
Chrysene	1 J
Naphthalene	10 J
Metals	
Aluminum	379 B
Iron	751

Sample ID:	MW-1
Laboratory Sample Number:	207936-006
Sampling Date:	10/25/2004
Units:	ug/l Q
VOCs	
Benzene	3.2 J
Metals	
Aluminum	114 J
Iron	10,100
Manganese	3,870

Location:	LMW-9
Sample ID:	154-LMW-9-20130917
Sample Date:	9/17/2013
Sample Depth (ft):	12
Units:	(ug/l) Q
VOCs	
Benzene	1.9
Cis-1,2-Dichloroethylene	8.1
Trichloroethylene (Tce)	6.6
Vinyl Chloride	4.6
Metals	
Aluminum	502
Aluminum (Dissolved)	14
Iron	707
Magnesium	217,000
Magnesium (Dissolved)	221,000

Location:	LMW-7
Sample ID:	150-LMW-7-20130917
Laboratory Sample Number:	13I0643-04
Sampling Date:	9/17/2013
Sample Depth (ft):	12.5
Units:	ug/l Q
VOCs	
1,2,4-Trimethylbenzene	6,000
1,3,5-Trimethylbenzene (Mesitylene)	1,900
Ethylbenzene	360
Isopropylbenzene (Cumene)	410
N-Butylbenzene	580
N-Propylbenzene	610
O-Xylene (1,2-Dimethylbenzene)	3,200
Sec-Butylbenzene	320
Toluene	1,800
SVOCs	
Naphthalene	43,700
PCBs	
Pcb-1254 (Aroclor 1254)	9.35
Metals	
Iron	5,940
Lead	39
Magnesium	406,000
Magnesium (Dissolved)	409,000
Manganese	757
Manganese (Dissolved)	805

Location:	MW-3 (363 BOND)		MW-3 (363 BOND)	
Sample ID:	143-MW-3-20130916		145-DUP-1-20130916	
Laboratory Sample Number:	13I0588-04		13I0588-05	
Sampling Date:	9/16/2013		9/16/2013	
Sample Depth (ft):	12		12	
Units:	ug/l	Q	ug/l	Q
VOCs				
Acetone	130	J	1	UJ
Isopropylbenzene (Cumene)	14	J	1.1	J
N-Butylbenzene	6.8	J	0.24	J
N-Propylbenzene	19	J	0.37	J
Metals				
Aluminum	10	J	1,150	J
Iron	25,200	J	14,500	J
Iron (Dissolved)	2,450	J	504	J
Manganese	4,650	J	811	J
Manganese (Dissolved)	4,480	J	741	J
Selenium	10	U	11	
Selenium (Dissolved)	10	U	21	

Sample ID:	MW-2
Laboratory Sample Number:	209387-002
Sampling Date:	4/28/2005
Units:	ug/l Q
SVOCs	
Naphthalene	23
Total Metals	
Iron	3,730
Manganese	544
Sodium	155,000
Dissolved Metals	
Manganese	512
Sodium	156,000

Location:	MW-2 (363 BOND)
Sample ID:	134-MW-2-20130913
Laboratory Sample Number:	13I0554-04
Sampling Date:	9/13/2013
Sample Depth (ft):	7
Units:	ug/l Q
Metals	
Aluminum	38
Iron	5,230
Magnesium	91,900
Magnesium (Dissolved)	91,100
Manganese	1,750
Manganese (Dissolved)	1,730
Selenium	13
Selenium (Dissolved)	11

Location:	LMW-6
Sample ID:	147-LMW-6-20130917
Laboratory Sample Number:	13I0643-01
Sampling Date:	9/17/2013
Sample Depth (ft):	12
Units:	ug/l Q
VOCs	
1,2,4-Trimethylbenzene	24
Benzene	39
Ethylbenzene	11
Isopropylbenzene (Cumene)	14
N-Propylbenzene	11
O-Xylene (1,2-Dimethylbenzene)	14
Toluene	6.1 J
SVOCs	
Acenaphthene	63.9
Naphthalene	139
Metals	
Aluminum	448 J
Aluminum (Dissolved)	28
Cobalt	25
Cobalt (Dissolved)	26
Iron	3,000
Iron (Dissolved)	1,020
Lead	31
Magnesium	40,800
Magnesium (Dissolved)	40,500
Selenium	19
Selenium (Dissolved)	50

Sample ID:	MW-4
Laboratory Sample Number:	209387-003
Sampling Date:	4/28/2005
Units:	ug/l Q
VOCs	
Benzene	1 J
Total Metals	
Cadmium	16.4
Sodium	28,400
Dissolved Metals	
Cadmium	15.3
Sodium	29,000

Location:	MW-4 (363 BOND)
Sample ID:	156-MW-4-20130917
Laboratory Sample Number:	13I0722-03
Sampling Date:	9/17/2013
Sample Depth (ft):	1/14/1900
Units:	ug/l Q
VOCs	
1,2,4-Trimethylbenzene	8.6
Metals	
Aluminum	10
Iron	5,120
Iron (Dissolved)	5,110
Manganese	651
Manganese (Dissolved)	659
Iron	5,120
Manganese	651

Sample ID:	MW-1
Laboratory Sample Number:	209387-001
Sampling Date:	4/28/2005
Units:	ug/l Q
Total Metals	
Aluminum	97.7 J
Iron	5,990
Manganese	956
Sodium	105,000
Dissolved Metals	
Iron	1,290
Manganese	977
Sodium	111,000

Location:	MW-1 (363 BOND)
Sample ID:	151-MW-1-20130917
Laboratory Sample Number:	13I0643-05
Sampling Date:	9/17/2013
Sample Depth (ft):	9
Units:	ug/l Q
Metals	
Iron	2,530
Manganese	963
Manganese (Dissolved)	936

NYSDEC Part 703 Groundwater Quality Objectives	Ground Water Quality Standards (ug/l)
Volatile Organic Compounds (VOCs)	
1,2-Dichloroethene (cis)	5
1,2,4-Trimethylbenzene	5
1,3,5-Trimethylbenzene	5
Acetone	50
Benzene	1
Ethylbenzene	5
Isopropyl Benzene	5
Propylbenzene-n	5
N-Butylbenzene	5
Sec-Butylbenzene	5
Toluene	5
Trichloroethylene	5
Vinyl Chloride	2
Xylene (mixed)	5
Semi-Volatile Organic Compounds (SVOCs)	
2,4-Dimethylphenol	2
Acenaphthene	20
Anthracene	50
Benzo(a)anthracene	5
Benzo(b)fluoranthene	0.002
Benzo(k)fluoranthene	0.002
Chrysene	5
Fluoranthene	50
Fluorene	5
Naphthalene	10
o-Cresol(s) (2-Methylphenol)	2
Phenanthrene	5
Phenol	1
Pyrene	50
PCBs	
Aroclor 1254	0.09
Metals	
Aluminum	3
Antimony	3
Arsenic	25
Cadmium	5
Iron	300
Iron and Manganese	500
Lead	25
Magnesium	35,000
Manganese	300
Selenium	10
Sodium	20,000

Notes:
1. Map features are based on aerial photographs, tax maps, and the following ELM reports: Phase II Investigation Report, 363 Bond Street (May 2005) and Phase II Investigation Report, 400 Carroll Street (May 2005).
2. All ELM sample locations are approximate and based on the reports identified in Note 1.
3. AOC-1: Proposed Excavation Area - 388 Carroll Street, North; AOC-2: Proposed Excavation Area - 388 Carroll Street, South; AOC-3: Proposed Excavation Area - 363 Bond Street; AOC-5: Former UST Area.

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Langan Engineering, Environmental, Surveying and Landscape Architecture, D.P.C.
Langan International LLC
Collectively known as Langan
NJ CERTIFICATE OF AUTHORIZATION No. 24GA27996400

Project
PROPOSED BOND STREET DEVELOPMENT
BLOCK No. 452, LOT Nos. 1 & 15
BROOKLYN
KINGS COUNTY NEW YORK

Drawing Title
SUMMARY OF ALL GROUNDWATER ANALYTICAL RESULTS

Project No.	Figure
100287501	13
Date: 5/8/2014	
Scale: 1"=30'	
Drawn By: atr	
Last Revised: 5/27/2014	

Path: I:\Langan.com\data\EP\data5\100287501\ArcGIS\ArcMap_Documents\2014-05 - NYSDEC RIR (363 Bond-388 Carroll)\Figure 13 - 363 Bond and 388 Carroll ALL GROUNDWATER DATA.mxd

APPENDIX A

GEOPHYSICAL SURVEY REPORT

LANGAN

GEOPHYSICAL ENGINEERING SURVEY REPORT

COMMERCIAL / INDUSTRIAL BUILDINGS

363 – 365 Bond Street & 400 Carroll Street, Brooklyn, New York

NOVA PROJECT NUMBER
13-0720

DATED
September 9, 2013

PREPARED FOR:
LANGAN
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619 River Drive
Elmwood Park, NJ 07407-1338
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PREPARED BY:

NOVA GEOPHYSICAL ENGINEERING
Subsurface Mapping Solutions
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September 9, 2013

Amanda Forsburg
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Mobile: 201.615.9726
Email: aforsburg@langan.com

Re: Geophysical Survey Report Commercial / Industrial Properties - Buildings
363-365 Bond Street & 400 Carroll Street, Brooklyn, New York

Dear Ms. Forsburg:

Nova Geophysical Services (NOVA) is pleased to provide findings of our geophysical surveys at the above referenced project sites located at 363-365 Bond Street & 400 Carroll Street, Brooklyn, New York (the "Sites"). Please see attached Geophysical Survey map for more details.

INTRODUCTION TO GEOPHYSICAL SURVEY

NOVA performed a Geophysical survey consisting of Ground Penetrating Radar (GPR), Electromagnetic (EM) surveys and comprehensive subsurface utility (CSUL) surveys at the project Site. The purpose of this survey is to clear and mark proposed environmental boring locations and to identify any underground storage tanks (USTs), anomalies, and subsurface structures that maybe located at the proposed boring areas at the project site on August 27th & 28th, 2013.

The equipment selected for this investigation will be included a CSUL Pipe and Cable Locator (an magnetic detector), Ditch-Witch utility locator, Electromagnetic detector (Geonics EM61), Software and Sensor's 250 MHz ground-penetrating radar (GPR).

A GPR system consists of a radar control unit, control cable and a transducer (antenna). The control unit transmits a trigger pulse at a normal repetition rate of 250 MHz. The trigger pulse is sent to the transmitter electronics in the transducer via the control cable. The transmitter electronics amplify the trigger pulses into bipolar pulses that are radiated to the surface. The transformed pulses vary in shape and frequency according to the transducer used. In the subsurface, variations of the signal occur at boundaries where there is a dielectric contrast (void, steel, soil type, etc.). Signal reflections travel back to the control unit and are represented as color graphic images for interpolation.

GEOPHYSICAL METHODS

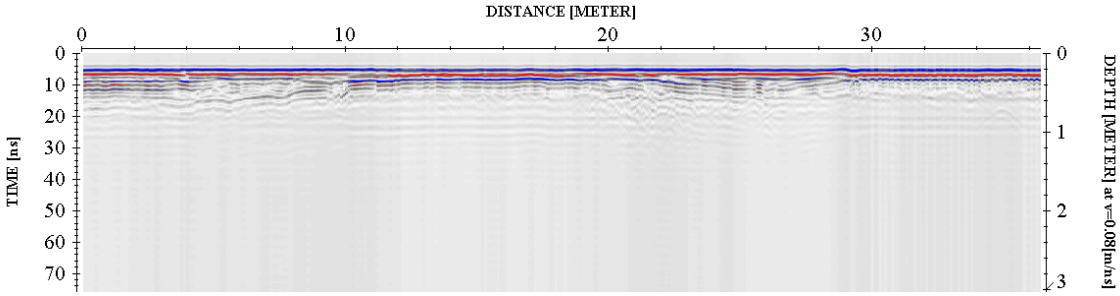
The project site was first screened using the Geonics(tm) electromagnetic detector by carrying the instrument over the boring locations at the site in 5' x 5' traverses. When evidence of anomalies were observed, the Ditch-witch(tm) utility locator was then used to determine if the anomalies were utilities or other large sub-surface metal objects. Finally, GPR profiles were collected over each metal-detector anomaly and inspected for reflections, which could be indicative of major anomalies.

GPR data profiles were collected for the areas of the Site specified by the client. The surveyed area consisted of paved and none paved areas.

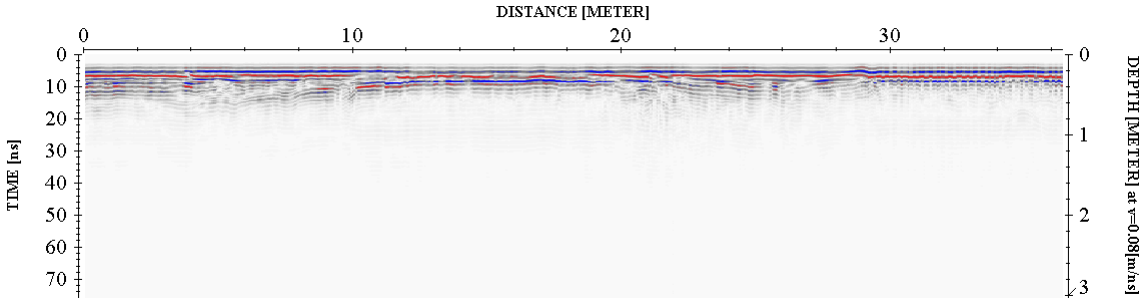
DATA PROCESSING

In order to improve the quality of the results and to better identify subsurface anomalies NOVA processed the collected data. The processes flow is briefly described at this section.

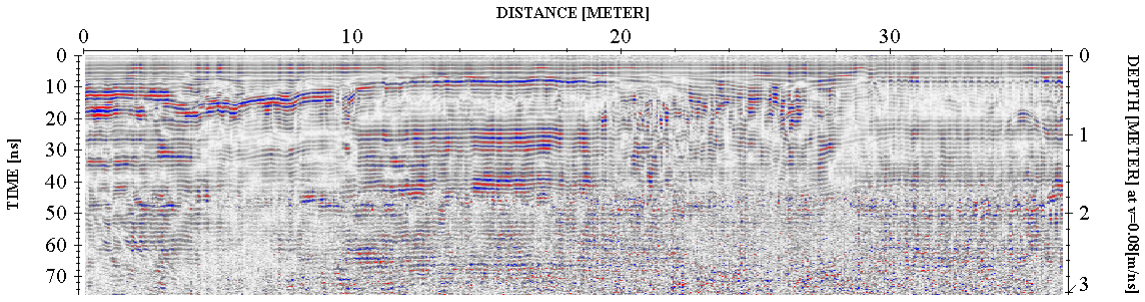
Step 1. Import raw RAMAC data to standard processing format



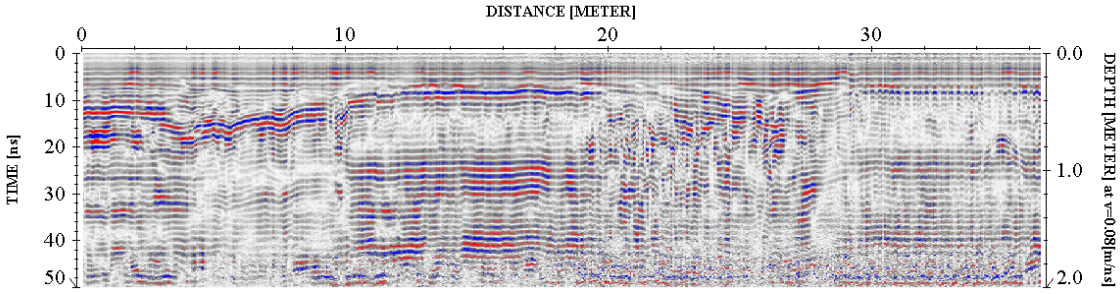
Step 2. Remove instrument noise *(dewow)*



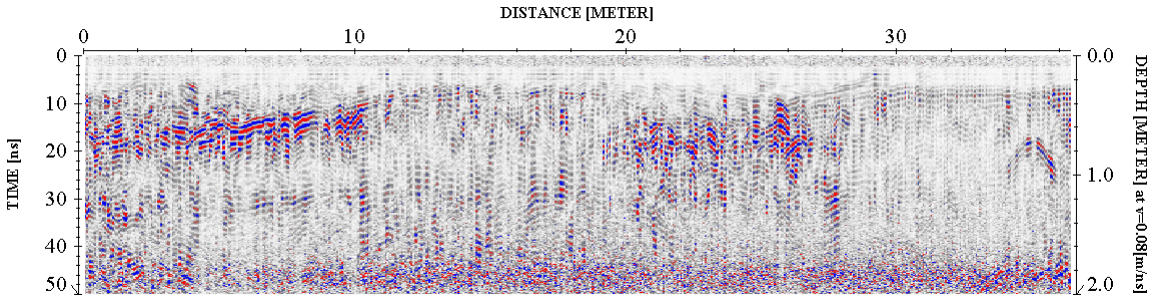
Step 3. Correct for attenuation losses *(energy decay function)*



Step 4. Remove static from bottom of profile *(time cut)*



Step 5. Mute horizontal ringing/noise *(subtracting average)*



The above example shows the significance of data processing. The last image (step 5) has higher resolution than the starting image (raw data – step 1) and describes the subsurface anomalies more accurately.

PHYSICAL SETTINGS

Nova observed following physical conditions at the time of the survey:

The weather: Mostly sunny
Temp: 83 & 85 degrees
Surface: Paved with Concrete and non-paved areas.
Geophysical Noise Level (GNL): Geophysical Noise Level (GNL) was medium to high due to site building settings with reinforcement, on-site storage, limited or no access at the time of the survey.

RESULTS

The results of the geophysical survey identified following at the project Site:

- Geophysical survey identified anomalies located along the western portion of the 363 Bond Street area (building) along Bond Street. Further evaluation of this anomaly with the CSUL, it confirmed that it was associated with the vent pipe which was also located at the same area.

- Geophysical survey identified additional anomalies located along the eastern portion of the project area (365 Bond Street) underneath the unpaved area of the site. Based on their reflection rates and proximity, these anomalies were located approximately 3 to 5 feet below ground surface.

- Geophysical survey identified anomalies along the southern portion of the project site located at 400 Carroll Street adjacent to the project site building located at363 Bond Street. Due to limited access, NOVA could verify the nature of these anomalies.

- Geophysical survey identified minor anomalies located throughout of the surveyed areas. Based on their reflection rate and proximity, they were consistent with subsurface utilities (water, sewer and etc.). All of these anomalies were clearly marked on the field during the survey.

- Geophysical survey identified additional vent pipe and fill port located along the western portion of the project site located at 363 Bond Street. Due to no access to the basement (partial basement) at the time of the survey, NOVA could not verify whether these lines are associated with an UST or AST located in the basement.

- Geophysical survey identified scattered anomalies located throughout of the project areas. None of these anomalies were consistent with any major subsurface USTs or other structures.

- Geophysical survey confirmed that all of the on-site floor drains were interconnected with their final destination to the municipal sewer system located along the Bond Street, 2nd Street and Carroll Street.

- Nova cleared and marked all of the proposed boring areas located throughout of the project area.

- Geophysical Survey Plan portrays the areas investigated during the geophysical survey.

- If you have any questions please do not hesitate to contact the undersigned.

Sincerely,

NOVA Geophysical Services

Levent Eskicakit, P.G., E.P.
Project Engineer

Cc Lindsay Deckard, Langan
Christopher McMahon Langan

Attachments:

Figure 1 Site Location Map
Geophysical Survey Plan
Geophysical Images

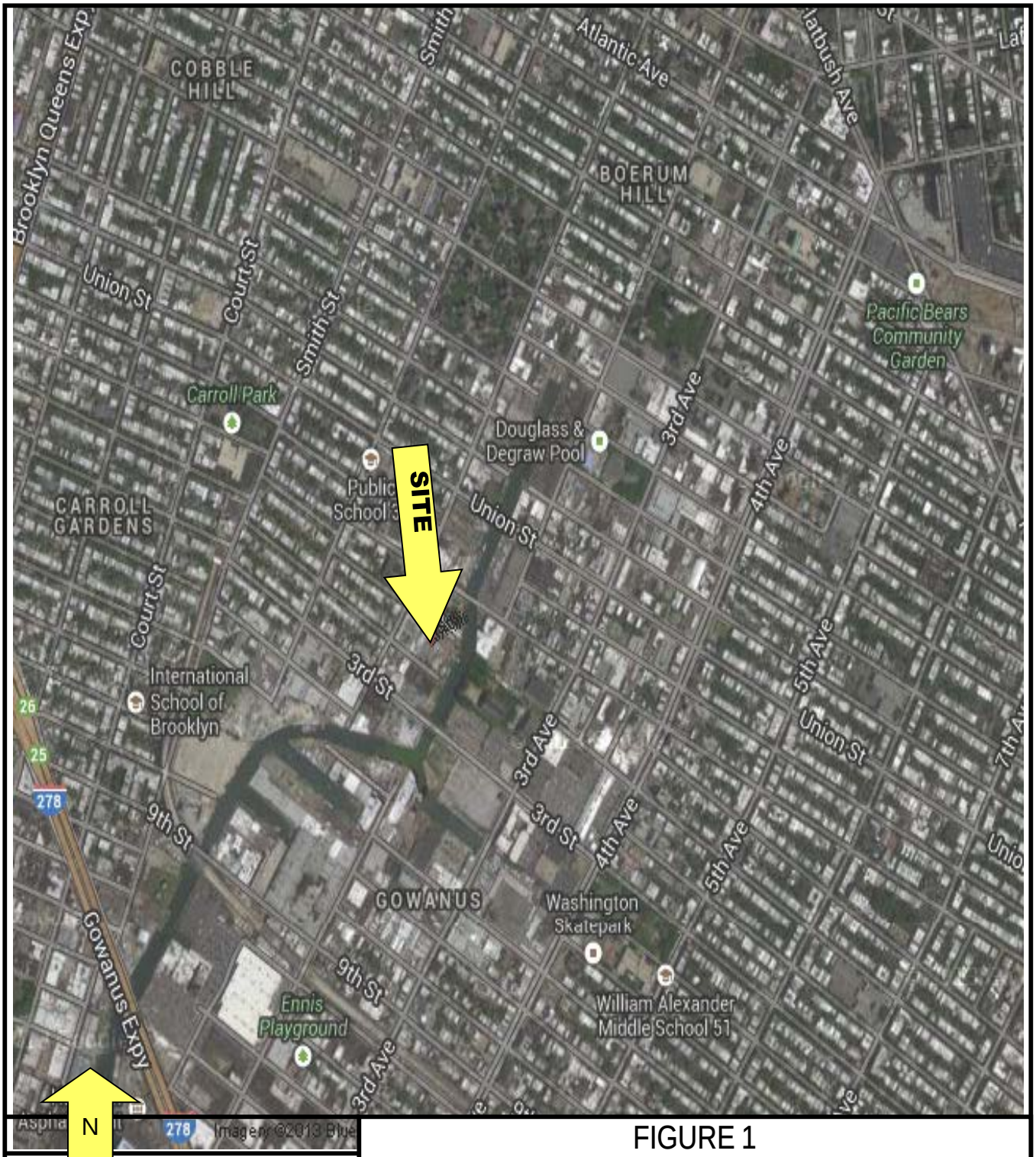


FIGURE 1

SITE LOCATION MAP

NOVA

Geophysical Services

Subsurface Mapping Solutions

56-01 Marathon Pkwy, PO Box 765, Douglaston, NY11362

(718) 261-1527 Fax (718) 261-1528

www.nova-gsi.com

SITE: **Commercial Properties**
363, 365 Bond Street & 400 Carroll Street
Brooklyn, New York

SCALE: See Map

NOTES

1- All anomalies were marked in the field.

GEOPHYSICAL SURVEY PLAN

NOVA
Geophysical Services
Subsurface Mapping Solutions
56-01 Marathon Parkway, # 765
Douglaston, New York11362
Phone (347) 556-7787 * Fax (718) 261-1527
www.nova-gsi.com

SITE : Commercial Buildings
363-365 Bond Street, Brooklyn, New York
CLIENT Langan Engineering & Environmental, Inc.
SCALE See Map
DATE August 27th & 28th, 2013

INFORMATION

- Project Area
- Underground Lines/Pipes/Utilities
- Anomaly (Former Foundation Structures)
- Minor Anomaly detected with GPR
- Anomalies (Detected with EM)

No Access
(Partial Basement)

NOTES

1- All anomalies were marked in the field.

NOVA
Geophysical Services
Subsurface Mapping Solutions
56-01 Marathon Parkway, # 765
Douglaston, New York11362
Phone (347) 556-7787 * Fax (718) 261-1527
www.nova-gsi.com

GEOPHYSICAL SURVEY PLAN

SITE : Commercial/ Industrial Properties
365 Bond Street & 400 Carroll Street, Brooklyn, New York
CLIENT Langan Engineering & Environmental, Inc.
SCALE See Map
DATE August 27th & 28th, 2013

INFORMATION

GPR/EM Surveyed Areas

Vent Pipe / Floor Drain

Major Anomaly

Underground Lines/Pipes/Utilities

Minor Anomaly detected with GPR

GEOPHYSICAL IMAGES

Commercial / Industrial Properties

363-365 Bond Street & 400 Carroll Street, Brooklyn, New York

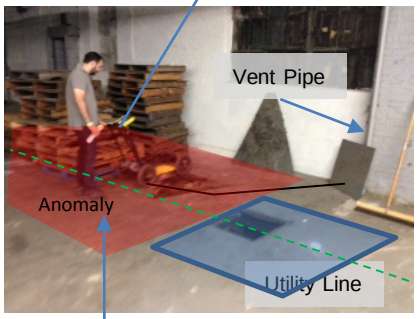
August 27th & 28th, 2013

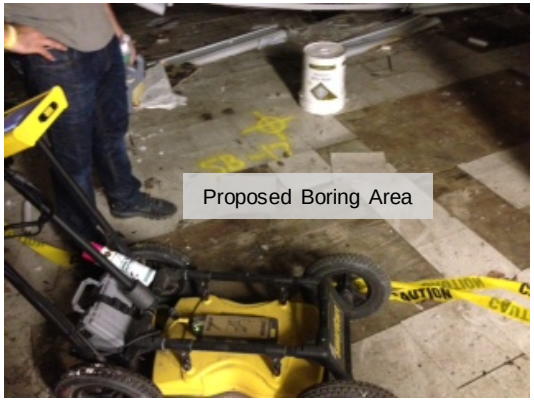
GEOPHYSICAL IMAGES

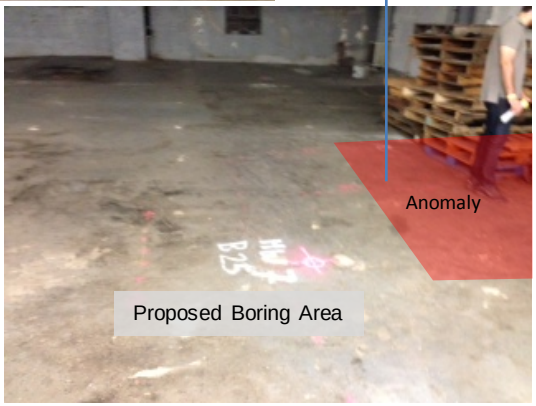
Commercial / Industrial Properties

363-365 Bond Street & 400 Carroll Street, Brooklyn, New York

August 27th & 28th, 2013



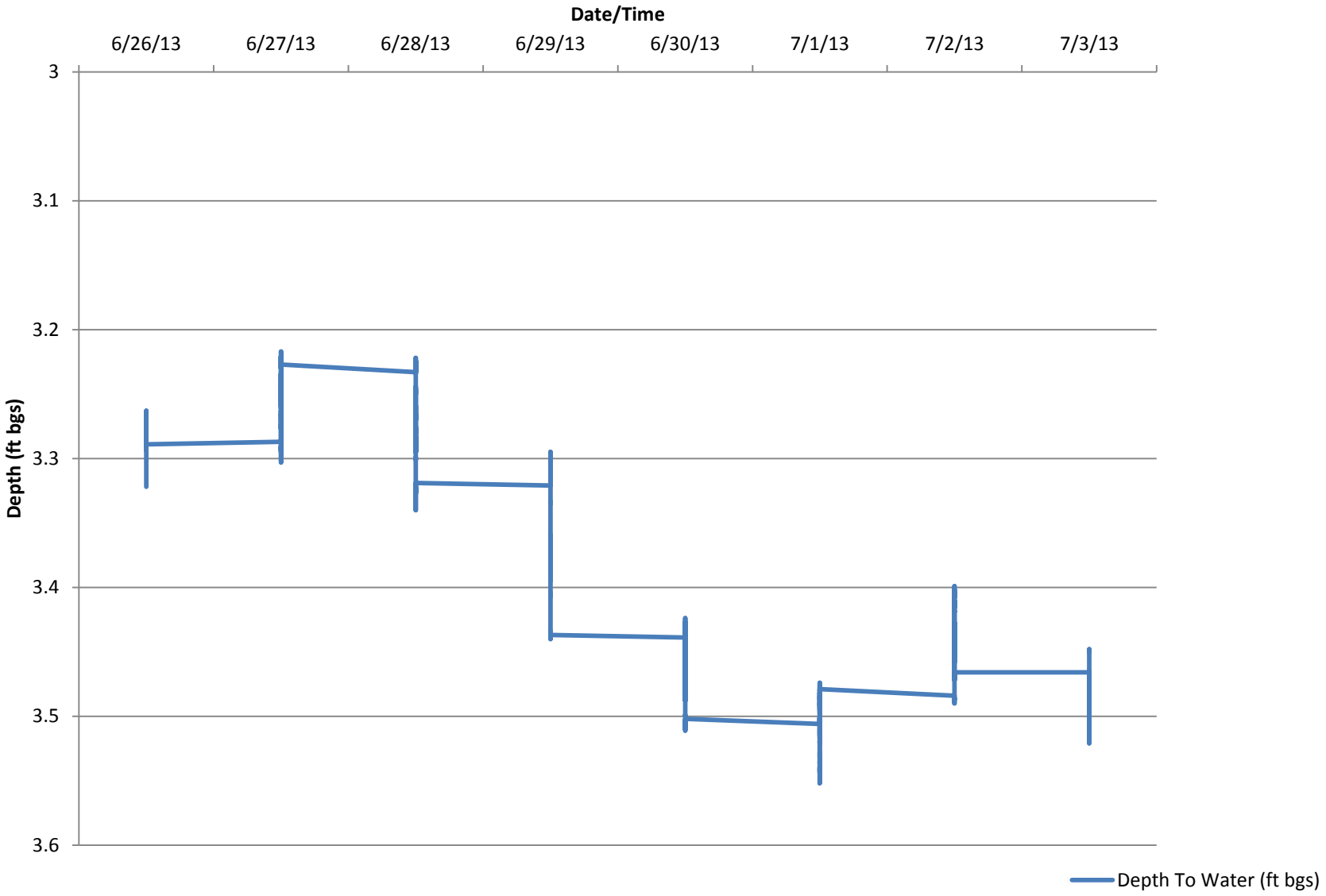




APPENDIX B

GROUNDWATER ELEVATION DATA

Depth to Water at LMW-3



APPENDIX C

FIELD LOGS

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LOG OF BORING LSB-7 **SHEET** 1 **OF** 2

PROJECT PROPOSED BOND ST.		**PROJECT NO.** 100287501	
LOCATION 363 BOND ST.		**ELEVATION AND DATUM**	
DRILLING AGENCY PAL		**DATE STARTED** 06SEP13	**DATE FINISHED** 06SEP13
DRILLING EQUIPMENT GEOPROBE 7822DT (0'-4') & GEOPROBE 420 MOBILE (4'-16')		**COMPLETION DEPTH** 16'	**ROCK DEPTH** —
SIZE AND TYPE OF BIT 4 1/4" & 1 1/4"		**NO. SAMPLES** DIST. 2	UNDIST. — CORE —
CASING 4' x 1 1/4" & 2' x 1 1/4"		**WATER LEVEL** FIRST 12'	COMPL. — 24 HR. —
CASING HAMMER — **WEIGHT** — **DROP** —		**FOREMAN** JEREMY & TONY	
SAMPLER 4' x 1" & 2' x 1" ACETATE LINERS		**INSPECTOR** LINDSAY DECKARD	
SAMPLER HAMMER — **WEIGHT** — **DROP** —			

PID (PPM)	SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES BLOCK	SAMPLES TYPE	SAMPLES RECOV. (IN.)	SAMPLES PENETR. RESIST. BLOWS/FT.	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
0.6	0'-1' CONCRETE [DRY]						BACKGROUND PID READING = 0.6 PPM
0.6	1'-4' BROWN F-M SAND, SOME SILT, TRACE CLAY, MICA, F GRAVEL [MOIST]						SAMPLE 072/LSB-7 @ 0-2' VOCs @ 1.5'-2.0'
0.6		1					
0.6					21"		
0.6		2					
0.6							
0.8		3					
0.4							
0.8	4'-6' SAME AS 1'-4' ABOVE	4					BACKGROUND PID READING = ~~0.8~~ 0.6 PPM
0.8					16"		
0.8		5					
0.9							
0.6	6'-6.5' SAME AS 1'-4' ABOVE	6					BACKGROUND PID READING = 0.6 PPM
0.8	6.5'-8' BLACK M-C SAND, SOME C GRAVEL, SILT, CLAY, TRACE MICA, WOOD/ORGANICS [MOIST]				17"		6.5'-8' FAINT ODOR
1.5		7					
0.6							
0.9	8'-10' SAME AS 6.5'-8' ABOVE	8					8'-10' FAINT ODOR
1.2					7"		
1.1		9					
1.3							
3.1	10'-12' F-C SAND (MOSTLY COARSE) BLACKISH BROWN, SOME ANGULAR COARSE GRAVEL, TRACE WOOD/ORG-ANICS, SILT, MICA [MOIST]	10					ODOR
1.7							
2.3		11			24"		
1.9							
1.0	12'-14' SAME AS 10'-12' ABOVE [WET]	12					GW @ 12'
1.7							
9999+					15"		PID READINGS OF 9999+ MAY BE INACCURATE, RECOVERY VERY WET W/ SLIGHT ODOR
9999+		13					SAMPLE 073/LSB-7 @ 13'-15' & VOCs @ 14.0'-14.5'
		14					

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JOB NO. 100287501
DATE 06SEP13

LOG OF BORING NO. LSB-7

SHEET 2 OF 2

PID (PPM)	SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES: NO./LOC.	SAMPLES: TYPE	SAMPLES: RECOV. ft.	SAMPLES: PENETR. RESIST BLS/6in.	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
4476	14' 15' SAME AS 10'-12' ABOVE [WET]	14					HIGH PID READING, FAINT ODOR, SOIL RECOVERY VERY WET
704							
725	15'-16' BROWNISH BLACK SILT, SOME CLAY, F SAND, TRACE GRAVEL [WET]	15			2½"		
1706							
TOSZ		16					

036100

REWRITE

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LOG OF BORING LSB-8 **SHEET** 1 **OF** 1

PROJECT: PROPOSED BOND ST. REDEVELOPMENT	PROJECT NO.: 100287501
LOCATION: 363 BOND ST.	ELEVATION AND DATUM: —
DRILLING AGENCY: PAL	DATE STARTED: 06SEP13 / DATE FINISHED: 06SEP13
DRILLING EQUIPMENT: GEOPROBE 420 MOBILE	COMPLETION DEPTH: 14' / ROCK DEPTH: —
SIZE AND TYPE OF BIT: 1 1/4"	NO. SAMPLES: DIST. 1, UNDIST —, CORE —
CASING: 2" x 1 1/4"	WATER LEVEL: FIRST 10'-11', COMPL. —, 24 HR. —
CASING HAMMER: — / WEIGHT: / DROP:	FOREMAN: JEREMY
SAMPLER: 2' x 1" ACETATE LINER	INSPECTOR: LINDSAY BECKARD
SAMPLER HAMMER: — / WEIGHT: / DROP:	

PID (PPM)	SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES: NO./LOC.	SAMPLES: TYPE	SAMPLES: RECOV. IN.	SAMPLES: PENETR. RESIST BLOWS/FT.	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
1.8	0'-2' CONCRETE [DRY]						BORING LOCATED IN AREA OF CRACKED/DEPRESSED/DAMAGED CONCRETE FLOORING
2.4		1			4"		
1.6							
1.5		2					
1.2	2'-3' BROWN M SAND SOME C GRAVEL, SILT [MOIST]						2'-4' SLIGHT ODOR
0.9		3			10"		
103	3'-4' BROWNISH BLACK M SAND, SOME SILT [MOIST]						
104		4					
210	~~4-6.5~~ GREYISH YELLOW C GRAVEL, SOME SAND, SILT, TRACE CLAY						VERY STRONG ODOR ~~4'-4.5'~~, 6-6.5'
107	6.5-8 [MOIST]	5			10"		
163	~~4.5-6.0~~ SAME AS 3'-4' ABOVE						
273		6					
22.3	4'-6' SAME AS 3'-4' ABOVE				10"		VERY STRONG ODOR
706		7					
349							
303		8					
174	8'-10' BROWNISH BLACK F SAND, SOME SILT, F GRAVEL, TRACE CLAY [WET] W/ SHEEN				5"		POOR RECOVERY — WET
280		9					MOST LIKELY GW, BUT ALSO GREYISH SILVER SHEEN
300							
335		10					GW @ 10'-11'
45 ~~170~~							VERY STRONG ODOR
64 ~~210~~	10'-12' BROWNISH GREY SILT, SOME F SAND, SOME CLAY [WET] W/ SHEEN	11			8"		SAMPLE 075/LSB 8 @ GW INTERFACE 10'-12' W/ VOCs @ 11.5'-12'
231							
351		12					
8.7	12'-14' BROWN M SAND, SOME SILT, TRACE CLAY [WET]				22"		NO ODOR, NO SHEEN
13.2		13					
13.4							
11.1		14					

~~END BORING~~

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LOG OF BORING LS B-9 **SHEET** 1 **OF** 1

PROJECT PROPOSED BOND ST REDEVELOPMENT	**PROJECT NO.** 100287501
LOCATION 363 BOND ST	**ELEVATION AND DATUM**
DRILLING AGENCY PAL	**DATE STARTED** 09SEP13 **DATE FINISHED** 09SEP13
DRILLING EQUIPMENT GEOPROBE 420 MOBILE	**COMPLETION DEPTH** 6' BGS **ROCK DEPTH** —
SIZE AND TYPE OF BIT 2' x 1¼", 1¼"	**NO. SAMPLES** DIST. 2 UNDIST — CORE —
CASING	**WATER LEVEL** FIRST 5' COMPL. — 24 HR. —
CASING HAMMER — **WEIGHT** **DROP**	**FOREMAN** TONY & MIKE
SAMPLER 2' x 1" ACETATE SLEEVE	**INSPECTOR** LINDSAY DECKARD
SAMPLER HAMMER — **WEIGHT** **DROP**	

PID (PPM)	SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO./LOC.	SAMPLES TYPE	SAMPLES RECOV. IN.	SAMPLES PENETR. RESIST. BLG/6IN.	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
0.2	0'-0.5' CONCRETE [DRY]						
421	0.5'-2.0' YELLOWISH BROWN (w/ SOME BLACK STREAKS) M-C SAND, SOME SILT, TRACE GRAVEL [MOIST]	1			16"		SAMPLE 079/LSB-9 @ 0'-2' w/ VOCs @ 1'-1.5'
791							
151							
129		2					
	2'-4' REDDISH BROWN SAND, SOME SILT, GRAVEL [MOIST]						POOR RECOVERY - 1ST ATTEMPT 2'-4', REFUSAL @ 3' (ROCK FRAGMENTS)
0.3		3			2"		
		4			—		GW @ 5'
78.1	4'-5.5' REDDISH BROWN M-C SAND, SOME C GRAVEL, BRICK, TRACE SILT [WET]						
50.2		5			7"		STRONG ODOR @ 5.5'-6'
51.6							SAMPLE 080/LSB 9 @ 4'-6', VOCs @ 5'-6'
147	5.5'-6' BLACK WOOD [MOIST] SOME ROCK FRAGMENTS	6					HIT REFUSAL @ 6', TWICE
295							END OF BORING @ 6' BGS
		7					
		8					
		9					
		10					
		11					
		12					
		13					
		14					

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LOG OF BORING LSB-10 **SHEET** 1 **OF** 1

PROJECT PROPOSED BOND ST. REDEVELOPMENT	**PROJECT NO.** 100287501
LOCATION 363 BOND ST	**ELEVATION AND DATUM** —
DRILLING AGENCY PAL	**DATE STARTED** 09SEP13 / **DATE FINISHED** 09SEP13
DRILLING EQUIPMENT GEOPROBE 420 MOBILE	**COMPLETION DEPTH** 4' BGS / **ROCK DEPTH** —
SIZE AND TYPE OF BIT 1 1/4"	**NO. SAMPLES** DIST. 1 / UNDIST. / CORE
CASING 2' x 1 1/4"	**WATER LEVEL** FIRST — / COMPL. — / 24 HR. —
CASING HAMMER — / **WEIGHT** / **DROP**	**FOREMAN** TONY & MIKE
SAMPLER 2' x 1" ACETATE SLEEVE	**INSPECTOR** LINDSAY DECKARD
SAMPLER HAMMER — / **WEIGHT** / **DROP**	

PID (PPM)	SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO./LOC.	SAMPLES TYPE	SAMPLES RECOV. FT.	SAMPLES PENETR. RESIST. BLS/6in.	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
2.6	0'-1.5' CONCRETE [DRY]						FAINT ODOR 1.5'-2.0'
11.6	0.5'-2.0' BLACK C SAND, SOME C GRAVEL, BRICK, TRACE SILT [MOIST]	1			8"		SAMPLE 085/LSB-10 0-2' w/ VOCs @ 1'-1.5'
41.3							
32.3							
3.8		2					
4.2	2'-4' BROWN C SAND, SOME C GRAVEL, BRICK, TRACE SILT [MOIST]						FAINT ODOR
2.4							
5.3		3			13"		
1.1							
0.8		4					HIT REFUSAL @ 4' BGS 3x END OF BORING.
		5					
		6					
		7					
		8					
		9					
		10					
		11					
		12					
		13					
		14					

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LOG OF BORING LSB-21 **SHEET** 1 **OF** 1

PROJECT: PROPOSED BOND ST. REDEVELOPMENT	PROJECT NO.: 100287501
LOCATION: 400 CARROLL ST.	ELEVATION AND DATUM: –
DRILLING AGENCY: PAL ENVIRONMENTAL SERVICES	DATE STARTED: 12SEP13 / DATE FINISHED: 12SEP13
DRILLING EQUIPMENT: GEOPROBE 7822 DT	COMPLETION DEPTH: 10' BGS / ROCK DEPTH:
SIZE AND TYPE OF BIT: 2 1/4"	NO. SAMPLES: DIST / UNDIST / CORE
CASING: 5' x 2 1/4"	WATER LEVEL: FIRST / COMPL. / 24 HR.
CASING HAMMER: – WEIGHT: – DROP: –	FOREMAN: JEREMY
SAMPLER: 5' x 1"	INSPECTOR: LINDSAY DECKARD
SAMPLER HAMMER: – WEIGHT: – DROP: –	

PID* (PPM)	SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES: NO./LOC.	SAMPLES: TYPE	SAMPLES: RECOV. ft.	SAMPLES: PENETR. RESIST. BLOWS/ft.	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
–	0'-5' FILL - TAN, F-M SAND [DRY]	1			6"		SAMPLE 123/LSB-21 @ 0'-2' w/ VOCs @ 1.5'-2'
–		2					
–		3					
–		4					
–		5					½" LENS OF BLACK SAND w/ SLIGHT ODOR @ 8.5'-8.55'
–	5'-7' SAME AS 0'-5' ABOVE	6					SAMPLE 124/LSB-21 @ 7'-9' w/ VOCs @ 8.5'-9'
–	7'-10' SAME AS 0'-5' ABOVE [WET]	7			18"		BW @ 7'
–		8					SAMPLE 125/DUP-3 @ 7'-9' w/ VOCs @ 8.5'-9'
–		9					REFUSAL @ 10' BGS. REPOSITION. SECOND REFUSAL @ 10 BGS
	END OF BORING	10					- REFUSAL POSSIBLY CONCRETE BASE OF SILO. BORING IS LOCATED WITHIN SILO FOOTPRINT.
		11					
		12					
		13					* TOO WET FOR PID, POURING RAIN
		14					

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LOG OF BORING LSB-22 **SHEET** 1 **OF** 2

PROJECT PROPOSED BOND ST. REDEVELOPMENT	**PROJECT NO.** 100287501
LOCATION 363 BOND ST	**ELEVATION AND DATUM** —
DRILLING AGENCY PAL	**DATE STARTED** 09SEP13 / **DATE FINISHED** 09SEP13
DRILLING EQUIPMENT GEOPROBE 420 MOBILE	**COMPLETION DEPTH** 16' / **ROCK DEPTH** —
SIZE AND TYPE OF BIT 1 ¼"	**NO. SAMPLES** DIST. 4 UNDIST. — CORE —
CASING 2' x 1 ¼"	**WATER LEVEL** FIRST 6' COMPL. — 24 HR. —
CASING HAMMER — WEIGHT — DROP —	**FOREMAN** TONY & MIKE
SAMPLER 2' x 1" ACETATE LINER	**INSPECTOR** LINDSAY DECKARD
SAMPLER HAMMER — WEIGHT — DROP —	

PID (PPM)	SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES: BLOWS	SAMPLES: TYPE	SAMPLES: RECOVERY	SAMPLES: PENETR. RESIST. BLOWS/FT	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
1.9	0'-1' CONCRETE [DRY] SOME BRICK						FAINT ODOR
1.1	1'-2' YELLOWISH BROWN F-M SAND, SOME GRAVEL, SILT, ROCK FRAGMENTS [DRY]	1			13"		SAMPLE 081/LSB-22 0'-2' w/ VOCS @ 1.0'-1.5'
2.5							SAMPLE 083/DUP-2 OF 081/LSB-22
1.9							
1.3		2					
1.9	2'-3.5' REDDISH BROWN M-C SAND, SOME GRAVEL, BRICK, SILT, TRACE MICA [DRY]						
1.6							
2.5	3.5'-4.0' SAME AS 2'-3.5' [MOIST]	3			24"		
4.6	w/ PRODUCT						
54.2							STRONG ODOR 3.5'-4'
384	4'-6' BLACK F-M SAND, SOME SILT, CLAY, GRAVEL, GLASS SHARDS, TRACE MICA [WET] w/ PRODUCT	4					
395					5"		OBSERVABLE PRODUCT -- BLACK SHEEN, WET
282		5			~~12"~~ (5")		SAMPLE 082/LSB 22 4'-6' w/ VOCS @ 5.5'-6'
480							
627							SAMPLE 084/LSB-22 MS/MSD OF 082/LSB-22
254	6'-8' BLACK M-C GRAVEL, SOME C SAND, BRICK, TRACE WOOD/ORGANICS, MICA [WET] GW & PRODUCT	6					GW @ 6'
108							
156		7			12"		
102							
56.6							
840	8'-9' SAME AS 6'-8' ABOVE	8					STRONG ODOR
60.7	9'-10' BLACK SILT, SOME F-M SAND, CLAY, TRACE WOOD [WET] GW & PRODUCT						
24.2		9			13"		
30.5							
14.6							
153	10'-12' SAME AS 9'-10' ABOVE	10					STRONG ODOR
163							
122		11			8"		
147							
141							
169	12'-14' SAME AS 9'-10' ABOVE	12					STRONG ODOR
218							
122		13			24"		
145							
166		14					

LANGAN
ENGINEERING & ENVIRONMENTAL SERVICES

JOB NO. 100287501
DATE 09SEP13

LOG OF BORING NO. LSB-22
SHEET 2 OF 2

PID (PPM)	SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO./LOC.	SAMPLES TYPE	SAMPLES RECOVERY	SAMPLES PENETR. RESIST. BLWS/6"	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
128	14'-16' SAME AS 9'-10' ABOVE	14					STRONG ODOR
119							
78.0		15			18"		
82.7							
79.3		16					

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LOG OF BORING LSB-23 **SHEET** 1 **OF** 1

PROJECT	BOND ST. PROPOSED REDEVELOPMENT	**PROJECT NO.**	100287501
LOCATION	363 BOND ST.	**ELEVATION AND DATUM**	—
DRILLING AGENCY	PAL	**DATE STARTED**	06SEP13
		DATE FINISHED	~~06SEP13~~ 09SEP13
DRILLING EQUIPMENT	GEOPROBE 420 MOBILE	**COMPLETION DEPTH**	—
		ROCK DEPTH	—
SIZE AND TYPE OF BIT	1¼"	**NO. SAMPLES**	DIST. 1 / UNDIST — / CORE —
CASING	2' x 1¼"	**WATER LEVEL**	FIRST — / COMPL. — / 24 HR. —
CASING HAMMER	— WEIGHT — DROP —	**FOREMAN**	JEREMY & TONY
SAMPLER	2' x 1" ACETATE LINER	**INSPECTOR**	LINDSAY DECKARD
SAMPLER HAMMER	— WEIGHT — DROP —		

PID (PPM)	SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO./LOC.	SAMPLES TYPE	SAMPLES RECOV. FT.	SAMPLES PENETR. RESIST BLS/6"	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
1.8	0'-1' CONCRETE [DRY]						NO SAMPLE 0'-2' (LOW RECOVERY)
2.6	1'-2' YELLOW M-C SAND, SOME GRAVEL [MOIST]	1			3"		
9.1							
0.9		2					SAMPLE 076/LSB-23 @ 2'-4' VOCs @ 3'-3.5' [NOT ENOUGH RECOV. FROM 0'-2']
1.9	2'-4' REDDISH BROWN M-C SAND, SOME BRICK, GRAVEL, TRACE SILT, MICA [MOIST]						REFUSAL TWICE @ 4' BGS - MOVED BORING, REATTEMPTED.
3.3		3			8"		BORING REFUSAL 3RD TIME @ 4' BGS
2.7							SLIGHT ODOR
3.1		4					- BORING STOPPED AT COB 06SEP13
							- REATTEMPT BORING 09SEP13
		5					REFUSAL @ 4' BGS FOR 4TH TIME.
							END BORING @ 4' BGS.
		6					
		7					
		8					
		9					
		10					
		11					
		12					
		13					
		14					

LANGAN
ENGINEERING & ENVIRONMENTAL SERVICES

LOG OF BORING LSB-24 **SHEET** 1 **OF** 1

PROJECT: PROPOSED BOND ST. REDEVELOPMENT	PROJECT NO.: 100287501
LOCATION: 363 BOND ST	ELEVATION AND DATUM: —
DRILLING AGENCY: PAL	DATE STARTED: 09SEP13 / DATE FINISHED: 09SEP13
DRILLING EQUIPMENT: GEOPROBE 420 MOBILE	COMPLETION DEPTH: 4' BGS / ROCK DEPTH: —
SIZE AND TYPE OF BIT: 1¼"	NO. SAMPLES: DIST. 1, UNDIST. —, CORE —
CASING: 2' X 1¼"	WATER LEVEL: FIRST —, COMPL. —, 24 HR. —
CASING HAMMER: — / WEIGHT: — / DROP: —	FOREMAN: TODY & MIKE
SAMPLER: 2' X 1" ACETATE SLEEVE	INSPECTOR: LINDSAY DECKARD
SAMPLER HAMMER: — / WEIGHT: — / DROP: —	

PID (PPM)	SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES: NO./TYPE	RECOV. (IN.)	PENETR. RESIST. BLOWS/6"	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
0.0	0'-1.5' CONCRETE [DRY]					POOR RECOVERY
0.0	1.5'-2' REDDISH BLACK M-C SAND, SOME BRICK, GRAVEL, TRACE SILT [DRY]	1		4"		
0.0						
0.0						
0.0		2		—		
0.0	2'-4' SAME AS 1.5'-2' ABOVE					POOR RECOVERY
0.0				3"		
0.0		3				
0.0						SAMPLE 086 / LSB-24 0'-4' DUE TO POOR RECOVERY VOCs @ 3.5'-4'
0.4		4				REFUSAL @ 4' BGS 3x
						END OF BORING
		5				
		6				
		7				
		8				
		9				
		10				
		11				
		12				
		13				
		14				

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LOG OF BORING LSB-25 **SHEET** 1 **OF** 1

PROJECT: PROPOSED BOND ST REDEVELOPMENT	PROJECT NO.: 100287501
LOCATION: 363 BOND ST.	ELEVATION AND DATUM: —
DRILLING AGENCY: PAL	DATE STARTED: 06SEP13 / DATE FINISHED: 06SEP13
DRILLING EQUIPMENT: GEOPROBE 420 MOBILE	COMPLETION DEPTH: 14' / ROCK DEPTH: —
SIZE AND TYPE OF BIT: 1 1/4"	NO. SAMPLES: DIST. 1, UNDIST. —, CORE —
CASING: 2' x 1 1/4"	WATER LEVEL: FIRST 11', COMPL. —, 24 HR. —
CASING HAMMER: — WEIGHT: — DROP: —	FOREMAN: JEREMY & TONY
SAMPLER: 2' x 1" ACETATE LINER	INSPECTOR: LINDSAY DECKARD
SAMPLER HAMMER: — WEIGHT: — DROP: —	

PID (PPM)	SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES: NO./LOC.	TYPE	RECOV.	PENETR. RESIST. BLWS/FT	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
2.4	~~1'-1'~~ CONCRETE [DRY]						BACKGROUND PID READING = 0.8 PPM
3.2	0'-1' BROWN F-M SAND, SOME GRAVEL, SILT [MOIST]	1			10"		FAINT ODOR 1'-2'
3.0							
6.4		2					
35.2	2'-4' SAME AS 1'-2' ABOVE						ODOR
653		3			16"		
475							
296		4					
761	4-5.5' SAME AS 1'-2' ABOVE						STRONG ODOR @ 5.5'-6.0'
140							
243	5.5-6.0 BLACK F SAND, SOME SILT, CLAY TRACE F GRAVEL [MOIST]	5			20"		
955							SAMPLE 07 / LSB-25 @ 5.5-7.5' w/ VOCs @ 5.5'-6.0'
245	6'-8' SAME AS 5.5'-6.0' ABOVE	6					STRONG ODOR
277					14"		
404		7					
298							
163	8'-10' SAME AS 5.5'-6' ABOVE	8					STRONG ODOR
153							
190		9			11"		
230							
79.5	10'-11' SAME AS 5.5'-6' ABOVE	10					
126							
137	11'-12' BROWN F SAND, SOME SILT, CLAY TRACE F GRAVEL [WET]	11			16"		GW @ 11'
105							
	—	12					NO RECOVERY - WET
		13			—		
		14					

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LOG OF BORING LSB-27 **SHEET** 1 **OF** 2

PROJECT: BOND ST. PROPOSED REDEVELOPMENT		PROJECT NO.: 100287501	
LOCATION: 400 CARROLL ST.		ELEVATION AND DATUM:	
DRILLING AGENCY: PAL ENVIRONMENTAL SERVICES		DATE STARTED: 13SEP13	DATE FINISHED: 13SEP13
DRILLING EQUIPMENT: GEOPROBE 7822 DT		COMPLETION DEPTH: 15'	ROCK DEPTH:
SIZE AND TYPE OF BIT: 2 1/4"		NO. SAMPLES: DIST.	UNDIST. / CORE
CASING: 5' x 2 1/4"		WATER LEVEL: FIRST	COMPL. / 24 HR.
CASING HAMMER: WEIGHT: DROP:		FOREMAN:	
SAMPLER: 5' x 2" ACETATE LINER		INSPECTOR:	
SAMPLER HAMMER: WEIGHT: DROP:			

PID (PPM)	SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES: RQD/REC.	SAMPLES: TYPE	SAMPLES: RECOV./ft.	SAMPLES: PENETR. RESIST. BLKS/ft.	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
0.0	0'-4.5' FILL - BROWN M-C SAND, SOME C GRAVEL, BRICK, TRACE SILT [DRY]						FAINT ODOR, 0'-4.5'
1.3		1					SAMPLE 12B/LSB-27 0'-2' w/ VOCs 0.5'-1.0'
0.4							
1.2	4.5'-5' CONCRETE [DRY]	2			12"		
0.2							
2.2		3					
3.7							
3.0		4					HIT REFUSAL B/TWN 4'-5'
3.2							5X MOVED BORING & ADVANCED
2.3							REFUSAL = CONCRETE
33.3	5'-6' FILL - BLACKISH BROWN M-C SAND, SOME GRAVEL, CONCRETE, SILT, TRACE CLAY [MOIST]	5					ODOR 5'-6'
66.8							SAMPLE 12A/LSB-27 5'-7' w/ VOCs @ 5'-5.5'
9.3		6					
4.7							
3.0	6'-8' BROWN F-M SAND, SOME SILT, TRACE CLAY [MOIST] WET	7			36"		GW @ 7'-8'
1.0							
0.8	8'-10' BROWNISH GREY CLAY, SOME ORGANICS (WOOD, ROOTS, LEAVES) [MOIST]	8					
0.7							
0.2		9					
0.4							
1.2	10-15' BROWNISH GREY CLAY, [MOIST]	10					FULL RECOVERY
1.1							NO ODOR
1.2		11					NO ORGANICS
0.9							
0.9		12			60"		
0.7							
0.5		13					
0.5		14					

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JOB NO. 100287501
DATE 13SEP13

LOG OF BORING NO. LSB-27

SHEET 2 OF 2

PID (PPM)	SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO./LOC.	SAMPLES TYPE	SAMPLES RECOV. FT.	SAMPLES PENETR. RESIST BLS/IN.	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
0.4		14					SEE PAGE 1
0.6	END OF BORING	15					

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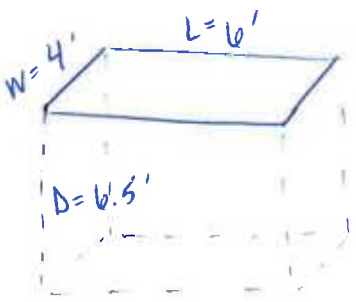
~~LOG OF BORING~~ TEST PIT TP-1 SHEET 1 OF 1

PROJECT: PROPOSED BOND ST REDEVELOPMENT	PROJECT NO.: 100287501
LOCATION: 363 BOND ST	ELEVATION AND DATUM: –
DRILLING AGENCY: PAL ENVIRONMENTAL SERVICES	DATE STARTED: 12SEP13 / DATE FINISHED: 12SEP13
DRILLING EQUIPMENT: –	COMPLETION DEPTH: 6.5' / ROCK DEPTH: –
SIZE AND TYPE OF BIT: –	NO. SAMPLES: DIST. – / UNDIST. / CORE
CASING: –	WATER LEVEL: FIRST 5.4' / COMPL. / 24 HR.
CASING HAMMER: – / WEIGHT / DROP	FOREMAN: MIKE
SAMPLER: –	INSPECTOR: LINDSAY DECKARD
SAMPLER HAMMER: – / WEIGHT / DROP	

(PPM) PID	SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES: NO. / TYPE / RECOV. FT. / PENETR. RESIST BLWS/6"	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
≈1.9 @ surface of pit	0' – 0.5' CONCRETE [DRY] 0.5' – 4.5' FILL – SAND, CONCRETE DEBRIS, BOULDERS, METAL DEBRIS [DRY]	1 2 3 4		
	4.5' – 5.4' SILT, SAND [MOIST] WET ~~GW~~ @ 5.4' 5.4' – 5.5' PRODUCT (≈0.1') 5.5' – 6.5' GW BOTTOM OF TEST PIT	5 6 7 8 9 10 11 12 13 14		- TP-1 LOCATED 5' SE OF LSV-3. - WE COLLECTED A JAR OF GW & PRODUCT FOR LANGAN REVIEW - NO LAB ANALYSIS. → CORRECTION 10SEP13 – CLIENT WANTS GW/PRODUCT BOTH FOR FINGERPRINT ANALYSIS

TEST PIT

LANGAN
ENGINEERING & ENVIRONMENTAL SERVICES

JOB NO. 100287501
DATE 11 SEP 13

LOG OF ~~BORING~~ NO. TP-2
SHEET 1 OF 1

PID (PPM)	SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO./LOC.	SAMPLES TYPE	SAMPLES RECOV. FT.	SAMPLES PENETR. RESIST BLS/in.	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
≈60 @ SURFACE OF PIT	0'-0.5' CONCRETE [DRY]	1					
	0.5'-4' SANDY FILL w/ BRICK, GRAVEL [DRY]	2					
		3					
	4'-4.5' CONCRETE (2ND FOUNDATION) [DRY]	4					
	4.5'-7.4' BLACKISH BROWN SILTY SAND, SOME F GRAVEL, CLAY [MOIST]	5					
		6					
		7					GW @ 7.4'
9999+ SAMPLE MATERIAL	BOTTOM OF TEST PIT	8					COLLECT SAMPLE FOR FINGERPRINT ANALYSIS
		9					

086100

TP-3

LANGAN
ENGINEERING & ENVIRONMENTAL SERVICES

JOB NO. 100287501
DATE 16SEP13

LOG OF ~~BORING NO.~~ TP-3
SHEET 1 OF 1

PID (PPM)	SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO./LOC.	SAMPLES TYPE	SAMPLES RECOV. FT.	SAMPLES PENETR. RESIST BLWS/FT.	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
≈122 @ SURFACE OF PIT	0'-1' CONCRETE [DRY]	1					
	1'-6' BLACKISH BROWN SAND, SOME BRICK, COARSE GRAVEL WOOD [MOIST]	2					
		3					
		4					
		5					
	6'-8.8' BLACKISH BROWN SILTY CLAY, SOME WOOD, SAND, GRAVEL [WET]/GW & PRODUCT	6					
		7					GW @ 7.5' COLLECT SAMPLE
		8					
9999+ OF SATURATED MATERIAL	BOTTOM OF TEST PIT						COLLECT SAMPLE

086100

Langan
Engineering and Environmental Services, Inc.

WELL CONSTRUCTION SUMMARY

TEMPORARY 1" WELL Well No. LMW-7 (LSB-25)

PROJECT: PROPOSED BOND ST REDEVELOPMENT	PROJECT NO.: 100287501
LOCATION: 363 BOND ST.	ELEVATION AND DATUM: —
DRILLING AGENCY: PAL ENVIRONMENTAL SERVICES	DATE STARTED: 12SEP13 / DATE FINISHED: 12SEP13
DRILLING EQUIPMENT: GEOPROBE 7822 DT	DRILLER: JEREMY
SIZE AND TYPE OF BIT: 2¼" SACRIFICIAL	INSPECTOR: LINDSAY DECKARD

METHOD OF INSTALLATION: PUSH

METHOD OF WELL DEVELOPMENT: —

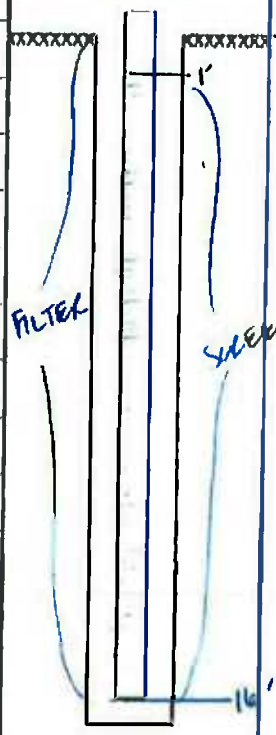
TYPE OF CASING: PVC / DIAMETER: 1"	TYPE OF BACKFILL MATERIAL: —
TYPE OF SCREEN: PVC / DIAMETER: 1"	TYPE OF SEAL MATERIAL: — (TEMP WELL)
BOREHOLE DIAMETER: 2¼"	TYPE OF FILTER MATERIAL: FILPRO

	ELEVATION	DEPTH
TOP OF CASING: AGS		
TOP OF SEAL: AGS		
TOP OF FILTER: AGS		
TOP OF SCREEN: 1' BGS		
BOTTOM OF BORING: 16' BGS		
SCREEN LENGTH: 15'		
SLOT SIZE: 10		

GROUNDWATER ELEVATIONS

ELEVATION	DATE
11'	06SEP13

WELL DETAILS



SOIL CLASSIFICATION	DEPTH
SEE BORING LSB-25	

076923

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WELL CONSTRUCTION SUMMARY

TEMPORARY 1" WELL Well No. MW-6 (LSB-22)

PROJECT: PROPOSED BOND ST. REDEVELOPMENT	PROJECT NO.: 100287501
LOCATION: 363 BOND ST.	ELEVATION AND DATUM: —
DRILLING AGENCY: PAL ENVIRONMENTAL SERVICES	DATE STARTED: 12SEP13 / DATE FINISHED: 12SEP13
DRILLING EQUIPMENT: GEOPROBE 7822 DT	DRILLER: JEREMY
SIZE AND TYPE OF BIT: 2 1/4" SACRIFICIAL	INSPECTOR: LINDSAY DEWARD

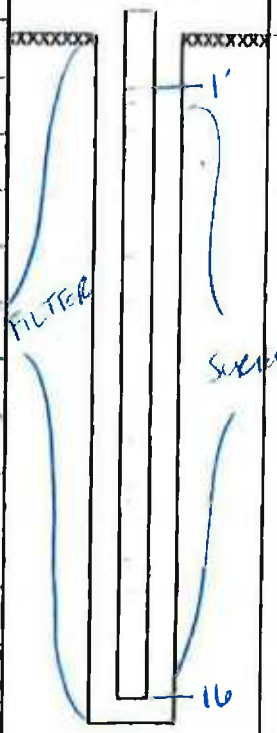
METHOD OF INSTALLATION: PUSH

METHOD OF WELL DEVELOPMENT: —

TYPE OF CASING: PVC	DIAMETER: 1"	TYPE OF BACKFILL MATERIAL: —	
TYPE OF SCREEN: PVC	DIAMETER: 1"	TYPE OF SEAL MATERIAL: — (TEMP WELL)	
BOREHOLE DIAMETER: 2 1/4"		TYPE OF FILTER MATERIAL: FILPRO	
TOP OF CASING: AGS	ELEVATION	DEPTH	
TOP OF SEAL: AGS	ELEVATION	DEPTH	
TOP OF FILTER: AGS	ELEVATION	DEPTH	
TOP OF SCREEN: 1'	ELEVATION	DEPTH	
BOTTOM OF BORING: 16'	ELEVATION	DEPTH	
SCREEN LENGTH: 15'			
SLOT SIZE: 10			

GROUNDWATER ELEVATIONS

ELEVATION: 6'	DATE: 09SEP13
ELEVATION: 6'	DATE: 12SEP13
ELEVATION:	DATE:
ELEVATION:	DATE:
ELEVATION:	DATE:
ELEVATION:	DATE:

WELL DETAILS	SOIL CLASSIFICATION	DEPTH
	SEE LSB-22 BORING LOG	

076229

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Engineering and Environmental Services, Inc.

WELL CONSTRUCTION SUMMARY

Well No. MW-9 (LSB-27)

PROJECT: PROPOSED BOND ST. REDEVELOPMENT	PROJECT NO.: 100287501
LOCATION: 400 CARROLL ST.	ELEVATION AND DATUM: —
DRILLING AGENCY: PAL ENVIRONMENTAL SERVICES	DATE STARTED: 13SEP13 / DATE FINISHED: 13SEP13
DRILLING EQUIPMENT: GEOPROBE 7822 DT	DRILLER: JEREMY
SIZE AND TYPE OF BIT: 4 1/4" AUGER HEAD	INSPECTOR: LINDSAY DECKARD

METHOD OF INSTALLATION: HOLLOW STEM AUGER

METHOD OF WELL DEVELOPMENT: PUMP & SURGE

TYPE OF CASING: PVC		DIAMETER: 2"
TYPE OF SCREEN: PVC		DIAMETER: 2"
BOREHOLE DIAMETER: 4 1/4"		
TOP OF CASING: AGS	ELEVATION	DEPTH
TOP OF SEAL: AGS	ELEVATION	DEPTH
TOP OF FILTER: 1'	ELEVATION	DEPTH
TOP OF SCREEN: AGS	ELEVATION	DEPTH
BOTTOM OF BORING: 15'	ELEVATION	DEPTH
SCREEN LENGTH: 10'		
SLOT SIZE: 10		

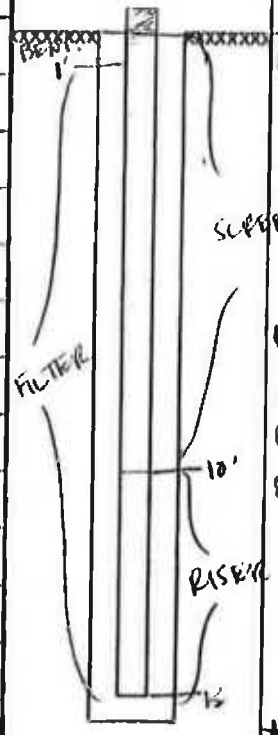
TYPE OF BACKFILL MATERIAL: —

TYPE OF SEAL MATERIAL: BENTONITE PELLETS

TYPE OF FILTER MATERIAL: FILPRO SUPERIOR QUARTZ FILTRATION MEDIA

GROUNDWATER ELEVATIONS

ELEVATION	DATE
7'	13SEP13
7'-8' (LSB-27)	13SEP13



SOIL ★ CLASSIFICATION	DEPTH
0'-6' FILL [DRY]	
6' DARK BLACKISH BROWN SAND & SILT W/ ODOR [MOIST]	
GW @ 7'	
8'-15' CLAY [MOIST] NO ODOR	
★SEE LSB-27 BORING LOG	

076923

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Engineering and Environmental Services, Inc.

WELL CONSTRUCTION SUMMARY

Well No. LMW-10 (LSB-21)

PROJECT: PROPOSED BOND ST. REDEVELOPMENT	PROJECT NO.: 100287501
LOCATION: 400 CATHERINE ST	ELEVATION AND DATUM: –
DRILLING AGENCY: PAL ENVIRONMENTAL SERVICES	DATE STARTED: 12SEP13 / DATE FINISHED: 12SEP13
DRILLING EQUIPMENT: GEOPROBE 7822 DT.	DRILLER: JEREMY
SIZE AND TYPE OF BIT: 4 1/4" AUGER HEAD	INSPECTOR: LINDSAY DECKARD
METHOD OF INSTALLATION: HOLLOW STEM AUGER	
METHOD OF WELL DEVELOPMENT: PUMP & SURGE	

TYPE OF CASING: PVC		DIAMETER: 2"	
TYPE OF SCREEN: PVC		DIAMETER: 2"	
BOREHOLE DIAMETER: 4 1/4"			
TOP OF CASING: AGS	ELEVATION	DEPTH	
TOP OF SEAL: AGS	ELEVATION	DEPTH	
TOP OF FILTER: AGS	ELEVATION	DEPTH	
TOP OF SCREEN: 4' BGS	ELEVATION	DEPTH	
BOTTOM OF BORING: 9' BGS	ELEVATION	DEPTH	
SCREEN LENGTH: 5' ~~BGS~~			
SLOT SIZE: 10			

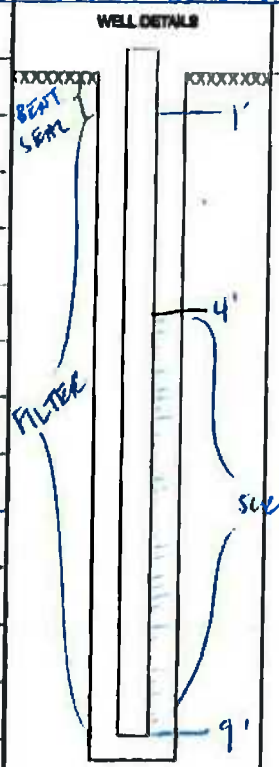
TYPE OF BACKFILL MATERIAL: –

TYPE OF SEAL MATERIAL: BENTONITE PELLETS

TYPE OF FILTER MATERIAL: FILPRO SUPERIOR QUARTZ FILTRATION MEDIA

GROUNDWATER ELEVATIONS

ELEVATION	DATE
7' BGS	12SEP13



SOIL CLASSIFICATION: FILL - SAND CLEAN, NO ODOR/SHEEN

DEPTH: GW @ 7'

075 023

LOW FLOW SAMPLING FIELD PARAMETER MEASUREMENTS

Project:	Bond Street Redevelopment	**Site Location:**	363 Bond Street	**Well No:**	MW-1	**Date:**	9/17/2013
Job Number:	100287501	**Weather:**				**Sampling Crew:**	CBM - LD
Initial Depth to Water (ft):	3.35	**Well Depth (ft):**	12.7	**Pump Intake Depth (ft):**	9		

TIME	TEMP. °C	pH (std. Units)	COND. (uS)	ORP (mV)	Turbidity (NTU)	DO (mg/l - %)	DTW (ft)	Q (ml/m)	NOTES color, odor etc.
1132	—	—	—	—	—	—	—	—	begin purging
1136	23.81	6.94	3.07	-64	54.2	2.95	3.46	150	
1140	24.65	6.73	3.04	-77	35.4	1.98	3.51	150	
1150	24.94	6.69	3.08	-64	13.7	0.97	3.55	150	
1203	24.96	6.76	3.10	-89	7.8	0.65	3.55	150	
1207	24.97	6.70	3.10	-92	7.5	0.656	3.60	150	
1212	25.02	6.71	3.10	-94	7.5	0.51	3.58	150	
1217	25.05	6.71	3.10	-97	7.3	0.49	3.60	150	
1230	—	—	—	—	—	—	—	—	Sample taken
		+/- 0.1 pH	+/- 3%	+/- 10 MV	+/- 10 NTU	+/- 10%	<0.3' drawdown		

Analytical Program

TCL-VO+10		PP-VO+15		MBTE		Phenols		Notes:	
TCL-BN+15		PP-BN+15		TBA		Others		Sample ID #151	
TCL-AE+5		PP-AE+10		Cyanide		PCE			
TCL-BNA+20		PP-BNA+25		TPH		TCE			
TCL-Pesticides		PP-Pesticides		TDS		cis-DCE			
TCL+30		PP-Metals		TSS		trans-DCE			
TAL		PP+40		TOX		VC			
TAL-Metals		PCB		TOC		Pb			

LANGAN

LOW FLOW SAMPLING FIELD PARAMETER MEASUREMENTS

Project:	Bond Street Redevelopment	**Site Location:**	363 Bond Street	**Well No:**	MW-2	**Date:**	9/13/2013
Job Number:	100287501	**Weather:**				**Sampling Crew:**	CBM - LD
Initial Depth to Water (ft):	2.72			**Well Depth (ft):**	9.11	**Pump Intake Depth (ft):**	7

TIME	TEMP. °C	pH (std. Units)	COND. (uS)	ORP (mV)	Turbidity (NTU)	DO (mg/l - %)	DTW (ft)	Q (ml/m)	NOTES color, odor etc.
1356	—	—	—	—	—	—	—	—	Begin purging
1402	21.92	6.23	11.6	-73	15.5	1.66	2.00	250	Strong odor
1407	22.13	6.55	10.2	-129	5.0	0.48	2.42	250	Sediment
1414	22.50	6.63	9.49	-143	6.2	0.41	2.54	250	
1419	22.57	6.61	8.06	-152	7.1	0.36	2.62	250	
1424	22.68	6.59	7.02	-158	7.1	0.35	2.62	250	
1429	22.76	6.58	6.49	-161	5.6	0.35	2.62	250	
1434	22.80	6.58	6.28	-162	5.1	0.35	2.62	250	
1439	22.71	6.62	6.07	-163	5.3	0.35	2.62	250	
1444	22.73	6.57	6.00	-163	11.2	0.34	2.66	250	
1449	22.72	6.56	5.94	-163	10.6	0.34	2.67	250	
1450	—	—	—	—	—	—	—	—	Sample taken
		+/- 0.1 pH	+/- 3%	+/- 10 MV	+/- 10 NTU	+/- 10%	<0.3' drawdown		

Analytical Program

TCL-VO+10		PP-VO+15		MBTE		Phenols		Notes:
TCL-BN+15		PP-BN+15		TBA		Others		Sample ID# 134
TCL-AE+5		PP-AE+10		Cyanide		PCE		
TCL-BNA+20		PP-BNA+25		TPH		TCE		
TCL-Pesticides		PP-Pesticides		TDS		cis-DCE		
TCL+30		PP-Metals		TSS		trans-DCE		
TAL		PP+40		TOX		VC		
TAL-Metals		PCB		TOC		Pb		

LANGAN

LOW FLOW SAMPLING FIELD PARAMETER MEASUREMENTS

Project:	Bond Street Redevelopment	**Site Location:**	363 Bond Street	**Well No:**	MW-3	**Date:**	9/16/13
Job Number:	100287501	**Weather:**				**Sampling Crew:**	CBM - LD
Initial Depth to Water (ft):	5.25	**Well Depth (ft):**	15			**Pump Intake Depth (ft):**	12

TIME	TEMP. °C	pH (std. Units)	COND. (uS)	ORP (mV)	Turbidity (NTU)	DO (mg/l - %)	DTW (ft)	Q (ml/m)	NOTES color, odor etc.
1409	—	—	—	—	—	—	—	—	Begin purging
1413	22.52	6.46	1.47	-116	19.7	0.76	5.80	100	
1418	22.47	6.45	1.51	-137	23.3	0.43	6.10	100	
1423	22.60	6.45	1.66	-143	16.6	0.34	6.40	100	
1428	22.63	6.45	1.77	-146	15.6	0.29	6.61	100	
1433	22.59	6.45	1.85	-146	5.0	0.29	6.62	100	
1443	22.65	6.45	1.98	-146	2.5	0.26	6.80	100	
1448	22.58	6.45	2.02	-146	2.4	0.28	6.85	100	
1492	22.49	6.45	2.07	-146	1.8	0.24	6.90	100	
1457	22.51	6.45	2.08	-146	2.2	0.24	6.95	100	
1502	22.54	6.46	2.09	-146	2.0	0.23	7.02	100	
1510	—	—	—	—	—	—	—	—	Sample taken
		+/- 0.1 pH	+/- 3%	+/- 10 MV	+/- 10 NTU	+/- 10%	<0.3' drawdown		

Analytical Program

TCL-VO+10		PP-VO+15		MBTE		Phenols		Notes:
TCL-BN+15		PP-BN+15		TBA		Others		
TCL-AE+5		PP-AE+10		Cyanide		PCE		Sample ID #143
TCL-BNA+20		PP-BNA+25		TPH		TCE		and MW-3/MS/MSD
TCL-Pesticides		PP-Pesticides		TDS		cis-DCE		Sample ID # 144+DUP1
TCL+30		PP-Metals		TSS		trans-DCE		
TAL		PP+40		TOX		VC		
TAL-Metals		PCB		TOC		Pb		

LANGAN

PROPOSED BOND ST REDEVELOPMENT — CHERCH GARDENS

LOW FLOW SAMPLING FIELD PARAMETER MEASUREMENTS

365 BOND ST. — MW-4 — 17SEP13

Project: NJTP Interchange 8 Site	**Site Location:** East Windsor, NJ	**Well No:** ~~MW-1~~	**Date:** ~~9/6/2013~~		
Job Number: 100312801	**Weather:** 60's SUNNY CLEAR		**Sampling Crew:** CBM LD		
Initial Depth to Water (ft): 6.51'	**Well Depth (ft):** ~~11~~ 11a.65'	**Pump Intake Depth (ft):** 14'			

TIME	TEMP. °C	pH (std. Units)	COND. ~~(uS)~~ S	ORP (mV)	Turbidity (NTU)	DO (mg/l - %)	DTW (ft)	Q (ml/m)	NOTES color, odor etc.
1615	19.09	9.22	3.02	-32	216	1.69	7.30	280	SLIGHT ODOR GREYISH BROWN
1620	19.51	8.36	3.15	-102	438	1.20	7.46	300	" " VERY LIGHT GREY BROWN
1625	19.49	8.03	3.24	-108	7.4	1.04	7.38	270	" " "
1630	19.49	~~7.79~~	3.31	-113	~~7.77~~ 2.2	0.91	~~7.37~~ 7.40	270	" " "
1635	19.49	7.58	3.36	-116	1.4	0.83	7.42	270	" " "
1645	19.49	7.40	3.41	-119	2.0	0.76	7.46	280	" " "
1650	BEGIN	SAMPLING							
		+/- 0.1 pH	+/- 3%	+/- 10 MV	+/- 10 NTU	+/- 10%	<0.3' drawdown		

Analytical Program

TCL-VO+10		PP-VO+15		MBTE		Phenols		Notes:
TCL-BN+15		PP-BN+15		TBA		Others		
TCL-AE+5		PP-AE+10		Cyanide		PCE		FIELD FILTER DISS. METAL
TCL-BNA+20		PP-BNA+25		TPH		TCE		
TCL-Pesticides		PP-Pesticides		TDS		cis-DCE		
TCL+30		PP-Metals		TSS		trans-DCE		
TAL		PP+40		TOX		VC		
TAL-Metals		PCB		TOC		Pb		

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LOW FLOW SAMPLING FIELD PARAMETER MEASUREMENTS

Project:	Bond Street Redevelopment	**Site Location:**	363 Bond Street	**Well No:**	MW-5	**Date:**	9/17/2013
Job Number:	100287501	**Weather:**				**Sampling Crew:**	CBM - LD
	Initial Depth to Water (ft):	6.95'	**Well Depth (ft):**	15.95'		**Pump Intake Depth (ft):**	12'

TIME	TEMP. °C	pH (std. Units)	COND. (uS)	ORP (mV)	Turbidity (NTU)	DO (mg/l - %)	DTW (ft)	Q (ml/m)	NOTES color, odor etc.
0852	—	—	—	—	—	—	—		begin purging
0857	20.94	~~7.08~~ 6.08	3.03	-69	35.7	1.73	—	100	floating product,
0902	21.24	6.31	6.14	-94	22.4	1.49	—	100	cannot take
0908	21.40	6.46	6.22	-107	5.9	0.60	—	100	dtw
0913	21.44	6.52	6.31	-111	2.9	0.60	—	100	
0925	21.46	6.61	6.33	-120	1.2	0.55	—	100	
0930	21.48	6.63	6.34	-122	0.3	0.48	—	100	
0935	21.50	6.65	6.35	-124	0.5	0.51	—	100	
0940	21.52	6.67	6.34	-125	0.9	0.44	—	100	
0945	21.60	6.69	6.34	-127	1.7	0.44	—	100	
0956	—	—	—	—	—	—	—	—	Sample taken
		+/- 0.1 pH	+/- 3%	+/- 10 MV	+/- 10 NTU	+/- 10%	<0.3' drawdown		

Analytical Program

TCL-VO+10		PP-VO+15		MBTE		Phenols		Notes:
TCL-BN+15		PP-BN+15		TBA		Others		Sample # 148
TCL-AE+5		PP-AE+10		Cyanide		PCE		DUP-2 collected ID # 149
TCL-BNA+20		PP-BNA+25		TPH		TCE		
TCL-Pesticides		PP-Pesticides		TDS		cis-DCE		
TCL+30		PP-Metals		TSS		trans-DCE		
TAL		PP+40		TOX		VC		
TAL-Metals		PCB		TOC		Pb		

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LOW FLOW SAMPLING FIELD PARAMETER MEASUREMENTS

PROPOSED BOND ST. REFERENCE WEST 363 BOND ST, CARLTON GARDENS LMW-6

Project:	~~NJTP Interchange 8 Site~~	**Site Location:**	East Windsor, NJ	**Well No:**	~~MW-~~	**Date:**	~~8/6/2013~~ 17 SEP 13
Job Number:	~~100342804~~ 100287501	**Weather:**	58°F SUNNY, CLEAR, STILL			Sampling Crew:	~~CBM~~ LD
Initial Depth to Water (ft):	5.21'	**Well Depth (ft)**	15'			**Pump Intake Depth (ft):**	12'

TIME	TEMP. °C	pH (std. Units)	COND. ~~(uS)~~ mS	ORP (mV)	Turbidity (NTU)	DO (mg/l - %)	DTW (ft)	Q (ml/m)	NOTES color, odor etc.
0935	20.54	6.47	4.34	-131	38.6	0.77	5.21'	250	YELLOW STRONG ODOR
0940	21.32	7.16	4.43	-141	11.1	0.72	5.21'	260	" " "
0900	21.46	7.24	4.56	-150	43.8	0.87	5.21'	275	BROWN " "
1005	21.54	7.28	4.56	-154	17.6	0.68	5.40'	260	" " "
1010	21.54	7.30	4.57	-155	10.8	0.64	5.28'	280	" " "
1015	21.57	7.31	4.64	-156	10.6	0.60	5.27	260	" " "
1020	BEGIN SAMPLING								
		+/- 0.1 pH	+/- 3%	+/- 10 MV	+/- 10 NTU	+/- 10%	<0.3' drawdown		

Analytical Program

TCL-VO+10	VOCs 260	PP-VO+15		MBTE		Phenols	
TCL-BN+15	SVOCs 270	PP-BN+15		TBA		Others	
TCL-AE+5		PP-AE+10		Cyanide		PCE	
TCL-BNA+20		PP-BNA+25		TPH		TCE	
TCL-Pesticides	PESTICIDES	PP-Pesticides		TDS		cis-DCE	
TCL+30		PP-Metals	MET 6010	TSS		trans-DCE	
TAL		PP+40		TOX		VC	
TAL-Metals		PCB	PCB 8082	TOC		Pb	

Notes: METALS - FILTERED (LAB) & UNFILTERED

LANGAN

LOW FLOW SAMPLING FIELD PARAMETER MEASUREMENTS

CARROLL GARDENS — 343 BOND ST. — LMW-7 — 17SEP13

Project: ~~NJTP Interchange 8 Site~~	Site Location: ~~East Windsor, NJ~~		Well No: ~~MW-1~~	Date: ~~9/9/2013~~	
Job Number: ~~100312801~~ 100278.01	Weather:	50 S, SUNNY, WARM		Sampling Crew: ~~CBM~~ WD	
Initial Depth to Water (ft): 9.54'	Well Depth (ft):	15'	Pump Intake Depth (ft):	INITIAL=12', FINAL=14.5'	

TIME	TEMP. °C	pH (std. Units)	COND. ~~(uS)~~ mS	ORP (mV)	Turbidity (NTU)	DO (mg/l - %)	DTW (ft)	Q (ml/m)	NOTES color, odor etc.
1135	20.77	8.11	27.4	-179	0.0	1.01	13.19	250	STRONG GASOLINE ODOR
LD STOPS PUMP - ONLY RECOVERING PRODUCT (SHUT IN) LD ADDS 2' TUBING & RESTARTS PUMP.									
1145	20.84	8.56	19.1	-152	800	4.31	-	50	MT DRAWDOWN, LD TURNS OF PUMP & ALLOWS RECHARGE
~~1215~~ (MW)							~~10.5 (DD)~~		
1315	20.53	7.09	21.7	-124	310	2.90	10.5		NO VOLUME PUMPED OUT
LD STOPS PUMP - TUBING FILLED w/ SEDIMENT. LD TO INSERT NEW TUBING @ 12' BGS									
1335	20.97	6.96	25.2	~~20.2~~ -26	800	3.85	~~12.81~~ 12.18	260	BROWN CLOUDY GW, CLEAR PRODUCT
1340	21.33	9.14	22.2	-81	800	2.48	12.18	260	" " " "
1345	21.77	9.11	23.7	-34	0	2.29	12.18	260	" " " "
1350	21.84	8.84	18.1	-76	0	3.24	12.62	260	" " " "
1355	21.98	8.78	23.9	-106	0	3.23	12.62	260	" " " "
1400	21.89	8.75	24.4	-105	0	3.45	12.63	260	" " " "
1405	21.93	8.57	25.6	-81	0	3.52	12.61	260	" " " "
1410	21.94	8.42	24.7	-85	0	3.60	12.64	260	" " " "
1415	21.96	8.39	23.8	-78	0	3.63	12.62	260	" " " "
1420	LD BEGINS SAMPLING								
		+/- 0.1 pH	+/- 3%	+/- 10 MV	+/- 10 NTU	+/- 10%	<0.3' drawdown		

Analytical Program							
TCL-VO+10		PP-VO+15		MBTE		Phenols	
TCL-BN+15		PP-BN+15		TBA		Others	
TCL-AE+5		PP-AE+10		Cyanide		PCE	
TCL-BNA+20		PP-BNA+25		TPH		TCE	
TCL-Pesticides		PP-Pesticides		TDS		cis-DCE	
TCL+30		PP-Metals		TSS		trans-DCE	
TAL		PP+40		TOX		VC	
TAL-Metals		PCB		TOC		Pb	

Notes:
PRODUCT 6.58'- 9.57'

LANGAN

LOW FLOW SAMPLING FIELD PARAMETER MEASUREMENTS

Project:	Bond Street Redevelopment	**Site Location:**	400 Carroll Street	**Well No:**	LMW-9	**Date:**	9/17/2013
Job Number:	100287501	**Weather:**				**Sampling Crew:**	CBM - LD
	Initial Depth to Water (ft):	3.18	**Well Depth (ft):**			**Pump Intake Depth (ft):**	12

TIME	TEMP. °C	pH (std. Units)	COND. (uS)	ORP (mV)	Turbidity (NTU)	DO (mg/l - %)	DTW (ft)	Q (ml/m)	NOTES color, odor etc.
1640	—	—	—	—	—	—	—	—	begin purging
1642	18.69	8.01	4.64	-42	123	3.29	3.32	150	odor
1647	18.94	7.34	4.603	-100	82.2	1.00	3.32	150	
1652	18.69	7.18	4.60	-106	93.4	0.92	3.37	150	
1657	18.77	7.10	4.57	-110	45.7	0.91	3.41	150	
1702	18.80	7.06	4.57	-113	40.41	0.90	3.43	150	
1707	18.78	7.02	4.57	-117	32.7	0.85	3.50	150	
1712	18.73	7.00	4.57	-120	31.1	0.82	3.55	150	
1717	18.72	6.98	4.58	-122	30.3	0.85	3.59	150	
1725	—	—	—	—	—	—	—	—	Sample taken
		+/- 0.1 pH	+/- 3%	+/- 10 MV	+/- 10 NTU	+/- 10%	<0.3' drawdown		

Analytical Program

TCL-VO+10		PP-VO+15		MBTE		Phenols		Notes:
TCL-BN+15		PP-BN+15		TBA		Others		
TCL-AE+5		PP-AE+10		Cyanide		PCE		Sample ID# 154
TCL-BNA+20		PP-BNA+25		TPH		TCE		
TCL-Pesticides		PP-Pesticides		TDS		cis-DCE		
TCL+30		PP-Metals		TSS		trans-DCE		
TAL		PP+40		TOX		VC		
TAL-Metals		PCB		TOC		Pb		

LANGAN

LOW FLOW SAMPLING FIELD PARAMETER MEASUREMENTS

Project:	Bond Street Redevelopment	**Site Location:**	400 Carroll Street	**Well No:**	CMW-10	**Date:**	9/17/2013
Job Number:	100287501	**Weather:**				**Sampling Crew:**	CBM - LD
	Initial Depth to Water (ft):	2.78	**Well Depth (ft):**			**Pump Intake Depth (ft):**	10

TIME	TEMP. °C	pH (std. Units)	COND. (uS)	ORP (mV)	Turbidity (NTU)	DO (mg/l - %)	DTW (ft)	Q (ml/m)	NOTES color, odor etc.
1532	–	–	–	–	–	–	–	–	begin purging
1541	21.39	8.03	23.4	-23	0	3.64	2.83	200	
1545	20.63	7.97	21.8	-91	970	0.81	2.84	200	
1550	20.53	7.94	21.4	-103	191	0.52	2.86	200	
1555	20.49	7.93	21.4	-114	108.6	0.50	2.86	200	
1600	20.41	7.93	21.1	-125	110.7	0.45	2.86	200	
1605	20.39	7.93	21.0	-132	27.0	0.54	2.85	200	
1610	20.39	7.93	20.9	-139	20.9	0.42	2.85	200	
1615	20.32	7.93	20.9	-145	17.0	0.46	2.85	200	
1620	20.32	7.93	20.9	-154	13.2	0.43	2.85	200	
1630	–	–	–	–	–	–	–	–	sample taken
		+/- 0.1 pH	+/- 3%	+/- 10 MV	+/- 10 NTU	+/- 10%	<0.3' drawdown		

Analytical Program

TCL-VO+10		PP-VO+15		MBTE		Phenols		Notes:
TCL-BN+15		PP-BN+15		TBA		Others		
TCL-AE+5		PP-AE+10		Cyanide		PCE		Sample ID # 155
TCL-BNA+20		PP-BNA+25		TPH		TCE		
TCL-Pesticides		PP-Pesticides		TDS		cis-DCE		
TCL+30		PP-Metals		TSS		trans-DCE		
TAL		PP+40		TOX		VC		
TAL-Metals		PCB		TOC		Pb		

LANGAN

SUMMA CANISTER SAMPLING FIELD DATA SHEET

Site: 363 BOND ST
Samplers: LINDSAY DECKARD
Date: 10SEP13

Sample #	098	099			
Location	LSV-4	LSV-18			
Summa Canister ID	# 22	Y65			
Flow Controller ID	Y-4	Y-3			
Sample Depth (b.g.s.)	4'	4'			
Additional Tubing Added	NO/ YES - How much	NO/ YES - How much	NO/ YES - How much	NO/ YES - How much	NO/ YES - How much
Purge Time (Start)	1042	1053			
Purge Time (Stop)	1045	1056			
Total Purge Time (min)	3	3			
Purge Volume	1 TEDLAR BAG	1 TEDLAR BAG			
PID Test of Purge Air	0.0 PPB	0.0 PPB			
Initial Tracer Gas Results in sampling line	0 PPM	0 PPM			
Initial Tracer Gas Results in shroud	69.3%	31.9%*			
Pressure Gauge - before sampling (in Hg)	-25.5	-30			
Sample Time (Start)	1049	1104			
Sample Time (Stop)	1340	1346			
Total Sample Time (min)	171	162			
Pressure Gauge - after sampling	0	-3			
Sample Volume	6 L	6 L			
Canister Pressure Went to Ambient Pressure?	YES / NO	YES / NO	YES / NO	YES / NO	YES / NO
Final Tracer Gas Results in sampling line	-	-			
Final Tracer Gas Results in shroud	-	-			
Associated Ambient Air Sample Number	AMBIENT-1	AMBIENT-1			
Weather 24 hours before and during sampling	60°-70°, LOW HUMIDITY, BREEZY, SUNNY				
General Comments	*FOR LSV-18 COULD NOT GET HELIUM LEVEL IN SHROUD ABOVE 31.9%. - POSSIBLE LEAK IN SHROUD OR CANISTER LOW ON HELIUM				

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SUMMA CANISTER SAMPLING FIELD DATA SHEET

Site: 400 CARROLL ST.
Samplers: LINDSAY DECKARD
Date: 11SEP13

Sample #	106	107	108	109	110
Location	AMBIENT-3	LSV-15	LSV-14	LSV-11	LSV-13
Summa Canister ID	Y83	MAX 21	S02	Y58	S18
Flow Controller ID	Y30	Y21	Y31	Y11	T-10
Sample Depth (b.g.s.)	AGS	2.5'	~~2.5'~~ 3'	3'	3'
Additional Tubing Added	NO/ YES - How much	NO/ YES - How much	NO/ YES - How much	NO/ YES - How much	NO/ YES - How much
Purge Time (Start)	–	1040	1058	1124	1230
Purge Time (Stop)	–	1044	1102	1127	1234
Total Purge Time (min)	–	4	4	3	4
Purge Volume	–	TEDLAR BAG	TEDLAR BAG	TEDLAR BAG	TEDLAR BAG
PID Test of Purge Air	–	93 PPB	542 PPB	~~3175 PPB~~ 1163 PPB	324 PPB
Initial Tracer Gas Results in sampling line	–	3350 PPM	0 PPM	3175 PPM	725 PPM
Initial Tracer Gas Results in shroud	–	71.6 %	74.6 %	78.5 %	58.2 %
Pressure Gauge - before sampling (in. Hg.)	2-30	2-30	2-30	-29.5	2-30
Sample Time (Start)	0854	1050	1106	1139	1239
Sample Time (Stop)	1440	1246	1325	1359	1439
Total Sample Time (min)	394	115	139	140	120
Pressure Gauge - after sampling (in. Hg)	-18.5	-6	-9.5	-9	-7
Sample Volume	6L	6L	6L	6L	6L
Canister Pressure Went to Ambient Pressure?	YES / NO	YES / NO	YES / NO	YES / NO	YES / NO
Final Tracer Gas Results in sampling line	–	–	–	–	–
Final Tracer Gas Results in shroud	–	–	–	–	–
Associated Ambient Air Sample Number	–	AMBIENT-3	AMBIENT-3	AMBIENT-3	AMBIENT 3
Weather 24 hours before and during sampling	90's, HUMID (BEFORE & DURING)				
General Comments					

SUMMA CANISTER SAMPLING FIELD DATA SHEET

Site: 363 BOND ST / PROPOSED BOND ST REDEVELOPMENT

Samplers: LD

Date: 09SEP13

Sample # ~~087~~	087	088	089	090	
Location ~~AMBIENT-1~~	AMBIENT-1	LSV-20	LSV-5	LSV-2	
Summa Canister ID ~~509~~	509	Y78	Y80	Y64	
Flow Controller ID	Y-27	Y-19	Y43	Y39	
Sample Depth (b.g.s.)	–	4' BGS	4' BGS	3' BGS	
Additional Tubing Added	(NO)/ YES - How much	(NO)/ YES - How much	(NO)/ YES - How much	NO/ YES - How much	NO/ YES - How much
Purge Time (Start)	–	1404	1446	1504	
Purge Time (Stop)	–	1409	1449	1508	
Total Purge Time (min)	–	5	3	4	
Purge Volume	–	1 TEDLAR CAL. BAG	1 TEDLAR BAG	1 TEDLAR BAG	
PID Test of Purge Air	–	797 PPB	0 PPB	0 PPB	
Initial Tracer Gas Results in sampling line	–	~~86.1%~~ 0.0 PPM	0.0 PPM	0.0 PPM	
Initial Tracer Gas Results in shroud	–	86.1%	71.9%	79.1%	
Pressure Gauge - before sampling	-30+ in.Hg.	-30+ in.Hg.	-27 in.Hg.	-30+ in.Hg.	
Sample Time (Start)	1330	1418	1453	1514	
Sample Time (Stop)	1732	1731	1700	1728	
Total Sample Time (min)	242	194	127	134	
Pressure Gauge - after sampling	-21.5 in.Hg.	-26.5 in.Hg.	-6 in.Hg.	-6.5 in.Hg.	
Sample Volume	6 L	6 L	6 L	6 L	
Canister Pressure Went to Ambient Pressure?	YES / (NO)	YES / (NO)	YES / (NO)	YES / (NO)	YES / NO
Final Tracer Gas Results in sampling line	–	–	–	–	
Final Tracer Gas Results in shroud	–	–	–	–	
Associated Ambient Air Sample Number	–	AMBIENT-1	AMBIENT-1	ABIENT-1	
Weather 24 hours before and during sampling	70's, SUNNY, LOW HUMIDITY				
General Comments	30+ = VACUUM GAUGE WAS PAST 30 in. Hg. - SPECIFIC INITIAL VACCUM PRESSURE UNKNOWN (i.e. PRESSURE ≤ 30 in. Hg.)				

SUMMA CANISTER SAMPLING FIELD DATA SHEET

Site: 363 BOND ST - PROPOSED BOND ST. REDEVELOPMENT

Samplers: LINDSAY DELCARD

Date: 10SEP13

Sample #	LSV-19	LSV-3	LSV-1	LSV-17	LSV-16
Location	093	094	095	096	097
Summa Canister ID	Y69	Y55	S13	S04	S24
Flow Controller ID	Y23	Y9	T6	Y47	T-1
Sample Depth (b.g.s.)	3.5'	4'	4'	4'	4'
Additional Tubing Added	(NO) / YES - How much	(NO) / YES - How much	(NO) / YES - How much	(NO) / YES - How much	(NO) / YES - How much
Purge Time (Start)	0818	0840	0932	1000	1031
Purge Time (Stop)	0822	0844	0936	1003	1034
Total Purge Time (min)	4	4	4	3	3
Purge Volume	1 TEDLAR BAG	1 TEDLAR BAG	1 TEDLAR BAG	1 TEDLAR BAG	1 TEDLAR BAG
PID Test of Purge Air	0.0 PPB	0.0 PPB	0.0 PPB	0.0 PPB	0.0 PPB
Initial Tracer Gas Results in sampling line	0 PPM	0 PPM	1100 PPM	650 PPM	0 PPM
Initial Tracer Gas Results in shroud	79.1 %	75.2 %	69.1 %	71.6 %	73.2 %
Pressure Gauge - before sampling in. Hg.	-30	-30	-26	-28.5	-30
Sample Time (Start)	0827	0847	0939	1007	1036
Sample Time (Stop)	1116	1147	1149	1232	1226
Total Sample Time (min)	169	180	130	165	110
Pressure Gauge - after sampling in. Hg	-7	-5	-1.5	-12	-7
Sample Volume	6L	6L	6L	6L	6L
Canister Pressure Went to Ambient Pressure?	YES / (NO)	YES / (NO)	YES / (NO)	YES / (NO)	YES / (NO)
Final Tracer Gas Results in sampling line	-	-	-	-	-
Final Tracer Gas Results in shroud	-	-	-	-	-
Associated Ambient Air Sample Number	AMBIENT-1	AMBIENT-1	AMBIENT-1	AMBIENT-1	AMBIENT-1
Weather 24 hours before and during sampling	70'S, DRY 09SEP13, HUMID 10SEP13				
General Comments					

SUMMA CANISTER SAMPLING FIELD DATA SHEET

Site: 400 CARROLL ST.
Samplers: LINDSAY DECLARD
Date: 11SEP13

Sample #	111				
Location	LSV-12				
Summa Canister ID	25				
Flow Controller ID	T-4				
Sample Depth (b.g.s.)	3'				
Additional Tubing Added	(NO)/ YES - How much	NO/ YES - How much	NO/ YES - How much	NO/ YES - How much	NO/ YES - How much
Purge Time (Start)	1210				
Purge Time (Stop)	1214				
Total Purge Time (min)	4				
Purge Volume	TEDLAR BAG				
PID Test of Purge Air	791 PPB				
Initial Tracer Gas Results in sampling line	4875 PPM				
Initial Tracer Gas Results in shroud	70.6%				
Pressure Gauge - before sampling (in. Hg)	-28.5				
Sample Time (Start)	1220				
Sample Time (Stop)	1420				
Total Sample Time (min)	120				
Pressure Gauge - after sampling (in. Hg)	-2				
Sample Volume	6 L				
Canister Pressure Went to Ambient Pressure?	YES / (NO)	YES / NO	YES / NO	YES / NO	YES / NO
Final Tracer Gas Results in sampling line	—				
Final Tracer Gas Results in shroud	—				
Associated Ambient Air Sample Number	AMBIENT-3				
Weather 24 hours before and during sampling	90's, HUMID (BEFORE & DURING)				
General Comments					

SUMMA CANISTER SAMPLING FIELD DATA SHEET

Site: 363 BOND STREET & 400 CARROLL

Samplers: CHRISTINE MADDEN

Date: SEPTEMBER 12, 2013

Sample #	112	113	114	115	116
Location	LSV-3	LSV-18	LSV-19	LSV-2	LSV-20
Summa Canister ID	5016	17	9	YALOOS	Y601
Flow Controller ID	T-7	01090	5001	5027	Y22
Sample Depth (b.g.s.)	1'	1'	1'	1'	1'
Additional Tubing Added	NO/ (YES) - How much ~1'	NO/ (YES) - How much ~1'	NO/ (YES) - How much ~1'	NO/ (YES) - How much ~1'	NO/ (YES) - How much ~1'
Purge Time (Start)	1340	1357	1413	1426	1443
Purge Time (Stop)	1343	1400	1416	1429	1446
Total Purge Time (min)	3	3	3	3	3
Purge Volume	1L	1L	1L	1L	1L
PID Test of Purge Air	219 PPb	97 PPb	142 PPb	130 PPb	395 PPb
Initial Tracer Gas Results in sampling line	10250 ppm	100 ppm	2875 ppm	0 ppm	3 %
Initial Tracer Gas Results in shroud	60 %	65 %	65 %	60 %	65 %
Pressure Gauge - before sampling	-30	< -30	< -30	< -30	-30
Sample Time (Start)	1343	1400	1417	1429	1447
Sample Time (Stop)	1544	1614	1617	1639	1647
Total Sample Time (min)	121	134	120	130	120
Pressure Gauge - after sampling	-5	-10	-9	-16.5	-9.5
Sample Volume	6L	6L	6L	6L	6L
Canister Pressure Went to Ambient Pressure?	YES / (NO)	YES / (NO)	YES / (NO)	YES / (NO)	YES / (NO)
Final Tracer Gas Results in sampling line	—	—	—	—	—
Final Tracer Gas Results in shroud	—	—	—	—	—
Associated Ambient Air Sample Number	Ambient-1	Ambient-1	Ambient-1	Ambient-1	Ambient-1
Weather 24 hours before and during sampling					
General Comments					

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SUMMA CANISTER SAMPLING FIELD DATA SHEET

Site: 363 BOND STREET & 400 CARROLL

Samplers: CHRISTINE MADSEN

Date: SEPTEMBER 12, 2013

Sample #	118	122	119	120	121
Location	LSV-4	DUP-1	LSV-16	LSV-17	LSV-1
Summa Canister ID	526	23	514	516	523
Flow Controller ID	Y20	Y26	Y45	Y-1	Y-16
Sample Depth (b.g.s.)	1'	1'	1'	1'	1'
Additional Tubing Added	NO/ (YES) - How much ~1'	NO/ (YES) - How much ~1'	NO/ (YES) - How much ~1'	NO/ (YES) - How much ~1'	NO/ (YES) - How much ~1'
Purge Time (Start)	1223	1223	1240	1302	1320
Purge Time (Stop)	1226	1226	1243	1305	1323
Total Purge Time (min)	3	3	3	3	3
Purge Volume	1L	1L	1L	1L	1L
PID Test of Purge Air	140 PPb	140 PPb	140 PPb	163 PPb	120 PPb
Initial Tracer Gas Results in sampling line	2.7 %.	2.7 %.	4.2 %.	75 PPM	150 PPM
Initial Tracer Gas Results in shroud	60 %.	60 %.	65 %.	65 %.	65 %.
Pressure Gauge - before sampling	-27.5	-28	-24.5	<-30	-29
Sample Time (Start)	1228	1228	1245	1307	1329
Sample Time (Stop)	1430	1430	1430	1510	1523
Total Sample Time (min)	122	122	111	123	114
Pressure Gauge - after sampling	-9	-5	-3.5	-8	-7
Sample Volume	6L	6L	6L		
Canister Pressure Went to Ambient Pressure?	YES / (NO)	YES / (NO)	YES / NO	YES / (NO)	YES / (NO)
Final Tracer Gas Results in sampling line	-	-	-	-	+
Final Tracer Gas Results in shroud	-	-	-	-	-
Associated Ambient Air Sample Number	Ambient-1	Ambient-1	ambient-1	ambient-1	ambient-1
Weather 24 hours before and during sampling					
General Comments	PARENT SAMPLE OF DUP-1 = 119/LSV-4				

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SUMMA CANISTER SAMPLING FIELD DATA SHEET

Site: 303 BOND & 400 CARROLL

Samplers: Christine madsen

Date: September 12, 2013

Sample #	117				
Location	LSV-5				
Summa Canister ID	V57A				
Flow Controller ID	V-40				
Sample Depth (b.g.s.)	1'				
Additional Tubing Added	NO/ (YES) - How much ~1'	NO/ YES - How much	NO/ YES - How much	NO/ YES - How much	NO/ YES - How much
Purge Time (Start)	1505				
Purge Time (Stop)	1508				
Total Purge Time (min)	3				
Purge Volume	1L				
PID Test of Purge Air	252ppb				
Initial Tracer Gas Results in sampling line	2.1				
Initial Tracer Gas Results in shroud	60.1				
Pressure Gauge - before sampling	29				
Sample Time (Start)	1509				
Sample Time (Stop)	1709				
Total Sample Time (min)	120				
Pressure Gauge - after sampling	-10				
Sample Volume	1L				
Canister Pressure Went to Ambient Pressure?	YES / (NO)	YES / NO	YES / NO	YES / NO	YES / NO
Final Tracer Gas Results in sampling line	-				
Final Tracer Gas Results in shroud	-				
Associated Ambient Air Sample Number	Ambient 1				
Weather 24 hours before and during sampling					
General Comments					

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APPENDIX D

DATA USABILITY SUMMARY REPORTS

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ENGINEERING & ENVIRONMENTAL SERVICES

Technical Memorandum

2700 Kelly Road, Suite 200 Warrington, PA 18976 T: 215.491.6500 F: 215.491.6501
Mailing Address: P.O. Box 1569 Doylestown, PA 18901

To: Chris McMahon, Langan Project Geologist

From: Emily Strake, Langan Project Chemist/Risk Assessor

Date: November 6, 2013

Re: Data Usability Summary Report
For Carroll Gardens
Brooklyn, New York
Soil Samples Collected September 6, 2013
Langan Project No.: 100287501

This memorandum presents the findings of an analytical data validation of the data generated from the analysis of soil samples collected on September 6, 2013 by Langan Engineering and Environmental Services ("Langan") at the Carroll Gardens site located in Brooklyn, New York ("the site"). The soil samples were analyzed by York Analytical Laboratories, Inc. located in Stratford, Connecticut (NYSDOH ELAP registration # 10854) for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), pesticides, metals, mercury, and percent solids using the analytical methods specified below.

- Target Compound List (TCL) VOCs + Tentatively Identified Compounds (TICs) by SW-846 Method 8260B (rev 2, 12/1996)
- SVOCs by SW-846 Method 8270C (rev 3, 12/1996)
- PCBs by SW-846 Method 8082 (rev 0, 12/1996)
- Pesticides by SW-846 Method 8081A (rev 1, 12/1996)
- Target Analyte List (TAL) Metals by SW-846 Method 6010B (rev 2, 12/1996)
- Mercury by SW-846 Method 7473 (rev 0, 2/2013)
- Percent solids by Standard Method SM2540G (1997)

Table 1, below, summarizes the laboratory and client sample identification numbers, sample collection dates, and analytical parameters subject to review.

Table 1: Sample Summary

SDG	***Lab Sample ID***	***Client Sample ID***	***Sample Date***	***Analytical Parameters***
13I0306	13I0306-01	072-LSB-7-20130906	9/6/2013	VOCs; SVOCs; Pesticides; PCBs; Metals

SDG	*Lab Sample ID*	*Client Sample ID*	*Sample Date*	*Analytical Parameters*
13I0306	13I0306-02	073-LSB-7-20130906	9/6/2013	VOCs; SVOCs; Pesticides; PCBs; Metals
13I0306	13I0306-03	074-LSB-25-20130906	9/6/2013	VOCs; SVOCs; Lead
13I0306	13I0306-04	075-LSB-8-20130906	9/6/2013	VOCs; SVOCs; Lead
13I0306	13I0306-05	076-LSB-23-20130906	9/6/2013	VOCs; SVOCs; Pesticides; PCBs; Metals
13I0306	13I0306-06	077-FB-3-20130906	9/6/2013	VOCs; SVOCs; Pesticides; PCBs; Metals
13I0306	13I0306-07	078-TB-3-20130906	9/6/2013	VOCs

Validation Overview

This data validation was performed in accordance with USEPA Region II Standard Operating Procedure (SOP) #HW-34, "Trace Volatile Data Validation" (February 2013, Revision 3), USEPA Region II SOP #HW-35, "Semivolatile Data Validation" (March 2013, Revision 2), USEPA Region II SOP #HW-36, "Pesticide Data Validation" (May 2013, Revision 4), USEPA Region II SOP #HW-37, "PCB Aroclor Data Validation" (May 2013, Revision 3), USEPA Region II SOP #HW-2a, "ICP-AES Data Validation" (December 2012, Revision 15), USEPA Region II SOP #HW2c, "Mercury and Cyanide Data Validation," the USEPA Contract Laboratory Program "National Functional Guidelines for Superfund Organic Methods Data Review" (USEPA-540R-08-01, June 2008), and the "National Functional Guidelines for Inorganic Superfund Data Review" (USEPA-540R-10-011, January 2010).

Validation includes reconstruction of the analytical data to verify that data are easily traceable and sufficiently complete to permit logical reconstruction by a qualified individual other than the originator. Items subject to review in this memorandum include holding times, sample preservation, sample extraction and digestion, instrument tuning, instrument calibration, laboratory blanks, laboratory control samples, system monitoring compounds, internal standard area counts, matrix spike/spike duplicate recoveries, target compound identification and quantification, chromatograms, overall system performance, serial dilutions, and dual column performance.

As a result of the review process, the following qualifiers may be assigned to the data in accordance with the USEPA's guidelines and best professional judgment:

- **R –** The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
- **J –** The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample.
- **UJ –** The analyte was not detected at a level greater than or equal to the reporting limit (RL); however, the reported RL is approximate and may be inaccurate or imprecise.
- **U –** The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the RL or the sample concentration for results impacted by blank contamination.
- **NJ –** The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

If any validation qualifiers are assigned these qualifiers should supersede any laboratory-applied qualifiers. Data that is not qualified as a result of this data validation is considered acceptable on the basis of the items specified for review. Data that is qualified as "R" are not sufficiently valid and technically supportable to be used for data interpretation. Data that is otherwise qualified due to minor data quality anomalies are usable, as qualified.

Table 2: Validator-applied qualification

Project Sample ID	*Analysis*	*Analyte*	*CAS No.*	*Validator Qualifier*
072-LSB-7-20130906	VOCs	1,4-DIOXANE (P-DIOXANE)	123-91-1	UJ
072-LSB-7-20130906	VOCs	ACETONE	67-64-1	J
073-LSB-7-20130906	VOCs	1,4-DIOXANE (P-DIOXANE)	123-91-1	UJ
073-LSB-7-20130906	VOCs	ACETONE	67-64-1	J
074-LSB-25-20130906	VOCs	1,4-DIOXANE (P-DIOXANE)	123-91-1	UJ
. 074-LSB-25-20130906	VOCs	ACETONE	67-64-1	J
075-LSB-8-20130906	VOCs	1,4-DIOXANE (P-DIOXANE)	123-91-1	UJ
075-LSB-8-20130906	VOCs	ACETONE	67-64-1	J
075-LSB-8-20130906	VOCs	METHYL ACETATE	79-20-9	J
075-LSB-8-20130906	SVOCs	4,6-DINITRO-2-METHYLPHENOL	534-52-1	UJ

Project Sample ID	*Analysis*	*Analyte*	*CAS No.*	*Validator Qualifier*
075-LSB-8-20130906	SVOCs	BENZIDINE	92-87-5	UJ
075-LSB-8-20130906	SVOCs	BENZOIC ACID	65-85-0	UJ
075-LSB-8-20130906	SVOCs	HEXACHLOROCYCLO PENTADIENE	77-47-4	UJ
075-LSB-8-20130906	SVOCs	CAPROLACTAM	105-60-2	UJ
076-LSB-23-20130906	VOCs	1,4-DIOXANE (P-DIOXANE)	123-91-1	UJ
076-LSB-23-20130906	VOCs	ACETONE	67-64-1	J
076-LSB-23-20130906	SVOCs	4,6-DINITRO-2-METHYLPHENOL	534-52-1	UJ
076-LSB-23-20130906	SVOCs	2,4-DINITROPHENOL	51-28-5	UJ
076-LSB-23-20130906	SVOCs	BENZIDINE	92-87-5	UJ
076-LSB-23-20130906	SVOCs	BENZOIC ACID	65-85-0	UJ
076-LSB-23-20130906	SVOCs	HEXACHLOROCYCLO PENTADIENE	77-47-4	UJ
076-LSB-23-20130906	SVOCs	CAPROLACTAM	105-60-2	UJ
077-FB-3-20130906	VOCs	ACETONE	67-64-1	U (2.0)
077-FB-3-20130906	VOCs	ISOPROPYLBENZENE (CUMENE)	98-82-8	UJ
077-FB-3-20130906	VOCs	TERT-BUTYL ALCOHOL	75-65-0	UJ
077-FB-3-20130906	SVOCs	2,4-DINITROPHENOL	51-28-5	UJ
077-FB-3-20130906	SVOCs	4,6-DINITRO-2-METHYLPHENOL	534-52-1	UJ
077-FB-3-20130906	SVOCs	BENZIDINE	92-87-5	UJ
077-FB-3-20130906	SVOCs	BENZOIC ACID	65-85-0	UJ
077-FB-3-20130906	SVOCs	HEXACHLOROCYCLO PENTADIENE	77-47-4	UJ
077-FB-3-20130906	SVOCs	CAPROLACTAM	105-60-2	UJ
077-FB-3-20130906	SVOCs	INDENO(1,2,3-C,D)PYRENE	193-39-5	UJ
077-FB-3-20130906	SVOCs	BENZO(A)ANTHRACENE	56-55-3	UJ
077-FB-3-20130906	SVOCs	BENZO(B)FLUORANTHENE	205-99-2	UJ
077-FB-3-20130906	SVOCs	BENZO(G,H,I)PERYLENE	191-24-2	UJ
077-FB-3-20130906	SVOCs	BENZO(K)FLUORANTHENE	207-08-9	UJ
077-FB-3-20130906	Pest	P,P'-DDE	72-55-9	UJ
077-FB-3-20130906	Pest	ALDRIN	309-00-2	UJ

Project Sample ID	*Analysis*	*Analyte*	*CAS No.*	*Validator Qualifier*
077-FB-3-20130906	Pest	ALPHA BHC (ALPHA HEXACHLOROCYCLOHEXANE)	319-84-6	UJ
077-FB-3-20130906	Pest	ALPHA-CHLORDANE	5103-71-9	UJ
077-FB-3-20130906	Pest	BETA BHC (BETA HEXACHLOROCYCLOHEXANE)	319-85-7	UJ
077-FB-3-20130906	Pest	DELTA BHC (DELTA HEXACHLOROCYCLOHEXANE)	319-86-8	UJ
077-FB-3-20130906	Pest	BETA ENDOSULFAN	33213-65-9	UJ
077-FB-3-20130906	Pest	GAMMA BHC (LINDANE)	58-89-9	UJ
077-FB-3-20130906	Pest	GAMMA-CHLORDANE	12789-03-6	UJ
077-FB-3-20130906	Pest	HEPTACHLOR EPOXIDE	1024-57-3	UJ
077-FB-3-20130906	Pest	HEXACHLOROBENZENE	118-74-1	UJ
078-TB-3-20130906	VOCs	ACETONE	67-64-1	U (2.0)
078-TB-3-20130906	VOCs	TERT-BUTYL ALCOHOL	75-65-0	UJ
078-TB-3-20130906	VOCs	ISOPROPYLBENZENE (CUMENE)	98-82-8	UJ

Major Deficiencies:

Major deficiencies include those that grossly impact data quality and necessitate the rejection of results. No major deficiencies were identified.

Minor Deficiencies:

Minor deficiencies include anomalies that directly impact data quality and necessitate qualification, but do not result in unusable data. The section below describes the minor deficiencies that were identified.

VOCs by SW-846 Method 8260B:

The initial calibration analyzed on instrument VOA2 displayed a relative response factor (RRF) less than the control limit (i.e., 0.005) for 1,4-dioxane at 0.002. The continuing calibration analyzed on 9/11/2013 at 7:40 displayed a RRF less than the control limit at 0.002. 1,4-Dioxane is a poor performer (USEPA 2008 NFG); associated results were non-detect and are qualified as "UJ" on the basis of professional judgment.

Method blank sample BI30547-BLK1 displayed a positive detection for acetone at 1.0 μg/L. The associated positive sample results were qualified as "U" at the sample concentration or the reporting limit.

The continuing calibration analyzed on 9/12/2013 at 7:43 displayed percent differences (%Ds) greater than the control limit with positive biases for TBA, acetone and 2-butanone at 28%, 42.1% and 41.2%, respectively. The associated positive detections are qualified as "J."

The initial calibration analyzed on instrument VOA3 displayed percent relative standard deviations (RSDs) greater than the control limit for TBA, n-propylbenzene, 1,3,5-trimethylbenzene, 1,2,4-trimethylbenzene and sec-butylbenzene at 39.11%, 26.77%, 20.03%, 21.10%, and 23.66%, respectively. The associated positive detections are qualified as "J" and non-detects are qualified "UJ."

SVOCs by SW-846 Method 8270C:

Laboratory control sample/control sample duplicate (LCS/LCSD) BI30556-BS1 displayed recoveries less than the lower control limit for benzoic acid and caprolactam. In addition, the LCS/LCSD relative percent difference (RPD) for caprolactam was greater than the control limit at 33.9%. The associated sample results were non-detect and are qualified as "UJ."

The initial calibration analyzed on instrument BNA#1 displayed a RSD greater than the control limit for benzidine at 40.15%. The associated sample results were non-detect and are qualified as "UJ."

The continuing calibration analyzed on 9/13/2013 at 6:48 displayed %Ds greater than the control limit with negative biases for hexachlorocyclopentadiene at 62.5%, 2,4-dinitrophenol at 51.1%, and 4,6-dinitro-2-methylphenol at 47.9%. The associated sample results were non-detect and are qualified as "UJ."

The initial calibration analyzed on BNA5 displayed RSDs greater than the control limit for acenaphthene, benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene and benzo(g,h,i)perylene at 20.90%, 20.70%, 25.05%, 26.61%, and 24.92%, respectively. The associated sample results were non-detect and are qualified as "UJ."

The continuing calibration analyzed on 9/13/2013 at 9:59 displayed a %D greater than the control limit with a negative bias for indeno(1,2,3-cd)pyrene at 25.8%. The associated sample results were non-detect and are qualified as "UJ."

Pesticides by SW-846 Method 8081A:

LCS BI30407-BS1 displayed recoveries less than the lower control limit for aldrin (35.9%), alpha-BHC (34.9%), beta-BHC (38.3%), delta0BHC (35.7%), gamma-BHC (35.9%), gamma-Chlordane (37.8%), alpha-Chlordane (36.8%), 4,4'-DDE (37.2%) endosulfan II (39.9%), and heptachlor epoxide (38.5%). The associated field blank sample results were non-detect and are qualified as "UJ."

Other Deficiencies:

Other deficiencies include anomalies that do not directly impact data quality and do not necessitate qualification. The section below describes the other deficiencies that were identified.

VOCs by SW-846 Method 8260B:

Method blank sample BI30512-BLK1 displayed a positive detection for acetone at 0.0032 mg/kg. The associated sample results were orders of magnitude greater than the blank concentrations; no qualification is required.

LCS/LCSD sample BI30512-BS1 displayed recoveries greater than the upper control limit for methyl acetate, 1,4-dioxane, and 2-butanone. In addition, the LCS/LCSD RPD for TBA was greater than the control limit at 33%. The associated sample results were non-detect; no qualification is required.

SVOCs by SW-846 Method 8270C:

Sample 074-LSB-25-20130906 displayed a surrogate recovery greater than the upper control limits for nitrobenzene-d5 at a 20X dilution. The surrogate recovery was affected by dilution and qualification of the data is not necessary.

LCS/LCSD BI30556-BS1 displayed RPDs greater than the control limit for 2,4-dinitrophenol at 23.1% and 4-nitrophenol at 50.1%. The associated sample results were non-detect; no qualification is required.

The continuing calibration analyzed on 9/13/2013 at 6:48 displayed a %D greater than the control limit with a positive bias for benzidine at 132.7%. The associated sample results were non-detect; no qualification is required.

Metals by SW-846 Method 6010B:

Multiple initial and continuing calibration blanks displayed negative detections for sodium with absolute values slightly greater than the reporting limit and positive detections for potassium greater than the reporting limit. The associated positive detections were orders of magnitude greater than the blank amounts and were not impacted by loss of instrument sensitivity, bias or drift.

ICP serial dilution sample 076-LSB-23-20130906 displayed a percent difference greater than the control limit (i.e., 10%) for sodium at 23.2%. The sample concentrations were less than 50X the MDL; no qualification is required.

Comments:

On the basis of this evaluation, the laboratory appears to have followed the specified analytical methods with the exception of errors discussed above. If a given fraction is not mentioned above, that means that all specified criteria were met for that parameter. All laboratory data packages met ASP Category B requirements.

All data are considered usable, as qualified. In addition, completeness, defined as the percentage of analytical results that are judged to be valid, is 100%.

Signed:

Emily Strake
Project Chemist/Risk Assessor

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ENGINEERING & ENVIRONMENTAL SERVICES

Technical Memorandum

2700 Kelly Road, Suite 200 Warrington, PA 18976 T: 215.491.6500 F: 215.491.6501
Mailing Address: P.O. Box 1569 Doylestown, PA 18901

To: Chris McMahon, Langan Project Geologist

From: Emily Strake, Langan Project Chemist/Risk Assessor

Date: November 8, 2013

Re: Data Usability Summary Report
For Carroll Gardens
Brooklyn, New York
Soil Samples Collected September 9, 2013
Langan Project No.: 100287501

This memorandum presents the findings of an analytical data validation of the data generated from the analysis of soil samples collected on September 9, 2013 by Langan Engineering and Environmental Services ("Langan") at the Carroll Gardens site located in Brooklyn, New York ("the site"). The soil samples were analyzed by York Analytical Laboratories, Inc. located in Stratford, Connecticut (NYSDOH ELAP registration # 10854) for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), pesticides, metals, mercury, and percent solids using the analytical methods specified below.

- Target Compound List (TCL) VOCs + Tentatively Identified Compounds (TICs) by SW-846 Method 8260B (rev 2, 12/1996)
- SVOCs by SW-846 Method 8270C (rev 3, 12/1996)
- PCBs by SW-846 Method 8082 (rev 0, 12/1996)
- Pesticides by SW-846 Method 8081A (rev 1, 12/1996)
- Target Analyte List (TAL) Metals by SW-846 Method 6010B (rev 2, 12/1996)
- Mercury by SW-846 Method 7473 (rev 0, 2/2013)
- Percent solids by Standard Method SM2540G (1997)

Table 1, below, summarizes the laboratory and client sample identification numbers, sample collection dates, and analytical parameters subject to review.

Table 1: Sample Summary

SDG	***Lab Sample ID***	***Client Sample ID***	***Sample Date***	***Analytical Parameters***
13I0342	13I0342-01	079-LSB-9-20130909	9/9/2013	VOCs; SVOCs; Pesticides; PCBs; Metals

SDG	*Lab Sample ID*	*Client Sample ID*	*Sample Date*	*Analytical Parameters*
13I0342	13I0342-02	080-LSB-9-20130909	9/9/2013	VOCs; SVOCs; Pesticides; PCBs; Metals
13I0342	13I0342-03	081-LSB-22-20130909	9/9/2013	VOCs; SVOCs; Pesticides; PCBs; Metals
13I0342	13I0342-04	082-084-LSB-22-20130909	9/9/2013	VOCs; SVOCs; Pesticides; PCBs; Metals
13I0342	13I0342-07	085-LSB-10-20130909	9/9/2013	VOCs; SVOCs; Pesticides; PCBs; Metals
13I0342	13I0342-08	086-LSB-24-20130909	9/9/2013	VOCs; SVOCs; Pesticides; PCBs; Metals
13I0342	13I0342-05	083-DUP-2-20130909	9/9/2013	VOCs; SVOCs; Pesticides; PCBs; Metals
13I0342	13I0342-09	091-FB-4-20130909	9/9/2013	VOCs; SVOCs; Pesticides; PCBs; Metals
13I0342	13I0342-10	092-TB-4-20130909	9/9/2013	VOCs

Validation Overview

This data validation was performed in accordance with USEPA Region II Standard Operating Procedure (SOP) #HW-34, "Trace Volatile Data Validation" (February 2013, Revision 3), USEPA Region II SOP #HW-35, "Semivolatile Data Validation" (March 2013, Revision 2), USEPA Region II SOP #HW-36, "Pesticide Data Validation" (May 2013, Revision 4), USEPA Region II SOP #HW-37, "PCB Aroclor Data Validation" (May 2013, Revision 3), USEPA Region II SOP #HW-2a, "ICP-AES Data Validation" (December 2012, Revision 15), USEPA Region II SOP #HW2c, "Mercury and Cyanide Data Validation," the USEPA Contract Laboratory Program "National Functional Guidelines for Superfund Organic Methods Data Review" (USEPA-540R-08-01, June 2008), and the "National Functional Guidelines for Inorganic Superfund Data Review" (USEPA-540R-10-011, January 2010).

Validation includes reconstruction of the analytical data to verify that data are easily traceable and sufficiently complete to permit logical reconstruction by a qualified individual other than the originator. Items subject to review in this memorandum include holding times, sample preservation, sample extraction and digestion, instrument tuning, instrument calibration, laboratory blanks, laboratory control samples, system monitoring compounds, internal standard area counts, matrix spike/spike duplicate recoveries, target compound identification and quantification, chromatograms, overall system performance, serial dilutions, field blanks, trip blanks, and dual column performance.

As a result of the review process, the following qualifiers may be assigned to the data in accordance with the USEPA's guidelines and best professional judgment:

- **R –** The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
- **J –** The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample.
- **UJ –** The analyte was not detected at a level greater than or equal to the reporting limit (RL); however, the reported RL is approximate and may be inaccurate or imprecise.
- **U –** The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the RL or the sample concentration for results impacted by blank contamination.
- **NJ –** The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

If any validation qualifiers are assigned these qualifiers should supersede any laboratory-applied qualifiers. Data that is not qualified as a result of this data validation is considered acceptable on the basis of the items specified for review. Data that is qualified as "R" are not sufficiently valid and technically supportable to be used for data interpretation. Data that is otherwise qualified due to minor data quality anomalies are usable, as qualified.

Table 2: Validator-applied qualification

Project Sample ID	*Analysis*	*Analyte*	*CAS No.*	*Validator Qualifier*
079-LSB-9-20130909	VOCs	TERT-BUTYL ALCOHOL	75-65-0	UJ

Project Sample ID	*Analysis*	*Analyte*	*CAS No.*	*Validator Qualifier*
079-LSB-9-20130909	SVOCs	ATRAZINE	1912-24-9	UJ
079-LSB-9-20130909	SVOCs	2,4-DINITROPHENOL	51-28-5	UJ
079-LSB-9-20130909	SVOCs	BENZIDINE	92-87-5	UJ
079-LSB-9-20130909	SVOCs	BENZOIC ACID	65-85-0	UJ
079-LSB-9-20130909	SVOCs	PENTACHLOROPHENOL	87-86-5	UJ
079-LSB-9-20130909	Metals	SODIUM	7440-23-5	J
080-LSB-9-20130909	VOCs	1,3,5-TRIMETHYLBENZENE (MESITYLENE)	108-67-8	J
080-LSB-9-20130909	VOCs	TERT-BUTYL ALCOHOL	75-65-0	UJ
080-LSB-9-20130909	SVOCs	2,4-DINITROPHENOL	51-28-5	UJ
080-LSB-9-20130909	SVOCs	4,6-DINITRO-2-METHYLPHENOL	534-52-1	UJ
080-LSB-9-20130909	SVOCs	ATRAZINE	1912-24-9	UJ
080-LSB-9-20130909	SVOCs	BENZIDINE	92-87-5	UJ
080-LSB-9-20130909	SVOCs	DIBENZ(A,H)ANTHRACENE	53-70-3	J
080-LSB-9-20130909	SVOCs	HEXACHLOROCYCLO PENTADIENE	77-47-4	UJ
080-LSB-9-20130909	SVOCs	INDENO(1,2,3-C,D)PYRENE	193-39-5	J
080-LSB-9-20130909	Metals	SODIUM	7440-23-5	J
081-LSB-22-20130909	VOCs	TERT-BUTYL ALCOHOL	75-65-0	UJ
081-LSB-22-20130909	SVOCs	2,4-DINITROPHENOL	51-28-5	UJ
081-LSB-22-20130909	SVOCs	4,6-DINITRO-2-METHYLPHENOL	534-52-1	UJ
081-LSB-22-20130909	SVOCs	ANTHRACENE	120-12-7	J
081-LSB-22-20130909	SVOCs	ATRAZINE	1912-24-9	UJ
081-LSB-22-20130909	SVOCs	BENZIDINE	92-87-5	UJ
081-LSB-22-20130909	SVOCs	BENZO(A)ANTHRACENE	56-55-3	J
081-LSB-22-20130909	SVOCs	BENZO(A)PYRENE	50-32-8	J
081-LSB-22-20130909	SVOCs	BENZO(B)FLUORANTHENE	205-99-2	J
081-LSB-22-20130909	SVOCs	BENZO(G,H,I)PERYLENE	191-24-2	J
081-LSB-22-20130909	SVOCs	BENZYL BUTYL PHTHALATE	85-68-7	J
081-LSB-22-20130909	SVOCs	BIS(2-ETHYLHEXYL) PHTHALATE	117-81-7	J

Project Sample ID	*Analysis*	*Analyte*	*CAS No.*	*Validator Qualifier*
081-LSB-22-20130909	SVOCs	CHRYSENE	218-01-9	J
081-LSB-22-20130909	SVOCs	DIBENZ(A,H)ANTHRACENE	53-70-3	J
081-LSB-22-20130909	SVOCs	FLUORENE	86-73-7	J
081-LSB-22-20130909	SVOCs	HEXACHLOROCYCLO PENTADIENE	77-47-4	UJ
081-LSB-22-20130909	SVOCs	INDENO(1,2,3-C,D)PYRENE	193-39-5	J
081-LSB-22-20130909	SVOCs	PHENANTHRENE	85-01-8	J
081-LSB-22-20130909	Pest	P,P'-DDE	72-55-9	J
081-LSB-22-20130909	Pest	P,P'-DDT	50-29-3	J
081-LSB-22-20130909	PCBs	PCB-1260 (AROCLOR 1260)	11096-82-5	J
081-LSB-22-20130909	Metals	ANTIMONY	7440-36-0	UJ
081-LSB-22-20130909	Metals	ARSENIC	7440-38-2	J
081-LSB-22-20130909	Metals	BERYLLIUM	7440-41-7	J
081-LSB-22-20130909	Metals	CHROMIUM, TOTAL	7440-47-3	J
081-LSB-22-20130909	Metals	COBALT	7440-48-4	J
081-LSB-22-20130909	Metals	COPPER	7440-50-8	J
081-LSB-22-20130909	Metals	IRON	7439-89-6	J
081-LSB-22-20130909	Metals	NICKEL	7440-02-0	J
081-LSB-22-20130909	Metals	SODIUM	7440-23-5	J
081-LSB-22-20130909	Metals	ZINC	7440-66-6	J
081-LSB-22-20130909	Metals	MERCURY	7439-97-6	J
082-084-LSB-22-20130909	VOCs	CHLOROETHANE	75-00-3	UJ
082-084-LSB-22-20130909	VOCs	TERT-BUTYL ALCOHOL	75-65-0	UJ
082-084-LSB-22-20130909	SVOCs	BIPHENYL (DIPHENYL)	92-52-4	UJ
082-084-LSB-22-20130909	SVOCs	2,4-DINITROPHENOL	51-28-5	UJ
082-084-LSB-22-20130909	SVOCs	2,4-DICHLOROPHENOL	120-83-2	UJ
082-084-LSB-22-20130909	SVOCs	2-METHYLNAPHTHALENE	91-57-6	J
082-084-LSB-22-20130909	SVOCs	2-METHYLPHENOL (O-CRESOL)	95-48-7	UJ

Project Sample ID	*Analysis*	*Analyte*	*CAS No.*	*Validator Qualifier*
082-084-LSB-22-20130909	SVOCs	3- AND 4- METHYLPHENOL (TOTAL)	MEPH3MEPH4	UJ
082-084-LSB-22-20130909	SVOCs	4,6-DINITRO-2-METHYLPHENOL	534-52-1	UJ
082-084-LSB-22-20130909	SVOCs	4-NITROANILINE	100-01-6	UJ
082-084-LSB-22-20130909	SVOCs	4-NITROPHENOL	100-02-7	UJ
082-084-LSB-22-20130909	SVOCs	ACENAPHTHENE	83-32-9	J
082-084-LSB-22-20130909	SVOCs	ACETOPHENONE	98-86-2	UJ
082-084-LSB-22-20130909	SVOCs	ANTHRACENE	120-12-7	J
082-084-LSB-22-20130909	SVOCs	ATRAZINE	1912-24-9	UJ
082-084-LSB-22-20130909	SVOCs	BENZALDEHYDE	100-52-7	UJ
082-084-LSB-22-20130909	SVOCs	BENZO(K)FLUORANTHENE	207-08-9	J
082-084-LSB-22-20130909	SVOCs	BENZIDINE	92-87-5	UJ
082-084-LSB-22-20130909	SVOCs	BENZO(A)PYRENE	50-32-8	J
082-084-LSB-22-20130909	SVOCs	CAPROLACTAM	105-60-2	UJ
082-084-LSB-22-20130909	SVOCs	DIBENZ(A,H)ANTHRACENE	53-70-3	UJ
082-084-LSB-22-20130909	SVOCs	DIBENZOFURAN	132-64-9	J
082-084-LSB-22-20130909	SVOCs	DIETHYL PHTHALATE	84-66-2	UJ
082-084-LSB-22-20130909	SVOCs	FLUORENE	86-73-7	J
082-084-LSB-22-20130909	SVOCs	HEXACHLOROCYCLOPENTADIENE	77-47-4	UJ
082-084-LSB-22-20130909	SVOCs	N-NITROSODIMETHYLAMINE	62-75-9	UJ
082-084-LSB-22-20130909	SVOCs	PENTACHLOROPHENOL	87-86-5	UJ

Project Sample ID	*Analysis*	*Analyte*	*CAS No.*	*Validator Qualifier*
082-084-LSB-22-20130909	SVOCs	PHENOL	108-95-2	UJ
082-084-LSB-22-20130909	Pest	All Pesticides	--	UJ
082-084-LSB-22-20130909	Metals	IRON	7439-89-6	J
082-084-LSB-22-20130909	Metals	SODIUM	7440-23-5	J
083-DUP-2-20130909	VOCs	TERT-BUTYL ALCOHOL	75-65-0	UJ
083-DUP-2-20130909	SVOCs	2,4,5-TRICHLOROPHENOL	95-95-4	UJ
083-DUP-2-20130909	SVOCs	2,4,6-TRICHLOROPHENOL	88-06-2	UJ
083-DUP-2-20130909	SVOCs	2,4-DICHLOROPHENOL	120-83-2	UJ
083-DUP-2-20130909	SVOCs	2,4-DIMETHYLPHENOL	105-67-9	UJ
083-DUP-2-20130909	SVOCs	2-CHLOROPHENOL	95-57-8	UJ
083-DUP-2-20130909	SVOCs	2-METHYLPHENOL (O-CRESOL)	95-48-7	UJ
083-DUP-2-20130909	SVOCs	2-NITROPHENOL	88-75-5	UJ
083-DUP-2-20130909	SVOCs	3- AND 4- METHYLPHENOL (TOTAL)	MEPH3MEPH4	UJ
083-DUP-2-20130909	SVOCs	4,6-DINITRO-2-METHYLPHENOL	534-52-1	UJ
083-DUP-2-20130909	SVOCs	4-NITROPHENOL	100-02-7	UJ
083-DUP-2-20130909	SVOCs	ANTHRACENE	120-12-7	J
083-DUP-2-20130909	SVOCs	ATRAZINE	1912-24-9	UJ
083-DUP-2-20130909	SVOCs	BENZIDINE	92-87-5	UJ
083-DUP-2-20130909	SVOCs	BENZO(A)ANTHRACENE	56-55-3	J
083-DUP-2-20130909	SVOCs	BENZO(A)PYRENE	50-32-8	J
083-DUP-2-20130909	SVOCs	BENZO(B)FLUORANTHENE	205-99-2	J
083-DUP-2-20130909	SVOCs	BENZO(G,H,I)PERYLENE	191-24-2	UJ
083-DUP-2-20130909	SVOCs	BENZYL BUTYL PHTHALATE	85-68-7	J
083-DUP-2-20130909	SVOCs	BIS(2-ETHYLHEXYL) PHTHALATE	117-81-7	J
083-DUP-2-20130909	SVOCs	CHRYSENE	218-01-9	J
083-DUP-2-20130909	SVOCs	FLUORENE	86-73-7	J

Project Sample ID	*Analysis*	*Analyte*	*CAS No.*	*Validator Qualifier*
083-DUP-2-20130909	SVOCs	HEXACHLOROCYCLO PENTADIENE	77-47-4	UJ
083-DUP-2-20130909	SVOCs	INDENO(1,2,3-C,D)PYRENE	193-39-5	J
083-DUP-2-20130909	SVOCs	PHENANTHRENE	85-01-8	J
083-DUP-2-20130909	SVOCs	PENTACHLOROPHENOL	87-86-5	UJ
083-DUP-2-20130909	SVOCs	PHENOL	108-95-2	UJ
083-DUP-2-20130909	Pest	P,P'-DDE	72-55-9	J
083-DUP-2-20130909	Pest	P,P'-DDT	50-29-3	J
083-DUP-2-20130909	PCBs	PCB-1260 (AROCLOR 1260)	11096-82-5	J
083-DUP-2-20130909	Metals	ANTIMONY	7440-36-0	UJ
083-DUP-2-20130909	Metals	ARSENIC	7440-38-2	J
083-DUP-2-20130909	Metals	BERYLLIUM	7440-41-7	UJ
083-DUP-2-20130909	Metals	CHROMIUM, TOTAL	7440-47-3	J
083-DUP-2-20130909	Metals	COBALT	7440-48-4	J
083-DUP-2-20130909	Metals	COPPER	7440-50-8	J
083-DUP-2-20130909	Metals	IRON	7439-89-6	J
083-DUP-2-20130909	Metals	NICKEL	7440-02-0	J
083-DUP-2-20130909	Metals	SODIUM	7440-23-5	J
083-DUP-2-20130909	Metals	ZINC	7440-66-6	J
083-DUP-2-20130909	Metals	MERCURY	7439-97-6	J
085-LSB-10-20130909	VOCs	1,3,5-TRIMETHYLBENZENE (MESITYLENE)	108-67-8	J
085-LSB-10-20130909	VOCs	TERT-BUTYL ALCOHOL	75-65-0	UJ
085-LSB-10-20130909	SVOCs	2,4,5-TRICHLOROPHENOL	95-95-4	UJ
085-LSB-10-20130909	SVOCs	2,4,6-TRICHLOROPHENOL	88-06-2	UJ
085-LSB-10-20130909	SVOCs	2,4-DICHLOROPHENOL	120-83-2	UJ
085-LSB-10-20130909	SVOCs	2,4-DIMETHYLPHENOL	105-67-9	UJ
085-LSB-10-20130909	SVOCs	2-CHLOROPHENOL	95-57-8	UJ
085-LSB-10-20130909	SVOCs	2-METHYLPHENOL (O-CRESOL)	95-48-7	UJ
085-LSB-10-20130909	SVOCs	2-NITROPHENOL	88-75-5	UJ
085-LSB-10-20130909	SVOCs	3- AND 4- METHYLPHENOL (TOTAL)	MEPH3MEPH4	UJ

Project Sample ID	*Analysis*	*Analyte*	*CAS No.*	*Validator Qualifier*
085-LSB-10-20130909	SVOCs	4,6-DINITRO-2-METHYLPHENOL	534-52-1	UJ
085-LSB-10-20130909	SVOCs	4-NITROPHENOL	100-02-7	UJ
085-LSB-10-20130909	SVOCs	PENTACHLOROPHENOL	87-86-5	UJ
085-LSB-10-20130909	SVOCs	PHENOL	108-95-2	UJ
085-LSB-10-20130909	SVOCs	2,4-DINITROPHENOL	51-28-5	UJ
085-LSB-10-20130909	SVOCs	ATRAZINE	1912-24-9	UJ
085-LSB-10-20130909	SVOCs	BENZIDINE	92-87-5	UJ
085-LSB-10-20130909	SVOCs	HEXACHLOROCYCLO PENTADIENE	77-47-4	UJ
085-LSB-10-20130909	Metals	SODIUM	7440-23-5	J
086-LSB-24-20130909	SVOCs	2,4,5-TRICHLOROPHENOL	95-95-4	UJ
086-LSB-24-20130909	SVOCs	2,4,6-TRICHLOROPHENOL	88-06-2	UJ
086-LSB-24-20130909	SVOCs	2,4-DICHLOROPHENOL	120-83-2	UJ
086-LSB-24-20130909	SVOCs	2,4-DIMETHYLPHENOL	105-67-9	UJ
086-LSB-24-20130909	SVOCs	2-CHLOROPHENOL	95-57-8	UJ
086-LSB-24-20130909	SVOCs	2-METHYLPHENOL (O-CRESOL)	95-48-7	UJ
086-LSB-24-20130909	SVOCs	2-NITROPHENOL	88-75-5	UJ
086-LSB-24-20130909	SVOCs	3- AND 4- METHYLPHENOL (TOTAL)	MEPH3MEPH4	UJ
086-LSB-24-20130909	SVOCs	4,6-DINITRO-2-METHYLPHENOL	534-52-1	UJ
086-LSB-24-20130909	SVOCs	4-NITROPHENOL	100-02-7	UJ
086-LSB-24-20130909	SVOCs	PENTACHLOROPHENOL	87-86-5	UJ
086-LSB-24-20130909	SVOCs	PHENOL	108-95-2	UJ
086-LSB-24-20130909	SVOCs	2,4-DINITROPHENOL	51-28-5	UJ
086-LSB-24-20130909	SVOCs	ATRAZINE	1912-24-9	UJ
086-LSB-24-20130909	SVOCs	BENZIDINE	92-87-5	UJ
086-LSB-24-20130909	SVOCs	HEXACHLOROCYCLO PENTADIENE	77-47-4	UJ
086-LSB-24-20130909	SVOCs	INDENO(1,2,3-C,D)PYRENE	193-39-5	J
091-FB-4-20130909	VOCs	1,2,4-TRIMETHYLBENZENE	95-63-6	UJ
091-FB-4-20130909	VOCs	1,3,5-TRIMETHYLBENZENE (MESITYLENE)	108-67-8	UJ

Project Sample ID	*Analysis*	*Analyte*	*CAS No.*	*Validator Qualifier*
091-FB-4-20130909	VOCs	ACETONE	67-64-1	U (2.1)
091-FB-4-20130909	VOCs	N-PROPYLBENZENE	103-65-1	UJ
091-FB-4-20130909	VOCs	SEC-BUTYLBENZENE	135-98-8	UJ
091-FB-4-20130909	VOCs	TERT-BUTYL ALCOHOL	75-65-0	UJ
091-FB-4-20130909	SVOCs	2,4-DICHLOROPHENOL	120-83-2	UJ
091-FB-4-20130909	SVOCs	4,6-DINITRO-2-METHYLPHENOL	534-52-1	UJ
091-FB-4-20130909	SVOCs	ACENAPHTHENE	83-32-9	UJ
091-FB-4-20130909	SVOCs	BENZIDINE	92-87-5	UJ
091-FB-4-20130909	SVOCs	BENZIDINE	92-87-5	UJ
091-FB-4-20130909	SVOCs	BENZO(A)ANTHRACENE	56-55-3	UJ
091-FB-4-20130909	SVOCs	BENZO(B)FLUORANTHENE	205-99-2	UJ
091-FB-4-20130909	SVOCs	BENZO(G,H,I)PERYLENE	191-24-2	UJ
091-FB-4-20130909	SVOCs	BENZO(K)FLUORANTHENE	207-08-9	UJ
091-FB-4-20130909	SVOCs	BENZOIC ACID	65-85-0	UJ
091-FB-4-20130909	SVOCs	CAPROLACTAM	105-60-2	UJ
091-FB-4-20130909	SVOCs	INDENO(1,2,3-C,D)PYRENE	193-39-5	UJ
091-FB-4-20130909	Pest	DELTA BHC (DELTA HEXACHLOROCYCLOHEXANE)	319-86-8	UJ
091-FB-4-20130909	Metals	SODIUM	7440-23-5	UJ
092-TB-4-20130909	VOCs	1,2,4-TRIMETHYLBENZENE	95-63-6	UJ
092-TB-4-20130909	VOCs	1,3,5-TRIMETHYLBENZENE (MESITYLENE)	108-67-8	UJ
092-TB-4-20130909	VOCs	ACETONE	67-64-1	U (2.0)
092-TB-4-20130909	VOCs	N-PROPYLBENZENE	103-65-1	UJ
092-TB-4-20130909	VOCs	SEC-BUTYLBENZENE	135-98-8	UJ
092-TB-4-20130909	VOCs	TERT-BUTYL ALCOHOL	75-65-0	UJ

Major Deficiencies:

Major deficiencies include those that grossly impact data quality and necessitate the rejection of results. No major deficiencies were identified.

Minor Deficiencies:

Minor deficiencies include anomalies that directly impact data quality and necessitate qualification, but do not result in unusable data. The section below describes the minor deficiencies that were identified.

VOCs by SW-846 Method 8260B:

Matrix spike/spike duplicate (MS/SD) sample 082-084LSB-22-20130909 displayed recoveries less than the lower control limit for chloroethane (38.7%/49.7%). The associated sample results were non-detect and are qualified as "UJ."

Laboratory control sample/control sample duplicate (LCS/LCSD) BI30473-BS1 displayed a recovery greater than the control limit for 1,3,5-trimethylbenzene at 117%. The associated positive detections are qualified as "J."

Method blank sample BI30547-BLK1 displayed a positive detection for acetone at 1.0 µg/L. The associated positive sample results were qualified as "U" at the reporting limit or the sample concentration.

The initial calibration analyzed on instrument VOA3 displayed percent relative standard deviations (RSDs) greater than the control limit for TBA at 39.11%, n-propylbenzene at 26.77%, 1,3,5-trimethylbenzene at 20.03%, 1,2,4-trimethylbenzene at 21.10%, and sec-butylbenzene at 23.66%. The associated sample results were non-detects and are qualified as "UJ."

The initial calibration analyzed on instrument VOA3 displayed a RSD greater than the control limit for TBA at 33.25%. The associated sample results were non-detects and are qualified as "UJ."

SVOCs by SW-846 Method 8270C:

The initial calibration analyzed on instrument BNA5 displayed RSDs greater than the control limit for benzoic acid, hexachlorocyclopentadiene, 2,4-dinitrophenol, pentachlorophenol and benzidine at 42.31%, 75.52% and 41.00%, 22.67%, and 31.69%, respectively. The associated sample results were non-detect and are qualified as "UJ."

MS sample 082-084-LSB-22-20130909 did not recover or displayed percent recoveries less than the lower control limit for several analytes: 1,1'-biphenyl, anthracene, benzo(a)pyrene, benzo(a)anthracene, 2,4-dichlorophenol, 4,6-dinitro-2-methylphenol, chrysene, 2,4-dinitrophenol, fluoranthene, fluorene, hexachlorocyclopentadiene, 3&4-methylphenols, 2-methylphenol, 4-nitroaniline, 4-nitrophenol, acetophenone, 2-methylnaphthalene, n-nitrosodimethylamine, pentachlorophenol, atrazine, diethyl phthalate, dibenz(a,h)anthrancene, phenanthrene, pyrene, phenol, benzaldehyde, and caprolactam. The associated non-detect sample results are qualified as "UJ."

Samples 083-DUP-2-20130909, 085-LSB-10-20130909 and 086-LSB-24-20130909 displayed recoveries less than the lower control limit for acid-extractable surrogates 2,4,6-tribromophenol and 2-fluorophenol. The results for acid-extractable compounds were non-detect and are qualified as "UJ."

LCS/LCSD sample BI30556-BS1 did not recover for benzoic acid and displayed recoveries less than the lower control limit for caprolactam at 18.8% and 13.4%. In addition, the LCS/LCSD relative percent difference (RPD) was greater than the control limit at 33.9%. The associated non-detect sample results were qualified as "UJ."

LCS sample BI30541-BS1 displayed a recovery less than the lower control limit for atrazine at 3.02%. The associated non-detect sample results were qualified as "UJ."

The initial calibration analyzed on instrument BNA#5 displayed RSDs greater than the control limit for acenaphthene at 20.9%, benzo(a)anthracene at 20.7%, benzo(b)fluoranthene at 25.05%, benzo(k)fluoranthene at 26.61%, and benzo(g,h,i)perylene at 24.92%. The associated sample results were non-detect and are qualified as "UJ."

The continuing calibration analyzed on 9/13/2013 at 21:59 displayed a percent difference (%D) greater than the control limit with a negative bias for indeno(1,2,3-cd)pyrene at 25.8%. The associated sample results were non-detect and are qualified as "UJ."

The initial calibration analyzed on instrument BNA#1 displayed a RSD greater than the control limit for benzidine at 40.15%. The associated sample results were non-detect and are qualified as "UJ."

The continuing calibration analyzed on 9/13/2013 at 18:48 displayed %Ds greater than the control limit with negative biases for hexachlorocyclopentadiene at 62.5%, 2,4-dinitrophenol at 51.1%, and 4,6-dinitro-2-methylphenol at 47.9%. The associated sample results were non-detect and are qualified as "UJ."

The continuing calibration analyzed on 9/16/2013 at 9:28 displayed %Ds greater than the control limit with a positive bias for indeno(1,2,3-cd)pyrene and dibenz(a,h)anthracene at 29.3% and 32.9%, respectively. The associated positive detections are qualified as "J."

Pesticides by SW-846 Method 8081B:

LCS/LCSD BI30558-BS1 displayed recoveries less than the lower control limit for delta-BHC at 39.6% and 34.5%, respectively. The associated sample results were non-detect and are qualified as "UJ."

MS/SD sample 082-084-LSB-22-20130909 displayed recoveries less than the lower control limit for gamma-Chlordane, alpha-Chlordane, 4,4'-DDE, heptachlor epoxide, aldrin, beta-BHC, delta-BHC, gamma-BHC, 4,4'-DDD, 4,4'-DDT, dieldrin, endosulfan I, endosulfan II, endosulfan sulfate, endrin, and heptachlor. In addition, the MS/SD RPDs for multiple constituents exceeded the control limit. The associated sample results were non-detect and are qualified as "UJ."

Sample 082-084-LSB-22-20130909 displayed a recovery for surrogate tetrachloro-m-xylene less than the lower control limit (i.e., 30%) at 23.5%. The associated sample results were non-detect and are qualified as "UJ."

Metals by SW-846 Method 6010B:

MS sample 082-084-LSB-22-20130909 displayed a recovery greater than the upper control limit for iron at 126%. The associated positive sample result is qualified as "J."

The continuing calibration blank analyzed on 9/11/2013 displayed a negative detection for sodium with an absolute value greater than the reporting limit at -282 µg/L. The associated non-detect sample result is qualified as "UJ."

The serial dilution analyzed in conjunction with sample batch BI30469 displayed a %D greater than the control limit (i.e., 10%) for thallium at 31.5%. The associated positive detections are qualified as "J."

Other Deficiencies:

Other deficiencies include anomalies that do not directly impact data quality and do not necessitate qualification. The section below describes the other deficiencies that were identified.

VOCs by SW-846 Method 8260B:

MS/SD sample 082-084LSB-22-20130909 displayed recoveries greater than the upper control limit for 2-hexanone and 4-methyl-2-pentanone. The associated sample results were non-detect; no qualification is required.

LCS/LCSD BI30473-BS1 displayed a RPD greater than the control limit for chloroethane at 31.2%. The associated sample results were non-detect; no qualification is required.

LCS sample BI30547-BS1 displayed recoveries greater than the upper control limit for 1,4-dioxane, 2-butanone, methyl acetate at 143%, 133%, and 166% respectively. In addition, the LCSD displayed a recovery for methyl acetate greater than the control limit at 134% and a LCS/LCSD RPD greater than the control limit for TBA at 33%. The associated sample results were non-detect; qualification is not required.

The continuing calibration analyzed on 9/11/2013 at 7:42 displayed a %D greater than the control limit with a positive bias for TBA at 27.3%. The associated sample results were non-detect; no qualification is required.

SVOCs by SW-846 Method 8270C:

Samples 080-LSB-9-20130909 and 082-084-LSB-22-20130909 displayed surrogate recoveries less than the lower control limits for analyses performed at 50X and 50X dilutions, respectively.

The surrogate recoveries were affected by dilution and qualification of the data is not necessary.

Sample 081-LSB-22-20130909 did not recover for acid-extractable surrogate 2,4,6-tribromophenol. The remaining two acid-extractable surrogates recovered within control limits; qualification is not necessary.

MS sample 082-084-LSB-22-20130909 displayed recoveries greater than the upper control limit for acenaphthene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, indeno(1,2,3-cd)pyrene, isophorone, 2-methylnaphthalene, 4-nitroaniline, n-nitrosodiphenylamine, benzoic acid, and 3-nitroaniline. In addition, multiple MS/SD RPDs exceeded acceptance criteria. The associated sample results were non-detect; no qualification is required.

The continuing calibration analyzed on 9/13/2013 at 10:03 displayed a %D greater than the control limit with a positive bias for benzidine at 29.6%. The associated sample results were non-detect; no further action is required.

LCS/LCSD sample BI30556-BS1 displayed RPDs greater than the control limit for 2,4-dinitrophenol at 23.1% and 4-nitrophenol at 50.1%. The associated sample results were non-detect; no qualification is required.

The continuing calibrations analyzed on 9/13/2013 at 18:48 and 9/16/2013 at 9:28 displayed %Ds greater than the control limit at 132.7% and 42.9%, respectively. The associated sample results were previously qualified; no further action is required.

Metals by SW-846 Method 6010B:

Multiple initial and continuing calibration blanks displayed negative detections for sodium with absolute values slightly greater than the reporting limit and positive detections for potassium and sodium above the reporting limit. The associated positive detections were orders of magnitude greater than the blank amounts and were not impacted by loss of instrument sensitivity, bias or drift.

The serial dilution analyzed in conjunction with sample batch BI30468 displayed %Ds greater than the control limit (i.e., 10%) for iron and potassium at 15.2% and 13.0%, respectively. The initial sample results were less than 50X the MDL and the reported field blank sample results were non-detect; no qualification is required.

Comments:

A field duplicate and parent sample pair (083-DUP-2-20130909 and 081-LSB-22-20130909) was collected and analyzed for VOCs, SVOCs, PCBs, metals, and pesticides. For results less than 5X the RL, analytes meet the precision criteria if the absolute difference is less than ±2X the RL. For results greater than 5X the RL, analytes meet the precision criteria if the RPD is less than or equal to 50%. Results for antimony, arsenic, beryllium, chromium, cobalt, copper, iron, nickel, zinc, mercury, 4,4'-DDE, 4,4'-DDT, PCB-1260, anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzyl butyl phthalate, bis(2-ethylhexyl)phthalate, chrysene, fluorene and phenanthrene did not meet the precision criteria and are qualified as estimated.

On the basis of this evaluation, the laboratory appears to have followed the specified analytical methods with the exception of errors discussed above. If a given fraction is not mentioned above, that means that all specified criteria were met for that parameter. All laboratory data packages met ASP Category B requirements.

All data are considered usable, as qualified. In addition, completeness, defined as the percentage of analytical results that are judged to be valid, is 100%.

Signed:

Emily Strake
Project Chemist/Risk Assessor

LANGAN
ENGINEERING & ENVIRONMENTAL SERVICES

Technical Memorandum

2700 Kelly Road, Suite 200 Warrington, PA 18976 T: 215.491.6500 F: 215.491.6501
Mailing Address: P.O. Box 1569 Doylestown, PA 18901

To: Chris McMahon, Langan Project Geologist

From: Emily Strake, Langan Project Chemist/Risk Assessor

Date: November 5, 2013

Re: Data Usability Summary Report – 13I0494
For Carroll Gardens
Brooklyn, New York
Soil Samples Collected September 12, 2013
Langan Project No.: 100287501

This memorandum presents the findings of an analytical data validation of the data generated from the analysis of soil samples collected on September 12, 2013 by Langan Engineering and Environmental Services ("Langan") at the Carroll Gardens site located in Brooklyn, New York ("the site"). The soil samples were analyzed by York Analytical Laboratories, Inc. located in Stratford, Connecticut (NYSDOH ELAP registration # 10854) for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), pesticides, and percent solids (%S) using the analytical methods specified below.

- NYSDEC Part 375 VOCs by SW-846 Method 8260B (rev 2, 12/1996)
- NYSDEC Part 375 SVOCs by SW-846 Method 8270C (rev 3, 12/1996)
- Pesticides by SW-846 Method 8081B (rev 2, 11/2000)
- Percent solids by Standard Method SM2540G (1997)

Table 1, below, summarizes the laboratory and client sample identification numbers, sample collection dates, and analytical parameters subject to review.

Table 1: Sample Summary

SDG	***Lab Sample ID***	***Client Sample ID***	***Sample Date***	***Analytical Parameters***
13I0494	13I0494-01	123-LSB-21-20130912	9/12/2013	VOCs; SVOCs; Pesticides
13I0494	13I0494-02	124-LSB-2120130912	9/12/2013	VOCs; SVOCs; Pesticides
13I0494	13I0494-03	125-DUP-3-20130912	9/12/2013	VOCs; SVOCs; Pesticides
13I0494	13I0494-04	126/TB-5	9/12/2013	VOCs

SDG	*Lab Sample ID*	*Client Sample ID*	*Sample Date*	*Analytical Parameters*
13I0494	13I0494-05	127/FB-5	9/12/2013	VOCs; SVOCs; Pesticides

Validation Overview

This data validation was performed in accordance with USEPA Region II Standard Operating Procedure (SOP) #HW-34, "Trace Volatile Data Validation" (February 2013, Revision 3), USEPA Region II SOP #HW-35, "Semivolatile Data Validation" (March 2013, Revision 2), USEPA Region II SOP #HW-36, "Pesticide Data Validation" (May 2013, Revision 4), and the USEPA Contract Laboratory Program "National Functional Guidelines for Superfund Organic Methods Data Review" (USEPA-540R-08-01, June 2008).

Validation includes reconstruction of the analytical data to verify that data are easily traceable and sufficiently complete to permit logical reconstruction by a qualified individual other than the originator. Items subject to review in this memorandum include holding times, sample preservation, sample extraction, instrument tuning, instrument calibration, laboratory blanks, laboratory control samples, system monitoring compounds, internal standard area counts, matrix spike/spike duplicate recoveries, target compound identification and quantification, chromatograms, overall system performance, dual column performance, field blank, field duplicate and trip blank sample results.

As a result of the review process, the following qualifiers may be assigned to the data in accordance with the USEPA's guidelines and best professional judgment:

- **R –** The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
- **J –** The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample.
- **UJ –** The analyte was not detected at a level greater than or equal to the reporting limit (RL); however, the reported RL is approximate and may be inaccurate or imprecise.

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

NJ – The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

If any validation qualifiers are assigned these qualifiers should supersede any laboratory-applied qualifiers. Data that is not qualified as a result of this data validation is considered acceptable on the basis of the items specified for review. Data that is qualified as "R" are not sufficiently valid and technically supportable to be used for data interpretation. Data that is otherwise qualified due to minor data quality anomalies are usable, as qualified.

Table 2: Validator-applied qualification

Project Sample ID	*Analysis*	*Analyte*	*CAS No.*	*Validator Qualifier*
123-LSB-21-20130912	VOCs	1,4-DIOXANE (P-DIOXANE)	123-91-1	UJ
123-LSB-21-20130912	VOCs	ACETONE	67-64-1	U (0.012)
123-LSB-21-20130912	VOCs	BROMOMETHANE	74-83-9	UJ
123-LSB-21-20130912	SVOCs	BENZIDINE	92-87-5	UJ
123-LSB-21-20130912	SVOCs	BENZOIC ACID	65-85-0	UJ
123-LSB-21-20130912	SVOCs	HEXACHLOROCYCLO PENTADIENE	77-47-4	UJ
124-LSB-2120130912	VOCs	1,2,4-TRIMETHYLBENZENE	95-63-6	UJ
124-LSB-2120130912	VOCs	1,4-DIOXANE (P-DIOXANE)	123-91-1	UJ
124-LSB-2120130912	VOCs	ACETONE	67-64-1	U (0.033)
124-LSB-2120130912	VOCs	BROMOMETHANE	74-83-9	UJ
124-LSB-2120130912	VOCs	CARBON DISULFIDE	75-15-0	J
124-LSB-2120130912	SVOCs	BENZIDINE	92-87-5	UJ
124-LSB-2120130912	SVOCs	BENZOIC ACID	65-85-0	UJ
124-LSB-2120130912	SVOCs	HEXACHLOROCYCLO PENTADIENE	77-47-4	UJ
125-DUP-3-20130912	VOCs	1,2,4-TRIMETHYLBENZENE	95-63-6	J
125-DUP-3-20130912	VOCs	1,4-DIOXANE (P-DIOXANE)	123-91-1	UJ
125-DUP-3-20130912	VOCs	ACETONE	67-64-1	J
125-DUP-3-20130912	VOCs	BROMOMETHANE	74-83-9	UJ

Project Sample ID	*Analysis*	*Analyte*	*CAS No.*	*Validator Qualifier*
125-DUP-3-20130912	VOCs	CARBON DISULFIDE	75-15-0	J
125-DUP-3-20130912	SVOCs	BENZIDINE	92-87-5	UJ
125-DUP-3-20130912	SVOCs	BENZOIC ACID	65-85-0	UJ
125-DUP-3-20130912	SVOCs	HEXACHLOROCYCLO PENTADIENE	77-47-4	UJ
126/TB-5	VOCs	ACETONE	67-64-1	U (2.2)
126/TB-5	VOCs	BROMOMETHANE	74-83-9	UJ
126/TB-5	VOCs	N-PROPYLBENZENE	103-65-1	UJ
126/TB-5	VOCs	SEC-BUTYLBENZENE	135-98-8	UJ
126/TB-5	VOCs	TERT-BUTYL ALCOHOL	75-65-0	UJ
127/FB-5	VOCs	ACETONE	67-64-1	U (2.0)
127/FB-5	VOCs	BROMOMETHANE	74-83-9	UJ
127/FB-5	VOCs	N-PROPYLBENZENE	103-65-1	UJ
127/FB-5	VOCs	SEC-BUTYLBENZENE	135-98-8	UJ
127/FB-5	VOCs	TERT-BUTYL ALCOHOL	75-65-0	UJ
127/FB-5	SVOCs	HEXACHLOROCYCLO PENTADIENE	77-47-4	UJ
127/FB-5	SVOCs	BENZIDINE	92-87-5	UJ
127/FB-5	SVOCs	BENZOIC ACID	65-85-0	UJ
127/FB-5	SVOCs	ACENAPHTHENE	83-32-9	UJ
127/FB-5	SVOCs	BENZO(B)FLUORANTHENE	205-99-2	UJ
127/FB-5	SVOCs	BENZO(G,H,I)PERYLENE	191-24-2	UJ
127/FB-5	SVOCs	BENZO(K)FLUORANTHENE	207-08-9	UJ
127/FB-5	SVOCs	CAPROLACTAM	105-60-2	UJ
127/FB-5	SVOCs	PENTACHLOROPHENOL	87-86-5	UJ

Major Deficiencies:

Major deficiencies include those that grossly impact data quality and necessitate the rejection of results. No major deficiencies were identified.

Minor Deficiencies:

Minor deficiencies include anomalies that directly impact data quality and necessitate qualification, but do not result in unusable data. The section below describes the minor

deficiencies that were identified.

VOCs by SW-846 Method 8260B:

Method blank samples BI30652-BLK1 and BI30653-BLK1 displayed positive detections for acetone at 1.0 µg/L and 0.0066 mg/kg, respectively. Results greater than the reporting limit (RL) but less than 2X the RL were qualified as "U" at the sample concentration. Results less than the RL are qualified as "U" at the RL.

The initial calibration analyzed on 9/4/2013 at 09:01 displayed a percent relative standard deviation (RSD) greater than the control limit (i.e., 20%) for bromomethane at 24.72%. The associated positive detections are qualified as "J" and non-detects are qualified "UJ."

The initial calibration analyzed on 9/4/2013 at 09:01 displayed a relative response factor (RRF) less than the control limit (i.e., 0.005) for 1,4-dioxane at 0.004. The continuing calibration analyzed on 9/16/2013 at 7:43 displayed an RRF less than the control limit at 0.004. 1,4-Dioxane is a poor performer (USEPA 2008 NFG); associated results were non-detect and are qualified as "UJ" on the basis of professional judgment.

The initial calibration analyzed on instrument VOA3 displayed RSDs greater than the control limit for bromomethane (26.58%), TBA (39.11%), n-propylbenzene (26.77%) and sec-butylbenzene (23.66%). The associated sample results were non-detect and are qualified as "UJ."

SVOCs by SW-846 Method 8270C:

Matrix spike sample 123-LSB-21-20130912 displayed a recovery less than the lower control limit for benzoic acid at 11.7%. The associated sample result was non-detect and is qualified as "UJ."

Laboratory control sample/laboratory control sample duplicate (LCS/LCSD) BI30781-BS1 displayed recoveries less than the lower control limits for benzoic acid (no recovery) and caprolactam (16.4% and 14.1%, respectively). The associated sample results were non-detect and are qualified as "UJ."

The initial calibration analyzed on instrument BNA#1 displayed a RSD greater than the control limit (i.e., 20%) for benzidine at 40.15%. The associated sample results were non-detect and are qualified as "UJ."

The continuing calibration analyzed on 9/17/2013 at 9:17 displayed a %D greater than the control limit with a negative bias for benzoic acid at 26.7%. The associated sample results were non-detect and are qualified as "UJ."

The continuing calibration analyzed on 9/18/2013 at 9:14 displayed %Ds greater than the control limit (i.e., 25%) with negative biases for benzoic acid and hexachlorocyclopentadiene at 26.9% and 46.3%, respectively. The associated sample results were non-detect and are qualified as "UJ."

The initial calibration analyzed on instrument BNA5 displayed RSDs greater than the control limit for acenaphthene, oentachlorophenol, benzo(b)fluoranthene, benzo(k)fluoranthene and benzo(g,h,i)perylene at 20.9%, 77.3%, 25.05%, 26.61%, and 24.92%, respectively. The associated non-detect results in the field blank sample were qualified as "UJ."

Other Deficiencies:

Other deficiencies include anomalies that do not directly impact data quality and do not necessitate qualification. The section below describes the other deficiencies that were identified.

VOCs by SW-846 Method 8260B:

LCS/LCSD BI30652-BS1 displayed percent recoveries greater than the control limit (i.e., 130%) for methyl acetate at 147% and 143%, respectively. The associated sample results were non-detect; no qualification is required.

The continuing calibration analyzed on 9/16/2013 at 7:43 displayed percent deviations (%Ds) greater than the control limit with positive biases for TBA and 1,1-dichloroethene at 26.9% and 28.6%, respectively. The associated sample results were non-detect; no qualification is required.

SVOCs by SW-846 Method 8270C:

LCS/LCSD BI30361-BS1 displayed RPD greater than the control limit for benzo(k)fluoranthene at 38.2%. The associated sample results were non-detect; no qualification is required.

LCS/LCSD BI30781-BS1 displayed RPD greater than the control limit for hexachlorocyclopentadiene at 29.9%. The associated sample results were non-detect; no qualification is required.

The continuing calibrations analyzed on 9/17/2013 at 9:17 and 9/18/2013 at 9:14 displayed %Ds greater than the control limit with a positive biases for benzidine at 44.9% and 129.6%, respectively. The associated sample results were non-detect; no qualification is required.

Comments:

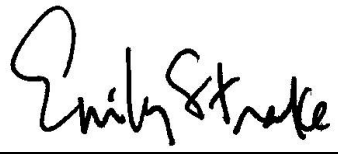
A trip blank sample and a field blank sample were submitted with this sample delivery group. Both blanks displayed positive detections for acetone attributable to laboratory method blank contamination. The field blank also displayed a positive detection for methylene chloride. The associated samples were non-detect for methylene chloride; therefore, contamination did not result from field decontamination procedures.

A field duplicate and parent sample pair (125-DUP-3-20130912 and 124-LSB-2120130912) was collected and analyzed for VOCs, SVOCs, and pesticides. For results less than 5X the RL, analytes meet the precision criteria if the absolute difference is less than ±2X the RL. For results greater than 5X the RL, analytes meet the precision criteria if the RPD is less than or equal to 50%. Results for 1,2,4-trimethylbenzene, acetone and carbon disulfide did not meet the precision criteria and are qualified as estimated.

On the basis of this evaluation, the laboratory appears to have followed the specified analytical methods with the exception of errors discussed above. If a given fraction is not mentioned above, that means that all specified criteria were met for that parameter. All laboratory data packages met ASP Category B requirements.

All data are considered usable, as qualified. In addition, completeness, defined as the percentage of analytical results that are judged to be valid, is 100%.

Signed:



Emily Strake
Project Chemist/Risk Assessor

LANGAN
ENGINEERING & ENVIRONMENTAL SERVICES

Technical Memorandum

2700 Kelly Road, Suite 200 Warrington, PA 18976 T: 215.491.6500 F: 215.491.6501
Mailing Address: P.O. Box 1569 Doylestown, PA 18901

To: Chris McMahon, Langan Project Geologist

From: Emily Strake, Langan Project Chemist/Risk Assessor

Date: November 5, 2013

Re: Data Usability Summary Report – 13I0538
For Carroll Gardens
Brooklyn, New York
Soil Samples Collected September 13, 2013
Langan Project No.: 100287501

This memorandum presents the findings of an analytical data validation of the data generated from the analysis of soil samples collected on September 13, 2013 by Langan Engineering and Environmental Services ("Langan") at the Carroll Gardens site located in Brooklyn, New York ("the site"). The soil samples were analyzed by York Analytical Laboratories, Inc. located in Stratford, Connecticut (NYSDOH ELAP registration # 10854) for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), pesticides, and percent solids (%S) using the analytical methods specified below.

- NYSDEC Part 375 VOCs by SW-846 Method 8260B (rev 2, 12/1996)
- NYSDEC Part 375 SVOCs by SW-846 Method 8270C (rev 3, 12/1996)
- Pesticides by SW-846 Method 8081B (rev 2, 11/2000)
- Percent solids by Standard Method SM2540G (1997)

Table 1, below, summarizes the laboratory and client sample identification numbers, sample collection dates, and analytical parameters subject to review.

Table 1: Sample Summary

SDG	*Lab Sample ID*	*Client Sample ID*	*Sample Date*	*Analytical Parameters*
13I0538	13I0538-01	128-LSB-27-20130913	9/13/2013	VOCs; SVOCs; Pesticides
13I0538	13I0538-02	129-LSB-27-20130913	9/13/2013	VOCs; SVOCs; Pesticides
13I0538	13I0538-03	133-TB-6-20130913	9/13/2013	VOCs

Validation Overview

This data validation was performed in accordance with USEPA Region II Standard Operating Procedure (SOP) #HW-34, "Trace Volatile Data Validation" (February 2013, Revision 3), USEPA Region II SOP #HW-35, "Semivolatile Data Validation" (March 2013, Revision 2), USEPA Region II SOP #HW-36, "Pesticide Data Validation" (May 2013, Revision 4), and the USEPA Contract Laboratory Program "National Functional Guidelines for Superfund Organic Methods Data Review" (USEPA-540R-08-01, June 2008).

Validation includes reconstruction of the analytical data to verify that data are easily traceable and sufficiently complete to permit logical reconstruction by a qualified individual other than the originator. Items subject to review in this memorandum include holding times, sample preservation, sample extraction, instrument tuning, instrument calibration, laboratory blanks, laboratory control samples, system monitoring compounds, internal standard area counts, matrix spike/spike duplicate recoveries, target compound identification and quantification, chromatograms, overall system performance, dual column performance, and trip blank sample results.

As a result of the review process, the following qualifiers may be assigned to the data in accordance with the USEPA's guidelines and best professional judgment:

- **R –** The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
- **J –** The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample.
- **UJ –** The analyte was not detected at a level greater than or equal to the reporting limit (RL); however, the reported RL is approximate and may be inaccurate or imprecise.
- **U –** The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the RL or the sample concentration for results impacted by blank contamination.
- **NJ –** The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

If any validation qualifiers are assigned these qualifiers should supersede any laboratory-applied qualifiers. Data that is not qualified as a result of this data validation is considered acceptable on the basis of the items specified for review. Data that is qualified as "R" are not sufficiently valid and technically supportable to be used for data interpretation. Data that is otherwise qualified due to minor data quality anomalies are usable, as qualified.

Table 2: Validator-applied qualification

Project Sample ID	*Analysis*	*Analyte*	*CAS No.*	*Validator Qualifier*
128-LSB-27-20130913	VOCs	1,4-DIOXANE (P-DIOXANE)	123-91-1	UJ
128-LSB-27-20130913	VOCs	ACETONE	67-64-1	U (0.052)
128-LSB-27-20130913	VOCs	BROMOMETHANE	74-83-9	UJ
128-LSB-27-20130913	SVOCs	2,4,5-TRICHLOROPHENOL	95-95-4	UJ
128-LSB-27-20130913	SVOCs	2,4,6-TRICHLOROPHENOL	88-06-2	UJ
128-LSB-27-20130913	SVOCs	2,4-DICHLOROPHENOL	120-83-2	UJ
128-LSB-27-20130913	SVOCs	2,4-DIMETHYLPHENOL	105-67-9	UJ
128-LSB-27-20130913	SVOCs	2,4-DINITROPHENOL	51-28-5	UJ
128-LSB-27-20130913	SVOCs	2-CHLOROPHENOL	95-57-8	UJ
128-LSB-27-20130913	SVOCs	2-METHYLPHENOL (O-CRESOL)	95-48-7	UJ
128-LSB-27-20130913	SVOCs	2-NITROPHENOL	88-75-5	UJ
128-LSB-27-20130913	SVOCs	3- AND 4- METHYLPHENOL (TOTAL)	MEPH3MEPH4	UJ
128-LSB-27-20130913	SVOCs	4,6-DINITRO-2-METHYLPHENOL	534-52-1	UJ
128-LSB-27-20130913	SVOCs	4-NITROPHENOL	100-02-7	UJ
128-LSB-27-20130913	SVOCs	BENZIDINE	92-87-5	UJ
128-LSB-27-20130913	SVOCs	BENZOIC ACID	65-85-0	UJ
128-LSB-27-20130913	SVOCs	HEXACHLOROCYCLO PENTADIENE	77-47-4	UJ
128-LSB-27-20130913	SVOCs	PENTACHLOROPHENOL	87-86-5	UJ
128-LSB-27-20130913	SVOCs	PHENOL	108-95-2	UJ
129-LSB-27-20130913	VOCs	1,4-DIOXANE (P-DIOXANE)	123-91-1	UJ
129-LSB-27-20130913	VOCs	ACETONE	67-64-1	U (0.030)
129-LSB-27-20130913	VOCs	BROMOMETHANE	74-83-9	UJ
129-LSB-27-20130913	SVOCs	2,4-DINITROPHENOL	51-28-5	UJ

Project Sample ID	*Analysis*	*Analyte*	*CAS No.*	*Validator Qualifier*
129-LSB-27-20130913	SVOCs	4,6-DINITRO-2-METHYLPHENOL	534-52-1	UJ
129-LSB-27-20130913	SVOCs	BENZIDINE	92-87-5	UJ
129-LSB-27-20130913	SVOCs	BENZOIC ACID	65-85-0	UJ
129-LSB-27-20130913	SVOCs	HEXACHLOROCYCLO PENTADIENE	77-47-4	UJ
133-TB-6-20130913	VOCs	1,4-DIOXANE (P-DIOXANE)	123-91-1	UJ
133-TB-6-20130913	VOCs	BROMOMETHANE	74-83-9	UJ

Major Deficiencies:

Major deficiencies include those that grossly impact data quality and necessitate the rejection of results. No major deficiencies were identified.

Minor Deficiencies:

Minor deficiencies include anomalies that directly impact data quality and necessitate qualification, but do not result in unusable data. The section below describes the minor deficiencies that were identified.

VOCs by SW-846 Method 8260B:

Method blank samples BI30667-BLK1 and BI30703 displayed positive detections for acetone at 0.0044 mg/kg and 0.0059 mg/kg, respectively. Results greater than the reporting limit (RL) but less than 2X the RL were qualified as "U" at the sample concentration. Results less than the RL are qualified as "U" at the RL.

The initial calibration analyzed on 9/4/2013 at 09:01 displayed a percent relative standard deviation (RSD) greater than the control limit (i.e., 20%) for bromomethane at 24.72%. The associated positive detections are qualified as "J" and non-detects are qualified "UJ."

The initial calibration analyzed on 9/4/2013 at 09:01 displayed a relative response factor less than the control limit (i.e., 0.005) for 1,4-dioxane at 0.004. The continuing calibration analyzed on 9/17/2013 at 8:35 displayed an RRF less than the control limit at 0.004. 1,4-Dioxane is a poor performer (USEPA 2008 NFG); associated results were non-detect and are qualified as "UJ" on the basis of professional judgment.

SVOCs by SW-846 Method 8270C:

Sample 128-LSB-27-20130913 displayed surrogate recoveries less than the lower control limit (i.e., 10%) for 2-fluorophenol and 2,4,6-tribromophenol at 9.52% and 0.995%, respectively. The associated acid-extractable compounds were non-detect and are qualified as "UJ."

Laboratory control sample/control sample duplicate (LCS/LCSD) BI30671-BS1 displayed recoveries less than the lower control limit for 2,4-dinitrophenol at 31.2% and 46.4%, respectively. In addition, the LCS/LCSD relative percent difference (RPD) was greater than the control limit at 39.2%. The associated sample results were non-detect and are qualified as "UJ."

The initial calibration analyzed on instrument BNA#1 displayed a RSD greater than the control limit (i.e., 20%) for benzidine at 40.15%. The associated sample results were non-detect and are qualified as "UJ."

The continuing calibration analyzed on 9/17/2013 at 15:27 displayed %Ds greater than the control limit with negative biases for benzoic acid, hexachlorocyclopentadiene, 2,4-dinitrophenol, and 4,6-dinitro-2-methylphenol at 54.1%, 57.1%, 56.2%, and 56.7%, respectively. The associated sample results were non-detect and are qualified as "UJ."

Other Deficiencies:

Other deficiencies include anomalies that do not directly impact data quality and do not necessitate qualification. The section below describes the other deficiencies that were identified.

VOCs by SW-846 Method 8260B:

The continuing calibration analyzed on 9/17/2013 at 8:35 displayed a percent deviation (%D) greater than the control limit (i.e., 40%) with a positive bias for acetone at 54.4%. The associated positive detections were previously qualified on the basis of method blank contamination; no further action is required.

SVOCs by SW-846 Method 8270C:

LCS/LCSD BI30671-BS1 a RPD greater than the control limit for 4,6-dinitro-2-methylphenol at 36.5%. The associated sample results were non-detect and the LCS/LCSD samples recovered within control; no qualification is required.

The continuing calibration analyzed on 9/17/2013 at 15:27 displayed a %D greater than the control limit with a positive bias for benzidine at 53.1%. The associated sample results were non-detect; no qualification is required.

Comments:

A trip blank sample was submitted with this sample delivery group and was non-detect for target analytes.

On the basis of this evaluation, the laboratory appears to have followed the specified analytical methods with the exception of errors discussed above. If a given fraction is not mentioned above, that means that all specified criteria were met for that parameter. All laboratory data packages met ASP Category B requirements.

All data are considered usable, as qualified. In addition, completeness, defined as the percentage of analytical results that are judged to be valid, is 100%.

Signed:

Emily Strake
Project Chemist/Risk Assessor

LANGAN
ENGINEERING & ENVIRONMENTAL SERVICES

Technical Memorandum

2700 Kelly Road, Suite 200 Warrington, PA 18976 T: 215.491.6500 F: 215.491.6501
Mailing Address: P.O. Box 1569 Doylestown, PA 18901

To: Chris McMahon, Langan Project Geologist

From: Alan Fleisher, Langan Staff Chemist

Date: November 7, 2013

Re: Data Usability Summary Report
For Carroll Gardens – 13I0588
Brooklyn, New York
Groundwater Samples Collected September 16, 2013
Langan Project No.: 100287501

This memorandum presents the findings of an analytical data validation of the data generated from the analysis of groundwater samples collected on September 16, 2013 by Langan Engineering and Environmental Services ("Langan") at the Carroll Gardens Site located in Brooklyn, New York ("the Site"). The samples were analyzed by York Analytical Laboratories (NYSDOH ELAP registration # 10894) located in Stratford, Connecticut for volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), pesticides, PCBs, total and dissolved metals, and mercury using the analytical method specified below.

- VOCs by SW-846 Method 8260B (rev 2, 12/1996)
- SVOCs by SW-846 Method 8270C (rev 3, 12/1996)
- Pesticides by SW-846 Method 8081B (rev 2, 2/2007)
- PCBs by SW-846 Method 8082A (rev 1, 2/2007)
- Metals by SW-846 Method 6010C (rev 3, 2/2007)
- Mercury by SW-846 Method 7473 (rev 0, 2/2007)

Table 1, below, summarizes the laboratory and client sample identification numbers, sample collection dates, and analytical parameters subject to review.

Table 1: Sample Summary

SDG	***Lab Sample ID***	***Client Sample ID***	***Sample Date***	***Analytical Parameters***
13I0588	13I0588-01	139-LMW-5-20130916	9/16/2013	VOCs; SVOCs; Pesticides; PCBs; Total and Dissolved Metals; Mercury
13I0588	13I0588-02	140-LMW-8-20130916	9/16/2013	VOCs; SVOCs; Pesticides; PCBs; Total and Dissolved Metals; Mercury

SDG	*Lab Sample ID*	*Client Sample ID*	*Sample Date*	*Analytical Parameters*
13I0588	13I0588-03	142-PZ-1-20130916	9/16/2013	VOCs; SVOCs; Pesticides; PCBs; Total and Dissolved Metals; Mercury
13I0588	13I0588-04	143-MW-3-20130916	9/16/2013	VOCs; SVOCs; Pesticides; PCBs; Total and Dissolved Metals; Mercury
13I0588	13I0588-05	145-DUP-1-20130916	9/16/2013	VOCs; SVOCs; Pesticides; PCBs; Total and Dissolved Metals; Mercury
13I0588	13I0588-06	146-TB-7-20130916	9/16/2013	VOCs

Validation Overview

This data validation was performed in accordance with USEPA Region II Standard Operating Procedure (SOP) #HW-34, "Trace Volatile Data Validation (February 2013, Revision 3), USEPA Region II SOP #HW-35, "Semivolatile Data Validation (March 2013, Revision 2), the USEPA Contract Laboratory Program, USEPA Region II SOP #HW-2, "Metals Data Validation (September 2006, Revision 13), USEPA Region II SOP #HW-36, "Pesticide Data Validation (May 2013, Revision 4), USEPA Region II SOP #HW-37, "PCB Aroclor Data Validation (May 2013, Revision 3), "National Functional Guidelines for Superfund Organic Methods Data Review (USEPA-540R-08-01, June 2008), and "National Functional Guidelines for Inorganic Superfund Data Review (USEPA-540R-10-011, January 2010).

Validation includes reconstruction of the analytical data to verify that data are easily traceable and sufficiently complete to permit logical reconstruction by a qualified individual other than the originator. Items subject to review in this memorandum include holding times, canister certification, instrument tuning, instrument calibration, laboratory blanks, laboratory control samples, system monitoring compounds, internal standard area counts, target compound identification and quantification, chromatograms, serial dilutions, dual column imprecision, overall system performance, trip blank samples, and field duplicate samples.

As a result of the review process, the following qualifiers may be assigned to the data in accordance with the USEPA's guidelines and best professional judgment:

R – The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.

J – The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample.

UJ – The analyte was not detected at a level greater than or equal to the reporting limit (RL); however, the reported RL is approximate and may be inaccurate or imprecise.

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

NJ – The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

If any validation qualifiers are assigned these qualifiers should supersede any laboratory-applied qualifiers. Data that is not qualified as a result of this data validation is considered acceptable on the basis of the items specified for review. Data that is qualified as "R" are not sufficiently valid and technically supportable to be used for data interpretation. Data that is otherwise qualified due to minor data quality anomalies are usable, as qualified.

Table 2: Validator-applied qualification

Project Sample ID	*Analysis*	*Analyte*	*CAS No.*	*Validator Qualifier*
139-LMW-5-20130916	VOCs	Acetone	67-64-1	J
139-LMW-5-20130916	SVOCs	Benzoic acid	65-85-0	UJ
139-LMW-5-20130916	SVOCs	Caprolactam	105-60-2	UJ
139-LMW-5-20130916	SVOCs	2-Methylnaphthalene	91-57-6	UJ
139-LMW-5-20130916	SVOCs	Acenaphthylene	208-96-8	UJ
139-LMW-5-20130916	SVOCs	Anthracene	120-12-7	UJ
139-LMW-5-20130916	SVOCs	Fluoranthene	206-44-0	UJ
139-LMW-5-20130916	SVOCs	Naphthalene	91-20-3	UJ
139-LMW-5-20130916	SVOCs	Pyrene	129-00-0	UJ
139-LMW-5-20130916	Pesticides	All Results	---	UJ
139-LMW-5-20130916	Metals	Total Potassium	7440-09-7	J
139-LMW-5-20130916	Metals	Total Sodium	7440-23-5	J
139-LMW-5-20130916	Metals	Total Aluminum	7429-90-5	J

Project Sample ID	*Analysis*	*Analyte*	*CAS No.*	*Validator Qualifier*
139-LMW-5-20130916	Metals	Total Calcium	7440-70-2	J
139-LMW-5-20130916	Metals	Total Iron	7439-89-6	J
139-LMW-5-20130916	Metals	Total Magnesium	7439-95-4	J
139-LMW-5-20130916	Metals	Total Manganese	7439-96-5	J
139-LMW-5-20130916	Metals	Dissolved Potassium	7440-09-7	J
139-LMW-5-20130916	Metals	Dissolved Sodium	7440-23-5	J
139-LMW-5-20130916	Metals	Dissolved Barium	7440-39-3	J
139-LMW-5-20130916	Metals	Dissolved Calcium	7440-70-2	J
139-LMW-5-20130916	Metals	Dissolved Iron	7439-89-6	J
139-LMW-5-20130916	Metals	Dissolved Magnesium	7439-95-4	J
139-LMW-5-20130916	Metals	Dissolved Manganese	7439-96-5	J
142-PZ-1-20130916	VOCs	All positive detections	---	J
142-PZ-1-20130916	VOCs	All non-detects	---	UJ
142-PZ-1-20130916	SVOCs	Benzoic acid	65-85-0	UJ
142-PZ-1-20130916	SVOCs	Caprolactam	105-60-2	UJ
142-PZ-1-20130916	SVOCs	2-Methylnaphthalene	91-57-6	UJ
142-PZ-1-20130916	SVOCs	Acenaphthylene	208-96-8	UJ
142-PZ-1-20130916	SVOCs	Anthracene	120-12-7	UJ
142-PZ-1-20130916	SVOCs	Fluoranthene	206-44-0	UJ
142-PZ-1-20130916	SVOCs	Naphthalene	91-20-3	J
142-PZ-1-20130916	SVOCs	Pyrene	129-00-0	UJ
142-PZ-1-20130916	Pesticides	All Results	---	UJ
142-PZ-1-20130916	PCBs	All Results	---	UJ
142-PZ-1-20130916	Metals	Total Potassium	7440-09-7	J
142-PZ-1-20130916	Metals	Total Sodium	7440-23-5	J
142-PZ-1-20130916	Metals	Total Aluminum	7429-90-5	J
142-PZ-1-20130916	Metals	Total Calcium	7440-70-2	J
142-PZ-1-20130916	Metals	Total Iron	7439-89-6	J
142-PZ-1-20130916	Metals	Total Magnesium	7439-95-4	J
142-PZ-1-20130916	Metals	Total Manganese	7439-96-5	J
142-PZ-1-20130916	Metals	Dissolved Potassium	7440-09-7	J
142-PZ-1-20130916	Metals	Dissolved Sodium	7440-23-5	J

Project Sample ID	*Analysis*	*Analyte*	*CAS No.*	*Validator Qualifier*
142-PZ-1-20130916	Metals	Dissolved Barium	7440-39-3	J
142-PZ-1-20130916	Metals	Dissolved Calcium	7440-70-2	J
142-PZ-1-20130916	Metals	Dissolved Iron	7439-89-6	J
142-PZ-1-20130916	Metals	Dissolved Magnesium	7439-95-4	J
142-PZ-1-20130916	Metals	Dissolved Manganese	7439-96-5	J
140-LMW-8-20130916	VOCs	Acetone	67-64-1	U (2.0)
140-LMW-8-20130916	VOCs	1,1,2,2-Tetrachloroethane	79-34-5	UJ
140-LMW-8-20130916	VOCs	1,2,4-Trichlorobenzene	120-82-1	UJ
140-LMW-8-20130916	VOCs	1,2,4-Trimethylbenzene	95-63-6	J
140-LMW-8-20130916	VOCs	1,2-Dibromo-3-chloropropane	96-12-8	UJ
140-LMW-8-20130916	VOCs	1,2-Dichlorobenzene	95-50-1	UJ
140-LMW-8-20130916	VOCs	1,3,5-Trimethylbenzene	108-67-8	UJ
140-LMW-8-20130916	VOCs	1,3-Dichlorobenzene	541-73-1	UJ
140-LMW-8-20130916	VOCs	1,4-Dichlorobenzene	106-46-7	UJ
140-LMW-8-20130916	VOCs	Bromoform	75-25-2	UJ
140-LMW-8-20130916	VOCs	Hexachlorobutadiene	87-68-3	UJ
140-LMW-8-20130916	VOCs	Isopropylbenzene	98-82-8	J
140-LMW-8-20130916	VOCs	n-Butylbenzene	104-51-8	J
140-LMW-8-20130916	VOCs	n-Propylbenzene	103-65-1	J
140-LMW-8-20130916	VOCs	p-Isopropyltoluene	99-87-6	UJ
140-LMW-8-20130916	VOCs	sec-Butylbenzene	135-98-8	J
140-LMW-8-20130916	VOCs	tert-Butylbenzene	98-06-6	J
140-LMW-8-20130916	SVOCs	Benzoic acid	65-85-0	UJ
140-LMW-8-20130916	SVOCs	Caprolactam	105-60-2	UJ
140-LMW-8-20130916	SVOCs	2-Methylnaphthalene	91-57-6	J
140-LMW-8-20130916	SVOCs	Acenaphthene	83-32-9	J
140-LMW-8-20130916	SVOCs	Acenaphthylene	208-96-8	UJ
140-LMW-8-20130916	SVOCs	Anthracene	120-12-7	UJ
140-LMW-8-20130916	SVOCs	Fluoranthene	206-44-0	UJ
140-LMW-8-20130916	SVOCs	Fluorene	86-73-7	J
140-LMW-8-20130916	SVOCs	Pyrene	129-00-0	UJ

Project Sample ID	*Analysis*	*Analyte*	*CAS No.*	*Validator Qualifier*
140-LMW-8-20130916	SVOCs	Naphthalene	91-20-3	UJ
140-LMW-8-20130916	Pesticides	All Results	---	UJ
140-LMW-8-20130916	Metals	Total Potassium	7440-09-7	J
140-LMW-8-20130916	Metals	Total Sodium	7440-23-5	J
140-LMW-8-20130916	Metals	Total Aluminum	7429-90-5	J
140-LMW-8-20130916	Metals	Total Calcium	7440-70-2	J
140-LMW-8-20130916	Metals	Total Iron	7439-89-6	J
140-LMW-8-20130916	Metals	Total Magnesium	7439-95-4	J
140-LMW-8-20130916	Metals	Total Manganese	7439-96-5	J
140-LMW-8-20130916	Metals	Dissolved Potassium	7440-09-7	J
140-LMW-8-20130916	Metals	Dissolved Sodium	7440-23-5	J
140-LMW-8-20130916	Metals	Dissolved Barium	7440-39-3	J
140-LMW-8-20130916	Metals	Dissolved Calcium	7440-70-2	J
140-LMW-8-20130916	Metals	Dissolved Iron	7439-89-6	J
140-LMW-8-20130916	Metals	Dissolved Magnesium	7439-95-4	J
140-LMW-8-20130916	Metals	Dissolved Manganese	7439-96-5	J
143-MW-3-20130916	VOCs	1,1,2,2-Tetrachloroethane	79-34-5	UJ
143-MW-3-20130916	VOCs	1,2,4-Trichlorobenzene	120-82-1	UJ
143-MW-3-20130916	VOCs	1,2,4-Trimethylbenzene	95-63-6	UJ
143-MW-3-20130916	VOCs	1,2-Dibromo-3-chloropropane	96-12-8	UJ
143-MW-3-20130916	VOCs	1,2-Dichlorobenzene	95-50-1	UJ
143-MW-3-20130916	VOCs	1,3,5-Trimethylbenzene	108-67-8	UJ
143-MW-3-20130916	VOCs	1,3-Dichlorobenzene	541-73-1	UJ
143-MW-3-20130916	VOCs	1,4-Dichlorobenzene	106-46-7	UJ
143-MW-3-20130916	VOCs	Bromoform	75-25-2	UJ
143-MW-3-20130916	VOCs	Hexachlorobutadiene	87-68-3	UJ
143-MW-3-20130916	VOCs	Isopropylbenzene	98-82-8	J
143-MW-3-20130916	VOCs	n-Butylbenzene	104-51-8	J
143-MW-3-20130916	VOCs	n-Propylbenzene	103-65-1	J
143-MW-3-20130916	VOCs	p-Isopropyltoluene	99-87-6	UJ
143-MW-3-20130916	VOCs	sec-Butylbenzene	135-98-8	UJ

Project Sample ID	*Analysis*	*Analyte*	*CAS No.*	*Validator Qualifier*
143-MW-3-20130916	VOCs	tert-Butylbenzene	98-06-6	UJ
143-MW-3-20130916	VOCs	Acetone	67-64-1	J
143-MW-3-20130916	SVOCs	Benzoic acid	65-85-0	UJ
143-MW-3-20130916	SVOCs	Caprolactam	105-60-2	UJ
143-MW-3-20130916	SVOCs	2-Methylnaphthalene	91-57-6	J
143-MW-3-20130916	SVOCs	Acenaphthene	83-32-9	J
143-MW-3-20130916	SVOCs	Acenaphthylene	208-96-8	J
143-MW-3-20130916	SVOCs	Anthracene	120-12-7	J
143-MW-3-20130916	SVOCs	Naphthalene	91-20-3	UJ
143-MW-3-20130916	SVOCs	Fluoranthene	206-44-0	J
143-MW-3-20130916	SVOCs	Fluorene	86-73-7	J
143-MW-3-20130916	SVOCs	Pyrene	129-00-0	J
143-MW-3-20130916	SVOCs	Phenanthrene	85-01-8	J
143-MW-3-20130916	Pesticides	All Results	---	UJ
143-MW-3-20130916	Metals	Total Potassium	7440-09-7	J
143-MW-3-20130916	Metals	Total Sodium	7440-23-5	J
143-MW-3-20130916	Metals	Total Aluminum	7429-90-5	J
143-MW-3-20130916	Metals	Total Calcium	7440-70-2	J
143-MW-3-20130916	Metals	Total Iron	7439-89-6	J
143-MW-3-20130916	Metals	Total Magnesium	7439-95-4	J
143-MW-3-20130916	Metals	Total Manganese	7439-96-5	J
143-MW-3-20130916	Metals	Dissolved Potassium	7440-09-7	J
143-MW-3-20130916	Metals	Dissolved Sodium	7440-23-5	J
143-MW-3-20130916	Metals	Dissolved Barium	7440-39-3	J
143-MW-3-20130916	Metals	Dissolved Calcium	7440-70-2	J
143-MW-3-20130916	Metals	Dissolved Iron	7439-89-6	J
143-MW-3-20130916	Metals	Dissolved Magnesium	7439-95-4	J
143-MW-3-20130916	Metals	Dissolved Manganese	7439-96-5	J
145-DUP-1-20130916	VOCs	1,1,1-Trichloroethane	71-55-6	UJ
145-DUP-1-20130916	VOCs	Freon 113	76-13-1	UJ
145-DUP-1-20130916	VOCs	1,1-Dichloroethane	75-34-3	UJ
145-DUP-1-20130916	VOCs	1,1-Dichloroethylene	75-35-4	UJ

Project Sample ID	*Analysis*	*Analyte*	*CAS No.*	*Validator Qualifier*
145-DUP-1-20130916	VOCs	1,2,4-Trimethylbenzene	95-63-6	J
145-DUP-1-20130916	VOCs	1,2-Dichloroethane	107-06-2	UJ
145-DUP-1-20130916	VOCs	2-Butanone	78-93-3	UJ
145-DUP-1-20130916	VOCs	Acetone	67-64-1	UJ
145-DUP-1-20130916	VOCs	Acrolein	107-02-8	UJ
145-DUP-1-20130916	VOCs	Acrylonitrile	107-13-1	UJ
145-DUP-1-20130916	VOCs	Benzene	71-43-2	UJ
145-DUP-1-20130916	VOCs	Bromodichloromethane	75-27-4	UJ
145-DUP-1-20130916	VOCs	Bromomethane	74-83-9	UJ
145-DUP-1-20130916	VOCs	Carbon disulfide	75-15-0	UJ
145-DUP-1-20130916	VOCs	Carbon tetrachloride	56-23-5	UJ
145-DUP-1-20130916	VOCs	Chloroethane	75-00-3	UJ
145-DUP-1-20130916	VOCs	Chloroform	67-66-3	UJ
145-DUP-1-20130916	VOCs	Chloromethane	74-87-3	UJ
145-DUP-1-20130916	VOCs	cis-1,2-Dichloroethylene	156-59-2	UJ
145-DUP-1-20130916	VOCs	Dichlorodifluoromethane	75-71-8	UJ
145-DUP-1-20130916	VOCs	Methyl acetate	79-20-9	UJ
145-DUP-1-20130916	VOCs	Methylene chloride	75-09-2	UJ
145-DUP-1-20130916	VOCs	TBA	75-65-0	UJ
145-DUP-1-20130916	VOCs	trans-1,2-Dichloroethylene	156-60-5	UJ
145-DUP-1-20130916	VOCs	Trichlorofluoromethane	75-69-4	UJ
145-DUP-1-20130916	VOCs	Vinyl chloride	75-01-4	UJ
145-DUP-1-20130916	VOCs	Isopropylbenzene	98-82-8	J
145-DUP-1-20130916	VOCs	n-Butylbenzene	104-51-8	J
145-DUP-1-20130916	VOCs	n-Propylbenzene	103-65-1	J
145-DUP-1-20130916	VOCs	sec-Butylbenzene	135-98-8	J
145-DUP-1-20130916	VOCs	tert-Butylbenzene	98-06-6	J
145-DUP-1-20130916	SVOCs	Benzoic acid	65-85-0	UJ
145-DUP-1-20130916	SVOCs	Caprolactam	105-60-2	UJ
145-DUP-1-20130916	SVOCs	2-Methylnaphthalene	91-57-6	UJ
145-DUP-1-20130916	SVOCs	Acenaphthene	83-32-9	J
145-DUP-1-20130916	SVOCs	Acenaphthylene	208-96-8	UJ

Project Sample ID	*Analysis*	*Analyte*	*CAS No.*	*Validator Qualifier*
145-DUP-1-20130916	SVOCs	Anthracene	120-12-7	UJ
145-DUP-1-20130916	SVOCs	Naphthalene	91-20-3	J
145-DUP-1-20130916	SVOCs	Fluoranthene	206-44-0	UJ
145-DUP-1-20130916	SVOCs	Fluorene	86-73-7	J
145-DUP-1-20130916	SVOCs	Pyrene	129-00-0	UJ
145-DUP-1-20130916	SVOCs	Phenanthrene	85-01-8	J
145-DUP-1-20130916	Metals	Dissolved Potassium	7440-09-7	J
145-DUP-1-20130916	Metals	Dissolved Sodium	7440-23-5	J
145-DUP-1-20130916	Metals	Dissolved Barium	7440-39-3	J
145-DUP-1-20130916	Metals	Dissolved Calcium	7440-70-2	J
145-DUP-1-20130916	Metals	Dissolved Iron	7439-89-6	J
145-DUP-1-20130916	Metals	Dissolved Magnesium	7439-95-4	J
145-DUP-1-20130916	Metals	Dissolved Manganese	7439-96-5	J
145-DUP-1-20130916	Metals	Total Potassium	7440-09-7	J
145-DUP-1-20130916	Metals	Total Sodium	7440-23-5	J
145-DUP-1-20130916	Metals	Total Aluminum	7429-90-5	J
145-DUP-1-20130916	Metals	Total Calcium	7440-70-2	J
145-DUP-1-20130916	Metals	Total Iron	7439-89-6	J
145-DUP-1-20130916	Metals	Total Magnesium	7439-95-4	J
145-DUP-1-20130916	Metals	Total Manganese	7439-96-5	J

Major Deficiencies:

Major deficiencies include those that grossly impact data quality and necessitate the rejection of results. No major deficiencies were identified.

Minor Deficiencies:

Minor deficiencies include anomalies that directly impact data quality and necessitate qualification, but do not result in unusable data. The section below describes the minor deficiencies that were identified.

VOCs by SW-846 8260B:

Method blank samples BI30900-BLK1 and BI30920-BLK1 displayed positive detections for acetone at 2.5 µg/L and 2.9 µg/L, respectively. The associated positive detections were qualified as non-detect, "U," at the QL.

Sample 145-DUP-1-20130916 displayed a recovery less than the lower control limit for surrogate compound 1,2-dichloroethane-d4 at 76.2%. The associated sample results were non-detect and were qualified as "UJ." The sample also displayed a recovery greater than the upper control limit for surrogate compound p-bromofluorobenzene at 177%. The associated positive detections were qualified as "J."

Sample 142-PZ-1-20130916 displayed internal standard areas less than the lower control limit for fluorobenzene, chlorobenzene-d5, 1,2-dichlorobenzene-d4 at 32.4%, 31.7%, and 28.8%, respectively. The associated positive detections were qualified as "J" and non-detects were qualified as "UJ."

Samples 140-LMW-8-20130916 and 143-MW-3-20130916 displayed internal standard areas less than the lower control limit for 1,2-dichlorobenzene-d4 at 39.5% and 46.6%, respectively. The associated positive detections were qualified as "J" and non-detects were qualified as "UJ."

Samples 139-LMW-5-20130916, 140-LMW-8-20130916, 142-PZ-1-20130916, and 143-MW-3-20130916 displayed recoveries less than the lower control limit for surrogate compound tetrachloro-m-xylene at 19.6%, 20.3%, 25.0%, and 27.0%, respectively. The associated sample results were non-detect and were qualified as "UJ."

The field duplicate/parent sample pair (145-DUP-1-20130916 and 143-MW-3-20130916) displayed imprecision greater than the control limit for acetone. For results less than 5X the RL, analytes meet the precision criteria if the absolute difference is less than ±1X the RL. For results greater than 5X the RL, analytes meet the precision criteria if the RPD is less than or equal to 35%. The associated positive detections are qualified as "J" and non-detects are qualified "UJ."

SVOCs by SW-846 8270C:

LCS/LCSD BI30781-BS1/BSD1 displayed recoveries less than the lower control limit for caprolactam at 16.4% and 14.1%, respectively. Benzoic acid did not recover in the LCS/LCSD. The associated sample results were non-detect and were qualified as "UJ."

The field duplicate/parent sample pair (145-DUP-1-20130916 and 143-MW-3-20130916) displayed imprecision greater than the control limit for 2-methylnaphthalene, acenaphthene, acenaphthylene, anthracene, fluoranthene, fluorene, naphthalene, phenanthrene, and pyrene. For results less than 5X the RL, analytes meet the precision criteria if the absolute difference is less than ±1X the RL. For results greater than 5X the RL, analytes meet the precision criteria if the RPD is less than or equal to 35%. The associated positive detections are qualified as "J" and non-detects are qualified "UJ."

PCBs by SW-846 8082A:

Sample 142-PZ-1-20130916 displayed a recovery less than the lower control limit for surrogate compound tetrachloro-m-xylene at 26.5%. The associated sample results were non-detect and were qualified as "UJ."

Dissolved Metals by SW-846 6010C:

Serial dilution Y3I1801-SRD1 displayed percent differences (%Ds) greater than the control limit for potassium and sodium at 15.3% and 21.6%, respectively. The associated positive detections were qualified as "J."

The field duplicate/parent sample pair (145-DUP-1-20130916 and 143-MW-3-20130916) displayed imprecision greater than the control limit for barium, calcium, iron, magnesium, manganese, potassium, and sodium. For results less than 5X the RL, analytes meet the precision criteria if the absolute difference is less than ±1X the RL. For results greater than 5X the RL, analytes meet the precision criteria if the RPD is less than or equal to 35%. The associated positive detections are qualified as "J."

Total Metals by SW-846 6010C:

Serial dilution Y3I1802-SRD2 displayed %Ds greater than the control limit for potassium and sodium at 16.1% and 20.1%, respectively. The associated positive detections were qualified as "J."

The field duplicate/parent sample pair (145-DUP-1-20130916 and 143-MW-3-20130916) displayed imprecision greater than the control limit for aluminum, calcium, iron, magnesium, manganese, potassium, and sodium. For results less than 5X the RL, analytes meet the precision criteria if the absolute difference is less than ±1X the RL. For results greater than 5X the RL, analytes meet the precision criteria if the RPD is less than or equal to 35%. The associated positive detections are qualified as "J" and non-detects are qualified "UJ."

Other Deficiencies:

Other deficiencies include anomalies that do not directly impact data quality and do not necessitate qualification. The section below describes the other deficiencies that were identified.

VOCs by SW-846 8260B:

Trip blank sample 146-TB-7-20130916 displayed a positive detection for acetone at 1.7 µg/L. The result was qualified as non-detect on the basis of method blank detections; the result was not used to assess data based on sample transport contamination.

Samples 142-PZ-1-20130916 and 143-MW-3-20130916 displayed recoveries greater than the upper control limit for surrogate compound 1,2-dichloroethane-d4 at 160% and 134%, respectively. The associated sample results were non-detect; qualification was not required.

Matrix spike/matrix spike duplicate (MS/MSD) sample 140-LMW-8-20130916 displayed recoveries and relative percent differences (RPDs) outside of control limits for several compounds. Data are not qualified on the basis of MS/MSD recoveries and RPDs alone.

MS/MSD sample 143-MW-3-20130916 displayed recoveries greater than the upper control limits for several compounds. Data are not qualified on the basis of MS/MSD recoveries alone.

LCS/LCSDs BI30900-BS1/BSD1 and BI30920-BS1/BSD1 displayed recoveries greater than the upper control limits for several compounds. The associated positive detections were previously qualified based on surrogate recoveries; further qualification was not required.

SVOCs by SW-846 8270C:

MS/MSD samples 140-LMW-8-20130916 and 143-MW-3-20130916 displayed recoveries

outside of control limits for several compounds. Data are not qualified on the basis of MS/MSD recoveries alone.

Pesticides by SW-846 8081B:

MS/MSD sample 143-MW-3-20130916 displayed recoveries greater than the upper control limit for beta-BHC at 478% and 624%, respectively. Data are not qualified on the basis of MS/MSD recoveries alone.

Dissolved Metals by SW-846 6010C:

Continuing calibration blank Y3I1801-CCB2 displayed positive detections for potassium and sodium at 0.06 µg/mL and 0.6 µg/mL, respectively. Continuing calibration blank Y3I1801-CCB3 displayed a positive detection for sodium at 0.3 µg/mL. The associated positive detections were greater than 5X the blank concentration; qualification was not required.

MS sample 140-LMW-8-20130916 displayed a recovery greater than the upper control limit for selenium at 126%. The associated sample results were non-detect; qualification was not required.

Total Metals by SW-846 6010C:

Continuing calibration blank Y3I1802-CCB2 displayed positive detections for potassium and sodium at 0.06 µg/mL and 0.6 µg/mL, respectively. Continuing calibration blank Y3I1802-CCB3 displayed a positive detection for sodium at 0.3 µg/mL. The associated positive detections were greater than 5X the blank concentration; qualification was not required.

Comments:

Several samples were analyzed at a dilution to bring target analytes within the linear range of the instrument calibration.

A field duplicate/parent sample pair (145-DUP-1-20130916 and 143-MW-3-20130916) was collected and analyzed for all parameters. For results less than 5X the RL, analytes meet the precision criteria if the absolute difference is less than ±1X the RL. For results greater than 5X the RL, analytes meet the precision criteria if the RPD is less than or equal to 35%. All analytes met the precision criteria with the exception of the results described above.

On the basis of this evaluation, the laboratory appears to have followed the specified analytical methods with the exception of errors discussed above. If a given fraction is not mentioned above, that means that all specified criteria were met for that parameter.

All data are considered usable, as qualified. In addition, completeness, defined as the percentage of analytical results that are judged to be valid, is 100%.

Signed:

Alan Fleisher
Staff Chemist

LANGAN
ENGINEERING & ENVIRONMENTAL SERVICES

Technical Memorandum

2700 Kelly Road, Suite 200 Warrington, PA 18976 T: 215.491.6500 F: 215.491.6501
Mailing Address: P.O. Box 1569 Doylestown, PA 18901

To: Chris McMahon, Langan Project Geologist

From: Emily Strake, Langan Project Chemist/Risk Assessor

Date: May 13, 2014

Re: Data Usability Summary Report
For Carroll Gardens – 13I0593
Brooklyn, New York
Soil and Oil Samples Collected September, 2013
Langan Project No.: 100287501

This memorandum presents the findings of an analytical data validation of the data generated from the analysis of soil and oil samples collected on September 12 and 16, 2013 by Langan Engineering and Environmental Services ("Langan") at the Carroll Gardens Site located in Brooklyn, New York ("the Site"). The samples were analyzed by York Analytical Laboratories (NYSDOH ELAP registration # 10894) located in Stratford, Connecticut for total petroleum hydrocarbon (TPH) fingerprinting using the analytical method specified below.

- TPH Fingerprinting by NYSDOH 310-14

Table 1, below, summarizes the laboratory and client sample identification numbers, sample collection dates, and analytical parameters subject to review.

Table 1: Sample Summary

SDG	*Lab Sample ID*	*Client Sample ID*	*Sample Date*	*Analytical Parameters*
13I0593	13I0593-01	135-TP-3-20130916-Soil	9/16/2013	TPH
13I0593	13I0593-04	138-TP-1-20130912	9/12/2013	TPH

Validation Overview

This data validation was performed in accordance with the "National Functional Guidelines for Superfund Organic Methods Data Review" (USEPA-540R-08-01, June 2008).

Validation includes reconstruction of the analytical data to verify that data are easily traceable and sufficiently complete to permit logical reconstruction by a qualified individual other than the

originator. Items subject to review in this memorandum include holding times, target compound identification and quantification, and overall system performance.

As a result of the review process, the following qualifiers may be assigned to the data in accordance with the USEPA's guidelines and best professional judgment:

- **R –** The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
- **J –** The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample.
- **UJ –** The analyte was not detected at a level greater than or equal to the reporting limit (RL); however, the reported RL is approximate and may be inaccurate or imprecise.
- **U –** The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the RL or the sample concentration for results impacted by blank contamination.
- **NJ –** The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

If any validation qualifiers are assigned these qualifiers should supersede any laboratory-applied qualifiers. Data that is not qualified as a result of this data validation is considered acceptable on the basis of the items specified for review. Data that is qualified as "R" are not sufficiently valid and technically supportable to be used for data interpretation. Data that is otherwise qualified due to minor data quality anomalies are usable, as qualified.

Qualification Summary:

Data did not require qualification.

Major Deficiencies:

Major deficiencies include those that grossly impact data quality and necessitate the rejection of results. No major deficiencies were identified.

Minor Deficiencies:

Minor deficiencies include anomalies that directly impact data quality and necessitate qualification, but do not result in unusable data. No minor deficiencies were identified.

Other Deficiencies:

Other deficiencies include anomalies that do not directly impact data quality and do not necessitate qualification. No other deficiencies were identified.

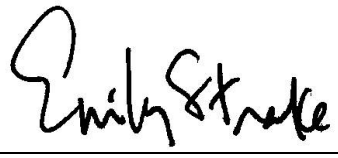
Comments:

On the basis of this evaluation, the laboratory appears to have followed the specified analytical methods. If a given fraction is not mentioned above, that means that all specified criteria were met for that parameter.

Field blank samples results were not subject to review.

All data are considered usable, as qualified. In addition, completeness, defined as the percentage of analytical results that are judged to be valid, is 100%.

Signed:



Emily Strake
Project Chemist/Risk Assessor

LANGAN
ENGINEERING & ENVIRONMENTAL SERVICES

Technical Memorandum

2700 Kelly Road, Suite 200 Warrington, PA 18976 T: 215.491.6500 F: 215.491.6501
Mailing Address: P.O. Box 1569 Doylestown, PA 18901

To: Chris McMahon, Langan Project Geologist

From: Alan Fleisher, Langan Staff Chemist

Date: November 7, 2013

Re: Data Usability Summary Report
For Carroll Gardens – 13I0643
Brooklyn, New York
Groundwater Samples Collected September 17, 2013
Langan Project No.: 100287501

This memorandum presents the findings of an analytical data validation of the data generated from the analysis of groundwater samples collected on September 17, 2013 by Langan Engineering and Environmental Services ("Langan") at the Carroll Gardens Site located in Brooklyn, New York ("the Site"). The samples were analyzed by York Analytical Laboratories (NYSDOH ELAP registration # 10894) located in Stratford, Connecticut for volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), pesticides, PCBs, total and dissolved metals, and mercury using the analytical method specified below.

- VOCs by SW-846 Method 8260B (rev 2, 12/1996)
- SVOCs by SW-846 Method 8270C (rev 3, 12/1996)
- Pesticides by SW-846 Method 8081B (rev 2, 2/2007)
- PCBs by SW-846 Method 8082A (rev 1, 2/2007)
- Metals by SW-846 Method 6010C (rev 3, 2/2007)
- Mercury by SW-846 Method 7473 (rev 0, 2/2007)

Table 1, below, summarizes the laboratory and client sample identification numbers, sample collection dates, and analytical parameters subject to review.

Table 1: Sample Summary

SDG	***Lab Sample ID***	***Client Sample ID***	***Sample Date***	***Analytical Parameters***
13I0643	13I0643-01	147-LMW-6-20130917	9/16/2013	VOCs; SVOCs; Pesticides; PCBs; Total and Dissolved Metals; Mercury
13I064	13I0643-02	148-MW-5-20130917	9/16/2013	VOCs; SVOCs; Pesticides; PCBs; Total and Dissolved Metals; Mercury

SDG	*Lab Sample ID*	*Client Sample ID*	*Sample Date*	*Analytical Parameters*
13I064	13I0643-03	150-LMW-7-20130917	9/16/2013	VOCs; SVOCs; Pesticides; PCBs; Total and Dissolved Metals; Mercury
13I064	13I0643-04	151-MW-1-20130917	9/16/2013	VOCs; SVOCs; Pesticides; PCBs; Total and Dissolved Metals; Mercury
13I064	13I0643-05	149-DUP-2-20130917	9/16/2013	VOCs; SVOCs; Pesticides; PCBs; Total and Dissolved Metals; Mercury
13I064	13I0643-06	152-LMW-1-20130917	9/17/2013	VOCs; SVOCs; Pesticides; PCBs; Total and Dissolved Metals; Mercury
13I064	13I0643-07	153-TB-8-20130917	9/17/2013	VOCs

Validation Overview

This data validation was performed in accordance with USEPA Region II Standard Operating Procedure (SOP) #HW-34, "Trace Volatile Data Validation (February 2013, Revision 3), USEPA Region II SOP #HW-35, "Semivolatile Data Validation (March 2013, Revision 2), the USEPA Contract Laboratory Program, USEPA Region II SOP #HW-2, "Metals Data Validation (September 2006, Revision 13), USEPA Region II SOP #HW-36, "Pesticide Data Validation (May 2013, Revision 4), USEPA Region II SOP #HW-37, "PCB Aroclor Data Validation (May 2013, Revision 3), "National Functional Guidelines for Superfund Organic Methods Data Review (USEPA-540R-08-01, June 2008), and "National Functional Guidelines for Inorganic Superfund Data Review (USEPA-540R-10-011, January 2010).

Validation includes reconstruction of the analytical data to verify that data are easily traceable and sufficiently complete to permit logical reconstruction by a qualified individual other than the originator. Items subject to review in this memorandum include holding times, canister certification, instrument tuning, instrument calibration, laboratory blanks, laboratory control samples, system monitoring compounds, internal standard area counts, target compound identification and quantification, chromatograms, serial dilutions, dual column imprecision, overall system performance, trip blank samples, and field duplicate samples.

As a result of the review process, the following qualifiers may be assigned to the data in accordance with the USEPA's guidelines and best professional judgment:

R – The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.

J – The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample.

UJ – The analyte was not detected at a level greater than or equal to the reporting limit (RL); however, the reported RL is approximate and may be inaccurate or imprecise.

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

NJ – The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

If any validation qualifiers are assigned these qualifiers should supersede any laboratory-applied qualifiers. Data that is not qualified as a result of this data validation is considered acceptable on the basis of the items specified for review. Data that is qualified as "R" are not sufficiently valid and technically supportable to be used for data interpretation. Data that is otherwise qualified due to minor data quality anomalies are usable, as qualified.

Table 2: Validator-applied qualification

Project Sample ID	*Analysis*	*Analyte*	*CAS No.*	*Validator Qualifier*
147-LMW-6-20130917	VOCs	Acetone	67-64-1	J
147-LMW-6-20130917	VOCs	Methylene chloride	75-09-2	UJ
147-LMW-6-20130917	VOCs	2-Butanone	78-93-3	UJ
147-LMW-6-20130917	VOCs	Toluene	108-88-3	J
147-LMW-6-20130917	SVOCs	Benzoic acid	65-85-0	UJ
147-LMW-6-20130917	SVOCs	Caprolactam	105-60-2	UJ
147-LMW-6-20130917	Pesticides	All Results	---	UJ
147-LMW-6-20130917	PCBs	All Results	---	UJ
147-LMW-6-20130917	Metals	Total Aluminum	7429-90-5	J
148-MW-5-20130917	VOCs	Acetone	67-64-1	UJ

Project Sample ID	*Analysis*	*Analyte*	*CAS No.*	*Validator Qualifier*
148-MW-5-20130917	VOCs	Methylene chloride	75-09-2	UJ
148-MW-5-20130917	VOCs	2-Butanone	78-93-3	UJ
148-MW-5-20130917	VOCs	Toluene	108-88-3	J
148-MW-5-20130917	SVOCs	Benzoic acid	65-85-0	UJ
148-MW-5-20130917	SVOCs	Caprolactam	105-60-2	UJ
148-MW-5-20130917	Pesticides	All Results	---	UJ
148-MW-5-20130917	Metals	Total Aluminum	7429-90-5	J
148-MW-5-20130917	PCBs	All Results	---	UJ
149-DUP-2-20130917	VOCs	Acetone	67-64-1	UJ
149-DUP-2-20130917	VOCs	Methylene chloride	75-09-2	UJ
149-DUP-2-20130917	VOCs	2-Butanone	78-93-3	UJ
149-DUP-2-20130917	VOCs	Toluene	108-88-3	J
149-DUP-2-20130917	SVOCs	Benzoic acid	65-85-0	UJ
149-DUP-2-20130917	SVOCs	Caprolactam	105-60-2	UJ
149-DUP-2-20130917	Metals	Total Aluminum	7429-90-5	J
150-LMW-7-20130917	VOCs	Acetone	67-64-1	UJ
150-LMW-7-20130917	VOCs	Methylene chloride	75-09-2	UJ
150-LMW-7-20130917	Metals	Total Aluminum	7429-90-5	UJ
151-MW-1-20130917	VOCs	Acetone	67-64-1	UJ
151-MW-1-20130917	VOCs	Methylene chloride	75-09-2	UJ
151-MW-1-20130917	SVOCs	Benzoic acid	65-85-0	UJ
151-MW-1-20130917	SVOCs	Caprolactam	105-60-2	UJ
151-MW-1-20130917	Metals	Total Aluminum	7429-90-5	UJ
152-LMW-1-20130917	VOCs	Acetone	67-64-1	UJ
152-LMW-1-20130917	VOCs	Methylene chloride	75-09-2	UJ
152-LMW-1-20130917	SVOCs	Benzoic acid	65-85-0	UJ
152-LMW-1-20130917	SVOCs	Caprolactam	105-60-2	UJ
152-LMW-1-20130917	Metals	Total Aluminum	7429-90-5	J
153-TB-8-20130917	VOCs	Acetone	67-64-1	UJ
153-TB-8-20130917	VOCs	Methylene chloride	75-09-2	UJ

Major Deficiencies:

Major deficiencies include those that grossly impact data quality and necessitate the rejection of results. No major deficiencies were identified.

Minor Deficiencies:

Minor deficiencies include anomalies that directly impact data quality and necessitate qualification, but do not result in unusable data. The section below describes the minor deficiencies that were identified.

VOCs by SW-846 8260B:

Laboratory control sample/laboratory control sample duplicate BI30909-BS1/BSD1displayed recoveries less than the lower control limit for acetone at 37.2% and 40.2%, respectively. The associated sample results were non-detect and were qualified as "UJ."

LCS/LCSD BI30998-BS1/BSD1 displayed recoveries less than the lower control limits for acetone (33.3 and 37.6%, respectively) and methylene chloride (69.9% and 72.2%, respectively). The associated positive detection was qualified as "J" and non-detects were qualified as "UJ." The LCS displayed a recovery less than the lower control limit for 2-butanone at 60.0%. The associated results were non-detect and were qualified as "UJ." The LCSD displayed a recovery less than the lower control limit for toluene at 81.9%. The associated positive detections were qualified as "J."

SVOCs by SW-846 8270C:

LCS BI30835-BS1 displayed a recovery less than the lower control limit for caprolactam at 22.9%. Benzoic acid did not recover in the sample. The associated sample results were non-detect and were qualified as "UJ."

Pesticides by SW-846 8081B:

Surrogate compounds decachlorobiphenyl and tetrachloro-m-xylene recovered below the lower control limits in samples 147-LMW-6-20130917 (10.9% and 22.4%, respectively) and 148-MW-5-20130917 (24.9% and 21.4%, respectively). The associated sample results were non-detect and were qualified as "UJ."

PCBs by SW-846 8082A:

Sample 147-LMW-6-20130917 displayed recoveries less than the lower control limit for surrogate compounds tetrachloro-m-xylene and dechlorobiphenyl at 23.5% and 23.4%, respectively. The associated sample results were qualified as "UJ."

Sample 148-MW-5-20130917 displayed a recovery less than the lower control limit for surrogate compound decachlorobiphenyl at 21.9%. The associated sample results were qualified as "UJ."

Total Metals by SW-846 6010C:

The field duplicate/parent sample pair (149-DUP-2-20130917 and 148-MW-5-20130917) displayed an absolute difference greater than the control limit for aluminum at 161 µg/L. The associated positive detections were qualified as "J" and non-detects were qualified as "UJ."

Other Deficiencies:

Other deficiencies include anomalies that do not directly impact data quality and do not necessitate qualification. The section below describes the other deficiencies that were identified.

VOCs by SW-846 8260B:

Method blank sample BI30998-BLK1 displayed a positive detection for acetone at 1.1 µg/L. The associated positive result was greater than 5X the blank concentration; qualification was not required.

LCS/LCSD BI30909-BS1/BSD1 displayed recoveries greater than the upper control limit for methyl acetate at 166% and 146%, respectively. The associated sample results were non-detect; qualification was not required.

LCS/LCSD BI30998-BS1/BSD1 displayed recoveries greater than the upper control limit for methyl acetate at 142% and 148%, respectively. The associated sample results were non-detect; qualification was not required. The LCS/LCSD displayed a relative percent difference (RPD) greater than the control limit for styrene at 38.0%. The LCS and LCSD recoveries were within control limits; qualification was not required.

SVOCs by SW-846 8270C:

Sample 148-MW-5-20130917 displayed a recovery less than the lower control limit for surrogate compound phenol-d5 at 5.31%. The sample also displayed a recovery greater than the upper control limit for surrogate compound nitrobenzene-d5 at 114%. Only one base/neutral and one acid surrogate were outside of control limits; based on professional judgment data were not qualified.

Sample 150-LMW-7-20130917 displayed a recovery greater than the upper control limit for surrogate compound 2-fluorobiphenyl at 126%. Surrogate compounds 2-fluorophenol, phenol-d5, nitrobenzene-d5, and 2,4,6-tribromophenol did not recover in the sample. The sample was analyzed at a 100X dilution; qualification was not required.

Pesticides by SW-846 8081B:

LCS/LCSD B130882-BS1/BSD1 displayed recoveries and RPDs outside of control limits for several compounds. The associated sample results were previously qualified based on surrogate recoveries; further qualification was not required.

Comments:

Several samples were analyzed at a dilution to bring target analytes within the linear range of the instrument calibration.

A field duplicate/parent sample pair (149-DUP-2-20130917 and 148-MW-5-20130917) was collected and analyzed for all parameters. For results less than 5X the RL, analytes meet the precision criteria if the absolute difference is less than ±1X the RL. For results greater than 5X the RL, analytes meet the precision criteria if the RPD is less than or equal to 35%. All analytes met the precision criteria with the exception of the results described above.

On the basis of this evaluation, the laboratory appears to have followed the specified analytical methods with the exception of errors discussed above. If a given fraction is not mentioned above, that means that all specified criteria were met for that parameter.

All data are considered usable, as qualified. In addition, completeness, defined as the percentage of analytical results that are judged to be valid, is 100%.

Signed:

Alan Fleisher
Staff Chemist

LANGAN
ENGINEERING & ENVIRONMENTAL SERVICES

Technical Memorandum

2700 Kelly Road, Suite 200 Warrington, PA 18976 T: 215.491.6500 F: 215.491.6501
Mailing Address: P.O. Box 1569 Doylestown, PA 18901

To: Chris McMahon, Langan Project Geologist

From: Alan Fleisher, Langan Staff Chemist

Date: November 7, 2013

Re: Data Usability Summary Report
For Carroll Gardens – 13I0722
Brooklyn, New York
Groundwater Samples Collected September 17, 2013
Langan Project No.: 100287501

This memorandum presents the findings of an analytical data validation of the data generated from the analysis of groundwater samples collected on September 17, 2013 by Langan Engineering and Environmental Services ("Langan") at the Carroll Gardens Site located in Brooklyn, New York ("the Site"). The samples were analyzed by York Analytical Laboratories (NYSDOH ELAP registration # 10894) located in Stratford, Connecticut for volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), pesticides, PCBs, total and dissolved metals, and mercury using the analytical method specified below.

- VOCs by SW-846 Method 8260B (rev 2, 12/1996)
- SVOCs by SW-846 Method 8270C (rev 3, 12/1996)
- Pesticides by SW-846 Method 8081B (rev 2, 2/2007)
- PCBs by SW-846 Method 8082A (rev 1, 2/2007)
- Metals by SW-846 Method 6010C (rev 3, 2/2007)
- Mercury by SW-846 Method 7473 (rev 0, 2/2007)

Table 1, below, summarizes the laboratory and client sample identification numbers, sample collection dates, and analytical parameters subject to review.

Table 1: Sample Summary

SDG	***Lab Sample ID***	***Client Sample ID***	***Sample Date***	***Analytical Parameters***
13I0722	13I0722-01	154-LMW-9-20130917	9/17/2013	VOCs; SVOCs; Pesticides; PCBs; Total and Dissolved Metals; Mercury
13I0722	13I0722-02	155-LMW-10-20130917	9/17/2013	VOCs; SVOCs; Pesticides; PCBs; Total and Dissolved Metals; Mercury

SDG	*Lab Sample ID*	*Client Sample ID*	*Sample Date*	*Analytical Parameters*
13I0722	13I0722-03	156-MW-4-20130917	9/17/2013	VOCs; SVOCs; Pesticides; PCBs; Total and Dissolved Metals; Mercury

Validation Overview

This data validation was performed in accordance with USEPA Region II Standard Operating Procedure (SOP) #HW-34, "Trace Volatile Data Validation (February 2013, Revision 3), USEPA Region II SOP #HW-35, "Semivolatile Data Validation (March 2013, Revision 2), the USEPA Contract Laboratory Program, USEPA Region II SOP #HW-2, "Metals Data Validation (September 2006, Revision 13), USEPA Region II SOP #HW-36, "Pesticide Data Validation (May 2013, Revision 4), USEPA Region II SOP #HW-37, "PCB Aroclor Data Validation (May 2013, Revision 3), "National Functional Guidelines for Superfund Organic Methods Data Review (USEPA-540R-08-01, June 2008), and "National Functional Guidelines for Inorganic Superfund Data Review (USEPA-540R-10-011, January 2010).

Validation includes reconstruction of the analytical data to verify that data are easily traceable and sufficiently complete to permit logical reconstruction by a qualified individual other than the originator. Items subject to review in this memorandum include holding times, canister certification, instrument tuning, instrument calibration, laboratory blanks, laboratory control samples, system monitoring compounds, internal standard area counts, target compound identification and quantification, chromatograms, serial dilutions, dual column imprecision, overall system performance, trip blank samples, and field duplicate samples.

As a result of the review process, the following qualifiers may be assigned to the data in accordance with the USEPA's guidelines and best professional judgment:

- **R –** The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
- **J –** The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample.
- **UJ –** The analyte was not detected at a level greater than or equal to the reporting limit (RL); however, the reported RL is approximate and may be inaccurate or imprecise.

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

NJ – The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

If any validation qualifiers are assigned these qualifiers should supersede any laboratory-applied qualifiers. Data that is not qualified as a result of this data validation is considered acceptable on the basis of the items specified for review. Data that is qualified as "R" are not sufficiently valid and technically supportable to be used for data interpretation. Data that is otherwise qualified due to minor data quality anomalies are usable, as qualified.

Table 2: Validator-applied qualification

Project Sample ID	*Analysis*	*Analyte*	*CAS No.*	*Validator Qualifier*
154-LMW-9-20130917	VOCs	Acetone	67-64-1	J
154-LMW-9-20130917	VOCs	2-Butanone	78-93-3	UJ
154-LMW-9-20130917	VOCs	Methylene chloride	75-09-2	UJ
154-LMW-9-20130917	SVOCs	Benzoic acid	65-85-0	UJ
154-LMW-9-20130917	SVOCs	Caprolactam	105-60-2	UJ
154-LMW-9-20130917	Pesticides	All Results	---	UJ
155-LMW-10-20130917	VOCs	Acetone	67-64-1	U (2.0)
155-LMW-10-20130917	VOCs	2-Butanone	78-93-3	UJ
155-LMW-10-20130917	VOCs	Methylene chloride	75-09-2	UJ
155-LMW-10-20130917	VOCs	Toluene	108-88-3	UJ
155-LMW-10-20130917	Metals	Dissolved Selenium	7782-49-2	J
155-LMW-10-20130917	Metals	Total Selenium	7782-49-2	J
156-MW-4-20130917	VOCs	Acetone	67-64-1	UJ
156-MW-4-20130917	VOCs	2-Butanone	78-93-3	UJ
156-MW-4-20130917	VOCs	Methylene chloride	75-09-2	UJ
156-MW-4-20130917	SVOCs	Benzoic acid	65-85-0	UJ
156-MW-4-20130917	SVOCs	Caprolactam	105-60-2	UJ
156-MW-4-20130917	Pesticides	All Results	---	UJ

Major Deficiencies:

Major deficiencies include those that grossly impact data quality and necessitate the rejection of results. No major deficiencies were identified.

Minor Deficiencies:

Minor deficiencies include anomalies that directly impact data quality and necessitate qualification, but do not result in unusable data. The section below describes the minor deficiencies that were identified.

VOCs by SW-846 8260B:

Laboratory control sample/laboratory control sample duplicate (LCS/LCSD) BI30998-BS1/BSD1 displayed recoveries less than the lower control for acetone at 33.3% and 37.6%, respectively. The associated sample result was non-detect and was qualified as "UJ." The LCS/LCSD displayed recoveries less than the lower control limits for methylene chloride at 69.9% and 72.2%, respectively. The LCS displayed a recovery less than the lower control limit for 2-butanone at 60.0%. The LCSD displayed a recovery less than the lower control limit for toluene at 81.9%. The associated sample results were non-detect and were qualified as "UJ."

LCS/LCSD BI31071-BS1/BSD1 displayed recoveries less than the lower control limits for acetone (32.9% and 30.5%) and methylene chloride (71.9% and 72.3%, respectively). The associated positive detection was qualified as "J" and non-detects were qualified as "UJ." The LCS displayed a recovery less than the lower control limit for 2-butanone at 61.4%. The associated sample result was non-detect and was qualified as "UJ."

Method blank sample BI30998-BLK1 displayed a positive detection for acetone at 1.1 µg/L. The associated sample result was qualified as non-detect, "U," at the QL.

SVOCs by SW-846 8270C:

LCS/LCSD BI30978-BS1/BSD1 displayed recoveries less than the lower control limit for caprolactam at 14.7% and 16.4%, respectively. Benzoic acid did not recover in the LCS/LCSD. The associated sample results were non-detect and were qualified as "UJ."

Pesticides by SW-846 8081B:

Samples 154-LMW-9-20130917 and 156-MW-4-201300917 displayed recoveries less than the lower control limit for surrogate compound tetrachloro-m-xylene at 20.3% and 25.9%, respectively. The associated sample results were non-detect and were qualified as "UJ."

Dissolved Metals by SW-846 6010C:

Matrix spike/matrix spike duplicate (MS/MSD) sample 154-LMW-9-20130917 displayed a recovery greater than the upper control limit for selenium at 128%. The associated positive result was qualified as "J."

Total Metals by SW-846 6010C:

Matrix spike/matrix spike duplicate (MS/MSD) sample 154-LMW-9-20130917 displayed a recovery greater than the upper control limit for selenium at 126%. The associated positive result was qualified as "J."

Other Deficiencies:

Other deficiencies include anomalies that do not directly impact data quality and do not necessitate qualification. The section below describes the other deficiencies that were identified.

VOCs by SW-846 8260B:

LCS/LCSD BI30998-BS1/BSD1 displayed recoveries greater than the upper control limit for methyl acetate at 142% and 148%, respectively. The associated sample result was non-detect; qualification was not required. The LCS/LCSD displayed a relative percent difference (RPD) greater than the control limit for styrene at 38.0%. The LCS and LCSD recoveries were within control limits; qualification was not required.

LCS/LCSD BI31071-BS1/BSD1 displayed recoveries greater than the upper control limit for methyl acetate at 152% and 162%, respectively. The associated sample results were non-detect; qualification was not required.

SVOCs by SW-846 8270C:

Sample 156-MW-4-20130917 displayed a recovery less than the lower control limit for surrogate compound phenol-d5 at 8.86%. Only one surrogate was outside of control limits; based on professional judgment, data were not qualified.

Dissolved Metals by SW-846 6010C:

MS/MSD sample 154-LMW-9-20130917 displayed a recovery greater than the upper control limit for antimony at 126%. The associated sample results were non-detect; qualification was not required.

Comments:

Several samples were analyzed at a dilution to bring target analytes within the linear range of the instrument calibration.

On the basis of this evaluation, the laboratory appears to have followed the specified analytical methods with the exception of errors discussed above. If a given fraction is not mentioned above, that means that all specified criteria were met for that parameter.

All data are considered usable, as qualified. In addition, completeness, defined as the percentage of analytical results that are judged to be valid, is 100%.

Signed:

Alan Fleisher
Staff Chemist

LANGAN
ENGINEERING & ENVIRONMENTAL SERVICES

Technical Memorandum

2700 Kelly Road, Suite 200 Warrington, PA 18976 T: 215.491.6500 F: 215.491.6501
Mailing Address: P.O. Box 1569 Doylestown, PA 18901

To: Chris McMahon, Langan Project Geologist

From: Alan Fleisher, Langan Staff Chemist

Date: November 4, 2013

Re: Data Usability Summary Report
For Carroll Gardens – 13I0347
Brooklyn, New York
Soil Vapor and Ambient Air Samples Collected September 9, 2013
Langan Project No.: 100287501

This memorandum presents the findings of an analytical data validation of the data generated from the analysis of four soil gas and ambient air samples collected on September 9, 2013 by Langan Engineering and Environmental Services ("Langan") at the Carroll Gardens Site located in Brooklyn, New York ("the Site"). The samples were analyzed by York Analytical Laboratories (NYSDOH ELAP registration # 10894) located in Stratford, Connecticut for volatile organic compounds (VOCs) using the analytical method specified below.

- Full List VOCs by EPA Compendium Method TO-15 (1/1999)

Table 1, below, summarizes the laboratory and client sample identification numbers, sample collection dates, and analytical parameters subject to review.

Table 1: Sample Summary

SDG	***Lab Sample ID***	***Client Sample ID***	***Sample Date***	***Analytical Parameters***
13I0347	13I0347-01	087/AMBIENT-1	9/9/2013	VOCs
13I0347	13I0347-02	088-LSV-20-20130909	9/9/2013	VOCs
13I0347	13I0347-03	089-LSV-5-20130909	9/9/2013	VOCs
13I0347	13I0347-04	090-LSV-2-20130909	9/9/2013	VOCs

Validation Overview

This data validation was performed in accordance with USEPA Region II Standard Operating Procedure (SOP) #HW-31, "Validating Volatile Organic Analysis of Ambient Air in Canister by Method TO-15" (October 2006, Revision 4) and the USEPA Contract Laboratory Program,

"National Functional Guidelines for Superfund Organic Methods Data Review (USEPA-540R-08-01), June 2008).

Validation includes reconstruction of the analytical data to verify that data are easily traceable and sufficiently complete to permit logical reconstruction by a qualified individual other than the originator. Items subject to review in this memorandum include holding times, canister certification, instrument tuning, instrument calibration, laboratory blanks, laboratory control samples, system monitoring compounds, internal standard area counts, target compound identification and quantification, chromatograms, and overall system performance.

As a result of the review process, the following qualifiers may be assigned to the data in accordance with the USEPA's guidelines and best professional judgment:

- **R –** The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
- **J –** The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample.
- **UJ –** The analyte was not detected at a level greater than or equal to the reporting limit (RL); however, the reported RL is approximate and may be inaccurate or imprecise.
- **U –** The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the RL or the sample concentration for results impacted by blank contamination.
- **NJ –** The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

If any validation qualifiers are assigned these qualifiers should supersede any laboratory-applied qualifiers. Data that is not qualified as a result of this data validation is considered acceptable on the basis of the items specified for review. Data that is qualified as "R" are not sufficiently valid and technically supportable to be used for data interpretation. Data that is otherwise qualified due to minor data quality anomalies are usable, as qualified.

Major Deficiencies:

Major deficiencies include those that grossly impact data quality and necessitate the rejection of results. No major deficiencies were identified.

Minor Deficiencies:

Minor deficiencies include anomalies that directly impact data quality and necessitate qualification, but do not result in unusable data. No minor deficiencies were identified.

Other Deficiencies:

Other deficiencies include anomalies that do not directly impact data quality and do not necessitate qualification. No other deficiencies were identified.

Comments:

Several samples were analyzed at a dilution to bring target analytes within the linear range of the instrument calibration.

On the basis of this evaluation, the laboratory appears to have followed the specified analytical methods with the exception of errors discussed above. If a given fraction is not mentioned above, that means that all specified criteria were met for that parameter.

All data are considered usable, as qualified. In addition, completeness, defined as the percentage of analytical results that are judged to be valid, is 100%.

Signed:

Alan Fleisher
Staff Chemist

LANGAN
ENGINEERING & ENVIRONMENTAL SERVICES

Technical Memorandum

2700 Kelly Road, Suite 200 Warrington, PA 18976 T: 215.491.6500 F: 215.491.6501
Mailing Address: P.O. Box 1569 Doylestown, PA 18901

To: Chris McMahon, Langan Project Geologist

From: Alan Fleisher, Langan Staff Chemist

Date: November 6, 2013

Re: Data Usability Summary Report
For Carroll Gardens – 13I0407
Brooklyn, New York
Soil Vapor and Ambient Air Samples Collected September 10, 2013
Langan Project No.: 100287501

This memorandum presents the findings of an analytical data validation of the data generated from the analysis of soil gas samples collected on September 10, 2013 by Langan Engineering and Environmental Services ("Langan") at the Carroll Gardens Site located in Brooklyn, New York ("the Site"). The samples were analyzed by York Analytical Laboratories (NYSDOH ELAP registration # 10894) located in Stratford, Connecticut for volatile organic compounds (VOCs) using the analytical method specified below.

- Full List VOCs by EPA Compendium Method TO-15 (1/1999)

Table 1, below, summarizes the laboratory and client sample identification numbers, sample collection dates, and analytical parameters subject to review.

Table 1: Sample Summary

SDG	*Lab Sample ID*	*Client Sample ID*	*Sample Date*	*Analytical Parameters*
13I0407	13I0407-01	093-LSV-19-20130910	9/10/2013	VOCs
13I0407	13I0407-02	094-LSV-3-20130910	9/10/2013	VOCs
13I0407	13I0407-03	095-LSV-1-20130910	9/10/2013	VOCs
13I0407	13I0407-04	096-LSV-17-20130910	9/10/2013	VOCs
13I0407	13I0407-05	097-LSV-16-20130910	9/10/2013	VOCs
13I0407	13I0407-06	098-LSV-4-20130910	9/10/2013	VOCs
13I0407	13I0407-07	099-LSV-18-20130910	9/10/2013	VOCs
13I0407	13I0407-09	101-LSV-6-20130910	9/10/2013	VOCs
13I0407	13I0407-10	102-LSV-24-20130910	9/10/2013	VOCs
13I0407	13I0407-11	103-LSV-10-20130910	9/10/2013	VOCs
13I0407	13I0407-12	104-LSV-25-20130910	9/10/2013	VOCs
13I0407	13I0407-13	105-LSV-9-20130910	9/10/2013	VOCs

Validation Overview

This data validation was performed in accordance with USEPA Region II Standard Operating Procedure (SOP) #HW-31, "Validating Volatile Organic Analysis of Ambient Air in Canister by Method TO-15" (October 2006, Revision 4) and the USEPA Contract Laboratory Program, "National Functional Guidelines for Superfund Organic Methods Data Review (USEPA-540R-08-01), June 2008), and the Quality Assurance Project Plans for each Site (Langan 2013).

Validation includes reconstruction of the analytical data to verify that data are easily traceable and sufficiently complete to permit logical reconstruction by a qualified individual other than the originator. Items subject to review in this memorandum include holding times, canister certification, instrument tuning, instrument calibration, laboratory blanks, laboratory control samples, system monitoring compounds, internal standard area counts, target compound identification and quantification, chromatograms, and overall system performance.

As a result of the review process, the following qualifiers may be assigned to the data in accordance with the USEPA's guidelines and best professional judgment:

- **R –** The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
- **J –** The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample.
- **UJ –** The analyte was not detected at a level greater than or equal to the reporting limit (RL); however, the reported RL is approximate and may be inaccurate or imprecise.
- **U –** The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the RL or the sample concentration for results impacted by blank contamination.
- **NJ –** The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

If any validation qualifiers are assigned these qualifiers should supersede any laboratory-applied qualifiers. Data that is not qualified as a result of this data validation is considered acceptable on the basis of the items specified for review. Data that is qualified as "R" are not sufficiently

valid and technically supportable to be used for data interpretation. Data that is otherwise qualified due to minor data quality anomalies are usable, as qualified.

Table 2: Validator-applied qualification

Project Sample ID	*Analysis*	*Analyte*	*CAS No.*	*Validator Qualifier*
097-LSV-16-20130910	VOCs	MTBE	1634-04-4	UJ
103-LSV-10-20130910	VOCs	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	J
103-LSV-10-20130910	VOCs	1,2,4-Trimethylbenzene	95-63-6	J
103-LSV-10-20130910	VOCs	1,3,5-Trimethylbenzene	108-67-8	J
103-LSV-10-20130910	VOCs	Ethylbenzene	100-41-4	J
103-LSV-10-20130910	VOCs	o-Xylene	95-47-6	J
103-LSV-10-20130910	VOCs	m & p-Xylenes	79601-23-1	J
104-LSV-25-20130910	VOCs	1,2,4-Trimethylbenzene	95-63-6	J
104-LSV-25-20130910	VOCs	1,3,5-Trimethylbenzene	108-67-8	J
104-LSV-25-20130910	VOCs	Ethylbenzene	100-41-4	J
104-LSV-25-20130910	VOCs	o-Xylene	95-47-6	J
104-LSV-25-20130910	VOCs	m & p-Xylenes	79601-23-1	J
105-LSV-9-20130910	VOCs	MTBE	1634-04-4	UJ

Major Deficiencies:

Major deficiencies include those that grossly impact data quality and necessitate the rejection of results. No major deficiencies were identified.

Minor Deficiencies:

Minor deficiencies include anomalies that directly impact data quality and necessitate qualification, but do not result in unusable data. The section below describes the minor deficiencies that were identified.

VOCs by USEPA TO-15:

Laboratory control sample (LCS) B130624-BS2 displayed a recovery less than the lower control limit for MTBE at 44.5%. The associated sample results were non-detect and were qualified as "UJ."

Samples 103-LSV-10-20130910 and 104-LSV-25-20130910 displayed recoveries greater than the upper control limit for internal standard chlorobenzene-d5 146% and 154%, respectively. The associated positive detections were qualified as "J."

Other Deficiencies:

Other deficiencies include anomalies that do not directly impact data quality and do not necessitate qualification. The section below describes the other deficiencies that were identified.

VOCs by USEPA TO-15:

LCS B130624-BS2 displayed a recovery greater than the upper control limit for 1,4-dioxane at 154%. The associated sample results were non-detect; qualification was not required.

Samples 102-LSV-24-20130910, 103-LSV-10-20130910, and 104-LSV-25-20130910 displayed recoveries greater than the upper control limit for internal standard 1,4-difluorobenzene at 141%, 141%, and 145%, respectively. The associated sample results were non-detect; qualification was not required.

Comments:

Several samples were analyzed at a dilution to bring target analytes within the linear range of the instrument calibration.

Sample 100/AMBIENT-2 was not analyzed by the laboratory because the vacuum gauge on the canister only moved from -30 in. Hg to -23 in. Hg during sampling. The level of dilution would not have produced a meaningful result.

Samples 098-LSV-4-20130910 and 104-LSV-25-20130910 had final canister vacuums of 0 in. Hg. This may indicate that the flow rates were high and the samples are skewed toward the beginning of the sampling period.

Sample 102-LSV-24-20130910 had a canister with a vacuum gauge that did not move during sampling.

On the basis of this evaluation, the laboratory appears to have followed the specified analytical methods with the exception of errors discussed above. If a given fraction is not mentioned above, that means that all specified criteria were met for that parameter.

All data are considered usable, as qualified. In addition, completeness, defined as the percentage of analytical results that are judged to be valid, is 100%.

Signed:

Alan Fleisher
Staff Chemist

LANGAN
ENGINEERING & ENVIRONMENTAL SERVICES

Technical Memorandum

2700 Kelly Road, Suite 200 Warrington, PA 18976 T: 215.491.6500 F: 215.491.6501
Mailing Address: P.O. Box 1569 Doylestown, PA 18901

To: Chris McMahon, Langan Project Geologist

From: Alan Fleisher, Langan Staff Chemist

Date: November 6, 2013

Re: Data Usability Summary Report
For Carroll Gardens – 13I0441
Brooklyn, New York
Soil Vapor and Ambient Air Samples Collected September 11, 2013
Langan Project No.: 100287501

This memorandum presents the findings of an analytical data validation of the data generated from the analysis of soil gas samples collected on September 11, 2013 by Langan Engineering and Environmental Services ("Langan") at the Carroll Gardens Site located in Brooklyn, New York ("the Site"). The samples were analyzed by York Analytical Laboratories (NYSDOH ELAP registration # 10894) located in Stratford, Connecticut for volatile organic compounds (VOCs) using the analytical method specified below.

- Full List VOCs by EPA Compendium Method TO-15 (1/1999)

Table 1, below, summarizes the laboratory and client sample identification numbers, sample collection dates, and analytical parameters subject to review.

Table 1: Sample Summary

SDG	*Lab Sample ID*	*Client Sample ID*	*Sample Date*	*Analytical Parameters*
13I0441	13I0441-01	106-AMBIENT-3-20130911	9/11/2013	VOCs
13I0441	13I0441-02	107-LSV-15-20130911	9/11/2013	VOCs
13I0441	13I0441-03	108-LSV-14-20130911	9/11/2013	VOCs
13I0441	13I0441-04	109-LSV-11-20130911	9/11/2013	VOCs
13I0441	13I0441-05	110-LSV-13-20130911	9/11/2013	VOCs
13I0441	13I0441-06	111-LSV-12-20130911	9/11/2013	VOCs

Validation Overview

This data validation was performed in accordance with USEPA Region II Standard Operating Procedure (SOP) #HW-31, "Validating Volatile Organic Analysis of Ambient Air in Canister by Method TO-15" (October 2006, Revision 4), the USEPA Contract Laboratory Program, "National

Functional Guidelines for Superfund Organic Methods Data Review (USEPA-540R-08-01), June 2008), and the Quality Assurance Project Plans for each Site (Langan 2013).

Validation includes reconstruction of the analytical data to verify that data are easily traceable and sufficiently complete to permit logical reconstruction by a qualified individual other than the originator. Items subject to review in this memorandum include holding times, canister certification, instrument tuning, instrument calibration, laboratory blanks, laboratory control samples, system monitoring compounds, internal standard area counts, target compound identification and quantification, chromatograms, and overall system performance.

As a result of the review process, the following qualifiers may be assigned to the data in accordance with the USEPA's guidelines and best professional judgment:

- **R –** The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
- **J –** The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample.
- **UJ –** The analyte was not detected at a level greater than or equal to the reporting limit (RL); however, the reported RL is approximate and may be inaccurate or imprecise.
- **U –** The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the RL or the sample concentration for results impacted by blank contamination.
- **NJ –** The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

If any validation qualifiers are assigned these qualifiers should supersede any laboratory-applied qualifiers. Data that is not qualified as a result of this data validation is considered acceptable on the basis of the items specified for review. Data that is qualified as "R" are not sufficiently valid and technically supportable to be used for data interpretation. Data that is otherwise qualified due to minor data quality anomalies are usable, as qualified.

Table 2: Validator-applied qualification

Project Sample ID	*Analysis*	*Analyte*	*CAS No.*	*Validator Qualifier*
106-AMBIENT-3-20130911	VOCs	Methylene chloride	75-09-2	U (1.6)

Major Deficiencies:

Major deficiencies include those that grossly impact data quality and necessitate the rejection of results. No major deficiencies were identified.

Minor Deficiencies:

Minor deficiencies include anomalies that directly impact data quality and necessitate qualification, but do not result in unusable data. The section below describes the minor deficiencies that were identified.

VOCs by USEPA TO-15:

Method blank sample BI30725-BLK2 displayed a positive detection for methylene chloride at 0.35 µg/m^3. The associated positive detection was less than 5X the blank concentration and was qualified as non-detect, "U," at the sample result.

Other Deficiencies:

Other deficiencies include anomalies that do not directly impact data quality and do not necessitate qualification. No other deficiencies were identified.

Comments:

Several samples were analyzed at a dilution to bring target analytes within the linear range of the instrument calibration.

On the basis of this evaluation, the laboratory appears to have followed the specified analytical methods with the exception of errors discussed above. If a given fraction is not mentioned above, that means that all specified criteria were met for that parameter.

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All data are considered usable, as qualified. In addition, completeness, defined as the percentage of analytical results that are judged to be valid, is 100%.

Signed:

Alan Fleisher
Staff Chemist

LANGAN
ENGINEERING & ENVIRONMENTAL SERVICES

Technical Memorandum

2700 Kelly Road, Suite 200 Warrington, PA 18976 T: 215.491.6500 F: 215.491.6501
Mailing Address: P.O. Box 1569 Doylestown, PA 18901

To: Chris McMahon, Langan Project Geologist

From: Alan Fleisher, Langan Staff Chemist

Date: November 5, 2013

Re: Data Usability Summary Report
For Carroll Gardens – 13I0489
Brooklyn, New York
Soil Vapor and Ambient Air Samples Collected September 12, 2013
Langan Project No.: 100287501

This memorandum presents the findings of an analytical data validation of the data generated from the analysis of soil gas samples collected on September 12, 2013 by Langan Engineering and Environmental Services ("Langan") at the Carroll Gardens Site located in Brooklyn, New York ("the Site"). The samples were analyzed by York Analytical Laboratories (NYSDOH ELAP registration # 10894) located in Stratford, Connecticut for volatile organic compounds (VOCs) using the analytical method specified below.

- Full List VOCs by EPA Compendium Method TO-15 (1/1999)

Table 1, below, summarizes the laboratory and client sample identification numbers, sample collection dates, and analytical parameters subject to review.

Table 1: Sample Summary

SDG	*Lab Sample ID*	*Client Sample ID*	*Sample Date*	*Analytical Parameters*
13I0489	13I0489-01	121-LSV-1-20130912	9/12/2013	VOCs
13I0489	13I0489-02	115-LSV-2-20130912	9/12/2013	VOCs
13I0489	13I0489-03	112-LSV-3-20130912	9/12/2013	VOCs
13I0489	13I0489-04	118-LSV-4-20130912	9/12/2013	VOCs
13I0489	13I0489-05	117-LSV-5-20130912	9/12/2013	VOCs
13I0489	13I0489-06	119-LSV-16-20130912	9/12/2013	VOCs
13I0489	13I0489-07	120-LSV-17-20130912	9/12/2013	VOCs
13I0489	13I0489-08	113-LSV-18-20130912	9/12/2013	VOCs
13I0489	13I0489-09	114-LSV-19-20130912	9/12/2013	VOCs
13I0489	13I0489-10	116-LSV-20-20130912	9/12/2013	VOCs
13I0489	13I0489-11	122-DUP-1-20130912	9/12/2013	VOCs

Validation Overview

This data validation was performed in accordance with USEPA Region II Standard Operating Procedure (SOP) #HW-31, "Validating Volatile Organic Analysis of Ambient Air in Canister by Method TO-15" (October 2006, Revision 4) and the USEPA Contract Laboratory Program, "National Functional Guidelines for Superfund Organic Methods Data Review (USEPA-540R-08-01), June 2008).

Validation includes reconstruction of the analytical data to verify that data are easily traceable and sufficiently complete to permit logical reconstruction by a qualified individual other than the originator. Items subject to review in this memorandum include holding times, canister certification, instrument tuning, instrument calibration, laboratory blanks, laboratory control samples, system monitoring compounds, internal standard area counts, target compound identification and quantification, chromatograms, overall system performance, and field duplicate samples.

As a result of the review process, the following qualifiers may be assigned to the data in accordance with the USEPA's guidelines and best professional judgment:

- **R –** The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
- **J –** The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample.
- **UJ –** The analyte was not detected at a level greater than or equal to the reporting limit (RL); however, the reported RL is approximate and may be inaccurate or imprecise.
- **U –** The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the RL or the sample concentration for results impacted by blank contamination.
- **NJ –** The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

If any validation qualifiers are assigned these qualifiers should supersede any laboratory-applied qualifiers. Data that is not qualified as a result of this data validation is considered acceptable on the basis of the items specified for review. Data that is qualified as "R" are not sufficiently

valid and technically supportable to be used for data interpretation. Data that is otherwise qualified due to minor data quality anomalies are usable, as qualified.

Table 2: Validator-applied qualification

Project Sample ID	*Analysis*	*Analyte*	*CAS No.*	*Validator Qualifier*
121-LSV-1-20130912	VOCs	Acetone	67-64-1	J
121-LSV-1-20130912	VOCs	cis-1,2-Dichloroethylene	156-59-2	J
121-LSV-1-20130912	VOCs	n-Hexane	110-54-3	J
121-LSV-1-20130912	VOCs	Trichloroethylene	79-01-6	J
121-LSV-1-20130912	VOCs	Vinyl acetate	108-05-4	UJ
115-LSV-2-20130912	VOCs	Acetone	67-64-1	J
115-LSV-2-20130912	VOCs	cis-1,2-Dichloroethylene	156-59-2	J
115-LSV-2-20130912	VOCs	n-Hexane	110-54-3	UJ
115-LSV-2-20130912	VOCs	Tetrachloroethylene	127-18-4	J
115-LSV-2-20130912	VOCs	Trichloroethylene	79-01-6	J
115-LSV-2-20130912	VOCs	Vinyl acetate	108-05-4	UJ
112-LSV-3-20130912	VOCs	Acetone	67-64-1	J
112-LSV-3-20130912	VOCs	cis-1,2-Dichloroethylene	156-59-2	J
112-LSV-3-20130912	VOCs	n-Hexane	110-54-3	J
112-LSV-3-20130912	VOCs	Tetrachloroethylene	127-18-4	J
112-LSV-3-20130912	VOCs	Trichloroethylene	79-01-6	J
112-LSV-3-20130912	VOCs	Vinyl acetate	108-05-4	UJ
118-LSV-4-20130912	VOCs	Acetone	67-64-1	J
118-LSV-4-20130912	VOCs	cis-1,2-Dichloroethylene	156-59-2	J
118-LSV-4-20130912	VOCs	n-Hexane	110-54-3	UJ
118-LSV-4-20130912	VOCs	Tetrachloroethylene	127-18-4	J
118-LSV-4-20130912	VOCs	Trichloroethylene	79-01-6	J
118-LSV-4-20130912	VOCs	Vinyl acetate	108-05-4	UJ
117-LSV-5-20130912	VOCs	Acetone	67-64-1	J
117-LSV-5-20130912	VOCs	n-Hexane	110-54-3	J
117-LSV-5-20130912	VOCs	Tetrachloroethylene	127-18-4	J

Project Sample ID	*Analysis*	*Analyte*	*CAS No.*	*Validator Qualifier*
117-LSV-5-20130912	VOCs	Trichloroethylene	79-01-6	J
117-LSV-5-20130912	VOCs	Vinyl acetate	108-05-4	UJ
119-LSV-16-20130912	VOCs	Acetone	67-64-1	J
119-LSV-16-20130912	VOCs	n-Hexane	110-54-3	J
119-LSV-16-20130912	VOCs	Tetrachloroethylene	127-18-4	J
119-LSV-16-20130912	VOCs	Trichloroethylene	79-01-6	J
119-LSV-16-20130912	VOCs	Vinyl acetate	108-05-4	UJ
120-LSV-17-20130912	VOCs	Acetone	67-64-1	J
120-LSV-17-20130912	VOCs	n-Hexane	110-54-3	UJ
120-LSV-17-20130912	VOCs	Tetrachloroethylene	127-18-4	J
120-LSV-17-20130912	VOCs	Trichloroethylene	79-01-6	J
120-LSV-17-20130912	VOCs	Vinyl acetate	108-05-4	UJ
113-LSV-18-20130912	VOCs	Acetone	67-64-1	J
113-LSV-18-20130912	VOCs	n-Hexane	110-54-3	UJ
113-LSV-18-20130912	VOCs	Tetrachloroethylene	127-18-4	J
113-LSV-18-20130912	VOCs	Trichloroethylene	79-01-6	J
113-LSV-18-20130912	VOCs	Vinyl acetate	108-05-4	UJ
114-LSV-19-20130912	VOCs	Acetone	67-64-1	J
114-LSV-19-20130912	VOCs	n-Hexane	110-54-3	J
114-LSV-19-20130912	VOCs	Tetrachloroethylene	127-18-4	J
114-LSV-19-20130912	VOCs	Trichloroethylene	79-01-6	J
114-LSV-19-20130912	VOCs	Vinyl acetate	108-05-4	UJ
116-LSV-20-20130912	VOCs	Acetone	67-64-1	J
116-LSV-20-20130912	VOCs	cis-1,2-Dichloroethylene	156-59-2	J
116-LSV-20-20130912	VOCs	n-Hexane	110-54-3	J
116-LSV-20-20130912	VOCs	Tetrachloroethylene	127-18-4	J
116-LSV-20-20130912	VOCs	Trichloroethylene	79-01-6	J
116-LSV-20-20130912	VOCs	Vinyl acetate	108-05-4	UJ
122-DUP-1-20130912	VOCs	Acetone	67-64-1	J
122-DUP-1-20130912	VOCs	cis-1,2-Dichloroethylene	156-59-2	J

Project Sample ID	*Analysis*	*Analyte*	*CAS No.*	*Validator Qualifier*
122-DUP-1-20130912	VOCs	n-Hexane	110-54-3	J
122-DUP-1-20130912	VOCs	Tetrachloroethylene	127-18-4	J
122-DUP-1-20130912	VOCs	Trichloroethylene	79-01-6	J
122-DUP-1-20130912	VOCs	Vinyl acetate	108-05-4	J

Major Deficiencies:

Major deficiencies include those that grossly impact data quality and necessitate the rejection of results. No major deficiencies were identified.

Minor Deficiencies:

Minor deficiencies include anomalies that directly impact data quality and necessitate qualification, but do not result in unusable data. The section below describes the minor deficiencies that were identified.

VOCs by USEPA TO-15:

The field duplicate/parent sample pair (122-DUP-1-20130912 and 118-LSV-4-20130912) displayed imprecision greater than the control limit for acetone, cis-1,2-dichloroethylene, n-hexane, tetrachloroethylene, trichloroethylene, and vinyl acetate. For results less than 5X the RL, analytes meet the precision criteria if the absolute difference is less than ±1X the RL. For results greater than 5X the RL, analytes meet the precision criteria if the RPD is less than or equal to 35%. The associated positive detections are qualified as "J" and non-detects are qualified "UJ."

Other Deficiencies:

Other deficiencies include anomalies that do not directly impact data quality and do not necessitate qualification. The section below describes the other deficiencies that were identified.

VOCs by USEPA TO-15:

Method blank sample BI30730-BLK1 displayed a positive detection for methylene chloride at 0.35 µg/m^3. The associated positive detections were greater than 5X the blank concentration; qualification was not required.

Comments:

Several samples were analyzed at a dilution to bring target analytes within the linear range of the instrument calibration.

Samples 112-LSV-3-20130912, 117-LSV-5-20130912, 116-LSV-20-20130912, and 112-DUP-1-20130912 were re-analyzed at higher dilutions except for trichloroethene. Only results from the initial analysis should be used for data interpretation.

On the basis of this evaluation, the laboratory appears to have followed the specified analytical methods with the exception of errors discussed above. If a given fraction is not mentioned above, that means that all specified criteria were met for that parameter.

All data are considered usable, as qualified. In addition, completeness, defined as the percentage of analytical results that are judged to be valid, is 100%.

Signed:

Alan Fleisher
Staff Chemist