

-Final-
Phase II Supplemental Environmental Site Investigation Report
For
MOTIVA SITE – BUSHWICK INLET PARK
56 QUAY STREET AND 1 FRANKLIN STREET
BLOCK 2590, LOT 100 AND
NORTHWEST PORTION OF BLOCK 2277, LOT 1
BROOKLYN, NEW YORK 11222

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EXECUTIVE SUMMARY

On behalf of the New York City Department of Design and Construction (NYCDDC), LiRo Engineers, Inc. (LiRo) conducted a Phase II Supplemental Environmental Site Investigation (SESI) of the Motiva Site located at the Bushwick Inlet Park addressed at 56 Quay Street and 1 Franklin Street in Brooklyn, New York (hereinafter referred to as the Site). The Site is proposed to be developed into park land that will be incorporated into the larger Bushwick Inlet Park. The Site is identified as the following parcels of vacant, undeveloped marsh land and water:

- Block 2590, Lot 100, 1 Franklin Street, E Designated for hazardous materials/UST Testing Protocol, E Designation No. E-138, Effective Date: 5/11/2005, Rezoning Name: M3-1; and,
- Northwest portion of Block 2277, Lot 1, 1-26 North 12th Street, E Designated for hazardous materials/UST Testing Protocol, E Designation No. E-138, Effective Date: 5/11/2005, Rezoning Name: M3-1.

While the Site description has changed since the work plan, was developed, all samples and historical information are still relevant to the development of the Motiva Parcel.

According to New York City Department of Parks and Recreation (NYCDPR), the Site consists of 8.22 acres of which 2.22 acres are upland areas and 6 acres are underwater. Block 2590, Lot 100 (which formerly included a portion of Block 2590, Lot 25 prior to reapportionment) is owned by Greenpoint Monitor ME/Motiva Enterprises, LLC. Block 2277, Lot 1 is occupied by Bayside Fuel Oil and is currently owned by North 12th Street Properties. The northwest portion of Block 2277, Lot 1 that is included as part of the Site is undeveloped and is covered with overgrown vegetation and rip-rap covered shoreline.

The Phase II SESI was completed to further assess Recognized Environmental Conditions (RECs) identified during the Phase I Environmental Site Assessment (ESA) completed by LiRo and dated February 4, 2014. Specifically, the Phase II SESI was performed to determine potential impacts to shallow subsurface areas to supplement a previous assessment that focused on deeper subsurface impacts.

The RECs and potential environmental issues identified within the Phase I ESA include: the E Designations (noted above); an oil and chemical storage facility adjacent to the Site; historical fill; historical industrial land use (on-site and adjacent/nearby off-site); a nearby historical Manufactured Gas Plant (MGP) site; debris and unauthorized waste disposal at the Site; off-site gasoline and auto repair operations; and, nearby transportation facility operations (shipping and freight yards). Detailed findings of the Phase I ESA are provided in Section 1.0 of this report.

In preparing the Phase I ESA, LiRo reviewed numerous previous investigation reports prepared for the Site and/or adjoining properties between 2001 and 2007. A complete listing and summaries of the previous investigations are provided in Section 1.0 of this report.

Based on the findings of the Phase I ESA and previous subsurface investigations completed on the Site and surrounding area, contaminated soil, sediments, and groundwater are known to be present at depth (generally in the range of 9 to 62 ft bgs) on-site. However, as of the date of the Phase I ESA, no shallow soil or sediment sampling data had been obtained and no groundwater data was available from the northern and eastern portions of the Site. Because the proposed Site redevelopment plan will involve potential exposure to shallow soil/sediment/groundwater during construction of park structures (i.e., boat ramp, walkway, etc.), a supplemental Phase II ESI consists of shallow soil sampling, sediment sampling, and groundwater sampling was recommended by LiRo.

To address the RECs and environmental issues identified at the Site, LiRo completed a supplemental subsurface investigation on March 23, 24, and 30, 2015, which included the following:

- The advancement of eight (8) soil borings, three (3) to a depth of 6 ft bgs (SB-01, SB-02, and SB-08) and five (5) to a depth of 5 ft bgs (SB-03 through SB-07). Two (2) soil samples were collected from each of the eight (8) soil borings;
- The collection of two (2) shallow sediment samples to a depth of 6 inches bgs;
- Laboratory analysis of the soil and sediment samples for Target Compound List (TCL) volatile organic compounds (VOCs) via United States Environmental Protection Agency (USEPA) Method 8260B; TCL SVOCs via USEPA Method 8270C; Target Analyte List (TAL) metals via USEPA Method 6010/20/7000; Pesticides via USEPA Method 8081A/608; Herbicides via USEPA Method 8151A; and, Polychlorinated Biphenyls (PCBs) via USEPA Method 3550B/8082;
- The collection of two (2) waste characterization composite soil samples which were analyzed for: (1) the USEPA Full Toxicity Characteristics Leaching Procedure (TCLP) parameters, including PCBs; (2) the Resource Conservation and Recovery Act (RCRA) Characteristics (ignitability, reactivity, and corrosivity); and, (3) Total Petroleum Hydrocarbons Diesel Range Organics/Gasoline Range Organics (TPH DRO/GRO);
- The installation of two (2) monitoring wells to 20 ft bgs within SB-01 and SB-02 (MW-01 and MW-02, respectively) and the collection of groundwater samples from each of the monitoring wells. While a third monitoring well was proposed to be installed, access restrictions to the proposed location prevented the installation; and,
- Laboratory analysis of the groundwater samples for TCL VOCs via USEPA Method 8260B; TCL SVOCs via USEPA Method 8270C; TAL metals via USEPA Method 6010/20/7000; Pesticides via USEPA Method 8081A/608; Herbicides via USEPA Method 8151A; and, PCBs via USEPA Method 3550B/8082. One (1) of the two (2) groundwater samples (MW-02) was analyzed for the New York City Department of

Environmental Protection (NYCDEP) Sanitary or Combined Sewer Discharge Parameters.

Field screening of soil, including PID readings and identification of visual and olfactory indicators of contamination were utilized during drilling and sampling activities. Field screening did not identify any visual or olfactory evidence of petroleum impacts or any elevated PID readings.

Subsurface soils encountered during this investigation consist of 5 to 10 feet of fill materials across the Site. The fill materials generally consist of fine to medium sand with anthropogenic debris consisting of red brick, concrete, glass, and ceramic pieces. Groundwater was encountered within monitoring wells MW-01 and MW-02 at a depth of 8 ft bgs.

Soil

The laboratory results for the soil samples indicate the following:

- SVOCs were detected in seven (7) of the eight (8) soil samples at concentrations above Part 375 Unrestricted Use (Track 1) SCOs, Part 375 Restricted Use – Residential SCOs, and/or the CP-51 SCLs. The SVOC exceedances were for:
 - o benzo(a)anthracene (2,700 to 9,300 micrograms per kilograms [ug/kg]);
 - o benzo(a)pyrene (2,400 to 9,500 ug/kg);
 - o benzo(b)fluoranthene (1,100 to 13,000 ug/kg);
 - o benzo(k)fluoranthene (1,100 to 3,800 ug/kg);
 - o chrysene (2,800 to 11,000 ug/kg);
 - o dibenzo[a,h]anthracene (390 to 1,500 ug/kg); and,
 - o indeno(1,2,3-cd)pyrene (530 to 5,900 ug/kg).
- Metals were detected in each of the soil samples at concentrations above Part 375 Unrestricted Use (Track 1) SCOs, Part 375 Restricted Use – Residential SCOs, and/or the CP-51 SCLs. The metals exceedances were for:
 - o arsenic (14 to 55 milligrams per kilograms [mg/kg]);
 - o barium (1,600 mg/kg);
 - o cadmium (2.9 to 12 mg/kg);
 - o chromium (38 to 77 mg/kg);
 - o copper (79 to 1,600 mg/kg);
 - o iron (16,000 to 100,000 mg/kg);
 - o lead (110 to 4,300 mg/kg);
 - o mercury (0.21 to 9 mg/kg);
 - o nickel (38 to 51 mg/kg); and,
 - o zinc (160 to 5,000 mg/kg).
- Pesticides were detected in five (5) of the eight (8) soil samples at concentrations above Part 375 Unrestricted Use (Track 1) SCOs and/or Part 375 Restricted Use – Residential SCOs. The pesticide exceedances were for:
 - o 4,4'-DDD (8.2 to 12 ug/kg);
 - o 4,4'-DDE (13 ug/kg);

- o 4,4'-DDT (14 to 270 ug/kg);
 - o chlordane (alpha) (550 to 5,100 ug/kg); and,
 - o dieldrin (6.9 to 140 ug/kg).
- Total PCBs were detected in six (6) of the eight (8) soil samples at concentrations above Part 375 Unrestricted Use (Track 1) SCOs and/or Part 375 Restricted Use – Residential SCOs. The total PCB concentrations ranged from 150 to 13,200 ug/kg.

The laboratory analytical results indicate that concentrations of detected VOCs and herbicides in the soil samples do not exceed the Part 375 Unrestricted Use (Track 1) SCOs, Part 375 Restricted Use – Residential SCOs, or the CP-51 SCLs.

Sediment

The laboratory results for the sediment samples indicate the following:

- SVOCs were detected in both of the sediment samples at concentrations above Part 375 Unrestricted Use (Track 1) SCOs, Part 375 Restricted Use – Residential SCOs, and/or the CP-51 SCLs. The SVOC exceedances were for:
 - o benzo(a)anthracene (2,200 ug/kg);
 - o benzo(a)pyrene (1,900 ug/kg);
 - o benzo(b)fluoranthene (2,100 ug/kg);
 - o chrysene (1,300 to 2,300 ug/kg); and/or,
 - o indeno(1,2,3-cd)pyrene (800 ug/kg).
- Metals were detected in each of the sediment samples at concentrations above Part 375 Unrestricted Use (Track 1) SCOs, Part 375 Restricted Use – Residential SCOs, and/or the CP-51 SCLs. The metal exceedances were for:
 - o arsenic (30-44 mg/kg);
 - o barium (490 mg/kg);
 - o chromium (41 mg/kg);
 - o copper (1,000 to 4,200 mg/kg);
 - o iron (58,000 to 65,000 mg/kg);
 - o lead (550 to 980 mg/kg);
 - o mercury (0.4 to 0.5 mg/kg); and/or,
 - o zinc (340 to 550 mg/kg).
- Pesticides were detected in both of the sediment samples at concentrations above Part 375 Unrestricted Use (Track 1) SCOs. The pesticide exceedances were for:
 - o 4,4'-DDE (6.6 ug/kg); and,
 - o 4,4'-DDT (7.7 to 14 ug/kg).
- Total PCBs were detected in one (1) of the two (2) sediment samples at a concentration of 170 ug/kg which is above the Part 375 Unrestricted Use (Track 1) SCO.

The laboratory analytical results indicate that concentrations of detected VOCs and herbicides in the sediment samples do not exceed the Part 375 Unrestricted Use (Track 1) SCOs, Part 375 Restricted Use – Residential SCOs, or the CP-51 SCLs.

Waste Characterization

The two (2) waste characterization samples do not exhibit evidence of hazardous waste characteristics. No detectable concentrations of TCLP VOCs, TCLP SVOCs, TCLP pesticides, TCLP herbicides, or PCBs were present in the waste characterization soil samples. Four (4) TCLP metals, including arsenic, barium, cadmium, and lead, were detected but at concentrations below 6 NYCRR Part 371 and RCRA regulatory levels. TPH-GRO was not detected and the detected concentration of TPH-DRO were 420 mg/kg within WC-01 and 150 mg/kg within WC-02. There is no New York State Department of Environmental Conservation (NYSDEC) standard for TPH-GRO or DRO.

Groundwater

The laboratory results indicate that while metals were detected within the two (2) groundwater samples analyzed, none of the concentrations exceed the NYCDEP Limitations to Sanitary or Combined Sewers or the NYSDEC Division of Water Technical and Operational Series 1.1.1 (TOGS) Ambient Water Quality Standards/Guidance Values. No VOCs, SVOCs, pesticides, herbicides, or PCBs were detected within the two (2) groundwater samples analyzed.

The laboratory results also indicate that groundwater at the Site meets both the NYCDEP Sewer Discharge Criteria Limit (daily limit) for discharge to sanitary or combined sewers and NYCDEP Sewer Discharge Criteria Limit (daily limit) for Effluent to Storm Sewers.

Conclusions

Based on the results of the Phase II SESI, the following conclusions are presented

- Field screening of soils did not identify any visual or olfactory evidence of petroleum impacts or elevated PID readings.
- The Site is underlain by fill materials generally consisting of fine to medium sand with anthropogenic debris consisting of red brick, concrete, glass, and ceramic pieces from grade to 10 ft bgs.
- Subsurface soil samples collected showed concentrations of SVOCs, metals, pesticides, and total PCBs that exceed Part 375 Unrestricted Use (Track 1) SCOs, Part 375 Restricted Use – Residential SCOs, and/or the CP-51 SCLs. These impacts are likely attributed to fill material at the Site and/or the industrial history of the Site and surrounding area.
- Sediment samples collected showed concentrations of SVOCs, metals, pesticides, and total PCBs that exceed soil guidance values Part 375 Unrestricted Use (Track 1) SCOs, Part 375 Restricted Use – Residential SCOs, and/or the CP-51 SCLs. These impacts are likely attributed to erosion of the fill material at the Site and/or the industrial history of the Site and surrounding area.
- The soil at the Site does not exhibit evidence of hazardous waste characteristics.
- Groundwater at the Site contains detectable concentrations of metals at levels below the NYCDEP Limitations to Sanitary or Combined Sewers and the NYSDEC Ambient Water Quality Standards/Guidance Values.

- The groundwater at the Site meets the NYCDEP Sewer Discharge Criteria Limit (daily limit) for discharge to sanitary or combined sewers.
- Based on a comparison of the analytical results, SB-02 and SB-04 are generally more impacted than the remaining on-site soil borings. Both of these borings were advanced on Block 2590, Lot 100.

Recommendations

For the Site to be suitable for proposed development, the following measures are recommended:

- Park development plans should also include a site management plan which details provisions and procedures that will be implemented to prevent exposure of future site worker and future park users to contaminated soil and sediment.
- To prevent exposure for future site recreational users, the site management plan should include a cover or barrier system that would effectively mitigate potential exposure to the contaminated soil.
- Due to the Site being identified as an E-Designated site, engagement with the appropriate City agency (Mayor's Office of Environmental Remediation (OER) or NYCDEP) should be conducted during any future Site work.
- The future construction contract documents should identify provisions and a contingency for managing, handling, transporting and disposing of non-hazardous contaminated soil and sediment. The Contractor should be required to submit a Material Handling Plan to identify the specific protocol and procedures that will be employed to manage the waste in accordance with applicable regulations.
- Due to the presence of SVOCs, metals, pesticides, and Total PCB concentrations above Part 375 SCOs, dust control procedures are recommended during excavation or regrading activities to minimize the creation and dispersion of fugitive airborne dust. The Contractor may implement dust control measures to minimize potential airborne contaminants released as a direct result of construction activities. A Community Air Monitoring Plan (CAMP) should be developed in accordance with NYSDEC Division of Environmental Remediation (DER)-10 Regulations. The CAMP requires real-time monitoring for VOCs and particulates (i.e., dust) at the downwind perimeter of each designated work area when certain activities are in progress at contaminated sites. The CAMP is intended to provide a measure of protection for the downwind community from potential airborne contaminant releases as a direct result of construction or subsurface work activities. Specific requirements should be reviewed for each situation in consultation with New York State Department of Health (NYSDOH) to ensure proper applicability.
- Before beginning any debris removal and any excavation activity, the Contractor should submit a site-specific health and safety plan (HASP) that will meet the requirements set forth by the Occupational, Safety and Health Administration (OSHA), the NYSDOH and any other applicable regulations. The HASP should identify the possible locations and risks associated with the potential contaminants that may be encountered, and the administrative and engineering controls that will be

utilized to mitigate concerns (i.e., dust control procedures for SVOCs, metals and pesticides).

- Dewatering may be necessary during construction activities at the Site. Based on the results of laboratory analyses for NYCDEP sewer discharge criteria, groundwater does not require pre-treatment prior to discharge to sanitary or combined sewers; however, the Contractor may be required to obtain a NYCDEP sewer discharge permit if dewatering is necessary.
- In addition, if discharge into storm sewers or Bushwick Inlet is required during dewatering, it may be done under the appropriate NYSDEC State Pollutant Discharge Elimination System (SPDES) permit. Additional sampling and laboratory analysis may be required to satisfy NYSDEC requirements prior to discharge.

1.0 INTRODUCTION

On behalf of the New York City Department of Design and Construction (NYCDDC), LiRo Engineers, Inc. (LiRo) conducted a Phase II Supplemental Environmental Site Investigation (SESI) of the Motiva Site located at the Bushwick Inlet Park addressed at 56 Quay Street and 1 Franklin Street in Brooklyn, New York (hereinafter referred to as the Site). The Site is proposed to be developed into park land that will be incorporated into the larger Bushwick Inlet Park. The Site is identified as the following parcels of vacant, undeveloped marsh land and water:

- Block 2590, Lot 100, 1 Franklin Street, E Designated for hazardous materials/UST Testing Protocol, E Designation No. E-138, Effective Date: 5/11/2005, Rezoning Name: M3-1. M3 districts are designated for areas with heavy industries that generate noise, traffic or pollutants. Typical uses include power plants, solid waste transfer facilities, and recycling plants, and fuel supply depots. M3 districts are usually located near the waterfront and buffered from residential areas; and,
- Northwest portion of Block 2277, Lot 1, 1-26 North 12th Street, E Designated for hazardous materials/UST Testing Protocol, E Designation No. E-138, Effective Date: 5/11/2005, Rezoning Name: M3-1.

While the Site description has changed since the work plan, was developed, all samples and historical information are still relevant to the development of the Motiva Parcel.

According to New York City Department of Parks and Recreation (NYCDPR), the Site consists of 8.22 acres of which 2.22 acres are upland areas and 6 acres are underwater. Block 2590, Lot 100 (which formerly included a portion of Block 2590, Lot 25 prior to reapportionment) is owned by Greenpoint Monitor ME/Motiva Enterprises, LLC. Block 2277, Lot 1 is occupied by Bayside Fuel Oil and is currently owned by North 12th Street Properties. The northwest portion of Block 2277, Lot 1 that is included as part of the Site is undeveloped and is covered with overgrown vegetation and rip-rap covered shoreline.

The Phase II SESI was completed to assess Recognized Environmental Conditions (RECs) identified during the Phase I Environmental Site Assessment (ESA) completed by LiRo and dated February 4, 2014. Specifically, the Phase II SESI was performed to assess the RECs in the shallow subsurface areas to add to the assessment that was performed in the past in the deeper subsurface. The Phase II SESI was performed on March 23, 24, and 30, 2015 by Ms. Eva Jakubowska of LiRo. Associated Environmental Services, Limited (AES) of Hauppauge, New York was the drilling contractor. A topographic Site Location Map is presented as Figure 1. A Site Plan is presented as Figure 2.

1.1 Recognized Environmental Conditions and Environmental Issues

The Phase I ESA Report prepared by LiRo and dated February 4, 2014 identified RECs and/or potential environmental issues and provided further recommendations for additional environmental Site assessment to better define areas of potential environmental liability associated with the Site. Based on the results of the Phase I ESA, LiRo identified the following RECs and/or potential environmental issues.

On-Site

- The Site includes three (3) Block and Lot parcels identified as E Designated (E-138) by New York City Department of City Planning (NYCDCP) on May 11, 2015. The three (3) E Designated parcels are identified as being rezoned as M3-1. M3 districts are designated for areas with heavy industries that generate noise, traffic or pollutants. Typical uses include power plants, solid waste transfer facilities, and recycling plants, and fuel supply depots. M3 districts are usually located near the waterfront and buffered from residential areas. Block 2277, Lot 1 and Block 2590, Lot 100 (which formerly included a portion of Block 2590, Lot 25 prior to reapportionment) are E Designated for UST Testing Protocol. While there was no evidence of tanks observed on the portions of the lots that occupy the Site, these E Designated listings are considered a REC due to the potential for petroleum contamination to have impacted the subsurface of the Site.
- Block 2277, Lot 1 is currently a bulk oil storage facility identified in the regulatory records as a generator of hazardous waste, Chemical Bulk Storage (CBS) facility, MOSF, along with the E Designation for UST Testing Protocol. Past occupants of this parcel were identified as Astral Oil Works, Standard Oil Company – Pratt Works, Paragon Oil - A Division of Texaco, Inc., and Bayside Fuel Oil, which date back to the 1800s. Although the majority of these activities took place in the southern portion of Block 2277, Lot 1, the potential impacts to the Site, which is the northern portion of Block 2277, Lot 1, must be considered a REC due to the close proximity and the nature of the operations. According to the Bayside Fuel Oil Cost To Cure (CTC) Report prepared by Metcalf and Eddy, dated June 2007, petroleum and coal tar contamination plumes on the Bayside Fuel Oil site may have impacted the southern portion of Block 2277, Lot 1.
- Block 2590, Lot 100 (which formerly included a portion of Block 2590, Lot 25 prior to reapportionment) were historically utilized by various industrial operations including a grain company, dock yard/ship yard, Union Gas Company, Spencer Paint and Varnish, Simpson Chemical Corporation, and Heyward Paint and Varnish Company from the late 1880s through the 1950s. The Site's industrial history is considered a REC due to the potential for undocumented releases to have impacted the subsurface of the Site.

- The previous studies reviewed dating from 2001 through 2007 have identified petroleum impacted and contaminated soils, sediments, and groundwater in and around Bushwick Creek Inlet at depths ranging from approximately 9 feet below grade surface (ft bgs), up to 62 ft bgs. No on-site shallow soil or sediment samples (grade to 5 ft bgs) were collected; however, elevated photo-ionization detector (PID) readings and petroleum odors were detected during Field screening of soils during the subsurface investigations. The presence of these contaminants is considered a REC.
- Based on the prevalence of historical fill in NYC, the Site was likely filled with urban fill in the late 1800's/early 1900's. According to the previous reports, urban fill is located at the Site at depths ranging from 11 to 19 ft bgs. Urban fill is considered a REC due to the potential presence of elevated concentrations of semi-volatile organic compounds (SVOCs) and metals in the subsurface at the Site.
- The Site includes various piles of debris, including wood, mattresses, plastic and glass bottles, brick, concrete, glass, slag metal, roofing materials, and coal. This debris is considered an environmental issue.
- The Bushwick Inlet portion of the Site is identified as a national wetland (E1UBL) while the entire Site is located within the limits of 100-year and 500-year flood zones (Map Panel ID 36049705202F, Zones AE [EL10] and Zone X). The presence of an on-site wetland and flood zones is considered an environmental issue.

Off-Site

The area surrounding the Site is characterized by various operations of potential environmental concern including the following:

- Gasoline stations (north of Site along West Street, northeast of Site at the southwest corner of Quay Street and Franklin Street, and east of the Site at the corner of Franklin Street and North 15th Street) from at least 1942 through the present;
- Auto repair facilities (north of Site along Quay Street and West Street and east of Site along Franklin Street and North 14th Street) from at least 1942 through the present; and,
- Freight companies (north of Site along Quay Street and West Street) from at least 1978 through the present.

Potential environmental concerns of historical off-site property uses include the following:

- Foundries (northeast of Site along Quay Street and Franklin Street) from at least 1887 through at least 1951;
- Manufacturers (chair factory [northeast of Site along Quay Street] in at least 1887, piano manufacturer [northeast of Site along Quay Street] from at least 1905 through at least 1916, steam forge/boiler manufacturer [northeast of Site along Franklin Street] from at least 1905 through at least 1916, etc.);
- A Manufactured Gas Plant (MGP) (southeast of Site along Kent Avenue and 12th Street) in the late 1800's and early 1900s;

- Shipping yards (north of Site along Quay Street and West Street) from at least 1905 through at least 1951; and,
- A welding company (north of Site along West Street) in at least 1951.

Based on previous studies discussed in Section 1.2, some of these surrounding industrial operations are suspected to have resulted in impacts to the soil, sediment, and groundwater in and around Bushwick Creek. Shallow and deep petroleum contamination was identified near the Bayside Oil aboveground storage tanks (ASTs) adjacent to the Site and previous investigations identified petroleum and coal tar contamination plumes within deeper subsurface soils that appear likely to impact the southern portion of the Site. Therefore, these nearby industrial operations were considered RECs.

Based on the findings of the Phase I ESA and previous subsurface investigations completed on the Site and surrounding area, contaminated soil, sediments, and groundwater are known to be present at depth (generally in the range of 9 to 62 ft bgs) on-site. However, no shallow soil or sediment sampling data had been obtained and no groundwater data was available from the northern and eastern portions of the Site. Because the proposed Site redevelopment plan will involve potential exposure to shallow soil/sediment during construction of park structures (i.e., boat ramp, walkway, etc.), a supplemental Phase II ESI consists of shallow soil and sediment sampling and groundwater sampling was recommended by LiRo.

1.2 Prior Reports

LiRo was provided with the following list of prior reports that were prepared for the Site.

- *Environmental Site Assessment Report, Motiva Enterprises LLC, Former Star Enterprise Surplus Property – Bushwick Inlet, Brooklyn, Kings County, New York 11211*, prepared by Newfields, LLC (Newfields) and dated July 2001;
- *Phase I Environmental Site Assessment, Former Star Enterprises – Bushwick Inlet Site, 56 Quay Street and 1 Franklin Street, Borough of Brooklyn, Kings County, New York*, prepared by Ecosystems Strategies, Inc. (E.S.I.) and dated June 18, 2004;
- *Site Investigation Report, Motiva Enterprises LLC – Bushwick Creek Inlet, Kent Avenue between South Shoreline of Bushwick Creek and Quay Street, Block 2590, Lot 25 and 100, Brooklyn, New York*, prepared by Metcalf and Eddy and dated November 2006;
- *CTC Report, Parkland, Motiva Enterprises LLC – Bushwick Creek Inlet, Kent Avenue between South Shoreline of Bushwick Creek and Quay Street, Block 2590, Lot 25 and 100, Brooklyn, New York*, prepared by Metcalf and Eddy and dated August 2007, and,
- *CTC Report, Parkland, Greenpoint Monitor Museum, South Shoreline of Bushwick Creek, 1 Franklin Street and 56 Quay Street, Block 2590, Lots 25 and 100 (Partial Lots), Brooklyn, New York*, prepared by Metcalf and Eddy and dated August 2007.

LiRo was also provided with the following list of prior reports that were prepared for the adjacent properties.

- *Phase II Baseline Environmental Site Assessment Report, Bayside Fuel Oil Depot, 1-65 North 12th Street, Brooklyn, New York*, prepared by TRC Environmental Corporation (TRC) and dated November 2002;
- *Phase I Environmental Site Assessment, Proposed Williamsburg Park, Brooklyn, New York*, prepared by Philip Habib and Associates (PH&A) and dated November 21, 2003 (the study included the Site and a larger area); and,
- *CTC Report, Parkland, Bayside Fuel Oil Company, 1-65 North 12th Street, Block 2277, Lot 1, Brooklyn, New York*, prepared by Metcalf and Eddy and dated June 2007.

A summary of each of these reports is as follows.

Environmental Site Assessment Report – Motiva Enterprises, LLC, July 2001

In July 2001, an ESA report was prepared by Newfields, LLC (Newfields) of Moorestown, New Jersey for the Site (the exact boundaries of the “site” included within this previous study is not clear). Based on this ESA, no further investigation was proposed for the Site. However, the ESA identified the following:

- The south adjacent property, Bayside Fuel Oil, is currently and has historically been utilized as a petroleum bulk storage facility;
- The Site was formerly owned by Paragon Oil - A Division of Texaco, Inc., which was the same owner as the Bayside Fuel Oil site. Newfields indicated that the Site was never used for petroleum storage like the south adjacent Bayside Fuel Oil property;
- The Site was filled with construction-type material in the early 1900s. Concrete, cinder blocks, brick, and wood were noted within the on-site soils at the time of Newfields inspection; and,
- The south adjacent Bayside Fuel Oil site is included as a New York State Department of Environmental Conservation (NYSDEC) Spill No. 9804544 which resulted in groundwater contamination. Groundwater sampling from these wells in 1998 and 2000 indicated no petroleum hydrocarbon constituents above NYSDEC groundwater quality standards with the exception of Methyl Tertiary Butyl Ether (MTBE) in one (1) of the wells. MTBE was reported slightly above the applicable standard. Monitoring wells located along the northern edge of this adjacent property suggest that groundwater flow in this area is to the southwest, away from the Site.

Phase II Baseline Environmental Site Assessment Report – Bayside Fuel Oil Depot, November 2003

TRC of Lyndhurst, New Jersey completed a Phase II Baseline ESA of the Bayside Fuel Oil facility in November 2002. TRC reported that the Bayside site was utilized as a petroleum distillation operation and a commercial fuel supplier for many years.

Williamsburg Works, a MGP, was also identified as being located south of the Bayside site. This report also indicated that a mantle of waste fill containing coal, ash, cinders, brick, wood, etc. (i.e., historic fill) intermixed with a sandy matrix cover the Bayside site and much of the surrounding area.

The baseline investigation included the advancement of 27 soil borings and 16 monitoring wells. A total of more than 80 soil samples were collected along with a total of 16 groundwater samples were collected. The investigation identified petroleum-impacted soils and groundwater throughout the entire Bayside site, particularly in the area of ASTs. In addition, two (2) areas were identified to include thin layers of free product ranging from 0.04 to 0.1 feet in thickness during the 2002 Baseline ESA and from 0.11 to 0.9 feet in thickness in 2001. Visual evidence of petroleum impacts to soil were observed from just below the ground surface to more than 20 ft bgs in some areas. In addition, the Bayside site was noted to be impacted with coal tar residual and dense non-aqueous product.

The majority of the 27 soil borings and 16 monitoring wells were advanced far south of the Motiva Site with the exception of three (3) soil borings (B-12, B-21, and B-24) and one (1) monitoring well (MW-5). These locations were near the southerly limits of the Motiva Site. Three (3) shallow samples (0-5 ft bgs) were collected from these borings and analyzed for metals only. Concentrations of metals exceeding Technical and Administrative Guidance Memorandum (TAGM) was reported from 0-2 ft bgs within B-24 and from 0-4 ft bgs within B-12 and B-21. Concentrations of volatile organic compounds (VOCs) and SVOCs exceeding TAGM were reported within B-12 in a sample collected from 4 to 8 ft bgs.

Phase I ESA – Proposed Williamsburg Park, November 2003

PH&A of New York, New York completed a Phase I ESA in November 2003. This study included Block 2277, Lot 1, Block 2287, Lots 1, 16, and 30, Block 2294, Lots 1 and 5, Block 2301, Lots 1, 50, 60, and 70, Block 2590, Lots 25 and 100. Based on this Phase I ESA, Blocks 2590-25 and 100 were historically utilized as a ship yard and dry dock facility. Block 2277-1 was identified as historically housing, but not limited to, the Standard Oil Company, Pratt Works (oil distillery and tin can factory), Paragon Oil, Division of Texaco, Inc. Multiple oil tanks were identified as historically being located on this parcel.

Based on this report, the Site was identified as being located within what was historically known as one (1) of the most industrialized areas of New York City. Including the bulk oil storage facility located at Block 2277, Lot 1, a nearby property was identified as a former coal gasification plant. These types of operations, among others in the area, are known to result in releases to the surrounding soils and/or groundwater. Phase II sampling previously conducted on Block 2277, Lot 1 identified significant levels of contamination.

Based on the nature of the on-site and surrounding operations, PH&A recommended that further sampling and delineation be completed along with any necessary remediation.

Phase I ESA – Former Star Enterprises, June 2004

E.S.I. of Poughkeepsie, New York completed a Phase I ESA in June 2004 which included a review of the 2001 ESA and a review of the Corrective Action Plan (CAP) for the “Bayside Fuel Oil Corporation” Site (Block 2277, Lot 1), currently known as Bayside Fuel Oil. Based on this Phase I ESA, soil and groundwater screening conducted during the Phase II found evidence of soil and groundwater contamination by petroleum products along the southern side of Bushwick Inlet. In addition, it was concluded that tidal forces in Bushwick inlet have a significant effect on the groundwater flow direction in the area. A Phase I and Phase II investigation conducted in May 2002 at the Bayside property also identified significant contamination at that site to a depth of 20 ft bgs. Free product and MTBE were identified within monitoring wells at that time.

E.S.I. concluded that provided the Site remains as passive open space, impacts in Bushwick Creek would not affect the Site.

Site Investigation Report – Motiva Enterprises, LLC, November 2006

This Site Investigation (SI) report was prepared by Metcalf and Eddy of Bridgewater, New Jersey at the request of the NYCDDC. One (1) acre of Block 2590, Lots 25 and 100 was proposed to be developed with the Greenpoint Monitor Museum while the remainder of the site was proposed to be developed into Williamsburg Park. The SI was conducted to determine the lateral and vertical extent of potential contamination in subsurface soil and sediment at the site due to historic and current on-site and off-site operations.

The SI included a review of a Phase I ESA completed in November 2003 by Fleming-Lee Shue, Inc. (FLS). (A copy of this November 2003 Phase I ESA by FLS was not provided to LiRo for review.) The Phase I ESA identified potential sources of impacts to the site to include a former nearby MGP, the on-site ship yard, and the oil storage facility located at Block 2277, Lot 1.

The Metcalf and Eddy SI included eight (8) soil borings along the shoreline of Bushwick Creek Inlet to a depth of 45 to 72 ft bgs and 11 sediment borings within the inlet at depths ranging from 35 to 54 ft below the mud line. Eighteen (18) soil samples were collected from the shoreline borings while 22 sediment samples were collected. The soil samples were collected from 9 to 69 ft bgs while the sediment samples were collected from 6 to 50 ft below the mudline. No groundwater samples were collected during this SI; however, Metcalf and Eddy indicated that based on groundwater data collected during a previous investigation at Block 2277, Lot 1, groundwater flow is generally north and northwest.

Based on the findings of the Metcalf and Eddy SI, the following conclusions are relevant to this current Motiva Site Phase I ESA.

- Petroleum odors were encountered within the three (3) borings located closest to Block 2277, Lot 1 (BC-1 through BC-3) from 5 to 27 ft bgs. Petroleum odors were encountered within eight (8) of the 22 sediment borings from 4 to 22 ft below the mud line.
- VOCs were detected above Technical and Administrative Guidance Manual (TAGM) and/or Spill Technology and Remediation Series (STARs) at deeper depths ranging from 9 to 21 ft bgs in three (3) of the 18 soil samples collected and from 8 to 26 ft bgs within nine (9) of the 22 sediment samples.
- SVOCs were detected above TAGM and/or STARs at deeper depths ranging from 9 to 62 ft bgs in six (6) of the 18 soil samples and from 6 to 26 ft bgs in 11 of the 22 sediment samples collected.
- Metals were detected above NYSDEC Recommended Soil Cleanup Objectives (RSCO) and Eastern US Background Criteria at deeper depths ranging from 9 to 62 ft bgs in 16 of the 18 soil samples and from 6 to 52 ft bgs in all of the sediment samples collected.

Metcalf and Eddy concluded that the detection of VOCs and SVOCs is likely the results of releases at the Bayside facility located at Block 2277, Lot 1 and/or the former nearby MGP. SVOCs may also be due to historic fill at the site. The detection of metals is likely the result of historic fill material at the site and/or undocumented discharges from historic industrial activities along the East River.

CTC Report – Parkland, Motiva Enterprises, LLC/Bushwick Creek Inlet, August 2007

Metcalf and Eddy prepared this CTC report at the request of the NYCDDC to provide an order of magnitude cost estimate to remediate contaminated soil and groundwater that may be encountered as part of the re-development of Block 2590, Lots 25 and 100 as a park with recreational boat launch. This CTC report was based on the findings of the SI prepared by Metcalf and Eddy summarized above.

The CTC report included the preparation of a Conceptual Site Plan by Metcalf and Eddy. In general, the Conceptual Site Plan for the site identified the future use as a park with boat launch for privately-owned boats to enter the East River and would include asphalt paved areas, a ramp into the water, one (1) small support building, and general open space. The conceptual remedial measures would include excavation and off-site disposal of contaminated historic fill. Metcalf and Eddy assumed that this fill would generally include petroleum contaminated non-hazardous soils. Dewatering was anticipated to be minimal. Metcalf and Eddy assumed that the entire site would be capped with a minimum of 2 feet of clean fill or 1 foot of pavement to act as an impermeable barrier to reduce potential employee, visitor, or trespasser contact with contaminated historic fill and petroleum contamination detected in the soil.

Based on the Conceptual Site Plan and the assumptions made by Metcalf and Eddy, the remedial cost estimate/CTC for the site was calculated to be \$1,845,000.

CTC Report – Parkland, Bayside Fuel Oil Company, June 2007

Metcalf and Eddy prepared this Bayside CTC report at the request of the NYCDDC to provide an order of magnitude cost estimate to remediate contaminated soil and groundwater that may be encountered as part of the re-development of Block 2277, Lot 1 as a park. This CTC report only addresses the upland portion of this parcel and was based on the findings of the SI prepared by Metcalf and Eddy and dated October 2006. A copy of the Bayside Fuel Oil Company October 2006 SI by Metcalf and Eddy was not provided to LiRo for review.

The Metcalf and Eddy CTC reported that 43 soil samples had been collected during the 2006 SI of the Bayside site. None of the samples, however, were collected in the shallow (upper 5 feet) soil zone, Metcalf and Eddy concluded that widespread contaminated fill was present from a depth of 6 ft bgs to 16 ft bgs and that petroleum impacts were detected within the soils from the ground surface to 25 ft bgs. Metcalf and Eddy also reported that MGP coal-tar contamination was present at the Bayside site, mostly occurring at a depth of greater than 25 ft bgs. The CTC Report developed contaminant plume maps for the coal tar and petroleum contamination. The plume maps presented in the report indicate that these plumes are likely to impact the southern portion of the Site.

Concentrations of VOCs, SVOCs, and metals that exceeded TAGM and/or Spill Technology and Remediation Series (STARS) were also detected in the groundwater samples collected at the Bayside site. Four (4) of the monitoring wells installed at the Bayside site, MW-1, MW-3, MW-5, and MW-28, were installed near the southerly limits of the Motiva Site. VOC exceedances were detected within MW-1 and MW-5 while metals exceedances were detected within MW-1, MW-3, MW-5, and MW-28. Due to the proximity of these monitoring wells to the Motiva Site, these impacts could impact the Site also.

Based on the Conceptual Site Plan and the assumptions made by Metcalf and Eddy, the remedial cost estimate/CTC for the site was calculated to be \$6,000,000.

CTC Report – Parkland, Greenpoint Monitor Museum, August 2007

Metcalf and Eddy prepared this CTC report at the request of the NYCDDC to provide an order of magnitude cost estimate to remediate contaminated soil and groundwater that may be encountered as part of the re-development of Block 2590, Lots 25 and 100 (partial lots) as a museum. This CTC report only addresses the upland portion of this parcel and was based on the findings of the SI prepared by Metcalf and Eddy and dated October 2006. A copy of this October 2006 SI by Metcalf and Eddy was not provided to LiRo for review.

This site was used for the loading and off-loading of petroleum products from the petroleum bulk storage facility located to the south, which has been utilized as such for at least 100 years. Another property of potential environmental concern was identified to be the former MGP, which was located further south.

Based on a summary of the 2006 Metcalf and Eddy subsurface investigation, four (4) soil samples were collected from two (2) soil borings. These samples were collected from 13 to 62 ft bgs. No groundwater samples were collected during this SI.

Based on the findings of the Metcalf and Eddy SI, the following conclusions are relevant to the Motiva Site Phase I ESA.

- While SVOCs, predominantly PAHs, were detected in three (3) of the four (4) soil samples collected from the shoreline, none of the detections were above TAGM criteria. Based on the presence of PAHs, the concentrations are likely associated with contaminants in historic fill placed at the site.
- Metals, likely also attributed to historic fill placed at the site, were detected from 13 to 62 ft bgs in all four (4) soil samples at concentrations above RSCOs or Eastern United States Background criteria.
- No VOCs or PCBs were detected in the samples at concentrations above TAGM criteria.

Based on the Conceptual Site Plan and the assumptions made by Metcalf and Eddy, the remedial cost estimate/CTC for the site was calculated to be \$700,000.

A copy of the above previous studies was included within the Phase I ESA completed by LiRo and dated February 4, 2014.

2.0 SITE DESCRIPTION

2.1 Site Location and Description

The Site is known as the Motiva Site – Bushwick Inlet Park located at 56 Quay Street and 1 Franklin Street in Brooklyn, New York. The Site is identified as the following.

Address	Block-Lot	Former Owner	E Designation
1 Franklin St.	Portion of 2590-100	Greenpoint Monitor ME/ Motiva Enterprises, LLC	E Designation (E-138, effective 5/11/2005) for Hazardous Materials/UST Testing Protocol; rezoned M3-1
1-26 North 12 th St.	Northwestern portion of 2277-1	North 12 th Street Properties	E Designation (E-138, effective 5/11/2005) for Hazardous Materials/UST Testing Protocol; rezoned M3-1

Notes:

*The parcel sizes are based on Automated City Register Information System (ACRIS) property boundaries, general Site drawing provided by the NYCDGP, and Computer Aided Design and Drafting (CADD) calculations by LiRo.

The majority of Block 2277, Lot 1, which is located south and southeast of the Site, is currently occupied by Bayside Fuel Oil, a MOSF. Bayside Fuel Oil tanks are to be cleaned and decommissioned upon completion of sale and property transfer of the parcel which is tentatively scheduled for 2015. The Site measures 8.22 acres, 2.22 acres of which are upland area and 6 acres are underwater. The Site is situated in an area characterized by industrial and commercial uses.

The Site is vacant land and is partially submerged beneath the Bushwick Inlet. The shoreline is covered with rip-rap. The Site is overgrown with vegetation and includes various piles of debris scattered throughout. One (1) dock, a boat launch, and evidence of former docks were noted on-site. According to the regulatory records and documents obtained through the New York City Department of Environmental Protection (NYCDEP) Environmental Requirements under the City Environmental Quality Review (CEQR), the Site is identified in the E Designation database with three (3) separate listings. The E Designation listings are due to rezoning of the parcels.

The Site is located within an area that is provided with all public utilities including sewer, water, natural gas, electric, telephone, etc.

The Site is bounded by the MTA Mobile Washing Unit facility to the north, Bayside Fuel Oil facility and tanks to the south, various commercial and industrial facilities to the east, and the East River to the west. A topographic Site Location Map is presented as Figure 1 and a Site Plan is presented as Figure 2.

2.2 Physical Setting

2.2.1 Topography

Based on a review of the United States Geological Survey (USGS) 7.5-Minute Quadrangle Map, Brooklyn, New York, dated 1979, the topographic elevation of the Site is approximately 0 to 10 feet above mean sea level (MSL). The topography of the immediate Site area slopes downward to the west. According to the USGS Brooklyn Quadrangle map, the land portion of the Site is approximately 5 to 10 feet higher than Bushwick Inlet which is bounded by deteriorated wooden bulkheads and dock structures. A copy of the topographic map is presented in Figure 1.

2.2.2 Geology

Brooklyn is located within Kings County, New York. Physiographically, Kings and Queens Counties are part of the Long Island Hydrogeologic System. In a roughly north-south cross section, the geology can be characterized as a wedge-shaped layer of Cretaceous and Pleistocene age sedimentary deposits, thickening to the south-southeast. Several impermeable clay layers are located within these sedimentary deposits, generally creating three (3) distinct aquifers. Potable water is primarily withdrawn from the deepest of these aquifers in southeastern Kings and Queens Counties; groundwater is the sole source of drinking water for Nassau and Suffolk Counties and is protected as such in Kings and Queens Counties. However, the potable water supply for NYC municipal water system is primarily withdrawn from the Catskills Reservoir in Upstate New York. Therefore, the actual potable water supply for the Corridor actually comes from the NYC municipal water system. Bedrock is of Precambrian and Paleozoic age. The thickness of the unconsolidated sediment ranges from 0 to approximately 1,300 ft bgs from north to south. Outcrops of metamorphic bedrock can be found along the northwest portions of Queens. The uppermost unconsolidated unit consists of Pleistocene glacial till and moraine deposits in the northern portions of the Queens and Kings Counties and glaciofluvial sediments derived from melt-water of the retreating glaciers to the south. These deposits constitute the Upper Glacial Aquifer.

The Cretaceous age sediments are characterized by three (3) periods of deposition separated by periods of erosion. The lowermost unit, known as the Raritan Formation, was formed by streams and coalescing delta deposits. The formation has been divided into two (2) units, the Lloyd Sand Member and a conformable overlying clay unit (the Raritan Confining Unit).

The Magothy Formation was deposited in an environment dominated by streams and coalescing deltas. The coarse basal unit indicates an environment of high energy that decreases rapidly, resulting in deposition of finer sands and silts that make up the majority of the formation.

Several episodes of Pleistocene glaciation by a southward advance from New England and the Hudson River valley eroded the Cretaceous deposits. The unconformity that extends across most of Queens and Kings Counties between the Cretaceous deposits and the overlying sediment, represents glacial scouring and glaciofluvial activity. Evidence of ice contact with the underlying Cretaceous deposits is absent in the southern portion of Queens and Kings Counties, indicating the southernmost limit of the advancing ice sheets.

The oldest Pleistocene deposit, represented only on western Long Island and Queens and Kings Counties is the Jameco Gravel (Jameco Aquifer). It is a channel filling of gravel and coarse sands which may represent a paleo Hudson River.

The terminal moraine of the last glacial advance is represented by the Harbor Hill Moraine. The Moraine trends southwest to northeast through central Kings and Queens Counties. The moraine deposits consist of poorly sorted silts, clays, sands and boulders and form the topographic highs in the area.

Based on the observations made during the LiRo Phase II SESI, the subsurface soils were found to consist of 5 to 10 feet of fill materials across the Site. The fill materials generally consist of fine to medium sand with anthropogenic debris consisting of red brick, concrete, glass, and ceramic pieces.

2.2.3 Hydrology

The first unconfined aquifer encountered is the upper glacial aquifer. The depth to the water table varies but generally follows topography. Closer to sea level, groundwater depths can occur 5 to 10 ft bgs. Generally, groundwater flow follows topographic elevation of the area with flow migrating from higher to lower elevations.

A portion of the Site is covered by Bushwick Inlet which is part of the East River located west adjacent to the Site. The depth to groundwater at the Site was between 4 and 8 ft bgs. Groundwater flow direction at the Site likely varies from southwest to north-northwest toward Bushwick Inlet. This variation in groundwater flow and/or variations in groundwater level are due to tidal fluctuations, seasonal fluctuations in precipitation, local usage demands, geology, underground structures, or dewatering operations.

Based upon the information supplied through the Environmental Data Resources, Inc. (EDR) of Shelton, Connecticut Radius Map Report, the northern portion of the Site is not identified within the limits of state or national wetland areas; however, the Bushwick Inlet portion of the Site is identified as a national wetland (E1BUL). No state wetlands are identified within the view limits of the Detail Map within the EDR report.

The Site is located within the limits of 100-year and 500-year flood zones (Panel No. 3604970202F, Zones AE [EL10] and Zone X), based on the EDR Radius Map Report, Detail Map.

3.0 DESCRIPTION OF FIELD ACTIVITIES

To address the RECs identified at the Site, LiRo completed a SESI on March 23, 24, and 30, 2015 which included the following efforts:

- The advancement of eight (8) soil borings, three (3) to a depth of 6 ft bgs (SB-01, SB-02, and SB-08) and five (5) to a depth of 5 ft bgs (SB-03 through SB-07). A total of two (2) soil samples were collected from each of the eight (8) soil borings;
- The collection of two (2) shallow sediment samples at a depth of 6 inches bgs;
- Laboratory analysis of the soil and sediment samples for Target Compound List (TCL) volatile organic compounds (VOCs) via United States Environmental Protection Agency (USEPA) Method 8260B; TCL SVOCs via USEPA Method 8270C; Target Analyte List (TAL) metals via USEPA Method 6010/20/7000; Pesticides via USEPA Method 8081A/608; Herbicides via USEPA Method 8151A; and, Polychlorinated Biphenyls (PCBs) via USEPA Method 3550B/8082;
- The collection of two (2) waste characterization composite soil samples which were analyzed for: (1) the USEPA Full Toxicity Characteristics Leaching Procedure (TCLP) parameters, including PCBs; (2) the Resource Conservation and Recovery Act (RCRA) Characteristics (ignitability, reactivity, and corrosivity); and, (3) Total Petroleum Hydrocarbons Diesel Range Organics/Gasoline Range Organics (TPH DRO/GRO);
- The installation of two (2) monitoring wells to 20 ft bgs within SB-01 and SB-02 (MW-01 and MW-02, respectively) and the collection of groundwater samples from each of the monitoring wells. While a third monitoring well was proposed to be installed, access restrictions to the proposed location prevented the installation; and,
- Laboratory analysis of the groundwater samples for TCL VOCs via USEPA Method 8260B; TCL SVOCs via USEPA Method 8270C; TAL metals via USEPA Method 6010/20/7000; Pesticides via USEPA Method 8081A/608; Herbicides via USEPA Method 8151A; and, PCBs via USEPA Method 3550B/8082. One (1) of the two (2) groundwater samples (MW-02) was analyzed for the New York City Department of Environmental Protection (NYCDEP) Sanitary or Combined Sewer Discharge Parameters.

The scope and methods used for the various field activities are documented below.

3.1 Supplemental Subsurface Soils and Sediment Investigation

A soil and sediment sampling program was conducted as part of this Supplemental Phase II SESI. Soil and sediment samples were collected to assess the RECs and/or environmental issues identified during the Phase I ESA. Figure 3 presents the soil and sediment sample locations.

As part of this Phase II SESI, subsurface soil and sediment sampling was performed on March 23, 24, and 30, 2015. AES of Hauppauge, New York, was the drilling contractor. Due to the shallow nature of the borings, each soil boring was hand cleared to 5 or 6 ft bgs using post hole digger and/or air knife. Two (2) sediment samples were also collected by using dedicated disposable sampling scoops. A description of the soils retained was logged by a qualified scientist and the soils were monitored in the field for the presence of VOCs with a PID. The maximum PID responses for the corresponding sample locations are shown on Table 1.

SB-01 and SB-02 were advanced by hand to 6 ft bgs while SB-03 through SB-07 were advanced to 5 ft bgs. The two (2) sediment samples (SED-01 and SED-02) were advanced by hand to 6 inches bgs. Borings SB-01 and SB-02 were also converted into monitoring wells while SB-03 through SB-08 were backfilled and patched to match the surrounding materials. Since all the borings were advanced in unpaved or gravel areas, there was no concrete or asphalt patching. The soil and sediment samples were collected, properly cooled, and packaged to prevent breakage, and forwarded via courier to Con-Test Analytical Laboratory in East Longmeadow, Massachusetts, which is a New York State Department of Health (NYSDOH) Environmental Laboratory Approval Program (ELAP)-certified analytical laboratory. Standard chain-of-custody procedures were followed.

One (1) composite soil sample was collected from each soil boring location for analysis of SVOC, metals, pesticides, herbicides, and PCBs. The eight (8) composite samples were collected by taking soil retrieved with the entire boring and mixing them in stainless steel bowls using stainless steel utensils. The bowls and utensils were then decontaminated using a deionized water andalconox soap bath and then rinsed with deionized water. Grab VOC samples were generally collected from the 6-inch interval just above the groundwater table of each boring.

Two (2) composite waste characterization soil samples (WC-01 and WC-02) were collected from the eight (8) soil borings advanced at the Site. These waste characterization composite samples were collected as follows:

- o WC-1: composited of soil aliquots from borings SB-01 through SB-05 (grade to bottom).
- o WC-2: composited of soil aliquots from borings SB-06 through SB-08 (grade to bottom).

3.2 Groundwater Investigation

A groundwater sampling program was conducted as part of the Supplemental Phase II SESI. Groundwater samples were collected to assess the RECs and/or environmental issues identified during the Phase I ESA. Figure 3 presents the groundwater sample locations.

Groundwater sampling was completed on March 30, 2015. Groundwater monitoring wells (MWs) constructed of 2-inch PVC casing and a 10-foot long screen were installed to a depth of 20 ft bgs. These MWs were installed within SB-01 and SB-02 (MW-01 and MW-02, respectively) which are located in the area of the proposed support building and dock. While a third MW was proposed to be installed, access restrictions to the proposed location prevented this well from being installed. The groundwater samples were collected using a dedicated bailer. Prior to groundwater sampling, the newly installed MWs were developed by LiRo and then purged of three well volumes. Field observations indicated that groundwater sample turbidity was low after purging. Two (2) groundwater samples were collected from MWs at boring locations SB-01 and SB-02.

The groundwater samples were analyzed for: TCL VOCs via USEPA Method 8260B; TCL SVOCs via USEPA Method 8270C; TAL metals via USEPA Method 6010/20/7000; Pesticides via USEPA Method 8081A/608; Herbicides via USEPA Method 8151A; and, PCBs via USEPA Method 3550B/8082. One (1) of the two (2) groundwater samples was also analyzed for the NYCDEP Sanitary or Combined Sewer Discharge Parameters.

4.0 FINDINGS

This section discusses the analytical data and findings for the activities discussed in Section 3.0. Tabulated laboratory results are presented in Appendix A. Boring logs and well installation records can be found in Appendix B. Complete analytical data reports are included in Appendix C. The following tables summarize the soil, sediment, and groundwater analytical results and field measurements collected during the field activities.

Table 1. Soil and Sediment Sample Analytical Results and Field Measurements

Boring No.	Sample ID	PID (ppm)	Sample Interval (ft bgs)	Total VOCs (ug/kg)	Total SVOCs (ug/kg)	Metals Exceed (Yes/No) ¹	Total Pesticide (ug/kg)	Total Herbicide (ug/kg)	Total PCBs (ug/kg)	Total Depth (ft bgs)
SB-01	SB-01-5.5-6	<1	5.5-6	ND	NA	NA	NA	NA	NA	6
	SB-01-COMP		Composite	NA	7,550	Yes	650	ND	500	
SB-02	SB-02-5.5-6	<1	5.5-6	ND	NA	NA	NA	NA	NA	6
	SB-02-COMP		Composite	NA	127,260	Yes	1,280	73	13,200	
SB-03	SB-03-3.5-4	<1	3.5-4	28	NA	NA	NA	NA	NA	5
	SB-03-COMP		Composite	NA	10,660	Yes	ND	ND	ND	
SB-04	SB-04-3.5-4	<1	3.5-4	ND	NA	NA	NA	NA	NA	5
	SB-04-COMP		Composite	NA	32,940	Yes	5,100	ND	1,100	
SB-05	SB-05-4.5-5	<1	4.5-5	ND	NA	NA	NA	NA	NA	5
	SB-05-COMP		Composite	NA	42,590	Yes	21	ND	ND	
SB-06	SB-06-4.5-5	<1	4.5-5	ND	NA	NA	NA	NA	NA	5
	SB-06-COMP		Composite	NA	8,760	Yes	103	ND	520	
SB-07	SB-07-4.5-5	<1	4.5-5	ND	NA	NA	NA	NA	NA	5
	SB-07-COMP		Composite	NA	96,500	Yes	ND	ND	150	
SB-08	SB-08-4.5-5	<1	4.5-5	198	NA	NA	NA	NA	NA	6
	SB-08-COMP		Composite	NA	31,580	Yes	ND	ND	730	
SED-01	SED-01(0-6)	<1	0-6 inches	ND	27,620	Yes	56	3,700	ND	6 inches
SED-02	SED-02(0-6)	<1	0-6 inches	10	11,030	Yes	26	15,000	170	6 inches

Notes:

PID – Photo-ionization Detector

ppm – parts per million

ug/kg – micrograms per kilogram

1. Metal(s) exceeds Part 375 Unrestricted Use (Track 1) Soil Cleanup Objectives (SCOs), Part 375

Restricted Use - Residential (Track 2) SCOs, and/or CP-51 Soil Cleanup Levels (SCLs).

All soil and sediment samples were analyzed for TCL VOCs, SVOCs, TAL Metals, Pesticides, Herbicides, and PCBs.

Table 2. Groundwater Sampling Summary

Sample ID	Depth to Groundwater (ft bgs)	TCL VOCs (ug/L)	Total SVOCs (ug/L)	Metals Exceed (Yes/No) ¹	Pesticides (ug/L)	Herbicides (ug/L)	PCBs (ug/L)	NYCDEP Sewer Discharge Criteria Exceedances (Yes/No)
MW-01	8	ND	ND	No	ND	ND	ND	NA
MW-02	8	ND	ND	No	ND	ND	ND	No

Notes:

ug/L – micrograms per liter

NA – Not Analyzed

1. Metal(s) exceeds NYCDEP Limitations to Sanitary or Combined Sewers or NYSDEC Division of Water Technical and Operational Series 1.1.1 (TOGS) Ambient Water Quality Standards/Guidance Values.

All groundwater samples were analyzed for TCL VOCs, SVOCs, TAL Metals, Pesticides, Herbicides, and PCBs. MW-02 was also analyzed for NYCDEP sewer discharge criteria.

4.1 Subsurface Soil and Sediment

In order to evaluate the subsurface soil quality, laboratory analytical results for the soil samples were compared with the regulatory standards identified in NYSDEC CP-51 – Soil Cleanup Levels (CP-51 SCLs) and NYSDEC Subpart 375-6: Remedial Program Unrestricted and Restricted Use - Residential (Track 1 and Track 2) SCOs. The intent of the sediment sampling was to determine potential impact during construction work in low lying areas (i.e., worker exposure/management/disposal) in or immediately adjacent to the waters' edge.

4.1.1 Field Screening

Field screening of soil, including PID readings and identification of visual and olfactory indicators of contamination were utilized during drilling and sampling activities. Field screening did not identify any visual or olfactory evidence of petroleum impacts or elevated PID readings. Soil boring logs are presented in Appendix B.

4.1.2 Volatile Organic Compounds (VOCs)

The laboratory analytical results indicate that concentrations of detected VOCs, including 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, ethylbenzene, isopropylbenzene, n-butylbenzene, n-propylbenzene, o-xylene, p-isopropyltoluene, sec-butylbenzene, tetrachloroethene, and trichloroethene, in soil do not exceed the Part 375 Unrestricted Use (Track 1) SCOs, Part 375 Restricted Use – Residential SCOs, or the CP-

51 SCLs. The laboratory analytical results indicate that concentrations of detected VOCs, including tetrachloroethene and trichloroethene, in sediment do not exceed the Part 375 Unrestricted Use (Track 1) SCOs, Part 375 Restricted Use – Residential SCOs, or the CP-51 SCLs. A summary of the analytical results for TCL VOC analysis is presented in Table A-1 in Appendix A.

4.1.3 Semi-Volatile Organic Compounds (SVOCs)

The laboratory results indicate that SVOCs, specifically polycyclic aromatic hydrocarbons (PAHs), were detected in seven (7) of the soil samples analyzed. Benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenzo[a,h]anthracene, and indeno(1,2,3-cd)pyrene were detected at concentrations above Part 375 Unrestricted Use (Track 1) SCOs, Part 375 Restricted Use – Residential SCOs, and/or the CP-51 SCLs.

The laboratory results indicate that SVOCs, including acenaphthene, anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, chrysene, and indeno(1,2,3-cd)pyrene, were detected in one (1) or both of the sediment samples analyzed. The laboratory results for the sediment samples indicate similar compounds at similar concentrations were detected as within the soil samples.

A summary of the analytical results for TCL SVOC analysis is presented in Table A-2 in Appendix A. Table 3, below, summarizes the detected SVOC concentrations in soil and sediment exceeding applicable criteria.

Table 3. Detected SVOC Concentrations in Soil and Sediment Exceeding Applicable Criteria

Sample Identification	Compound	Concentration (ug/kg)	Part 375 Unrestricted Use SCO	Part 375 Restricted Use – Residential SCO	CP-51 SCL
SB-01-COMP	Indeno(1,2,3-cd)pyrene	<u>530</u>	500	500	500
SB-02-COMP	Benzo(a)anthracene	<u>9,300</u>	1,000	1,000	1,000
	Benzo(a)pyrene	<u>9,500</u>	1,000	1,000	1,000
	Benzo(b)fluoranthene	<u>13,000</u>	1,000	1,000	1,000
	Benzo(k)fluoranthene	<u>3,800</u>	800	1,000	800
	Chrysene	<u>11,000</u>	1,000	1,000	1,000
	Indeno(1,2,3-cd)pyrene	<u>5,900</u>	500	500	500
SB-03-COMP	Benzo(b)fluoranthene	<u>1,100</u>	1,000	1,000	1,000
	Indeno(1,2,3-cd)pyrene	<u>630</u>	500	500	500
SB-04-COMP	Benzo(a)anthracene	<u>2,500</u>	1,000	1,000	1,000
	Benzo(a)pyrene	<u>2,400</u>	1,000	1,000	1,000
	Benzo(b)fluoranthene	<u>3,000</u>	1,000	1,000	1,000
	Benzo(k)fluoranthene	<u>1,100</u>	800	1,000	800
	Chrysene	<u>2,800</u>	1,000	1,000	1,000
	Indeno(1,2,3-cd)pyrene	<u>1,500</u>	500	500	500

Table 3. Detected SVOC Concentrations in Soil and Sediment Exceeding Applicable Criteria (continued)

Sample Identification	Compound	Concentration (ug/kg)	Part 375 Unrestricted Use SCO	Part 375 Restricted Use – Residential SCO	CP-51 SCL
SB-05-COMP	Benzo(a)anthracene	3,200	1,000	1,000	1,000
	Benzo(a)pyrene	2,400	1,000	1,000	1,000
	Benzo(b)fluoranthene	3,000	1,000	1,000	1,000
	Benzo(k)fluoranthene	1,100	800	1,000	800
	Chrysene	3,400	1,000	1,000	1,000
	Dibenz[a,h]anthracene	400	330	330	330
	Indeno(1,2,3-cd)pyrene	1,300	500	500	500
SB-07-COMP	Benzo(a)anthracene	5,300	1,000	1,000	1,000
	Benzo(a)pyrene	4,800	1,000	1,000	1,000
	Benzo(b)fluoranthene	5,900	1,000	1,000	1,000
	Benzo(k)fluoranthene	2,200	800	1,000	800
	Chrysene	5,200	1,000	1,000	1,000
	Indeno(1,2,3-cd)pyrene	2,500	500	500	500
SB-08-COMP	Benzo(a)anthracene	2,700	1,000	1,000	1,000
	Benzo(a)pyrene	2,700	1,000	1,000	1,000
	Benzo(b)fluoranthene	3,200	1,000	1,000	1,000
	Benzo(k)fluoranthene	1,300	800	1,000	800
	Chrysene	2,800	1,000	1,000	1,000
	Dibenz[a,h]anthracene	390	330	330	330
	Indeno(1,2,3-cd)pyrene	1,900	500	500	500
SED-01 (0-6)	Benzo(a)anthracene	2,200	1,000	1,000	1,000
	Benzo(a)pyrene	1,900	1,000	1,000	1,000
	Benzo(b)fluoranthene	2,100	1,000	1,000	1,000
	Chrysene	2,300	1,000	1,000	1,000
	Indeno(1,2,3-cd)pyrene	880	500	500	500
SED-02 (0-6)	Chrysene	1,300	1,000	1,000	1,000

Notes:

ug/kg – micrograms per kilogram

Border – Concentration Exceeds Unrestricted Use Part 375 SCO.

Border – Concentration Exceeds Restricted Use – Residential SCO.

Underline – Concentration Exceeds CP-51 SCL.

4.1.4 Target Analyte List (TAL) Metals

The laboratory results indicate that metals were detected in each of the soil samples analyzed. Arsenic, barium, cadmium, chromium, copper, lead, mercury, nickel, and zinc were detected at concentrations above Part 375 Unrestricted Use (Track 1) SCOs, Part 375 Restricted Use – Residential SCOs, and/or the CP-51 SCLs. The detected concentration of metals in these soil samples are attributed to contaminants in fill material at the Site and/or the industrial history of the Site and surrounding area.

The laboratory results indicate that metals were detected in both sediment samples that were analyzed. Similar analytes at similar concentrations that were detected in the soil samples were also detected in the sediment samples.

A summary of the analytical results for metals analysis is presented in Table A-3 in Appendix A. Table 4, included on the following page, summarizes the detected metals concentrations in soil and sediment exceeding applicable criteria.

Table 4. Detected Metals Concentrations in Soil and Sediment Exceeding Applicable Criteria

Sample Identification	Compound	Concentration (mg/kg)	Part 375 Unrestricted Use SCO	Part 375 Restricted Use – Residential SCO	CP-51 SCL
SB-01-COMP	Arsenic	55	13	16	NS
	Cadmium	3.6	2.5	2.5	NS
	Copper	110	50	270	NS
	Iron	35,000	NS	NS	2,000
	Lead	860	63	400	NS
	Mercury	0.35	0.18	0.81	NS
	Zinc	340	109	2,200	NS
SB-02-COMP	Arsenic	22	13	16	NS
	Barium	1,600	350	350	NS
	Cadmium	12	2.5	2.5	NS
	Chromium	77	30	36	NS
	Copper	1,600	50	270	NS
	Iron	100,000	NS	NS	2,000
	Lead	4,300	63	400	NS
	Mercury	9	0.18	0.81	NS
	Nickel	51	30	140	NS
	Zinc	5,000	109	2,200	NS
SB-03-COMP	Arsenic	16	13	16	NS
	Copper	420	50	270	NS
	Iron	38,000	NS	NS	2,000
	Lead	500	63	400	NS
	Mercury	0.21	0.18	0.81	NS
	Zinc	230	109	2,200	NS
SB-04-COMP	Arsenic	14	13	16	NS
	Chromium	38	30	36	NS
	Copper	1,600	50	270	NS
	Iron	47,000	NS	NS	2,000
	Lead	730	63	400	NS
	Mercury	0.53	0.18	0.81	NS
	Nickel	38	30	140	NS
	Zinc	780	109	2,200	NS
SB-05-COMP	Copper	82	50	270	NS
	Iron	43,000	NS	NS	2,000
	Lead	310	63	400	NS
	Mercury	0.27	0.18	0.81	NS
	Zinc	190	109	2,200	NS
SB-06-COMP	Iron	16,000	NS	NS	2,000
	Lead	270	63	400	NS
	Mercury	0.28	0.18	0.81	NS
SB-07-COMP	Copper	36	50	270	NS
	Iron	20,000	NS	NS	2,000
	Lead	110	63	400	NS
	Zinc	160	109	2,200	NS

Table 4. Detected Metals Concentrations in Soil and Sediment Exceeding Applicable Criteria (continued)

Sample Identification	Compound	Concentration (mg/kg)	Part 375 Unrestricted Use SCO	Part 375 Restricted Use – Residential SCO	CP-51 SCL
SB-08-OMP	Arsenic	45	13	16	NS
	Cadmium	2.9	2.5	2.5	NS
	Copper	100	50	270	NS
	Lead	380	63	400	NS
	Mercury	1.8	0.18	0.81	NS
	Zinc	530	109	2,200	NS
SED-01 (0-6)	Arsenic	30	13	16	NS
	Copper	4,200	50	270	NS
	Iron	<u>65,000</u>	NS	NS	2,000
	Lead	550	63	400	NS
	Mercury	0.4	0.18	0.81	NS
	Zinc	550	109	2,200	NS
SED-02 (0-6)	Arsenic	44	13	16	NS
	Barium	490	350	350	NS
	Chromium	41	30	36	NS
	Copper	1,000	50	270	NS
	Iron	<u>58,000</u>	NS	NS	2,000
	Lead	980	63	400	NS
	Mercury	0.5	0.18	0.81	NS
	Zinc	340	109	2,200	NS

Notes:

mg/kg – milligrams per kilogram

NS – No Standard

Border – Concentration Exceeds Unrestricted Use Part 375 SCO.

Border – Concentration Exceeds Restricted Use – Residential SCO.

Underline – Concentration Exceeds CP-51 SCL.

4.1.5 Pesticides

The laboratory results indicate that pesticides were detected in five (5) of the soil samples analyzed. 4,4'-DDD, 4,4'-DDE, 4,4'-DDT, chlordane (alpha), and dieldrin exceed Part 375 Unrestricted Use (Track 1) SCOs and/or Part 375 Restricted Use – Residential SCOs.

The laboratory results indicate that pesticides were detected in both of the sediment samples analyzed. The laboratory results for the sediment samples indicate generally lower concentrations than were detected within the soil samples.

A summary of the analytical results for the pesticides analysis is presented in Table A-4 of Appendix A. Table 5, included on the following page, summarizes the detected pesticides concentrations in soil and sediment exceeding applicable criteria.

Table 5. Detected Pesticides Concentrations in Soil and Sediment Exceeding Applicable Criteria

Sample Identification	Compound	Concentration (ug/kg)	Part 375 Unrestricted Use SCO	Part 375 Restricted Use – Residential SCO	CP-51 SCL
SB-01-COMP	4,4'-DDD	8.2	3.3	2,600	NS
	4,4'-DDT	38	3.3	1,700	NS
	Chlordane (alpha)	550	95	910	NS
	Dieldrin	54	5	NS	NS
SB-02-COMP	4,4'-DDT	270	3.3	1,700	NS
	Dieldrin	140	5	NS	NS
SB-04-COMP	Chlordane (alpha)	5,100	95	910	NS
SB-05-COMP	4,4'-DDT	14	3.3	1,700	NS
	Dieldrin	6.9	5	NS	NS
SB-06-COMP	4,4'-DDD	12	3.3	2,600	NS
	4,4'-DDE	13	3.3	1,800	NS
	4,4'-DDT	57	3.3	1,700	NS
	Dieldrin	21	5	NS	NS
SED-01 (0-6)	4,4'-DDT	7.7	3.3	1,700	NS
SED-02 (0-6)	4,4'-DDE	6.6	3.3	1,800	NS
	4,4'-DDT	14	3.3	1,700	NS

Notes:

ug/kg – micrograms per kilogram

NS – No Standard

Border – Concentration Exceeds Unrestricted Use Part 375 SCO.

Border – Concentration Exceeds Restricted Use – Residential SCO.

Border – Concentration Exceeds CP-51 SCL.

4.1.6 Herbicides

The laboratory analytical results indicate that concentrations of detected herbicides do not exceed the Part 375 Unrestricted Use (Track 1) SCOs, Part 375 Restricted Use – Residential SCOs, or the CP-51 SCLs in the soil samples. However, herbicides without Part 375 SCOs or CP-51 SCLs, including 2,4-DB and MCPA, were detected. A summary of the analytical results for herbicides analysis is presented in Table A-5 in Appendix A.

4.1.7 Polychlorinated Biphenyls (PCBs)

The laboratory results indicate that PCBs were detected in six (6) of the soil samples analyzed. Total PCBs exceed Part 375 Unrestricted Use (Track 1) SCOs and/or Part 375 Restricted Use – Residential SCOs in those six (6) samples.

The laboratory results indicate that PCBs were detected in one (1) of the two (2) sediment samples analyzed. The laboratory results for the one (1) sediment sample indicates an exceedance of the Part 375 Unrestricted Use (Track 1) SCO.

A summary of the analytical results for the PCBs analysis is presented in Table A-6 of Appendix A. Table 6 summarizes the detected PCB concentrations in soil and sediment exceeding applicable criteria.

Table 6. Detected PCB Concentrations in Soil and Sediment Exceeding Applicable Criteria

Sample Identification	Compound	Concentration (ug/kg)	Part 375 Unrestricted Use SCO	Part 375 Restricted Use – Residential SCO	CP-51 SCL
SB-01-COMP	Total PCBs	500	100	1,000	NS
SB-02-COMP	Total PCBs	13,200	100	1,000	NS
SB-04-COMP	Total PCBs	1,100	100	1,000	NS
SB-06-COMP	Total PCBs	520	100	1,000	NS
SB-07-COMP	Total PCBs	150	100	1,000	NS
SB-08-COMP	Total PCBs	730	100	1,000	NS
SED-02 (0-6)	Total PCBs	170	100	1,000	NS

Notes:

ug/kg – micrograms per kilogram

NS – No Standard

Border – Concentration Exceeds Unrestricted Use Part 375 SCO.

Border – Concentration Exceeds Restricted Use – Residential SCO.

Border – Concentration Exceeds CP-51 SCL.

4.1.8 Waste Characteristics

Two (2) composite waste characterization soil samples (WC-01 and WC-02) were collected from the eight (8) soil borings advanced at the Site. These waste characterization composite samples were collected as follows:

- o WC-1: composited of soil aliquots from borings SB-01 through SB-05 (grade to bottom).
- o WC-2: composited of soil aliquots from borings SB-06 through SB-08 (grade to bottom).

These two (2) waste characterization samples were analyzed for USEPA RCRA hazardous waste characteristics of corrosivity, ignitability, reactivity, and toxicity. The results of the analyses indicate that the soil does not exhibit evidence of hazardous waste characteristics. No detectable concentrations of TCLP VOCs, SVOCs, pesticides, herbicides, or PCBs were present in the waste characterization soil samples. Four (4) metals, arsenic, barium, cadmium, and lead, were detected but at concentrations below 6 NYCRR Part 371 and RCRA regulatory levels. The soil samples were also analyzed for TPH-DRO and TPH-GRO. TPH-GRO was not detected and the detected concentration of TPH-DRO were 420 mg/kg within WC-01 and 150 mg/kg within WC-02. There is no NYSDEC standard for TPH-GRO or DRO. A summary of the waste characteristics analyses is presented in Table A-7 of Appendix A.

4.2 Groundwater

Groundwater sample results were compared against the NYCDEP Limitations to Sanitary or Combined Sewers and the NYSDEC TOGS 1.1.1 Ambient Water Quality Standards/Guidance Values.

4.2.1 Volatile Organic Compounds (VOCs)

The laboratory results indicate that no VOCs were detected in the two (2) groundwater samples analyzed. The TCL VOC results are presented in Table A-9 of Appendix A.

4.2.2 Semi-Volatile Organic Compounds (SVOCs)

The laboratory results indicate that no SVOCs were detected in the two (2) groundwater samples analyzed. The TCL SVOC results are presented in Table A-10 of Appendix A.

4.2.3 Target Analyte List (TAL) Metals

The laboratory results indicate that metals concentrations do not exceed the NYCDEP Limitations to Sanitary or Combined Sewers and the NYSDEC TOGS 1.1.1 Ambient Water Quality Standards/Guidance Values. A summary of the TAL Metals results is presented in Table A-11 of Appendix A.

4.2.4 Pesticides

The laboratory results indicate that no pesticides were detected in the two (2) groundwater samples analyzed. The pesticides results are presented in Table A-12 of Appendix A.

4.2.5 Herbicides

The laboratory results indicate that no herbicides were detected in the two (2) groundwater samples analyzed. The herbicide results are presented in Table B-13 of Appendix A.

4.2.6 Polychlorinated Biphenyls (PCBs)

The laboratory results indicate that no PCBs were detected in the two (2) groundwater samples analyzed. The PCBs results are presented in Table A-14 of Appendix A.

4.2.7 New York City Department of Environmental Protection (NYCDEP) Sewer Discharge Criteria

The laboratory results indicate that groundwater at the Site meets both the NYCDEP Sewer Discharge Criteria Limit (daily limit) for discharge to sanitary or combined sewers and for Effluent to Storm Sewers. A summary of the results for NYCDEP Sewer Discharge Criteria is present in Table A-8 of Appendix A.

5.0 CONCLUSIONS AND RECOMMENDATIONS

LiRo performed a SESI at the Site on March 23, 24, and 30, 2015 that consisted of soil, sediment, and groundwater sampling to assess the RECs and/or environmental issues identified in the Phase I ESA report.

5.1 Conclusions

Based on the results of the Phase II SESI, the following conclusions are presented

- Field screening of soils did not identify any visual or olfactory evidence of petroleum impacts or elevated PID readings.
- The Site is underlain by fill materials generally consisting of fine to medium sand with anthropogenic debris consisting of red brick, concrete, glass, and ceramic pieces from grade to 10 ft bgs.
- Subsurface soil samples collected showed concentrations of SVOCs, metals, pesticides, and total PCBs that exceed Part 375 Unrestricted Use (Track 1) SCOs, Part 375 Restricted Use – Residential SCOs, and/or the CP-51 SCLs. These impacts are likely attributed to fill material at the Site and/or the industrial history of the Site and surrounding area.
- Sediment samples collected showed concentrations of SVOCs, metals, pesticides, and total PCBs that exceed soil guidance values Part 375 Unrestricted Use (Track 1) SCOs, Part 375 Restricted Use – Residential SCOs, and/or the CP-51 SCLs. These impacts are likely attributed to erosion of the fill material at the Site and/or the industrial history of the Site and surrounding area.
- The soil at the Site does not exhibit evidence of hazardous waste characteristics.
- Groundwater at the Site contains detectable concentrations of metals at levels below the NYCDEP Limitations to Sanitary or Combined Sewers and the NYSDEC Ambient Water Quality Standards/Guidance Values.
- The groundwater at the Site meets the NYCDEP Sewer Discharge Criteria Limit (daily limit) for discharge to sanitary or combined sewers.
- Based on a comparison of the analytical results, SB-02 and SB-04 are generally more impacted than the remaining on-site soil borings. Both of these borings were advanced on Block 2590, Lot 100.

5.2 Recommendations

For the Site to be suitable for proposed development, the following measures are recommended:

- Park development plans should also include a site management plan which details provisions and procedures that will be implemented to prevent exposure of future site worker and future park users to contaminated soil and sediment.

- To prevent exposure for future site recreational users, the site management plan should include a cover or barrier system that would effectively mitigate potential exposure to the contaminated soil.
- Due to the Site being identified as an E-Designated site, engagement with the appropriate City agency (Mayor's Office of Environmental Remediation (OER) or NYCDEP) should be conducted during any future Site work.
- The future construction contract documents should identify provisions and a contingency for managing, handling, transporting and disposing of non-hazardous contaminated soil and sediment. The Contractor should be required to submit a Material Handling Plan to identify the specific protocol and procedures that will be employed to manage the waste in accordance with applicable regulations.
- Due to the presence of SVOCs, metals, pesticides, and Total PCB concentrations above Part 375 SCOs, dust control procedures are recommended during excavation or regrading activities to minimize the creation and dispersion of fugitive airborne dust. The Contractor may implement dust control measures to minimize potential airborne contaminants released as a direct result of construction activities. A Community Air Monitoring Plan (CAMP) should be developed in accordance with NYSDEC Division of Environmental Remediation (DER)-10 Regulations. The CAMP requires real-time monitoring for VOCs and particulates (i.e., dust) at the downwind perimeter of each designated work area when certain activities are in progress at contaminated sites. The CAMP is intended to provide a measure of protection for the downwind community from potential airborne contaminant releases as a direct result of construction or subsurface work activities. Specific requirements should be reviewed for each situation in consultation with New York State Department of Health (NYSDOH) to ensure proper applicability.
- Before beginning any debris removal and any excavation activity, the Contractor should submit a site-specific health and safety plan (HASP) that will meet the requirements set forth by the Occupational, Safety and Health Administration (OSHA), the NYSDOH and any other applicable regulations. The HASP should identify the possible locations and risks associated with the potential contaminants that may be encountered, and the administrative and engineering controls that will be utilized to mitigate concerns (i.e., dust control procedures for SVOCs, metals and pesticides).
- Dewatering may be necessary during construction activities at the Site. Based on the results of laboratory analyses for NYCDEP sewer discharge criteria, groundwater does not require pre-treatment prior to discharge to sanitary or combined sewers; however, the Contractor may be required to obtain a NYCDEP sewer discharge permit if dewatering is necessary.
- In addition, if discharge into storm sewers or Bushwick Inlet is required during dewatering, it may be done under the appropriate NYSDEC State Pollutant Discharge Elimination System (SPDES) permit. Additional sampling and laboratory analysis may be required to satisfy NYSDEC requirements prior to discharge.

6.0 STATEMENT OF LIMITATIONS AND SIGNATURES OF PROFESSIONALS

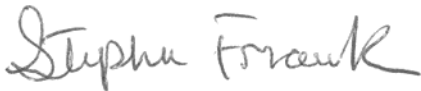
LiRo has performed a Phase II SESI of the Motiva Site – Bushwick Inlet Park located at 1 Quay Street and 56 Franklin Street in Brooklyn, New York. The data presented and the opinions expressed in this report are qualified as stated in the attachment to this section of the report. Signature of the professionals that prepared the Phase II SESI can be found below. Qualifications for these individuals are provided in Appendix D.

Report Prepared By:



Amy Hewson
Senior Environmental Analyst

Report Reviewed By:



Stephen Frank
Senior Geologist

Report Reviewed By:



Robert Kreuzer
Project Manager

7.0 STATEMENT OF LIMITATIONS

The data presented and the opinions expressed in this report are qualified as follows:

The sole purpose of the investigation and of this report is to assess the physical characteristics of the Site with respect to the presence or absence in the environment of oil or hazardous materials and substances as defined in the applicable State and Federal environmental laws and regulations and to gather information regarding current and past environmental conditions at the Site.

LiRo derived the data in this report primarily from visual inspections, examination of records in the public domain, interviews with individuals with information about the Site, and a limited number of subsurface explorations made on the dates indicated. The passage of time, manifestation of latent conditions or occurrence of future events may require further exploration at the Site, analysis of the data, and re-evaluation of the findings, observations, and conclusions expressed in the report.

In preparing this report, LiRo has relied upon and presumed accurate certain information (or the absence thereof) about the Site and adjacent properties provided by governmental officials and agencies, the Client, and others identified herein. Except as otherwise stated in the report, LiRo has not attempted to verify the accuracy or completeness of any such information.

The data reported and the findings, observations, and conclusions expressed in the report are limited by the Scope of Services, including the extent of subsurface exploration and other tests. The Scope of Services was defined by the requests of the Client, the time and budgetary constraints imposed by the Client, and the availability of access to the Site.

Because of the limitations stated above, the findings, observations, and conclusions expressed by LiRo in this report are not, and should not be considered, an opinion concerning the compliance of any past or present owner or operator of the Site with any Federal, State or local law or regulation. No warranty or guarantee, whether expressed or implied, is made with respect to the data reported or findings, observations, and conclusions expressed in this report. Further, such data, findings, observations, and conclusions are based solely upon Site conditions in existence at the time of investigation.

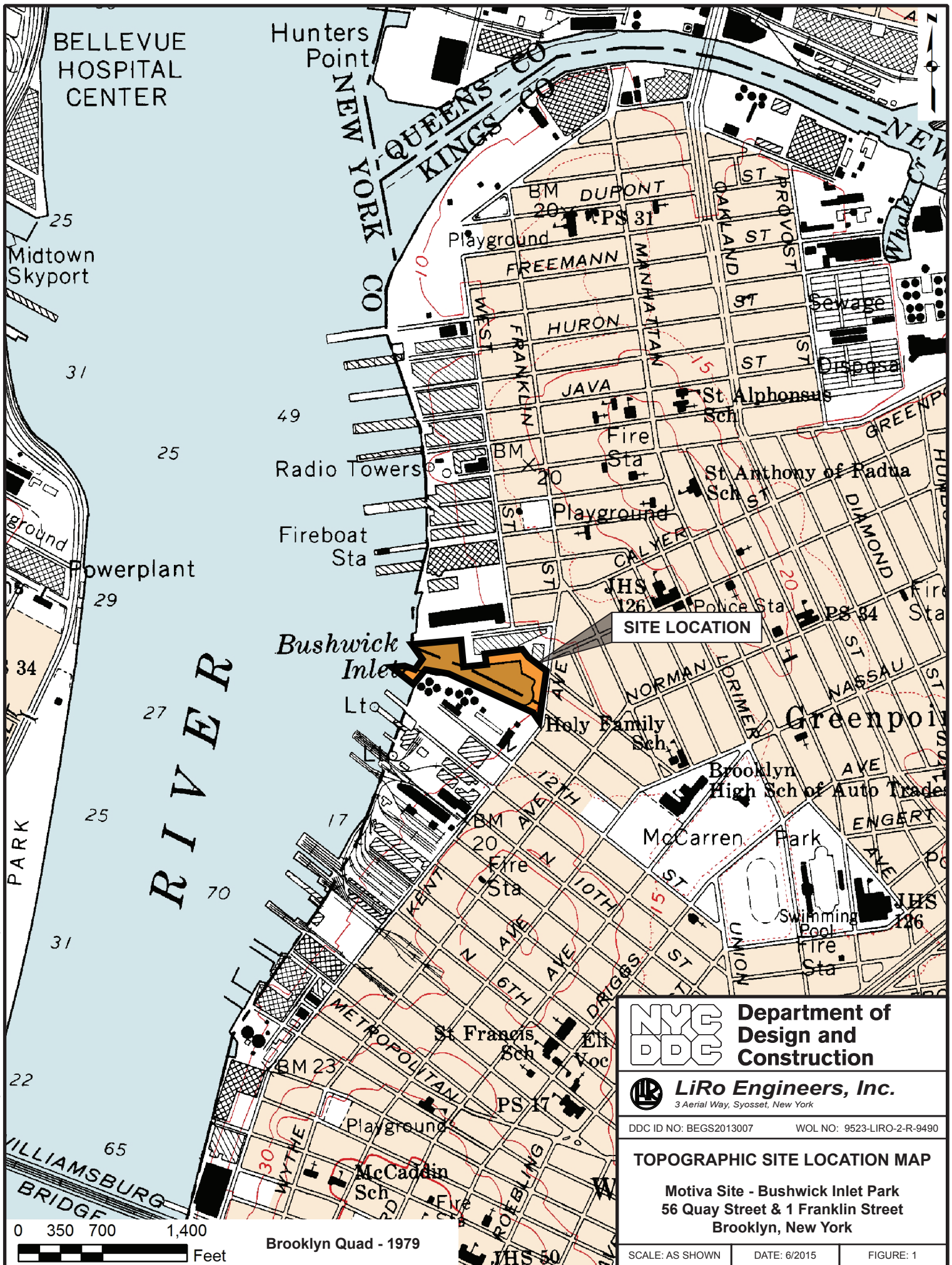
This report has been prepared on behalf of and for the exclusive use of the Client, and is subject to and issued in connection with the Agreement and the provisions thereof.

FIGURES

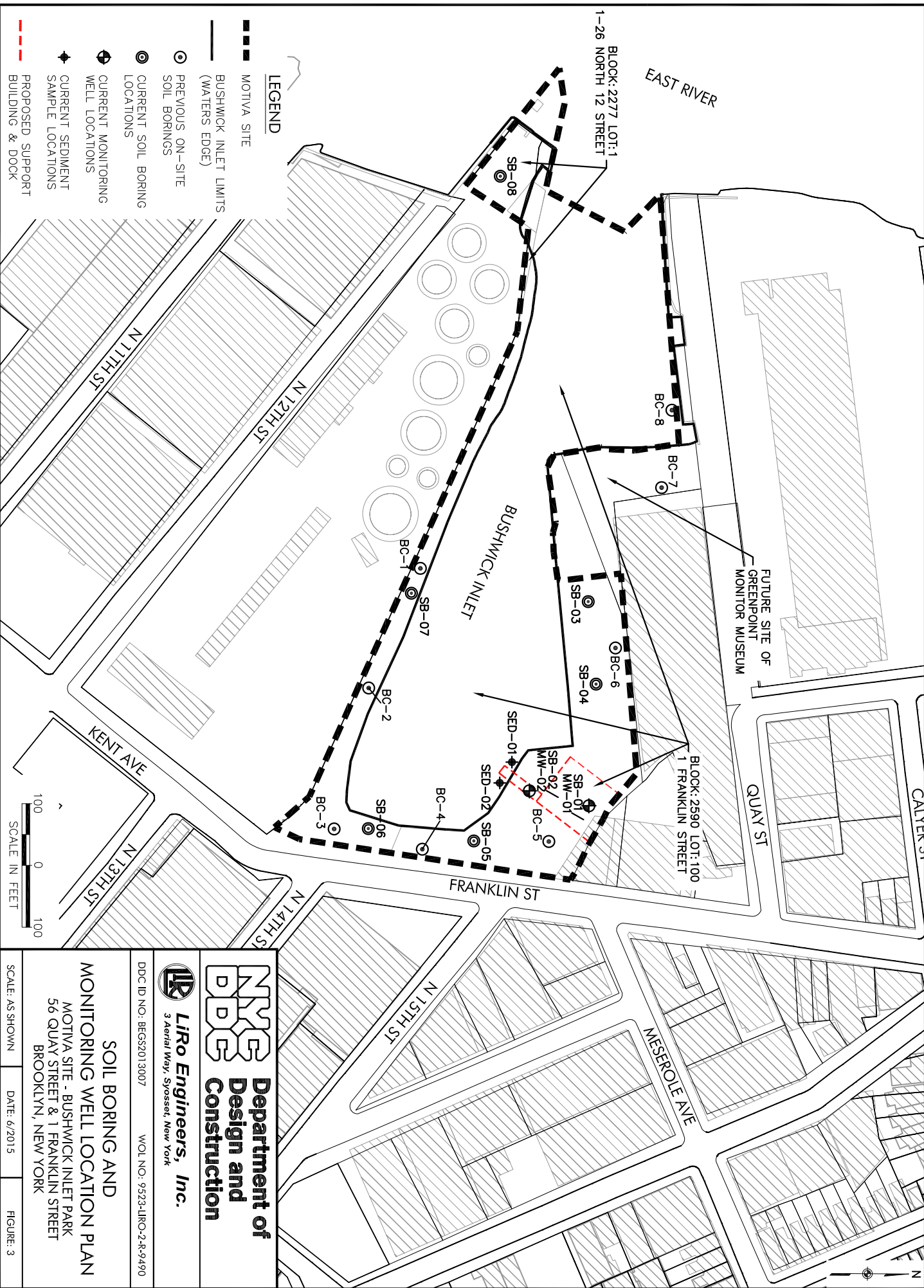
FIGURE 1 – TOPOGRAPHIC SITE LOCATION MAP

FIGURE 2 – SITE PLAN

FIGURE 3 – SOIL BORING AND MONITORING WELL LOCATION PLAN







NYC
DBE
Department of
Design and
Construction

LiRo Engineers, Inc.
3 Aerial Way, Syosset, New York

DDC ID NO: BEGS2013007 WOL NO: 9523-LIRO-2-R-9490

SOIL BORING AND
MONITORING WELL LOCATION PLAN
MOTIVA SITE - BUSHWICK INLET PARK
56 QUAY STREET & 1 FRANKLIN STREET
BROOKLYN, NEW YORK

SCALE: AS SHOWN DATE: 6/2015 FIGURE: 3

APPENDICES

APPENDIX A
SUMMARY TABLES OF SOIL, SEDIMENT, AND GROUNDWATER
ANALYTICAL RESULTS

Appendix A-1. Summary of Target Compound List (TCL) Volatile Organic Compounds (VOCs) Detected in Soil and Sediment
Phase II Environmental Subsurface Investigation for the Motiva Site - Bushwick Inlet Park
56 Quay St. & 1 Franklin St., Brooklyn, New York

TCL VOC	Part 375-6.8 (a) Unrestricted Use (Track 1) Soil Cleanup Objectives (SCOs)	Part 375-6.8 (b) Restricted Use (Track 2) Residential Soil Cleanup Objectives (SCOs)	CP-51 Soil Cleanup Levels (SCLs)	Sample ID, Date Collect, and Depth (ft bgs)									
				SB-01-5.5-6	SB-02-5.5-6	SB-03-3.5-4	SB-04-3.5-5	SB-05-4.5-5	SB-06-4.5-5	SB-07-4.5-5	SB-08-4.5-5	SED-01 (0-6)	SED-02 (0-6)
				3/24/2015	3/24/2015	3/24/2015	3/24/2015	3/24/2015	3/24/2015	3/25/2015	4/6/2015	3/24/2015	3/24/2015
				5.5-6	5.5-6	3.5-4	3.5-4	4.5-5	4.5-5	4.5-5	4.5-5	*0-6	*0-6
1,2,4-Trimethylbenzene	3,600	47,000	NS	ND	ND	ND	ND	ND	ND	ND	50	ND	ND
1,3,5-Trimethylbenzene	8,400	47,000	NS	ND	ND	ND	ND	ND	ND	ND	48	ND	ND
Ethylbenzene	1,000	30,000	1,000	ND	ND	ND	ND	ND	ND	ND	2.6	ND	ND
Isopropylbenzene	NS	NS	2,300	ND	ND	ND	ND	ND	ND	ND	3.7	ND	ND
n-Butylbenzene	12,000	100,000	NS	ND	ND	ND	ND	ND	ND	ND	46	ND	ND
n-Propylbenzene	3,900	100,000	NS	ND	ND	ND	ND	ND	ND	ND	11	ND	ND
o-Xylene	NS	NS	NS	ND	ND	ND	ND	ND	ND	ND	12	ND	ND
p-Isopropyltoluene	NS	NS	10,000	ND	ND	ND	ND	ND	ND	ND	13	ND	ND
sec-Butylbenzene	11,000	100,000	NS	ND	ND	ND	ND	ND	ND	ND	12	ND	ND
Tetrachloroethene	1,300	5,500	NS	ND	ND	28	ND	ND	ND	ND	ND	ND	5.7
Trichloroethene	470	10,000	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	4.1
Total VOCs	NS	NS	NS	ND	ND	28	ND	ND	ND	ND	198	ND	10

Notes:

All concentrations are reported in parts per billion (ppb or ug/kg)

ft bgs = feet below grade surface

ND = Compound not detected above method detection limit (see attached lab report for mdl's)

NS = No Standard

SCOs = Soil Cleanup Objectives as per the NYSDEC Regulations 6 NYCRR Subpart 375-6 Remedial Program Soil Cleanup Objectives (December 14, 2006).

CP-51 SCLs = New York State Department of Environmental Conservation (NYSDEC) CP-51 – Soil Cleanup Guidance (CP-51) (October 21, 2010).

*Measured in inches

BOLD = Concentration exceeds NYSDEC CP-51 SCLs Table 1 - Supplemental Soil Cleanup Objectives (Residential), Table 2 - Soil Cleanup Levels for Gasoline Contaminated Soils, Table 3 - Soil Cleanup Levels for Fuel oil Contaminated Soil

Shading = Concentration exceeds Unrestricted Use (Track 1) Soil Cleanup Objectives

Italicized = Concentration exceeds Restricted Use (Track 2) Residential Soil Cleanup Objectives

Appendix A-2. Summary of Target Compound List (TCL) Semi-Volatile Organic Compounds (SVOCs) Detected in Soil and Sediment
Phase II Environmental Subsurface Investigation for the Motiva Site - Bushwick Inlet Park
56 Quay St. & 1 Franklin St., Brooklyn, New York

TCL SVOC	Part 375-6.8 (a) Unrestricted Use (Track 1) Soil Cleanup Objectives (SCOs)	Part 375-6.8 (b) Restricted Use (Track 2) Residential Soil Cleanup Objectives (SCOs)	CP-51 Soil Cleanup Levels (SCLs)	Sample ID, Date Collect, and Depth (ft bgs)									
				SB-01-COMP	SB-02-COMP	SB-03-COMP	SB-04-COMP	SB-05-COMP	SB-06-COMP	SB-07-COMP	SB-08-COMP	SED-01 (0-6)	SED-02 (0-6)
				3/24/2015 Composite	3/24/2015 Composite	3/24/2015 Composite	3/24/2015 Composite	3/24/2015 Composite	3/24/2015 Composite	3/25/2015 Composite	4/6/2015 Composite	3/24/2015 *0-6	3/24/2015 *0-6
1-Methylnaphthalene	NS	NS	NS	ND	440	ND	ND	850	ND	3,600	ND	ND	ND
2-Methylnaphthalene	NS	NS	410	340	610	ND	240	620	ND	3,300	ND	ND	ND
Acenaphthene	20,000	100,000	20,000	ND	650	ND	240	640	ND	2,700	ND	330	ND
Acenaphthylene	100,000	100,000	100,000	ND	990	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	100,000	100,000	100,000	ND	2,500	230	740	1,500	310	3,800	690	830	ND
Benzo(a)anthracene	1,000	1,000	1,000	610	9,300	830	2,500	3,200	780	5,300	2,700	2,200	950
Benzo(a)pyrene	1,000	1,000	1,000	630	9,500	850	2,400	2,400	740	4,800	2,700	1,900	760
Benzo(b)fluoranthene	1,000	1,000	1,000	830	13,000	1,100	3,000	3,000	880	5,900	3,200	2,100	910
Benzo(g,h,i)perylene	100,000	100,000	100,000	570	6,200	850	1,500	1,300	410	2,500	1,800	990	510
Benzo(k)fluoranthene	800	1,000	800	300	3,800	370	1,100	1,100	370	2,200	1,300	780	310
bis(2-Ethylhexyl)phthalate	NS	NS	50,000	ND	930	ND	640	ND	ND	ND	ND	ND	ND
Carbazole	NS	NS	NS	ND	890	ND	330	380	ND	1,700	ND	ND	ND
Chrysene	1,000	1,000	1,000	800	11,000	1,000	2,800	3,400	740	5,200	2,800	2,300	1,300
Dibenz[a,h]anthracene	330	330	330	ND	1,500	ND	320	400	ND	ND	390	240	ND
Dibenzofuran	NS	NS	NS	ND	ND	ND	ND	ND	ND	1,600	ND	ND	ND
Flouranthene	100,000	100,000	100,000	970	21,000	1,800	5,400	6,100	1,500	15,000	5,600	4,700	1,500
Fluorene	30,000	100,000	30,000	ND	750	ND	220	830	ND	2,400	ND	270	ND
Indeno(1,2,3-cd)pyrene	500	500	500	530	5,900	630	1,500	1,300	450	2,500	1,900	880	420
Naphthalene	12,000	100,000	NS	360	1,300	ND	310	570	ND	ND	ND	ND	ND
Phenanthrene	100,000	100,000	100,000	610	13,000	1,300	4,100	7,600	1,200	20,000	3,200	4,700	2,100
Pyrene	100,000	100,000	100,000	1,000	24,000	1,700	5,600	7,400	1,400	14,000	5,300	5,400	2,300
Total SVOCs	NS	NS	NS	7,550	127,260	10,660	32,940	42,590	8,780	96,500	31,580	27,620	11,060

Notes:

All concentrations are reported in parts per billion (ppb or ug/kg)

ft bgs = feet below grade surface

ND = Compound not detected above method detection limit (see attached lab report for mdl's)

NS = No Standard

SCOs = Soil Cleanup Objectives as per the NYSDEC Regulations 6 NYCRR Subpart 375-6 Remedial Program Soil Cleanup Objectives (December 14, 2006).

CP-51 SCLs = New York State Department of Environmental Conservation (NYSDEC) CP-51 – Soil Cleanup Guidance (CP-51) (October 21, 2010).

*Measured in inches

BOLD = Concentration exceeds NYSDEC CP-51 SCLs Table 1 - Supplemental Soil Cleanup Objectives (Residential), Table 2 - Soil Cleanup Levels for Gasoline Contaminated Soils, Table 3 - Soil Cleanup Levels for Fuel oil Contaminated Soil

Shading = Concentration exceeds Unrestricted Use (Track 1) Soil Cleanup Objectives

Italicized = Concentration exceeds Restricted Use (Track 2) Residential Soil Cleanup Objectives

Appendix A-3. Summary of Target Analyte List (TAL) Metals Detected in Soil and Sediment
Phase II Environmental Subsurface Investigation for the Motiva Site - Bushwick Inlet Park
56 Quay St. & 1 Franklin St., Brooklyn, New York

Target Analyte List Metal	Part 375-6.8 (a) Unrestricted Use (Track 1) Soil Cleanup Objectives (SCOs)	Part 375-6.8 (b) Restricted Use (Track 2) Residential Soil Cleanup Objectives (SCOs)	CP-51 Soil Cleanup Levels (SCLs)	Sample ID, Date Collect, and Depth (ft bgs)									
				SB-01-COMP	SB-02-COMP	SB-03-COMP	SB-04-COMP	SB-05-COMP	SB-06-COMP	SB-07-COMP	SB-08-COMP	SED-01 (0-6)	SED-02 (0-6)
				3/24/2015 Composite	3/24/2015 Composite	3/24/2015 Composite	3/24/2015 Composite	3/24/2015 Composite	3/24/2015 Composite	3/25/2015 Composite	4/6/2015 Composite	3/24/2015 *0-6	3/24/2015 *0-6
Aluminum	NS	NS	NS	6,700	5,200	2,800	4,600	4,500	8,400	5,900	6,700	3,900	2,100
Antimony	NS	NS	NS	ND	11	8.3	4.4	ND	ND	ND	ND	ND	4.1
Arsenic	13	16	NS	55	22	16	14	11	4.4	5.1	45	30	44
Barium	350	350	NS	200	1,600	150	310	97	100	63	86	82	490
Beryllium	7.2	14	NS	1.9	3.3	1.7	3	1.8	0.95	0.98	1.7	3.7	2.2
Cadmium	2.5	2.5	NS	3.6	12	1	2	1.2	0.58	1.7	2.9	1.8	1.9
Calcium	NS	NS	NS	3,000	5,300	48,000	2,000	12,000	24,000	12,000	9,000	2,000	1,700
Chromium (total)	30	36	NS	21	77	16	38	11	19	13	21	22	41
Cobalt	NS	NS	30	11	29	7.2	13	6.6	6.7	6.3	7.7	15	11
Copper	50	270	NS	110	1,600	420	1,600	82	36	79	100	4,200	1,000
Iron	NS	NS	2,000	35,000	100,000	38,000	47,000	43,000	16,000	20,000	23,000	65,000	58,000
Lead	63	400	NS	860	4,300	500	730	310	270	110	380	550	980
Magnesium	NS	NS	NS	980	2,000	29,000	1,800	1,600	12,000	4,600	6,100	1,900	1,400
Manganese	1,600	2,000	NS	360	670	260	450	240	240	200	230	1,200	790
Mercury	0.18	0.81	NS	0.35	9	0.21	0.53	0.27	0.28	0.12	1.8	0.4	0.5
Nickel	30	140	NS	25	51	15	38	14	15	13	25	28	15
Potassium	NS	NS	NS	590	670	530	740	750	1,700	720	1,000	840	1,300
Sodium	NS	NS	NS	240	190	2,500	1,700	180	130	120	750	3,500	3,700
Vanadium	NS	NS	100	34	36	19	46	20	29	32	78	32	24
Zinc	109	2,200	NS	340	5,000	230	780	190	96	160	530	550	340

Notes:

All concentrations are in parts per million (ppm or mg/kg)

ft bgs = feet below grade surface

ND = Compound not detected above method detection limit (see attached lab report for mdl's)

NS = No Standard

SCOs = Soil Cleanup Objectives as per the NYSDEC Regulations 6 NYCRR Subpart 375-6 Remedial Program Soil Cleanup Objectives (December 14, 2006).

CP-51 SCLs = New York State Department of Environmental Conservation (NYSDEC) CP-51 – Soil Cleanup Guidance (CP-51) (October 21, 2010).

*Measured in inches

BOLD = Concentration exceeds NYSDEC CP-51 SCLs Table 1 - Supplemental Soil Cleanup Objectives (Residential), Table 2 - Soil Cleanup Levels for Gasoline Contaminated Soils, Table 3 - Soil Cleanup Levels for Fuel oil Contaminated Soil

Shading = Concentration exceeds Unrestricted Use (Track 1) Soil Cleanup Objectives

Italicized = Concentration exceeds Restricted Use (Track 2) Residential Soil Cleanup Objectives

Appendix A-4. Summary of Pesticides Detected in Soil and Sediment
Phase II Environmental Subsurface Investigation for the Motiva Site - Bushwick Inlet Park
56 Quay St. & 1 Franklin St., Brooklyn, New York

Pesticides	Part 375-6.8 (a) Unrestricted Use (Track 1) Soil Cleanup Objectives (SCOs)	Part 375-6.8 (b) Restricted Use (Track 2) Residential Soil Cleanup Objectives (SCOs)	CP-51 Soil Cleanup Levels (SCLs)	Sample ID, Date Collect, and Depth (ft bgs)									
				SB-01-COMP	SB-02-COMP	SB-03-COMP	SB-04-COMP	SB-05-COMP	SB-06-COMP	SB-07-COMP	SB-08-COMP	SED-01 (0-6)	SED-02 (0-6)
				3/24/2015	3/24/2015	3/24/2015	3/24/2015	3/24/2015	3/24/2015	3/25/2015	4/6/2015	3/24/2015	3/24/2015
				Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite	*0-6	*0-6
Alachlor	NS	NS	NS	ND	870	ND	ND	ND	ND	ND	ND	ND	ND
4,4'-DDD	3.3	2,600	NS	8.2	ND	ND	ND	ND	12	ND	ND	ND	ND
4,4'-DDE	3.3	1,800	NS	ND	ND	ND	ND	ND	13	ND	ND	ND	6.6
4,4'-DDT	3.3	1,700	NS	38	270	ND	ND	14	57	ND	ND	7.7	14
Chlordane (alpha)	94	910	NS	550	ND	ND	5,100	ND	ND	ND	ND	48	5.1
Dieldrin	5	NS	NS	54	140	ND	ND	6.9	21	ND	ND	ND	ND
Total Pesticides	NS	NS	NS	650	1,280	ND	5,100	21	103	ND	ND	56	26

Notes:

All concentrations are reported in parts per billion (ppb or ug/kg)

ft bgs = feet below grade surface

ND = Compound not detected above method detection limit (see attached lab report for mdl's)

NS = No Standard

SCOs = Soil Cleanup Objectives as per the NYSDEC Regulations 6 NYCRR Subpart 375-6 Remedial Program Soil Cleanup Objectives (December 14, 2006).

CP-51 SCLs = New York State Department of Environmental Conservation (NYSDEC) CP-51 – Soil Cleanup Guidance (CP-51) (October 21, 2010).

*Measured in inches

BOLD = Concentration exceeds NYSDEC CP-51 SCLs Table 1 - Supplemental Soil Cleanup Objectives (Residential), Table 2 - Soil Cleanup Levels for Gasoline Contaminated Soils, Table 3 - Soil Cleanup Levels for Fuel oil Contaminated Soil

Shading = Concentration exceeds Unrestricted Use (Track 1) Soil Cleanup Objectives

Italicized = Concentration exceeds Restricted Use (Track 2) Residential Soil Cleanup Objectives

Appendix A-5. Summary of Herbicides Detected in Soil and Sediment
Phase II Environmental Subsurface Investigation for the Motiva Site - Bushwick Inlet Park
56 Quay St. & 1 Franklin St., Brooklyn, New York

Herbicides	Part 375-6.8 (a) Unrestricted Use (Track 1) Soil Cleanup Objectives (SCOs)	Part 375-6.8 (b) Restricted Use (Track 2) Residential Soil Cleanup Objectives (SCOs)	CP-51 Soil Cleanup Levels (SCLs)	Sample ID, Date Collect, and Depth (ft bgs)									
				SB-01-COMP	SB-02-COMP	SB-03-COMP	SB-04-COMP	SB-05-COMP	SB-06-COMP	SB-07-COMP	SB-08-COMP	SED-01 (0-6)	SED-02 (0-6)
				3/24/2015	3/24/2015	3/24/2015	3/24/2015	3/24/2015	3/24/2015	3/25/2015	4/6/2015	3/24/2015	3/24/2015
				Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite	*0-6	*0-6
2,4-DB	NS	NS	NS	ND	73	ND	ND	ND	ND	ND	ND	ND	ND
MCPA	NS	NS	NS	ND	ND	ND	ND	ND	ND	ND	ND	3,700	15,000
Herbicides	NS	NS	NS	ND	73	ND	ND	ND	ND	ND	ND	3,700	15,000

Notes:

All concentrations are reported in parts per billion (ppb or ug/kg)

ft bgs = feet below grade surface

ND = Compound not detected above method detection limit (see attached lab report for mdl's)

NS = No Standard

SCOs = Soil Cleanup Objectives as per the NYSDEC Regulations 6 NYCRR Subpart 375-6 Remedial Program Soil Cleanup Objectives (December 14, 2006).

CP-51 SCLs = New York State Department of Environmental Conservation (NYSDEC) CP-51 – Soil Cleanup Guidance (CP-51) (October 21, 2010).

*Measured in inches

BOLD = Concentration exceeds NYSDEC CP-51 SCLs Table 1 - Supplemental Soil Cleanup Objectives (Residential), Table 2 - Soil Cleanup Levels for Gasoline Contaminated Soils, Table 3 - Soil Cleanup Levels for Fuel oil Contaminated Soil

Shading = Concentration exceeds Unrestricted Use (Track 1) Soil Cleanup Objectives

Italicized = Concentration exceeds Restricted Use (Track 2) Residential Soil Cleanup Objectives

Appendix A-6. Summary of Polychlorinated Biphenyls (PCBs) Detected in Soil and Sediment
Phase II Environmental Subsurface Investigation for the Motiva Site - Bushwick Inlet Park
56 Quay St. & 1 Franklin St., Brooklyn, New York

PCBs	Part 375-6.8 (a) Unrestricted Use (Track 1) Soil Cleanup Objectives (SCOs)	Part 375-6.8 (b) Restricted Use (Track 2) Residential Soil Cleanup Objectives (SCOs)	CP-51 Soil Cleanup Levels (SCLs)	Sample ID, Date Collect, and Depth (ft bgs)									
				SB-01-COMP	SB-02-COMP	SB-03-COMP	SB-04-COMP	SB-05-COMP	SB-06-COMP	SB-07-COMP	SB-08-COMP	SED-01 (0-6)	SED-02 (0-6)
				3/24/2015	3/24/2015	3/24/2015	3/24/2015	3/24/2015	3/24/2015	3/25/2015	4/6/2015	3/24/2015	3/24/2015
				Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite	*0-6	*0-6
Aroclor 1248	NS	NS	NS	ND	7,100	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1254	NS	NS	NS	330	4,900	ND	1,100	ND	ND	ND	430	ND	170
Aroclor 1260	NS	NS	NS	170	1,200	ND	ND	ND	520	150	300	ND	ND
Total PCBs	100	1,000	NS	500	13,200	ND	1,100	ND	520	150	730	ND	170

Notes:

All concentrations are reported in parts per billion (ppb or ug/kg)

ft bgs = feet below grade surface

ND = Compound not detected above method detection limit (see attached lab report for mdl's)

NS = No Standard

SCOs = Soil Cleanup Objectives as per the NYSDEC Regulations 6 NYCRR Subpart 375-6 Remedial Program Soil Cleanup Objectives (December 14, 2006).

CP-51 SCLs = New York State Department of Environmental Conservation (NYSDEC) CP-51 – Soil Cleanup Guidance (CP-51) (October 21, 2010).

*Measured in inches

BOLD = Concentration exceeds NYSDEC CP-51 SCLs Table 1 - Supplemental Soil Cleanup Objectives (Residential), Table 2 - Soil Cleanup Levels for Gasoline Contaminated Soils, Table 3 - Soil Cleanup Levels for Fuel oil Contaminated Soil

Shading = Concentration exceeds Unrestricted Use (Track 1) Soil Cleanup Objectives

Italicized = Concentration exceeds Restricted Use (Track 2) Residential Soil Cleanup Objectives

Appendix A-7. Summary of Waste Characterization in Soil
Phase II Environmental Subsurface Investigation for the Motiva Site - Bushwick Inlet Park
56 Quay St. & 1 Franklin St., Brooklyn, New York

Parameter	6 NYCRR Part 371 and RCRA	Sample ID and Date Collect	
		WC-01 3/25/2015	WC-02 3/25/2015
VOCs¹	ug/L	ND	ND
SVOCs¹	ug/L	ND	ND
PESTs¹	ug/L	ND	ND
HERBs¹	ug/L	ND	ND
METALS¹	ug/L		
Arsenic	5,000	ND	11
Barium	100,000	1,100	530
Cadmium	1,000	16	ND
Lead	5,000	580	370
PCBs¹	ug/Kg	ND	ND
MISC. PARAMETERS (units)			
Reactivity Sulfide (mg/kg)	500	ND	ND
Reactivity Cyanide (mg/kg)	250	ND	ND
pH (SU)	2-12.5	7.6	8.4
Ignitability	>140 °F	Absent	Absent
TPHC Diesel Range Organics (mg/kg)	NS	420	150
TPHC Gasoline Range Organics (mg/kg)	NS	ND	ND

Notes:

ft bgs = feet below grade surface

NS = No Standard

ND = Compound not detected above method detection limit (see attached lab report for mdl's)

SU = Standard unit

mg/Kg = milligram per kilogram

ug/L = microgram per liter

ug/Kg = microgram per kilogram

°F = Degrees Fahrenheit

Shading = Concentration exceeds 6 NYCRR Part 371 and RCRA Toxicity Characteristic Regulatory Levels for Hazardous Waste.

Appendix A-8. NYCDEP Discharge Criteria for Groundwater
Phase II Environmental Subsurface Investigation for the Motiva Site - Bushwick Inlet Park
56 Quay St. & 1 Franklin St., Brooklyn, New York

Parameter ¹	NYCDEP Limitations to Sanitary or Combined Sewers		Well ID and Date Collected	
			MW-02	
			3/30/2015	
CBOD ⁴	NS	mg/L	ND	
Chloride ⁴	NS	mg/L	290	
Flash Point - Liquid/Solid	> 140	°F	>212	
Nitrate+Nitrite	NS	mg/L	ND	
Non-Polar Material ²	50	mg/L	ND	
pH	5-12	pH	6.8	
Phenolics	NS	mg/L	ND	
Temperature	150	Fah.	NA	
TKN	NS	mg/L	7.8	
Total Nitrogen ⁴	NS	mg/L	7.8	
Total Solids ⁴	NS	mg/L	1,100	
Total Suspended Solids (TSS) ³	350	mg/L	160	
Cadmium (instantaneous/composite)	2 / 0.69	mg/L	ND	
Chromium Hexavalent (VI)	5	mg/L	0.014	
Copper	5	mg/L	0.051	
Lead	2	mg/L	0.1	
Mercury	0.05	mg/L	ND	
Nickel	3	mg/L	0.021	
Zinc	5	mg/L	0.24	
Benzene	134	ug/L	ND	
Carbontetrachloride	NS	ug/L	ND	
Chloroform	NS	ug/L	ND	
cis-1,2-Dichloroethylene	NS	mg/L	ND	
1,4 Dichlorobenzene	NS	ug/L	ND	
Ethylbenzene	380	ug/L	ND	
Methyl-Tert-Butyl-Ether (MTBE)	50	ug/L	ND	
Naphthalene	47	ug/L	ND	
Tetrachloroethylene (Perc)	20	ug/L	ND	
Toluene	74	ug/L	ND	
1,2,4 Trichlorobenzene	NS	ug/L	ND	
1,1,1 Trichloroethane	NS	ug/L	ND	
Xylenes (Total)	74	ug/L	ND	
PCBs (Total)	1	ug/L	ND	

Notes:

NS = No Standard/Not Sampled

NA = Not Analyzed

ND = Parameter not detected above minimum detection limits (MDL) value reported in the MDL for that

mg/L = milligram per liter

ug/L = microgram per liter

Shaded = Concentration exceeds NYCDEP Limitations for Effluent to Sanitary or Combined Sewers (daily limit)

¹ All handling and preservation of collected samples and laboratory analyses of samples was performed in accordance with 40 CFR Part 136.

² Analysis for non-polar materials was performed by USEPA method 1664.

³ For discharge >= 10,000 gallons per day (gpd), the TSS limit is 350 mg/l. For discharge < 10,000 gpd, the limit is determined on a case by case basis.

⁴ Analysis for Carbonaceous Biochemical Oxygen Demand (CBOD), Chloride, Total Solids, and Total Nitrogen are required if proposed discharge >= 10,000 gpd.



Appendix A-9. Summary of Target Compound List (TCL) Volatile Organic Compounds (VOCs) Detected in Groundwater

**Phase II Environmental Subsurface Investigation for the Motiva Site - Bushwick Inlet Park
56 Quay St. & 1 Franklin St., Brooklyn, New York**

TCL VOC ¹	NYCDEP Limitations to Sanitary or Combined Sewers	NYS Ambient Water Quality Standards/Guidance Values	Sample ID & Date Collect	
			MW-01	MW-02
			3/30/2015	3/30/2015
Total VOCs	NS	NS	ND	ND

Notes:

All concentrations are reported in parts per billion (ppb or ug/L)

NYS Ambient Water Quality Standards/Guidance Values for Class GA Waterbody

NS = No Standard/Not Sampled

NA = Not Analyzed

ND = Compound not detected above method detection limit (see attached lab report for mdl's)

Shaded = Concentration exceeds NYCDEP Limitations for Effluent to Sanitary or Combined Sewers (daily limit)

Bold = Concentration exceeds NYS Ambient Water Quality Standards/Guidance Values - Class GA Waters

¹ All handling and preservation of collected samples and laboratory analyses of samples was performed in accordance with 40 CFR Part 136.



**Appendix A-10. Summary of Target Compound List (TCL) Semi-Volatile Organic Compounds (SVOCs)
Detected in Groundwater**

**Phase II Environmental Subsurface Investigation for the Motiva Site - Bushwick Inlet Park
56 Quay St. & 1 Franklin St., Brooklyn, New York**

TCL SVOC ¹	NYCDEP Limitations to Sanitary or Combined Sewers	NYS Ambient Water Quality Standards/Guidance Values	Sample ID & Date Collect	
			MW-01	MW-02
			3/30/2015	3/30/2015
Total SVOCs	NS	NS	ND	ND

Notes:

All concentrations are reported in parts per billion (ppb or ug/L)

NYS Ambient Water Quality Standards/Guidance Values for Class GA Waterbody

NS = No Standard/Not Sampled

ND = Compound not detected above method detection limit (see attached lab report for mdl's)

Shaded = Concentration exceeds NYCDEP Limitations for Effluent to Sanitary or Combined Sewers (daily limit)

Bold = Concentration exceeds NYS Ambient Water Quality Standards/Guidance Values - Class GA Waters

¹ All handling and preservation of collected samples and laboratory analyses of samples was performed in accordance with 40 CFR Part 136.



Appendix A-11. Summary of Target Analyte List (TAL) Metals Detected in Groundwater
Phase II Environmental Subsurface Investigation for the Motiva Site - Bushwick Inlet Park
56 Quay St. & 1 Franklin St., Brooklyn, New York

Target Analyte List Metal ¹	NYCDEP Limitations to Sanitary or Combined Sewers	NYS Ambient Water Quality Standards/Guidance Values	Sample ID & Date Collect	
			MW-01	MW-02
			3/30/2015	3/30/2015
Aluminum	NS	NS	1	6
Arsenic	NS	63*	0.019	0.016
Barium	NS	NS	0.14	0.14
Calcium Metal	NS	NS	74	5
Chromium (VI)	5	54**	ND	0.014
Copper	NS	5.6	0.033	0.051
Iron	NS	NS	9	33
Lead	NS	8	0.043	0.1
Magnesium	NS	NS	30	28
Manganese	NS	NS	0.84	3.4
Nickel	NS	8	ND	0.021
Potassium	NS	NS	24	15
Sodium	NS	NS	480	250
Vanadium	NS	NS	0.014	0.031
Zinc	NS	66	0.07	0.24

Notes:

All concentrations are reported in parts per billion (ppb or ug/L)

NYS Ambient Water Quality Standards/Guidance Values for Class GA Waterbody

NS = No Standard/Not Sampled

ND = Compound not detected above method detection limit (see attached lab report for mdl's)

* = Dissolved form

** = Acid-soluble form

Shaded = Concentration exceeds NYCDEP Limitations for Effluent to Sanitary or Combined Sewers (daily limit)

Bold = Concentration exceeds NYS Ambient Water Quality Standards/Guidance Values - Class GA Waters

¹ All handling and preservation of collected samples and laboratory analyses of samples was performed in accordance with 40 CFR Part 136.



Appendix A-12. Summary of Pesticides Detected in Groundwater
Phase II Environmental Subsurface Investigation for the Motiva Site - Bushwick Inlet Park
56 Quay St. & 1 Franklin St., Brooklyn, New York

Pesticides ¹	NYCDEP Limitations to Sanitary or Combined Sewers	NYS Ambient Water Quality Standards/Guidance Values	Sample ID & Date Collect	
			MW-01	MW-02
			3/30/2015	3/30/2015
Total Pesticides	NS	NS	ND	ND

Notes:

All concentrations are reported in parts per billion (ppb or ug/L)

NYS Ambient Water Quality Standards/Guidance Values for Class GA Waterbody

NS = No Standard/Not Sampled

ND = Compound not detected above method detection limit (see attached lab report for mdl's)

Shaded = Concentration exceeds NYCDEP Limitations for Effluent to Sanitary or Combined Sewers (daily limit)

Bold = Concentration exceeds NYS Ambient Water Quality Standards/Guidance Values - Class GA Waters

¹ All handling and preservation of collected samples and laboratory analyses of samples was performed in accordance with 40 CFR Part 136.



Appendix A-13. Summary of Herbicides Detected in Groundwater
Phase II Environmental Subsurface Investigation for the Motiva Site - Bushwick Inlet Park
56 Quay St. & 1 Franklin St., Brooklyn, New York

Herbicides ¹	NYCDEP Limitations to Sanitary or Combined Sewers	NYS Ambient Water Quality Standards/Guidance Values	Sample ID & Date Collect	
			MW-01	MW-02
			3/30/2015	3/30/2015
Herbicides	NS	NS	ND	ND

Notes:

All concentrations are reported in parts per billion (ppb or ug/L)

NYS Ambient Water Quality Standards/Guidance Values for Class GA Waterbody

NS = No Standard/Not Sampled

ND = Compound not detected above method detection limit (see attached lab report for mdl's)

Shaded = Concentration exceeds NYCDEP Limitations for Effluent to Sanitary or Combined Sewers (daily limit)

Bold = Concentration exceeds NYS Ambient Water Quality Standards/Guidance Values - Class GA Waters

¹ All handling and preservation of collected samples and laboratory analyses of samples was performed in accordance with 40 CFR Part 136.



**Appendix A-14. Summary of Polychlorinated Biphenyls (PCBs) Detected in Groundwater
Phase II Environmental Subsurface Investigation for the Motiva Site - Bushwick Inlet Park
56 Quay St. & 1 Franklin St., Brooklyn, New York**

PCBs ^{1, 2}	NYCDEP Limitations to Sanitary or Combined Sewers	NYS Ambient Water Quality Standards/Guidance Values	Sample ID & Date Collect	
			MW-01	MW-02
			3/30/2015	3/30/2015
Total PCBs	1	0.000001	ND	ND

Notes:

All concentrations are reported in parts per billion (ppb or ug/L)

NYS Ambient Water Quality Standards/Guidance Values for Class GA Waterbody

ND = Compound not detected above method detection limit (see attached lab report for mdl's)

Shaded = Concentration exceeds NYCDEP Limitations for Effluent to Sanitary or Combined Sewers (daily limit)

Bold = Concentration exceeds NYS Ambient Water Quality Standards/Guidance Values - Class GA Waters

¹ All handling and preservation of collected samples and laboratory analyses of samples was performed in accordance with 40 CFR Part 136.

² Analysis for PCBs was performed according to USEPA method 608 with method detection limit =<65 parts per trillion. Analysis for PCBs is required if discharge =>10,000 gallons per day (gpd) and duration of discharge > 10

APPENDIX B

BORING LOGS AND MONITORING WELL INSTALLATION RECORDS



LiRo Engineers, Inc.

TEST BORING LOG

BORING NO:	SB-01
SHEET:	1 of 1
JOB NO.:	13-110-0265
LOCATION:	Motiva Site - Bushwick Inlet Park
GROUND ELEVATION:	
DATE STARTED:	March 24, 2015
DATE FINISHED:	March 24, 2015
DRILLER:	John Veiss
GEOLOGIST:	Eva Jakubowska
REVIEWED BY:	

PROJECT:	Motiva Site-Bushwick Inlet Park, Brooklyn, NY
CLIENT:	New York City Department of Design and Construction (NYCDDC)
BORING CONTRACTOR:	Associated Environmental Services, Ltd.
GROUNDWATER:	8.0'
CAS.	
SAMPLER	Macro core
TUBE	5'
DATE	
TIME	
LEVEL	
TYPE	
TYPE	
DIA.	
WT.	
FALL	

DEPTH FEET	SAMPLE					DESCRIPTION			USCS	REMARKS	
	STRATA	"S" NO.	"N" NO.	BLOWS PER 6"	REC% RQD%	COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION			
		SB-01				NA	Dark brown to black	NA	0-6.0': Top vegetation. Fine to medium sand with urban fill material (red brick, concrete pieces and grass/ceramic pieces.)	FILL	Hand cleared to 6 ft bgs PID: 0.0 ppm MOIST at 6 ft bgs
6											
						NA	Dark brown	NA	6-10.0': Fine to medium sand and fill material.	FILL	PID: 0.0 ppm WET at 8 ft bgs
10											
						NA	Dark brown	NA	10-15': Fine to medium sand.	SP	PID: 0.0 ppm WET
15											
						NA	Dark brown	NA	15-20': Fine to medium sand.	SP	PID: 0.0 ppm WET
20											

Terminated at 20 ft BGS

COMMENTS:
Soil samples were classified in the field using the Unified Soil Classification System (USCS).
Groundwater was noted at 8 ft bgs. The boring was driven to a depth of 20 ft bgs for MW-01 installation.
Two (2) soil samples were collected and sent for lab analysis: a grab sample (SB-01-5.5-6.0),
at 6" interval above the groundwater table and a composite sample (SB-01-COMP) of the entire
boring. Additionally, the soil from this boring was part of the WC-01 sample.

PROJECT NO.:	13-110-0265
BORING NO.:	SB-01



LiRo Engineers, Inc.

TEST BORING LOG

BORING NO:	SB-02
SHEET:	1 of 1
JOB NO.:	13-110-0265
LOCATION:	Motiva Site - Bushwick Inlet Park
GROUND ELEVATION:	
DATE STARTED:	March 24, 2015
DATE FINISHED:	March 24, 2015
DRILLER:	John Veiss
GEOLOGIST:	Eva Jakubowska
REVIEWED BY:	

PROJECT:	Motiva Site-Bushwick Inlet Park, Brooklyn, NY
CLIENT:	New York City Department of Design and Construction (NYCDDC)
BORING CONTRACTOR:	Associated Environmental Services, Ltd.
GROUNDWATER:	8.0'
CAS.	
SAMPLER	Macro core
TUBE	5'
DATE	
TIME	
LEVEL	
TYPE	
TYPE	DIA.
	WT.
	FALL

DEPTH FEET	SAMPLE					DESCRIPTION				USCS	REMARKS
	STRATA	"S" NO.	"N" NO.	BLOWS PER 6"	REC%	COLOR	CONSISTENCY HARDNESS	MATERIAL			
					RQD%			DESCRIPTION			
						NA	Dark brown to black	NA	0-6.0': Top vegetation. Fine to medium sand with urban fill material (red brick, concrete pieces and grass/ceramic pieces and ash)	FILL	Hand cleared to 6 ft bgs PID: 0.0 ppm
6		SB-02				NA	Dark brown	NA	6-10.0': Fine to medium sand and fill material.	FILL	PID: 0.0 ppm WET at 8 ft bgs
10						NA	Dark brown	NA	10-15': Fine to medium sand.	SP	PID: 0.0 ppm WET
15						NA	Dark brown	NA	15-20': Fine to medium sand.	SP	PID: 0.0 ppm WET
20						NA	Dark brown	NA	15-20': Fine to medium sand.	SP	PID: 0.0 ppm WET

Terminated at 20 ft BGS

COMMENTS:
Soil samples were classified in the field using the Unified Soil Classification System (USCS).
Groundwater was noted at 8 ft bgs. The boring was driven to a depth of 20 ft bgs for MW-02 installation.
Two (2) soil samples were collected and sent for lab analysis: a grab sample (SB-02-5.5-6.0),
at 6" interval above the groundwater table and a composite sample (SB-02-COMP) of the entire
boring. Additionally, the soil from this boring was part of the WC-01 sample.

PROJECT NO.:	13-110-0265
BORING NO.:	SB-02

LiRo Engineers, Inc.

TEST BORING LOG

BORING NO: SB-03

PROJECT: Motiva Site-Bushwick Inlet Park, Brooklyn, NY

SHEET: 1 of 1

CLIENT: New York City Department of Design and Construction (NYCDDC)

JOB NO.: 13-110-0265

BORING CONTRACTOR: Associated Environmental Services, Ltd.

LOCATION:	Motiva Site-Bushwick Inlet Park

GROUNDWATER:	4	CAS.	SAMPLER	TUBE

GROUND ELEVATION:

DATE	TIME	LEVEL	TYPE	TYPE			

DATE STARTED: March 24, 2015

				DIA.			

DATE FINISHED: March 24, 2015

				WT.					

DRILLER: John Veiss

				FALL			

GEOLOGIST: Eva Jakubowska

REVIEWED BY:

SAMPLE	DESCRIPTION

DESCRIPTION

DEPTH	"S"	"N"	BLOWS	REC%	CONSISTENCY

FEET	STRATA	NO.	NO.	PER 6"	RQD%	COLOR	HARDNESS

[illegible][illegible]

			NA	Black	NA	urban fill

[illegible][illegible]

0-5.0': Top vegetation. Medium sand with urban fill material (red brick pieces, glass/ceramic pieces, and ash).

FILL

Hand cleared to 5 ft bgs
PID: 0.0 ppm
WET at 4 ft bgs

Terminated at 5 ft BGS

COMMENTS:

Soil samples were classified in the field using the Unified Soil Classification System (USCS).

Groundwater was noticed at 4 ft bgs. The boring was hand cleared to 5 ft bgs only. Two (2) shallow

samples were collected and sent for lab analysis: a grab sample (SB-03-3.5-4.0), a 6" interval

above the groundwater table; and, a composite sample (SB-03-COMP) of the entire boring from

0 to 5 ft bgs. Additionally, the soil from this boring was part of the WC-01 sample.

[illegible]

PROJECT NO.: 13-110-0265

BORING NO.: SB-03



BORING NO: SB-04

SHEET: 1 of 1

PROJECT: Motiva Site-Bushwick Inlet Park, Brooklyn, NY

CLIENT: New York City Department of Design and Construction (NYCDDC)

JOB NO.: 13-110-0265

BORING CONTRACTOR: Associated Environmental Services, Ltd.

LOCATION:	Motiva Site-Bushwick Inlet Park

GROUNDWATER:	4	CAS.	SAMPLER	TUBE

GROUND ELEVATION: _____

DATE	TIME	LEVEL	TYPE	TYPE			

GROUND ELEVATION: _____

				DIA.			

DATE STARTED: March 24, 2015

				WT			

DATE FINISHED: March 24, 2015

				FEAL I			

DBIL ER:	John Veiss

[illegible]

GEOLOGIST: Eva Jakubowska

REVIEWED BY: _____

DEPTH FEET	SAMPLE					DESCRIPTION			USCS	REMARKS	
	STRATA	"S" NO.	"N" NO.	BLOWS PER 6"		REC% RQD%	COLOR	CONSISTENCY HARDNESS			MATERIAL DESCRIPTION
						NA	Dark brown to black	NA	0-5.0': Top vegetation. Fine to medium sand with rocks and urban fill material (red brick pieces, glass/ceramic pieces, and ash).	FILL	Hand cleared to 5 ft bgs PID: 0.0 ppm WET at 4 ft bgs
		SB-04									
5											

Terminated at 5 ft BGS

COMMENTS:

Soil samples were classified in the field using the Unified Soil Classification System (USCS). Groundwater was noticed at 4 ft bgs. The boring was hand cleared to 5 ft bgs only. Two (2) shallow samples were collected and sent for lab analysis: a grab sample (SB-04-3.5-4.0), 6" interval above the groundwater table; and, a composite sample (SB-04-COMP) of the entire boring from 0 to 5 ft bgs. Additionally, the soil from this boring was part of the WC-01 sample.

PROJECT NO.: 13-110-0265

BORING NO.: SB-04

LiRo Engineers, Inc.

TEST BORING LOG

BORING NO: SB-05

PROJECT: Motiva Site-Bushwick Inlet Park, Brooklyn, NY

SHEET: 1 of 1

CLIENT: New York City Department of Design and Construction (NYCDDC)

JOB NO.: 13-110-0265

BORING CONTRACTOR: Associated Environmental Services, Ltd.

LOCATION:	Motiva Site-Bushwick Inlet Park

GROUNDWATER:	5	CAS.	SAMPLER	TUBE

GROUND ELEVATION:

DATE	TIME	LEVEL	TYPE	TYPE			
				DIA.			
				WT.			
				FALL			

DATE STARTED: March 24, 2015

DATE FINISHED: March 24, 2015

DRILLER: John Veiss

GEOLOGIST: Eva Jakubowska

REVIEWED BY:

DEPTH FEET	SAMPLE					DESCRIPTION			USCS	REMARKS	
	STRATA	"S" NO.	"N" NO.	BLOWS PER 6"		REC% RQD%	COLOR	CONSISTENCY HARDNESS			MATERIAL DESCRIPTION
		SB-05				NA	Dark brown	NA	0-5.0': Top vegetation. Fine to medium sand with urban fill material (red brick pieces, glass/ceramic pieces, and ash).	FILL	Hand cleared to 5 ft bgs PID: 0.0 ppm WET at 5 ft bgs
5											

Terminated at 5 ft BGS

COMMENTS:

Soil samples were classified in the field using the Unified Soil Classification System (USCS). Groundwater was noticed at 5 ft bgs. The boring was hand cleared to 5 ft bgs only. Two (2) shallow samples were collected and sent for lab analysis: a grab sample (SB-05-4.5-5.0), 6" interval above the groundwater table; and, a composite sample (SB-05-COMP) of the entire boring from 0 to 5 ft bgs. Additionally, the soil from this boring was part of the WC-01 sample.

PROJECT NO.: 13-110-0265

BORING NO.: SB-05



LiRo Engineers, Inc.

TEST BORING LOG

PROJECT: Motiva Site-Bushwick Inlet Park, Brooklyn, NY										BORING NO: SB-06	
CLIENT: New York City Department of Design and Construction (NYCDDC)										SHEET: 1 of 1	
BORING CONTRACTOR: Associated Environmental Services, Ltd.										JOB NO.: 13-110-0265	
GROUNDWATER: 5										LOCATION: Motiva Site-Bushwick Inlet Park	
GROUND ELEVATION:											
CAS.											
SAMPLER											
TUBE											
DATE										DATE STARTED: March 24, 2015	
TIME										DATE FINISHED: March 24, 2015	
LEVEL										DRILLER: John Veiss	
TYPE										GEOLOGIST: Eva Jakubowska	
TYPE										REVIEWED BY:	
DIA.											
WT.											
FALL											
DEPTH											
FEET											
SAMPLE										DESCRIPTION	
STRATA										USCS	
"S" NO.										REMARKS	
"N" NO.											
BLOWS PER 6"											
REC% RQD%											
COLOR											
CONSISTENCY											
HARDNESS											
MATERIAL DESCRIPTION											
5											
SB-06											
0-5.0': Top vegetation. Fine to medium sand with urban fill material (red brick pieces, glass/ceramic pieces, and ash).										FILL	
Hand cleared to 5 ft bgs PID: 0.0 ppm WET at 5 ft bgs											
Terminated at 5 ft BGS											
COMMENTS:											
Soil samples were classified in the field using the Unified Soil Classification System (USCS).											
Groundwater was noticed at 5 ft bgs. The boring was hand cleared to 5 ft bgs only. Two (2) shallow samples were collected and sent for lab analysis: a grab sample (SB-06-4.5-5.0), 6" interval above the groundwater table; and, a composite sample (SB-06-COMP) of the entire boring from 0 to 5 ft bgs. Additionally, the soil from this boring was part of the WC-02 sample.											
PROJECT NO.: 13-110-0265											
BORING NO.: SB-06											

LiRo Engineers, Inc.

TEST BORING LOG

BORING NO: SB-07

PROJECT: Motiva Site-Bushwick Inlet Park, Brooklyn, NY

SHEET: 1 of 1

CLIENT: New York City Department of Design and Construction (NYCDDC)

JOB NO.: 13-110-0265

BORING CONTRACTOR: Associated Environmental Services, Ltd.

LOCATION:	Motiva Site-Bushwick Inlet Park

GROUNDWATER:	5	CAS.	SAMPLER	TUBE

GROUND ELEVATION: _____

DATE	TIME	LEVEL	TYPE	TYPE			

DATE STARTED: March 25, 2015

				DIA.			

DATE FINISHED: March 25, 2015

[illegible]

DRILLER: John Veiss

				FALL			

GEOLOGIST: Eva Jakubowska

REVIEWED BY: _____

DEPTH FEET	SAMPLE					DESCRIPTION				USCS	REMARKS
	STRATA	"S" NO.	"N" NO.	BLOWS		REC%	COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION		
				PER 6"							
						NA	Dark brown	NA	0-5.0': Top vegetation. Medium sand with very large rocks (coastal rocks) and urban fill material.	FILL	Hand cleared to 5 ft bgs PID: 0.0 ppm WET at 5 ft bgs
5		SB-07									

Terminated at 5 ft BGS

COMMENTS:

PROJECT NO.: 13-110-0265

Soil samples were classified in the field using the Unified Soil Classification System (USCS).

BORING NO.: SB-07

Groundwater was noticed at 5 ft bgs. The boring was hand cleared to 5 ft bgs only. Two (2) shallow

samples were collected and sent for lab analysis: a grab sample (SB-07-4.5-5.0), 6" interval

above the groundwater table; and, a composite sample (SB-07-COMP) of the entire boring from

0 to 5 ft bgs. Additionally, the soil from this boring was part of the WC-02 sample.



LiRo Engineers, Inc.

TEST BORING LOG

PROJECT: Motiva Site-Bushwick Inlet Park, Brooklyn, NY										BORING NO.: SB-08	
CLIENT: New York City Department of Design and Construction (NYCDDC)										SHEET: 1 of 1	
BORING CONTRACTOR: Associated Environmental Services, Ltd.										JOB NO.: 13-110-0265	
GROUNDWATER: NA										LOCATION: Motiva Site-Bushwick Inlet Park	
GROUND ELEVATION:										DATE STARTED: April 6, 2015	
DATE FINISHED: April 6, 2015										DRILLER: Marty & Luis	
GEOLOGIST: Mary Brzowski										REVIEWED BY:	
REVIEWED BY:											
DATE										DATE STARTED: April 6, 2015	
TIME										DATE FINISHED: April 6, 2015	
LEVEL										DRILLER: Marty & Luis	
TYPE										GEOLOGIST: Mary Brzowski	
TYPE										REVIEWED BY:	
DIA.											
WT.											
FALL											
CAS.											
SAMPLER											
TUBE											
DEPTH											
FEET											
STRATA											
"S" NO.											
"N" NO.											
BLOWS PER 6"											
REC% RQD%											
COLOR											
CONSISTENCY											
HARDNESS											
MATERIAL DESCRIPTION											
USCS											
REMARKS											
0-5.0': Fill material - ballasts, fine to medium sand with some silt, trace of red brick, gravel, and mice pieces.										FILL	
5.0-6.0': Fine to medium sand with some silt, shells, gravel (weathered mica schist), and traces of peat (vegetation).										OL	
Terminated at 6 ft BGS											
COMMENTS:										PROJECT NO.: 13-110-0265	
Soil samples were classified in the field using the Unified Soil Classification System (USCS).										BORING NO.: SB-08	
Groundwater was not noticed. The boring was hand cleared to 6 ft bgs. Two (2) shallow											
samples were collected and sent for lab analysis: a grab sample (SB-08-4.5-5.0), 6" interval											
above the suspect groundwater table; and, a composite sample (SB-08-COMP) of the entire											
boring from 0 to 6 ft bgs.											

DRILLING SUMMARY		MONITORING WELL CONSTRUCTION LOG					
Geologist: Eva Jakubowska							
Drilling Company: Associated Environmental Services, Ltd.							
Driller: John Veiss							
Rig Make/Model: Geoprobe							
Date: 3/25/2015							
GEOLOGIC LOG <table border="1"> <thead> <tr> <th>Depth (ft.)</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> </tr> </tbody> </table>		Depth (ft.)	Description				
Depth (ft.)	Description						
WELL DESIGN		NOT TO SCALE					
CASING MATERIAL		SCREEN MATERIAL					
Surface: Sand		Type: 2" Schedule 40 PVC					
Monitor: Schedule 40 PVC		Slot Diameter: 0.020					
		FILL MATERIAL					
		Type: SAND NO. 2 Setting: 3-20 ft bgs					
		SEAL MATERIAL					
		Type: Bentonite Chips Setting: 2-3 ft bgs					
		Type: Backfill Setting: Grade to 2 ft bgs					
COMMENTS:		LEGEND:					
Temporary well point installed in boring SB-01. Groundwater encountered at 8-10 ft bgs.		PVC Casing PVC Screen No.2 Sand Pack Bentonite Seal					
CLIENT:	LOCATION:	Project No.					
NYCDDC	Motiva Site-Bushwick Inlet Park, Brooklyn, NY	13-110-0265					
LiRo Engineers, Inc.	Monitoring Well Construction Details	Well Number: MW-01					

DRILLING SUMMARY		MONITORING WELL CONSTRUCTION LOG					
Geologist: Eva Jakubowska							
Drilling Company: Associated Environmental Services, Ltd.							
Driller: John Veiss							
Rig Make/Model: Geoprobe							
Date: 3/25/2015							
GEOLOGIC LOG <table border="1"> <thead> <tr> <th>Depth (ft.)</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> </tr> </tbody> </table>		Depth (ft.)	Description			PVC Casing: 2 Diameter 20 Length PVC Screen 2" Diameter 5 Length Bottom of Screen Set @ 19.5 ft bgs End of Boring Set @ 20 ft bgs	
Depth (ft.)	Description						
WELL DESIGN		NOT TO SCALE					
CASING MATERIAL		SCREEN MATERIAL					
Surface: Sand		Type: 2" Schedule 40 PVC					
Monitor: Schedule 40 PVC		Slot Diameter: 0.020					
FILL MATERIAL		SEAL MATERIAL					
Type: SAND NO. 2 Setting: 3-20 ft bgs		Type: Bentonite Chips Setting: 2-3 ft bgs					
Type: Backfill Setting: Grade to 2 ft bgs							
COMMENTS:		LEGEND:					
Temporary well point installed in boring SB-02. Groundwater encountered at 8-10 ft bgs. _____ _____ _____ _____		PVC Casing PVC Screen No.2 Sand Pack Bentonite Seal					
CLIENT:	LOCATION:	Project No.					
NYCDDC	Motiva Site-Bushwick Inlet Park, Brooklyn, NY	13-110-0265					
LiRo Engineers, Inc.	Monitoring Well Construction Details	Well Number: MW-02					

APPENDIX C
LABORATORY ANALYTICAL DATA
Included on Attached CD

April 6, 2015

Steve Frank
LiRo Engineers, Inc.
690 Delaware Avenue
Buffalo, NY 14209-2202

Project Location: Motiva Site - Bushiwick Inlet Park
Client Job Number:
Project Number: 13-110-0265
Laboratory Work Order Number: 15C1102

Enclosed are results of analyses for samples received by the laboratory on March 26, 2015. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "James Georgantas", with a long horizontal flourish extending to the right.

James M. Georgantas
Project Manager

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

LiRo Engineers, Inc.
690 Delaware Avenue
Buffalo, NY 14209-2202
ATTN: Steve Frank

REPORT DATE: 4/6/2015

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 13-110-0265

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 15C1102

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: Motiva Site - Bushiwick Inlet Park

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
SB-01-5.5-6.0'	15C1102-01	Soil		SM 2540G SW-846 8260C	
SB-01-COMP	15C1102-02	Soil		SM 2540G SW-846 6010C SW-846 7471B SW-846 8081B SW-846 8082A SW-846 8151A SW-846 8270D	
SB-02-5.5-6.0'	15C1102-03	Soil		SM 2540G SW-846 8260C	
SB-02-COMP	15C1102-04	Soil		SM 2540G SW-846 6010C SW-846 7471B SW-846 8081B SW-846 8082A SW-846 8151A SW-846 8270D	
SB-03-3.5-4.0'	15C1102-05	Soil		SM 2540G SW-846 8260C	
SB-03-COMP	15C1102-06	Soil		SM 2540G SW-846 6010C SW-846 7471B SW-846 8081B SW-846 8082A SW-846 8151A SW-846 8270D	
SB-04-3.5-4.0'	15C1102-07	Soil		SM 2540G SW-846 8260C	
SB-04-COMP	15C1102-08	Soil		SM 2540G SW-846 6010C SW-846 7471B SW-846 8081B SW-846 8082A SW-846 8151A SW-846 8270D	
SB-05-4.5-5.0'	15C1102-09	Soil		SM 2540G SW-846 8260C	

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LiRo Engineers, Inc.
690 Delaware Avenue
Buffalo, NY 14209-2202
ATTN: Steve Frank

REPORT DATE: 4/6/2015

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 13-110-0265

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 15C1102

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: Motiva Site - Bushiwick Inlet Park

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
SB-05-COMP	15C1102-10	Soil		SM 2540G	
				SW-846 6010C	
				SW-846 7471B	
				SW-846 8081B	
				SW-846 8082A	
				SW-846 8151A	
SB-06-4.5-5.0'	15C1102-11	Soil		SW-846 8270D	
				SM 2540G	
				SW-846 8260C	
				SM 2540G	
				SW-846 6010C	
				SW-846 7471B	
SB-06-COMP	15C1102-12	Soil		SW-846 8081B	
				SW-846 8082A	
				SW-846 8151A	
				SW-846 8270D	
				SM 2540G	
				SW-846 8260C	
SB-07-4.5-5.0'	15C1102-13	Soil		SW-846 6010C	
				SW-846 7471B	
				SW-846 8081B	
				SW-846 8082A	
				SW-846 8151A	
				SW-846 8270D	
SB-07-COMP	15C1102-14	Soil		SM 2540G	
				SW-846 6010C	
				SW-846 7471B	
				SW-846 8081B	
				SW-846 8082A	
				SW-846 8151A	
SED-01 (0-6")	15C1102-15	Soil		SW-846 8270D	
				SM 2540G	
				SW-846 6010C	
				SW-846 7471B	
				SW-846 8081B	
				SW-846 8082A	
SED-02 (0-6")	15C1102-16	Soil		SW-846 8151A	
				SW-846 8260C	
				SW-846 8270D	
				SM 2540G	
				SW-846 6010C	
				SW-846 7471B	
				SW-846 8081B	
				SW-846 8082A	
				SW-846 8151A	
				SW-846 8260C	
				SW-846 8270D	

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PROJECT NUMBER: 13-110-0265

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 15C1102

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: Motiva Site - Bushiwick Inlet Park

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
WC-01	15C1102-17	Soil	SB-01 through SB-05	SM 2540G	
				SW-846 1030	
				SW-846 1311	
				SW-846 6010C	
				SW-846 7470A	
				SW-846 8015C	
				SW-846 8081B	
				SW-846 8082A	
				SW-846 8151A	
				SW-846 8260C	
				SW-846 8270D	
				SW-846 9014	
				SW-846 9030A	
				SW-846 9045C	
WC-02	15C1102-18	Soil	SB-06 & SB-07	SW-846 9095B	
				SM 2540G	
				SW-846 1030	
				SW-846 1311	
				SW-846 6010C	
				SW-846 7470A	
				SW-846 8015C	
				SW-846 8081B	
				SW-846 8082A	
				SW-846 8151A	
				SW-846 8260C	
				SW-846 8270D	
				SW-846 9014	
				SW-846 9030A	
				SW-846 9045C	
				SW-846 9095B	

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

For method 8151, samples were derivatized on 03/31/15 and 04/02/15.

For method 8151, sample analysis bracketed by LCS to monitor esterification. All recoveries in the bracketing LCS met method criteria.

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SW-846 6010C

Qualifications:**B**

Analyte is found in the associated blank as well as in the sample.

Analyte & Samples(s) Qualified:**Copper**

15C1102-02[SB-01-COMP], 15C1102-04[SB-02-COMP], 15C1102-06[SB-03-COMP], 15C1102-08[SB-04-COMP], 15C1102-10[SB-05-COMP], 15C1102-12[SB-06-COMP], 15C1102-14[SB-07-COMP], 15C1102-15[SED-01 (0-6")], 15C1102-16[SED-02 (0-6")], B118098-BS1, B118098-BSD1, B118200-BS1, B118200-BSD1

Iron

15C1102-02[SB-01-COMP], 15C1102-04[SB-02-COMP], 15C1102-06[SB-03-COMP], 15C1102-08[SB-04-COMP], 15C1102-10[SB-05-COMP], 15C1102-12[SB-06-COMP], B118200-BS1, B118200-BSD1

B-07

Data is not affected by elevated level in blank since sample result is >10x level found in the blank.

Analyte & Samples(s) Qualified:**Copper**

15C1102-02[SB-01-COMP], 15C1102-04[SB-02-COMP], 15C1102-06[SB-03-COMP], 15C1102-08[SB-04-COMP], 15C1102-10[SB-05-COMP], 15C1102-12[SB-06-COMP], 15C1102-14[SB-07-COMP], 15C1102-15[SED-01 (0-6")], 15C1102-16[SED-02 (0-6")], B118098-BLK1, B118200-BLK1

Iron

15C1102-02[SB-01-COMP], 15C1102-04[SB-02-COMP], 15C1102-06[SB-03-COMP], 15C1102-08[SB-04-COMP], 15C1102-10[SB-05-COMP], 15C1102-12[SB-06-COMP], B118200-BLK1

L-07

Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.

Analyte & Samples(s) Qualified:**Copper**

B118200-BSD1

Zinc

B118200-BSD1

L-07A

Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD outside of control limits. Reduced precision anticipated for any reported result for this compound.

Analyte & Samples(s) Qualified:**Lead**

15C1102-02[SB-01-COMP], 15C1102-04[SB-02-COMP], 15C1102-06[SB-03-COMP], 15C1102-08[SB-04-COMP], 15C1102-10[SB-05-COMP], 15C1102-12[SB-06-COMP], B118200-BSD1

SW-846 8015C

Qualifications:**PR-03**

Sample preserved in the laboratory, not in the field as required by the method.

Analyte & Samples(s) Qualified:

15C1102-17[WC-01], 15C1102-18[WC-02]

SW-846 8081B

Qualifications:

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P-01

Result was confirmed using a dissimilar column. Relative percent difference between the two results was >40%. In accordance with the method, the higher result was reported.

Analyte & Samples(s) Qualified:**4,4'-DDD**

15C1102-12[SB-06-COMP]

4,4'-DDT

15C1102-10[SB-05-COMP]

4,4'-DDT [2C]

15C1102-02[SB-01-COMP], 15C1102-04[SB-02-COMP], 15C1102-12[SB-06-COMP]

Alachlor [2C]

15C1102-04[SB-02-COMP]

Dieldrin

15C1102-02[SB-01-COMP], 15C1102-04[SB-02-COMP], 15C1102-12[SB-06-COMP]

RL-11

Elevated reporting limit due to high concentration of target compounds.

Analyte & Samples(s) Qualified:

15C1102-04[SB-02-COMP], 15C1102-08[SB-04-COMP]

RL-12

Elevated reporting limit due to matrix interference.

Analyte & Samples(s) Qualified:

15C1102-06[SB-03-COMP], 15C1102-14[SB-07-COMP]

S-01

The surrogate recovery for this sample is not available due to sample dilution below the surrogate reporting limit required from high analyte concentration and/or matrix interferences.

Analyte & Samples(s) Qualified:**Decachlorobiphenyl**

15C1102-08[SB-04-COMP]

Decachlorobiphenyl [2C]

15C1102-08[SB-04-COMP]

Tetrachloro-m-xylene

15C1102-08[SB-04-COMP]

Tetrachloro-m-xylene [2C]

15C1102-08[SB-04-COMP]

S-02

The surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic compounds present in the sample extract.

Analyte & Samples(s) Qualified:**Decachlorobiphenyl [2C]**

15C1102-04[SB-02-COMP]

SW-846 8082A

Qualifications:**MS-21**

Matrix spike and/or spike duplicate recovery bias high due to contribution of other Aroclors present in the source sample.

Analyte & Samples(s) Qualified:**Aroclor-1016**

B118123-MS1, B118123-MSD1

Aroclor-1016 [2C]

B118123-MS1, B118123-MSD1

Aroclor-1260

B118123-MS1, B118123-MSD1

Aroclor-1260 [2C]

B118123-MS1, B118123-MSD1

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P-01

Result was confirmed using a dissimilar column. Relative percent difference between the two results was >40%. In accordance with the method, the higher result was reported.

Analyte & Samples(s) Qualified:**Aroclor-1254 [2C]**

15C1102-02[SB-01-COMP], 15C1102-08[SB-04-COMP], 15C1102-16[SED-02 (0-6")]

SW-846 8151A**Qualifications:****P-01**

Result was confirmed using a dissimilar column. Relative percent difference between the two results was >40%. In accordance with the method, the higher result was reported.

Analyte & Samples(s) Qualified:**2,4-DB**

15C1102-04[SB-02-COMP]

S-03

Surrogate recovery outside of control limits due to suspected sample matrix interference.

Analyte & Samples(s) Qualified:**2,4-Dichlorophenylacetic acid**

15C1102-15[SED-01 (0-6")], 15C1102-16[SED-02 (0-6")]

2,4-Dichlorophenylacetic acid [2C]

15C1102-02[SB-01-COMP], 15C1102-04[SB-02-COMP], 15C1102-08[SB-04-COMP], 15C1102-15[SED-01 (0-6")], 15C1102-16[SED-02 (0-6")]

V-06

Continuing calibration did not meet method specifications and was biased on the high side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the high side.

Analyte & Samples(s) Qualified:**Dalapon**

B117934-BS1, B117934-BSD1

V-20

Continuing calibration did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

Analyte & Samples(s) Qualified:**Dalapon**

15C1102-02[SB-01-COMP], 15C1102-04[SB-02-COMP], 15C1102-06[SB-03-COMP], 15C1102-08[SB-04-COMP], 15C1102-10[SB-05-COMP],

15C1102-12[SB-06-COMP], 15C1102-14[SB-07-COMP], 15C1102-15[SED-01 (0-6")], 15C1102-16[SED-02 (0-6")]

SW-846 8260C**Qualifications:****L-02**

Laboratory fortified blank/laboratory control sample recovery and duplicate recoveries outside of control limits. Data validation is not affected since all results are "not detected" for associated samples in this batch and bias is on the high side.

Analyte & Samples(s) Qualified:**Trichlorofluoromethane (Freon 11)**

B118395-BS1, B118395-BSD1

L-07

Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.

Analyte & Samples(s) Qualified:**1,1-Dichloroethylene**

B118395-BSD1

1,1-Dichloropropene

B118395-BSD1

Chloroethane

B118395-BSD1

L-07A

Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD outside of control limits. Reduced precision anticipated for any reported result for this compound.

Analyte & Samples(s) Qualified:**Bromomethane**

B118395-BSD1

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PR-03

Sample preserved in the laboratory, not in the field as required by the method.

Analyte & Samples(s) Qualified:

15C1102-01[SB-01-5.5-6.0'], 15C1102-03[SB-02-5.5-6.0'], 15C1102-05[SB-03-3.5-4.0'], 15C1102-07[SB-04-3.5-4.0'], 15C1102-09[SB-05-4.5-5.0'],
15C1102-11[SB-06-4.5-5.0'], 15C1102-13[SB-07-4.5-5.0'], 15C1102-15[SED-01 (0-6")], 15C1102-16[SED-02 (0-6")]

PR-15

According to the NY ELAP program, all voa results less than 0.2mg/Kg are estimated and biased low if not collected according to SW-846
5035-L/5035A-L.

Analyte & Samples(s) Qualified:

15C1102-01[SB-01-5.5-6.0'], 15C1102-03[SB-02-5.5-6.0'], 15C1102-05[SB-03-3.5-4.0'], 15C1102-07[SB-04-3.5-4.0'], 15C1102-09[SB-05-4.5-5.0'],
15C1102-11[SB-06-4.5-5.0'], 15C1102-13[SB-07-4.5-5.0'], 15C1102-15[SED-01 (0-6")], 15C1102-16[SED-02 (0-6")]

R-05

Laboratory fortified blank duplicate RPD is outside of control limits. Reduced precision is anticipated for any reported value for this
compound.

Analyte & Samples(s) Qualified:

Bromomethane

15C1102-01[SB-01-5.5-6.0'], 15C1102-03[SB-02-5.5-6.0'], 15C1102-05[SB-03-3.5-4.0'], 15C1102-07[SB-04-3.5-4.0'], 15C1102-09[SB-05-4.5-5.0'],
15C1102-11[SB-06-4.5-5.0'], 15C1102-13[SB-07-4.5-5.0'], 15C1102-15[SED-01 (0-6")], 15C1102-16[SED-02 (0-6")], B118395-BLK1, B118395-BS1, B118395-BSD1

V-05

Continuing calibration did not meet method specifications and was biased on the low side for this compound. Increased uncertainty is
associated with the reported value which is likely to be biased on the low side.

Analyte & Samples(s) Qualified:

1,2-Dibromo-3-chloropropane (DBP)

15C1102-01[SB-01-5.5-6.0'], 15C1102-03[SB-02-5.5-6.0'], 15C1102-05[SB-03-3.5-4.0'], 15C1102-07[SB-04-3.5-4.0'], 15C1102-09[SB-05-4.5-5.0'],
15C1102-11[SB-06-4.5-5.0'], 15C1102-13[SB-07-4.5-5.0'], 15C1102-15[SED-01 (0-6")], 15C1102-16[SED-02 (0-6")], B118395-BLK1, B118395-BS1, B118395-BSD1

V-20

Continuing calibration did not meet method specifications and was biased on the high side. Data validation is not affected since sample result
was "not detected" for this compound.

Analyte & Samples(s) Qualified:

Acetone

B118395-BS1, B118395-BSD1

Bromomethane

B118395-BS1, B118395-BSD1

Trichlorofluoromethane (Freon 11)

B118395-BS1, B118395-BSD1

SW-846 8270D

Qualifications:

L-04

Laboratory fortified blank/laboratory control sample recovery and duplicate recovery are outside of control limits. Reported value for this
compound is likely to be biased on the low side.

Analyte & Samples(s) Qualified:

2,4-Dinitrophenol

15C1102-02[SB-01-COMP], 15C1102-04[SB-02-COMP], 15C1102-06[SB-03-COMP], 15C1102-08[SB-04-COMP], 15C1102-10[SB-05-COMP],
15C1102-12[SB-06-COMP], 15C1102-14[SB-07-COMP], 15C1102-15[SED-01 (0-6")], 15C1102-16[SED-02 (0-6")], B118238-BLK1, B118238-BS1, B118238-BSD1

L-07A

Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD
outside of control limits. Reduced precision anticipated for any reported result for this compound.

Analyte & Samples(s) Qualified:

Benzoic Acid

B118238-BS1

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MS-09

Matrix spike recovery and matrix spike duplicate recovery outside of control limits. Possibility of sample matrix effects that lead to a low bias for reported result or non-homogeneous sample aliquots cannot be eliminated.

Analyte & Samples(s) Qualified:

2,4-Dinitrophenol

15C1102-12[SB-06-COMP], B118238-MS1, B118238-MSD1

4,6-Dinitro-2-methylphenol

15C1102-12[SB-06-COMP], B118238-MS1, B118238-MSD1

Benzidine

15C1102-12[SB-06-COMP], B118238-MS1, B118238-MSD1

Benzoic Acid

15C1102-12[SB-06-COMP], B118238-MS1, B118238-MSD1

Hexachlorocyclopentadiene

15C1102-12[SB-06-COMP], B118238-MS1, B118238-MSD1

MS-22

Either matrix spike or MS duplicate is outside of control limits, but the other is within limits. RPD between the two MS/MSD results is within method specified criteria.

Analyte & Samples(s) Qualified:

4-Chloroaniline

B118238-MS1

Aniline

B118238-MS1

Phenanthrene

B118238-MS1

R-05

Laboratory fortified blank duplicate RPD is outside of control limits. Reduced precision is anticipated for any reported value for this compound.

Analyte & Samples(s) Qualified:

2,4-Dinitrophenol

15C1102-02[SB-01-COMP], 15C1102-04[SB-02-COMP], 15C1102-06[SB-03-COMP], 15C1102-08[SB-04-COMP], 15C1102-10[SB-05-COMP], 15C1102-12[SB-06-COMP], 15C1102-14[SB-07-COMP], 15C1102-15[SED-01 (0-6")], 15C1102-16[SED-02 (0-6")], B118238-BLK1, B118238-BS1, B118238-BSD1

Benzoic Acid

15C1102-02[SB-01-COMP], 15C1102-04[SB-02-COMP], 15C1102-06[SB-03-COMP], 15C1102-08[SB-04-COMP], 15C1102-10[SB-05-COMP], 15C1102-12[SB-06-COMP], 15C1102-14[SB-07-COMP], 15C1102-15[SED-01 (0-6")], 15C1102-16[SED-02 (0-6")], B118238-BLK1, B118238-BSD1

RL-11

Elevated reporting limit due to high concentration of target compounds.

Analyte & Samples(s) Qualified:

15C1102-04[SB-02-COMP], 15C1102-14[SB-07-COMP]

S-07

One associated surrogate standard recovery is outside of control limits but the other(s) is/are within limits. All recoveries are > 10%.

Analyte & Samples(s) Qualified:

2,4,6-Tribromophenol

15C1102-17[WC-01], 15C1102-18[WC-02], B118251-BLK1, B118251-BS1

V-04

Initial calibration did not meet method specifications. Compound was calibrated using a response factor where %RSD is outside of method specified criteria.

Analyte & Samples(s) Qualified:

Benzidine

15C1102-02[SB-01-COMP], 15C1102-04[SB-02-COMP], 15C1102-06[SB-03-COMP], 15C1102-08[SB-04-COMP], 15C1102-10[SB-05-COMP], 15C1102-12[SB-06-COMP], 15C1102-14[SB-07-COMP], 15C1102-15[SED-01 (0-6")], 15C1102-16[SED-02 (0-6")], B118238-BLK1, B118238-BS1, B118238-BSD1, B118238-MS1, B118238-MSD1

V-05

Continuing calibration did not meet method specifications and was biased on the low side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the low side.

Analyte & Samples(s) Qualified:

Benzidine

15C1102-02[SB-01-COMP], 15C1102-04[SB-02-COMP], 15C1102-06[SB-03-COMP], 15C1102-08[SB-04-COMP], 15C1102-10[SB-05-COMP], 15C1102-12[SB-06-COMP], 15C1102-14[SB-07-COMP], 15C1102-15[SED-01 (0-6")], 15C1102-16[SED-02 (0-6")], B118238-BLK1, B118238-BS1, B118238-BSD1, B118238-MS1, B118238-MSD1

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V-06

Continuing calibration did not meet method specifications and was biased on the high side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the high side.

Analyte & Samples(s) Qualified:

4-Nitrophenol

B118238-BS1, B118238-BSD1, B118238-MS1, B118238-MSD1

Benzo(g,h,i)perylene

15C1102-02[SB-01-COMP], 15C1102-04[SB-02-COMP], 15C1102-06[SB-03-COMP], 15C1102-08[SB-04-COMP], 15C1102-10[SB-05-COMP], 15C1102-12[SB-06-COMP], 15C1102-14[SB-07-COMP], 15C1102-15[SED-01 (0-6")], 15C1102-16[SED-02 (0-6")], B118238-BS1, B118238-BSD1, B118238-MS1, B118238-MSD1

V-16

Response factor is less than method specified minimum acceptable value. Reduced precision and accuracy may be associated with reported result.

Analyte & Samples(s) Qualified:

Pentachloronitrobenzene

15C1102-02[SB-01-COMP], 15C1102-04[SB-02-COMP], 15C1102-06[SB-03-COMP], 15C1102-08[SB-04-COMP], 15C1102-10[SB-05-COMP], 15C1102-12[SB-06-COMP], 15C1102-14[SB-07-COMP], 15C1102-15[SED-01 (0-6")], 15C1102-16[SED-02 (0-6")], B118238-BLK1, B118238-BS1, B118238-BSD1, B118238-MS1, B118238-MSD1

V-20

Continuing calibration did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

Analyte & Samples(s) Qualified:

4-Nitrophenol

15C1102-02[SB-01-COMP], 15C1102-04[SB-02-COMP], 15C1102-06[SB-03-COMP], 15C1102-08[SB-04-COMP], 15C1102-10[SB-05-COMP], 15C1102-12[SB-06-COMP], 15C1102-14[SB-07-COMP], 15C1102-15[SED-01 (0-6")], 15C1102-16[SED-02 (0-6")], B118238-BLK1

Benzo(g,h,i)perylene

B118238-BLK1

N-Nitrosodimethylamine

15C1102-02[SB-01-COMP], 15C1102-04[SB-02-COMP], 15C1102-06[SB-03-COMP], 15C1102-08[SB-04-COMP], 15C1102-10[SB-05-COMP], 15C1102-12[SB-06-COMP], 15C1102-14[SB-07-COMP], 15C1102-15[SED-01 (0-6")], 15C1102-16[SED-02 (0-6")], B118238-BLK1

SW-846 9045C

Qualifications:

H-03

Sample received after recommended holding time was exceeded.

Analyte & Samples(s) Qualified:

pH

15C1102-17[WC-01], 15C1102-18[WC-02]

SW-846 8015C

Gasoline Range Organics (2-Methylpentane through 1,2,4-Trimethylbenzene) is quantitated against a calibration made with an unleaded gasoline composite standard.
Diesel Range Organics (C10-C28) is quantitated against a calibration made with a #2 fuel oil standard.

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Tod E. Kopyscinski
Laboratory Director

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description:

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: SB-01-5.5-6.0'

Sampled: 3/24/2015 10:00

Sample ID: 15C1102-01

Sample Matrix: Soil

Sample Flags: PR-03, PR-15

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.12	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 9:41	MFF
Acrylonitrile	ND	0.0070	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 9:41	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.0012	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 9:41	MFF
Benzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 9:41	MFF
Bromobenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 9:41	MFF
Bromochloromethane	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 9:41	MFF
Bromodichloromethane	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 9:41	MFF
Bromoform	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 9:41	MFF
Bromomethane	ND	0.012	mg/Kg dry	1	R-05	SW-846 8260C	4/2/15	4/2/15 9:41	MFF
2-Butanone (MEK)	ND	0.046	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 9:41	MFF
tert-Butyl Alcohol (TBA)	ND	0.046	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 9:41	MFF
n-Butylbenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 9:41	MFF
sec-Butylbenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 9:41	MFF
tert-Butylbenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 9:41	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.0012	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 9:41	MFF
Carbon Disulfide	ND	0.023	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 9:41	MFF
Carbon Tetrachloride	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 9:41	MFF
Chlorobenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 9:41	MFF
Chlorodibromomethane	ND	0.0012	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 9:41	MFF
Chloroethane	ND	0.023	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 9:41	MFF
Chloroform	ND	0.0046	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 9:41	MFF
Chloromethane	ND	0.012	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 9:41	MFF
2-Chlorotoluene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 9:41	MFF
4-Chlorotoluene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 9:41	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0023	mg/Kg dry	1	V-05	SW-846 8260C	4/2/15	4/2/15 9:41	MFF
1,2-Dibromoethane (EDB)	ND	0.0012	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 9:41	MFF
Dibromomethane	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 9:41	MFF
1,2-Dichlorobenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 9:41	MFF
1,3-Dichlorobenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 9:41	MFF
1,4-Dichlorobenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 9:41	MFF
trans-1,4-Dichloro-2-butene	ND	0.0046	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 9:41	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.023	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 9:41	MFF
1,1-Dichloroethane	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 9:41	MFF
1,2-Dichloroethane	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 9:41	MFF
1,1-Dichloroethylene	ND	0.0046	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 9:41	MFF
cis-1,2-Dichloroethylene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 9:41	MFF
trans-1,2-Dichloroethylene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 9:41	MFF
1,2-Dichloropropane	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 9:41	MFF
1,3-Dichloropropane	ND	0.0012	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 9:41	MFF
2,2-Dichloropropane	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 9:41	MFF
1,1-Dichloropropene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 9:41	MFF
cis-1,3-Dichloropropene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 9:41	MFF
trans-1,3-Dichloropropene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 9:41	MFF
Diethyl Ether	ND	0.023	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 9:41	MFF

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Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description:

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: SB-01-5.5-6.0'

Sampled: 3/24/2015 10:00

Sample ID: 15C1102-01

Sample Matrix: Soil

Sample Flags: PR-03, PR-15

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.0012	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 9:41	MFF
1,4-Dioxane	ND	0.12	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 9:41	MFF
Ethylbenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 9:41	MFF
Hexachlorobutadiene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 9:41	MFF
Isopropylbenzene (Cumene)	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 9:41	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 9:41	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0046	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 9:41	MFF
Methylene Chloride	ND	0.023	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 9:41	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.023	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 9:41	MFF
Naphthalene	ND	0.0046	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 9:41	MFF
n-Propylbenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 9:41	MFF
Styrene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 9:41	MFF
1,1,1,2-Tetrachloroethane	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 9:41	MFF
Tetrachloroethylene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 9:41	MFF
Tetrahydrofuran	ND	0.012	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 9:41	MFF
Toluene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 9:41	MFF
1,2,3-Trichlorobenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 9:41	MFF
1,2,4-Trichlorobenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 9:41	MFF
1,3,5-Trichlorobenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 9:41	MFF
1,1,1-Trichloroethane	ND	0.0046	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 9:41	MFF
1,1,2-Trichloroethane	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 9:41	MFF
Trichloroethylene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 9:41	MFF
Trichlorofluoromethane (Freon 11)	ND	0.012	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 9:41	MFF
1,2,3-Trichloropropane	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 9:41	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.012	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 9:41	MFF
1,2,4-Trimethylbenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 9:41	MFF
1,3,5-Trimethylbenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 9:41	MFF
Vinyl Chloride	ND	0.012	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 9:41	MFF
m+p Xylene	ND	0.0046	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 9:41	MFF
o-Xylene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 9:41	MFF
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
1,2-Dichloroethane-d4	113	70-130							
Toluene-d8	99.6	70-130							
4-Bromofluorobenzene	98.6	70-130							

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Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description:

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: SB-01-5.5-6.0'

Sampled: 3/24/2015 10:00

Sample ID: 15C1102-01

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	86.1		% Wt	1		SM 2540G	4/1/15	4/1/15 23:12	JJL

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Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description:

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: SB-01-COMP

Sampled: 3/24/2015 10:10

Sample ID: 15C1102-02

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.20	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 14:19	CMR
Acenaphthylene	ND	0.20	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 14:19	CMR
Acetophenone	ND	0.40	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 14:19	CMR
Aniline	ND	0.40	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 14:19	CMR
Anthracene	ND	0.20	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 14:19	CMR
Benzidine	ND	0.78	mg/Kg dry	1	V-04, V-05	SW-846 8270D	4/1/15	4/1/15 14:19	CMR
Benzo(a)anthracene	0.61	0.20	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 14:19	CMR
Benzo(a)pyrene	0.63	0.20	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 14:19	CMR
Benzo(b)fluoranthene	0.83	0.20	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 14:19	CMR
Benzo(g,h,i)perylene	0.57	0.20	mg/Kg dry	1	V-06	SW-846 8270D	4/1/15	4/1/15 14:19	CMR
Benzo(k)fluoranthene	0.30	0.20	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 14:19	CMR
Benzoic Acid	ND	1.2	mg/Kg dry	1	R-05	SW-846 8270D	4/1/15	4/1/15 14:19	CMR
Bis(2-chloroethoxy)methane	ND	0.40	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 14:19	CMR
Bis(2-chloroethyl)ether	ND	0.40	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 14:19	CMR
Bis(2-chloroisopropyl)ether	ND	0.40	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 14:19	CMR
Bis(2-Ethylhexyl)phthalate	ND	0.40	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 14:19	CMR
4-Bromophenylphenylether	ND	0.40	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 14:19	CMR
Butylbenzylphthalate	ND	0.40	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 14:19	CMR
Carbazole	ND	0.20	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 14:19	CMR
4-Chloroaniline	ND	0.78	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 14:19	CMR
4-Chloro-3-methylphenol	ND	0.78	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 14:19	CMR
2-Chloronaphthalene	ND	0.40	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 14:19	CMR
2-Chlorophenol	ND	0.40	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 14:19	CMR
4-Chlorophenylphenylether	ND	0.40	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 14:19	CMR
Chrysene	0.80	0.20	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 14:19	CMR
Dibenz(a,h)anthracene	ND	0.20	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 14:19	CMR
Dibenzofuran	ND	0.40	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 14:19	CMR
Di-n-butylphthalate	ND	0.40	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 14:19	CMR
1,2-Dichlorobenzene	ND	0.40	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 14:19	CMR
1,3-Dichlorobenzene	ND	0.40	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 14:19	CMR
1,4-Dichlorobenzene	ND	0.40	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 14:19	CMR
3,3-Dichlorobenzidine	ND	0.20	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 14:19	CMR
2,4-Dichlorophenol	ND	0.40	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 14:19	CMR
Diethylphthalate	ND	0.40	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 14:19	CMR
2,4-Dimethylphenol	ND	0.40	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 14:19	CMR
Dimethylphthalate	ND	0.40	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 14:19	CMR
4,6-Dinitro-2-methylphenol	ND	0.40	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 14:19	CMR
2,4-Dinitrophenol	ND	0.78	mg/Kg dry	1	L-04, R-05	SW-846 8270D	4/1/15	4/1/15 14:19	CMR
2,4-Dinitrotoluene	ND	0.40	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 14:19	CMR
2,6-Dinitrotoluene	ND	0.40	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 14:19	CMR
Di-n-octylphthalate	ND	0.40	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 14:19	CMR
1,2-Diphenylhydrazine (as Azobenzene)	ND	0.40	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 14:19	CMR
Fluoranthene	0.97	0.20	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 14:19	CMR
Fluorene	ND	0.20	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 14:19	CMR

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Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description:

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: SB-01-COMP

Sampled: 3/24/2015 10:10

Sample ID: 15C1102-02

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	0.40	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 14:19	CMR
Hexachlorobutadiene	ND	0.40	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 14:19	CMR
Hexachlorocyclopentadiene	ND	0.40	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 14:19	CMR
Hexachloroethane	ND	0.40	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 14:19	CMR
Indeno(1,2,3-cd)pyrene	0.53	0.20	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 14:19	CMR
Isophorone	ND	0.40	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 14:19	CMR
1-Methylnaphthalene	ND	0.20	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 14:19	CMR
2-Methylnaphthalene	0.34	0.20	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 14:19	CMR
2-Methylphenol	ND	0.40	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 14:19	CMR
3/4-Methylphenol	ND	0.40	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 14:19	CMR
Naphthalene	0.36	0.20	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 14:19	CMR
2-Nitroaniline	ND	0.40	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 14:19	CMR
3-Nitroaniline	ND	0.40	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 14:19	CMR
4-Nitroaniline	ND	0.40	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 14:19	CMR
Nitrobenzene	ND	0.40	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 14:19	CMR
2-Nitrophenol	ND	0.40	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 14:19	CMR
4-Nitrophenol	ND	0.78	mg/Kg dry	1	V-20	SW-846 8270D	4/1/15	4/1/15 14:19	CMR
N-Nitrosodimethylamine	ND	0.40	mg/Kg dry	1	V-20	SW-846 8270D	4/1/15	4/1/15 14:19	CMR
N-Nitrosodiphenylamine	ND	0.40	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 14:19	CMR
N-Nitrosodi-n-propylamine	ND	0.40	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 14:19	CMR
Pentachloronitrobenzene	ND	0.40	mg/Kg dry	1	V-16	SW-846 8270D	4/1/15	4/1/15 14:19	CMR
Pentachlorophenol	ND	0.40	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 14:19	CMR
Phenanthrene	0.61	0.20	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 14:19	CMR
Phenol	ND	0.40	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 14:19	CMR
Pyrene	1.0	0.20	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 14:19	CMR
Pyridine	ND	0.40	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 14:19	CMR
1,2,4,5-Tetrachlorobenzene	ND	0.40	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 14:19	CMR
1,2,4-Trichlorobenzene	ND	0.40	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 14:19	CMR
2,4,5-Trichlorophenol	ND	0.40	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 14:19	CMR
2,4,6-Trichlorophenol	ND	0.40	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 14:19	CMR
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
2-Fluorophenol	74.0	30-130							
Phenol-d6	77.5	30-130							
Nitrobenzene-d5	88.5	30-130							
2-Fluorobiphenyl	96.0	30-130							
2,4,6-Tribromophenol	78.8	30-130							
p-Terphenyl-d14	101	30-130							

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Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description:

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: SB-01-COMP

Sampled: 3/24/2015 10:10

Sample ID: 15C1102-02

Sample Matrix: Soil

Organochloride Pesticides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Alachlor [1]	ND	0.024	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 17:40	PJG
Aldrin [1]	ND	0.0059	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 17:40	PJG
alpha-BHC [1]	ND	0.0059	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 17:40	PJG
beta-BHC [1]	ND	0.0059	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 17:40	PJG
delta-BHC [1]	ND	0.0059	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 17:40	PJG
gamma-BHC (Lindane) [1]	ND	0.0024	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 17:40	PJG
Chlordane [2]	0.55	0.024	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 17:40	PJG
4,4'-DDD [2]	0.0082	0.0047	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 17:40	PJG
4,4'-DDE [1]	ND	0.0047	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 17:40	PJG
4,4'-DDT [2]	0.038	0.0047	mg/Kg dry	1	P-01	SW-846 8081B	3/31/15	4/1/15 17:40	PJG
Dieldrin [1]	0.054	0.0047	mg/Kg dry	1	P-01	SW-846 8081B	3/31/15	4/1/15 17:40	PJG
Endosulfan I [1]	ND	0.0059	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 17:40	PJG
Endosulfan II [1]	ND	0.0094	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 17:40	PJG
Endosulfan sulfate [1]	ND	0.0094	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 17:40	PJG
Endrin [1]	ND	0.0094	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 17:40	PJG
Endrin aldehyde [1]	ND	0.0094	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 4:18	PJG
Endrin ketone [1]	ND	0.0094	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 17:40	PJG
Heptachlor [1]	ND	0.0059	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 17:40	PJG
Heptachlor epoxide [1]	ND	0.0059	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 17:40	PJG
Hexachlorobenzene [1]	ND	0.0071	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 17:40	PJG
Methoxychlor [1]	ND	0.059	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 17:40	PJG
Toxaphene [1]	ND	0.12	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 17:40	PJG
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
Decachlorobiphenyl [1]	91.8	30-150						4/1/15 17:40	
Decachlorobiphenyl [2]	98.3	30-150						4/1/15 17:40	
Tetrachloro-m-xylene [1]	80.4	30-150						4/1/15 17:40	
Tetrachloro-m-xylene [2]	80.1	30-150						4/1/15 17:40	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description:

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: SB-01-COMP

Sampled: 3/24/2015 10:10

Sample ID: 15C1102-02

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.12	mg/Kg dry	5		SW-846 8082A	3/31/15	4/1/15 22:06	PJG
Aroclor-1221 [1]	ND	0.12	mg/Kg dry	5		SW-846 8082A	3/31/15	4/1/15 22:06	PJG
Aroclor-1232 [1]	ND	0.12	mg/Kg dry	5		SW-846 8082A	3/31/15	4/1/15 22:06	PJG
Aroclor-1242 [1]	ND	0.12	mg/Kg dry	5		SW-846 8082A	3/31/15	4/1/15 22:06	PJG
Aroclor-1248 [1]	ND	0.12	mg/Kg dry	5		SW-846 8082A	3/31/15	4/1/15 22:06	PJG
Aroclor-1254 [2]	0.33	0.12	mg/Kg dry	5	P-01	SW-846 8082A	3/31/15	4/1/15 22:06	PJG
Aroclor-1260 [1]	0.17	0.12	mg/Kg dry	5		SW-846 8082A	3/31/15	4/1/15 22:06	PJG
Aroclor-1262 [1]	ND	0.12	mg/Kg dry	5		SW-846 8082A	3/31/15	4/1/15 22:06	PJG
Aroclor-1268 [1]	ND	0.12	mg/Kg dry	5		SW-846 8082A	3/31/15	4/1/15 22:06	PJG
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
Decachlorobiphenyl [1]	79.0	30-150							
Decachlorobiphenyl [2]	85.1	30-150							
Tetrachloro-m-xylene [1]	86.6	30-150							
Tetrachloro-m-xylene [2]	85.8	30-150							

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Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description:

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: SB-01-COMP

Sampled: 3/24/2015 10:10

Sample ID: 15C1102-02

Sample Matrix: Soil

Herbicides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2,4-D [1]	ND	29	µg/kg dry	1		SW-846 8151A	3/27/15	4/1/15 3:18	PJG
2,4-DB [1]	ND	29	µg/kg dry	1		SW-846 8151A	3/27/15	4/1/15 3:18	PJG
2,4,5-TP (Silvex) [1]	ND	2.9	µg/kg dry	1		SW-846 8151A	3/27/15	4/1/15 3:18	PJG
2,4,5-T [1]	ND	2.9	µg/kg dry	1		SW-846 8151A	3/27/15	4/1/15 3:18	PJG
Dalapon [2]	ND	72	µg/kg dry	1		SW-846 8151A	3/27/15	4/1/15 3:18	PJG
Dicamba [1]	ND	2.9	µg/kg dry	1		SW-846 8151A	3/27/15	4/1/15 3:18	PJG
Dichloroprop [1]	ND	29	µg/kg dry	1		SW-846 8151A	3/27/15	4/1/15 3:18	PJG
Dinoseb [1]	ND	14	µg/kg dry	1		SW-846 8151A	3/27/15	4/1/15 3:18	PJG
MCPA [1]	ND	2900	µg/kg dry	1		SW-846 8151A	3/27/15	4/1/15 3:18	PJG
MCPP [1]	ND	2900	µg/kg dry	1		SW-846 8151A	3/27/15	4/1/15 3:18	PJG
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
2,4-Dichlorophenylacetic acid [1]	112	30-150							
2,4-Dichlorophenylacetic acid [2]	152 *	30-150	S-03						

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Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description:

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: SB-01-COMP

Sampled: 3/24/2015 10:10

Sample ID: 15C1102-02

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aluminum	6700	2.8	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:13	MJH
Antimony	ND	2.8	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:13	MJH
Arsenic	55	2.8	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:13	MJH
Barium	200	2.8	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:13	MJH
Beryllium	1.9	0.28	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:13	MJH
Cadmium	3.6	0.28	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:13	MJH
Calcium	3000	8.5	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:13	MJH
Chromium	21	0.57	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:13	MJH
Cobalt	11	2.8	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:13	MJH
Copper	110	0.57	mg/Kg dry	1	B-07, B	SW-846 6010C	3/31/15	4/1/15 14:13	MJH
Iron	35000	28	mg/Kg dry	10	B-07, B	SW-846 6010C	3/31/15	4/2/15 14:07	MJH
Lead	860	0.85	mg/Kg dry	1	L-07A	SW-846 6010C	3/31/15	4/1/15 14:13	MJH
Magnesium	980	8.5	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:13	MJH
Manganese	360	0.57	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:13	MJH
Mercury	0.35	0.029	mg/Kg dry	1		SW-846 7471B	3/31/15	4/1/15 9:58	SCB
Nickel	25	0.57	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:13	MJH
Potassium	590	110	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:13	MJH
Selenium	ND	5.7	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:13	MJH
Silver	ND	0.57	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:13	MJH
Sodium	240	110	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:13	MJH
Thallium	ND	2.8	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:13	MJH
Vanadium	34	1.1	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:13	MJH
Zinc	350	1.1	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:13	MJH

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Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description:

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: SB-01-COMP

Sampled: 3/24/2015 10:10

Sample ID: 15C1102-02

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	84.9		% Wt	1		SM 2540G	4/1/15	4/1/15 22:54	JJL

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Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description:

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: SB-02-5.5-6.0'

Sampled: 3/24/2015 11:05

Sample ID: 15C1102-03

Sample Matrix: Soil

Sample Flags: PR-03, PR-15

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.11	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:12	MFF
Acrylonitrile	ND	0.0064	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:12	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.0011	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:12	MFF
Benzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:12	MFF
Bromobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:12	MFF
Bromochloromethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:12	MFF
Bromodichloromethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:12	MFF
Bromoform	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:12	MFF
Bromomethane	ND	0.011	mg/Kg dry	1	R-05	SW-846 8260C	4/2/15	4/2/15 10:12	MFF
2-Butanone (MEK)	ND	0.042	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:12	MFF
tert-Butyl Alcohol (TBA)	ND	0.042	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:12	MFF
n-Butylbenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:12	MFF
sec-Butylbenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:12	MFF
tert-Butylbenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:12	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.0011	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:12	MFF
Carbon Disulfide	ND	0.021	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:12	MFF
Carbon Tetrachloride	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:12	MFF
Chlorobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:12	MFF
Chlorodibromomethane	ND	0.0011	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:12	MFF
Chloroethane	ND	0.021	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:12	MFF
Chloroform	ND	0.0042	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:12	MFF
Chloromethane	ND	0.011	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:12	MFF
2-Chlorotoluene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:12	MFF
4-Chlorotoluene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:12	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0021	mg/Kg dry	1	V-05	SW-846 8260C	4/2/15	4/2/15 10:12	MFF
1,2-Dibromoethane (EDB)	ND	0.0011	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:12	MFF
Dibromomethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:12	MFF
1,2-Dichlorobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:12	MFF
1,3-Dichlorobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:12	MFF
1,4-Dichlorobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:12	MFF
trans-1,4-Dichloro-2-butene	ND	0.0042	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:12	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.021	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:12	MFF
1,1-Dichloroethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:12	MFF
1,2-Dichloroethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:12	MFF
1,1-Dichloroethylene	ND	0.0042	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:12	MFF
cis-1,2-Dichloroethylene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:12	MFF
trans-1,2-Dichloroethylene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:12	MFF
1,2-Dichloropropane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:12	MFF
1,3-Dichloropropane	ND	0.0011	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:12	MFF
2,2-Dichloropropane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:12	MFF
1,1-Dichloropropene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:12	MFF
cis-1,3-Dichloropropene	ND	0.0011	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:12	MFF
trans-1,3-Dichloropropene	ND	0.0011	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:12	MFF
Diethyl Ether	ND	0.021	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:12	MFF

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Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description:

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: SB-02-5.5-6.0'

Sampled: 3/24/2015 11:05

Sample ID: 15C1102-03

Sample Matrix: Soil

Sample Flags: PR-03, PR-15

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.0011	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:12	MFF
1,4-Dioxane	ND	0.11	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:12	MFF
Ethylbenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:12	MFF
Hexachlorobutadiene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:12	MFF
Isopropylbenzene (Cumene)	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:12	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:12	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0042	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:12	MFF
Methylene Chloride	ND	0.021	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:12	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.021	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:12	MFF
Naphthalene	ND	0.0042	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:12	MFF
n-Propylbenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:12	MFF
Styrene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:12	MFF
1,1,1,2-Tetrachloroethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:12	MFF
Tetrachloroethylene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:12	MFF
Tetrahydrofuran	ND	0.011	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:12	MFF
Toluene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:12	MFF
1,2,3-Trichlorobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:12	MFF
1,2,4-Trichlorobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:12	MFF
1,3,5-Trichlorobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:12	MFF
1,1,1-Trichloroethane	ND	0.0042	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:12	MFF
1,1,2-Trichloroethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:12	MFF
Trichloroethylene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:12	MFF
Trichlorofluoromethane (Freon 11)	ND	0.011	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:12	MFF
1,2,3-Trichloropropane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:12	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.011	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:12	MFF
1,2,4-Trimethylbenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:12	MFF
1,3,5-Trimethylbenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:12	MFF
Vinyl Chloride	ND	0.011	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:12	MFF
m+p Xylene	ND	0.0042	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:12	MFF
o-Xylene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:12	MFF
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
1,2-Dichloroethane-d4	112	70-130							
Toluene-d8	100	70-130							
4-Bromofluorobenzene	99.4	70-130							

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description:

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: SB-02-5.5-6.0'

Sampled: 3/24/2015 11:05

Sample ID: 15C1102-03

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	84.3		% Wt	1		SM 2540G	4/1/15	4/1/15 23:12	JJL

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description:

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: SB-02-COMP

Sampled: 3/24/2015 11:15

Sample ID: 15C1102-04

Sample Matrix: Soil

Sample Flags: RL-11

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	0.65	0.41	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 14:42	CMR
Acenaphthylene	0.99	0.41	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 14:42	CMR
Acetophenone	ND	0.82	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 14:42	CMR
Aniline	ND	0.82	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 14:42	CMR
Anthracene	2.5	0.41	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 14:42	CMR
Benzidine	ND	1.6	mg/Kg dry	2	V-04, V-05	SW-846 8270D	4/1/15	4/1/15 14:42	CMR
Benzo(a)anthracene	9.3	0.41	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 14:42	CMR
Benzo(a)pyrene	9.5	0.41	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 14:42	CMR
Benzo(b)fluoranthene	13	2.1	mg/Kg dry	10		SW-846 8270D	4/1/15	4/1/15 18:53	CMR
Benzo(g,h,i)perylene	6.2	0.41	mg/Kg dry	2	V-06	SW-846 8270D	4/1/15	4/1/15 14:42	CMR
Benzo(k)fluoranthene	3.8	0.41	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 14:42	CMR
Benzoic Acid	ND	2.4	mg/Kg dry	2	R-05	SW-846 8270D	4/1/15	4/1/15 14:42	CMR
Bis(2-chloroethoxy)methane	ND	0.82	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 14:42	CMR
Bis(2-chloroethyl)ether	ND	0.82	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 14:42	CMR
Bis(2-chloroisopropyl)ether	ND	0.82	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 14:42	CMR
Bis(2-Ethylhexyl)phthalate	0.93	0.82	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 14:42	CMR
4-Bromophenylphenylether	ND	0.82	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 14:42	CMR
Butylbenzylphthalate	ND	0.82	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 14:42	CMR
Carbazole	0.89	0.41	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 14:42	CMR
4-Chloroaniline	ND	1.6	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 14:42	CMR
4-Chloro-3-methylphenol	ND	1.6	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 14:42	CMR
2-Chloronaphthalene	ND	0.82	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 14:42	CMR
2-Chlorophenol	ND	0.82	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 14:42	CMR
4-Chlorophenylphenylether	ND	0.82	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 14:42	CMR
Chrysene	11	2.1	mg/Kg dry	10		SW-846 8270D	4/1/15	4/1/15 18:53	CMR
Dibenz(a,h)anthracene	1.5	0.41	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 14:42	CMR
Dibenzofuran	ND	0.82	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 14:42	CMR
Di-n-butylphthalate	ND	0.82	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 14:42	CMR
1,2-Dichlorobenzene	ND	0.82	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 14:42	CMR
1,3-Dichlorobenzene	ND	0.82	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 14:42	CMR
1,4-Dichlorobenzene	ND	0.82	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 14:42	CMR
3,3-Dichlorobenzidine	ND	0.41	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 14:42	CMR
2,4-Dichlorophenol	ND	0.82	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 14:42	CMR
Diethylphthalate	ND	0.82	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 14:42	CMR
2,4-Dimethylphenol	ND	0.82	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 14:42	CMR
Dimethylphthalate	ND	0.82	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 14:42	CMR
4,6-Dinitro-2-methylphenol	ND	0.82	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 14:42	CMR
2,4-Dinitrophenol	ND	1.6	mg/Kg dry	2	L-04, R-05	SW-846 8270D	4/1/15	4/1/15 14:42	CMR
2,4-Dinitrotoluene	ND	0.82	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 14:42	CMR
2,6-Dinitrotoluene	ND	0.82	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 14:42	CMR
Di-n-octylphthalate	ND	0.82	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 14:42	CMR
1,2-Diphenylhydrazine (as Azobenzene)	ND	0.82	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 14:42	CMR
Fluoranthene	21	2.1	mg/Kg dry	10		SW-846 8270D	4/1/15	4/1/15 18:53	CMR
Fluorene	0.75	0.41	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 14:42	CMR

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Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description:

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: SB-02-COMP

Sampled: 3/24/2015 11:15

Sample ID: 15C1102-04

Sample Matrix: Soil

Sample Flags: RL-11

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	0.82	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 14:42	CMR
Hexachlorobutadiene	ND	0.82	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 14:42	CMR
Hexachlorocyclopentadiene	ND	0.82	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 14:42	CMR
Hexachloroethane	ND	0.82	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 14:42	CMR
Indeno(1,2,3-cd)pyrene	5.9	0.41	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 14:42	CMR
Isophorone	ND	0.82	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 14:42	CMR
1-Methylnaphthalene	0.44	0.41	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 14:42	CMR
2-Methylnaphthalene	0.61	0.41	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 14:42	CMR
2-Methylphenol	ND	0.82	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 14:42	CMR
3/4-Methylphenol	ND	0.82	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 14:42	CMR
Naphthalene	1.3	0.41	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 14:42	CMR
2-Nitroaniline	ND	0.82	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 14:42	CMR
3-Nitroaniline	ND	0.82	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 14:42	CMR
4-Nitroaniline	ND	0.82	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 14:42	CMR
Nitrobenzene	ND	0.82	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 14:42	CMR
2-Nitrophenol	ND	0.82	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 14:42	CMR
4-Nitrophenol	ND	1.6	mg/Kg dry	2	V-20	SW-846 8270D	4/1/15	4/1/15 14:42	CMR
N-Nitrosodimethylamine	ND	0.82	mg/Kg dry	2	V-20	SW-846 8270D	4/1/15	4/1/15 14:42	CMR
N-Nitrosodiphenylamine	ND	0.82	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 14:42	CMR
N-Nitrosodi-n-propylamine	ND	0.82	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 14:42	CMR
Pentachloronitrobenzene	ND	0.82	mg/Kg dry	2	V-16	SW-846 8270D	4/1/15	4/1/15 14:42	CMR
Pentachlorophenol	ND	0.82	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 14:42	CMR
Phenanthrene	13	2.1	mg/Kg dry	10		SW-846 8270D	4/1/15	4/1/15 18:53	CMR
Phenol	ND	0.82	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 14:42	CMR
Pyrene	24	2.1	mg/Kg dry	10		SW-846 8270D	4/1/15	4/1/15 18:53	CMR
Pyridine	ND	0.82	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 14:42	CMR
1,2,4,5-Tetrachlorobenzene	ND	0.82	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 14:42	CMR
1,2,4-Trichlorobenzene	ND	0.82	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 14:42	CMR
2,4,5-Trichlorophenol	ND	0.82	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 14:42	CMR
2,4,6-Trichlorophenol	ND	0.82	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 14:42	CMR
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
2-Fluorophenol	63.6	30-130						4/1/15 14:42	
Phenol-d6	66.2	30-130						4/1/15 14:42	
Nitrobenzene-d5	72.0	30-130						4/1/15 14:42	
2-Fluorobiphenyl	70.5	30-130						4/1/15 14:42	
2,4,6-Tribromophenol	63.1	30-130						4/1/15 14:42	
p-Terphenyl-d14	68.7	30-130						4/1/15 14:42	

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Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description:

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: SB-02-COMP

Sampled: 3/24/2015 11:15

Sample ID: 15C1102-04

Sample Matrix: Soil

Sample Flags: RL-11

Organochloride Pesticides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Alachlor [2]	0.87	0.48	mg/Kg dry	20	P-01	SW-846 8081B	3/31/15	4/1/15 18:04	PJG
Aldrin [1]	ND	0.12	mg/Kg dry	20		SW-846 8081B	3/31/15	4/1/15 18:04	PJG
alpha-BHC [1]	ND	0.12	mg/Kg dry	20		SW-846 8081B	3/31/15	4/1/15 18:04	PJG
beta-BHC [1]	ND	0.12	mg/Kg dry	20		SW-846 8081B	3/31/15	4/1/15 18:04	PJG
delta-BHC [1]	ND	0.12	mg/Kg dry	20		SW-846 8081B	3/31/15	4/1/15 18:04	PJG
gamma-BHC (Lindane) [1]	ND	0.048	mg/Kg dry	20		SW-846 8081B	3/31/15	4/1/15 18:04	PJG
Chlordane [1]	ND	0.48	mg/Kg dry	20		SW-846 8081B	3/31/15	4/1/15 18:04	PJG
4,4'-DDD [1]	ND	0.097	mg/Kg dry	20		SW-846 8081B	3/31/15	4/1/15 18:04	PJG
4,4'-DDE [1]	ND	0.097	mg/Kg dry	20		SW-846 8081B	3/31/15	4/1/15 18:04	PJG
4,4'-DDT [2]	0.27	0.097	mg/Kg dry	20	P-01	SW-846 8081B	3/31/15	4/1/15 18:04	PJG
Dieldrin [1]	0.14	0.097	mg/Kg dry	20	P-01	SW-846 8081B	3/31/15	4/1/15 18:04	PJG
Endosulfan I [1]	ND	0.12	mg/Kg dry	20		SW-846 8081B	3/31/15	4/1/15 18:04	PJG
Endosulfan II [1]	ND	0.19	mg/Kg dry	20		SW-846 8081B	3/31/15	4/1/15 18:04	PJG
Endosulfan sulfate [1]	ND	0.19	mg/Kg dry	20		SW-846 8081B	3/31/15	4/1/15 18:04	PJG
Endrin [1]	ND	0.19	mg/Kg dry	20		SW-846 8081B	3/31/15	4/1/15 18:04	PJG
Endrin aldehyde [1]	ND	0.19	mg/Kg dry	20		SW-846 8081B	3/31/15	4/1/15 23:26	PJG
Endrin ketone [1]	ND	0.19	mg/Kg dry	20		SW-846 8081B	3/31/15	4/1/15 18:04	PJG
Heptachlor [1]	ND	0.12	mg/Kg dry	20		SW-846 8081B	3/31/15	4/1/15 18:04	PJG
Heptachlor epoxide [1]	ND	0.12	mg/Kg dry	20		SW-846 8081B	3/31/15	4/1/15 18:04	PJG
Hexachlorobenzene [1]	ND	0.14	mg/Kg dry	20		SW-846 8081B	3/31/15	4/1/15 18:04	PJG
Methoxychlor [1]	ND	1.2	mg/Kg dry	20		SW-846 8081B	3/31/15	4/1/15 18:04	PJG
Toxaphene [1]	ND	2.4	mg/Kg dry	20		SW-846 8081B	3/31/15	4/1/15 18:04	PJG
Surrogates	% Recovery	Recovery Limits			Flag/Qual				
Decachlorobiphenyl [1]	90.3	30-150						4/1/15 18:04	
Decachlorobiphenyl [2]	180	*	30-150		S-02			4/1/15 18:04	
Tetrachloro-m-xylene [1]	82.7	30-150						4/1/15 18:04	
Tetrachloro-m-xylene [2]	79.0	30-150						4/1/15 18:04	

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Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description:

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: SB-02-COMP

Sampled: 3/24/2015 11:15

Sample ID: 15C1102-04

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.60	mg/Kg dry	25		SW-846 8082A	3/31/15	4/2/15 5:44	PJG
Aroclor-1221 [1]	ND	0.60	mg/Kg dry	25		SW-846 8082A	3/31/15	4/2/15 5:44	PJG
Aroclor-1232 [1]	ND	0.60	mg/Kg dry	25		SW-846 8082A	3/31/15	4/2/15 5:44	PJG
Aroclor-1242 [1]	ND	0.60	mg/Kg dry	25		SW-846 8082A	3/31/15	4/2/15 5:44	PJG
Aroclor-1248 [2]	7.1	0.60	mg/Kg dry	25		SW-846 8082A	3/31/15	4/2/15 5:44	PJG
Aroclor-1254 [2]	4.9	0.60	mg/Kg dry	25		SW-846 8082A	3/31/15	4/2/15 5:44	PJG
Aroclor-1260 [2]	1.2	0.60	mg/Kg dry	25		SW-846 8082A	3/31/15	4/2/15 5:44	PJG
Aroclor-1262 [1]	ND	0.60	mg/Kg dry	25		SW-846 8082A	3/31/15	4/2/15 5:44	PJG
Aroclor-1268 [1]	ND	0.60	mg/Kg dry	25		SW-846 8082A	3/31/15	4/2/15 5:44	PJG
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
Decachlorobiphenyl [1]	87.0	30-150						4/2/15 5:44	
Decachlorobiphenyl [2]	112	30-150						4/2/15 5:44	
Tetrachloro-m-xylene [1]	90.0	30-150						4/2/15 5:44	
Tetrachloro-m-xylene [2]	93.7	30-150						4/2/15 5:44	

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Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description:

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: SB-02-COMP

Sampled: 3/24/2015 11:15

Sample ID: 15C1102-04

Sample Matrix: Soil

Herbicides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2,4-D [1]	ND	30	µg/kg dry	1		SW-846 8151A	3/27/15	4/1/15 3:57	PJG
2,4-DB [1]	73	30	µg/kg dry	1	P-01	SW-846 8151A	3/27/15	4/1/15 3:57	PJG
2,4,5-TP (Silvex) [1]	ND	3.0	µg/kg dry	1		SW-846 8151A	3/27/15	4/1/15 3:57	PJG
2,4,5-T [1]	ND	3.0	µg/kg dry	1		SW-846 8151A	3/27/15	4/1/15 3:57	PJG
Dalapon [2]	ND	75	µg/kg dry	1		SW-846 8151A	3/27/15	4/1/15 3:57	PJG
Dicamba [1]	ND	3.0	µg/kg dry	1		SW-846 8151A	3/27/15	4/1/15 3:57	PJG
Dichloroprop [1]	ND	30	µg/kg dry	1		SW-846 8151A	3/27/15	4/1/15 3:57	PJG
Dinoseb [1]	ND	15	µg/kg dry	1		SW-846 8151A	3/27/15	4/1/15 3:57	PJG
MCPA [1]	ND	3000	µg/kg dry	1		SW-846 8151A	3/27/15	4/1/15 3:57	PJG
MCPP [1]	ND	3000	µg/kg dry	1		SW-846 8151A	3/27/15	4/1/15 3:57	PJG
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
2,4-Dichlorophenylacetic acid [1]	94.3	30-150						4/1/15 3:57	
2,4-Dichlorophenylacetic acid [2]	174 *	30-150			S-03			4/1/15 3:57	

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Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description:

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: SB-02-COMP

Sampled: 3/24/2015 11:15

Sample ID: 15C1102-04

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aluminum	5200	3.0	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:18	MJH
Antimony	11	3.0	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:18	MJH
Arsenic	22	3.0	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:18	MJH
Barium	1600	3.0	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:18	MJH
Beryllium	3.3	0.30	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:18	MJH
Cadmium	12	0.30	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:18	MJH
Calcium	5300	8.9	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:18	MJH
Chromium	77	0.60	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:18	MJH
Cobalt	29	3.0	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:18	MJH
Copper	1600	0.60	mg/Kg dry	1	B-07, B	SW-846 6010C	3/31/15	4/1/15 14:18	MJH
Iron	100000	300	mg/Kg dry	100	B-07, B	SW-846 6010C	3/31/15	4/2/15 14:13	MJH
Lead	4300	0.89	mg/Kg dry	1	L-07A	SW-846 6010C	3/31/15	4/1/15 14:18	MJH
Magnesium	2000	8.9	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:18	MJH
Manganese	670	0.60	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:18	MJH
Mercury	9.0	1.4	mg/Kg dry	50		SW-846 7471B	3/31/15	4/1/15 10:24	SCB
Nickel	51	0.60	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:18	MJH
Potassium	670	120	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:18	MJH
Selenium	ND	6.0	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:18	MJH
Silver	ND	0.60	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:18	MJH
Sodium	190	120	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:18	MJH
Thallium	ND	3.0	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:18	MJH
Vanadium	36	1.2	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:18	MJH
Zinc	5000	12	mg/Kg dry	10		SW-846 6010C	3/31/15	4/2/15 14:17	MJH

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Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description:

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: SB-02-COMP

Sampled: 3/24/2015 11:15

Sample ID: 15C1102-04

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	82.8		% Wt	1		SM 2540G	4/1/15	4/1/15 22:54	JJL

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Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description:

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: SB-03-3.5-4.0'

Sampled: 3/24/2015 09:00

Sample ID: 15C1102-05

Sample Matrix: Soil

Sample Flags: PR-03, PR-15

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.12	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:45	MFF
Acrylonitrile	ND	0.0072	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:45	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.0012	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:45	MFF
Benzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:45	MFF
Bromobenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:45	MFF
Bromochloromethane	ND	0.0024	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:45	MFF
Bromodichloromethane	ND	0.0024	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:45	MFF
Bromoform	ND	0.0024	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:45	MFF
Bromomethane	ND	0.012	mg/Kg dry	1	R-05	SW-846 8260C	4/2/15	4/2/15 10:45	MFF
2-Butanone (MEK)	ND	0.048	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:45	MFF
tert-Butyl Alcohol (TBA)	ND	0.048	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:45	MFF
n-Butylbenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:45	MFF
sec-Butylbenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:45	MFF
tert-Butylbenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:45	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.0012	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:45	MFF
Carbon Disulfide	ND	0.024	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:45	MFF
Carbon Tetrachloride	ND	0.0024	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:45	MFF
Chlorobenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:45	MFF
Chlorodibromomethane	ND	0.0012	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:45	MFF
Chloroethane	ND	0.024	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:45	MFF
Chloroform	ND	0.0048	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:45	MFF
Chloromethane	ND	0.012	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:45	MFF
2-Chlorotoluene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:45	MFF
4-Chlorotoluene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:45	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0024	mg/Kg dry	1	V-05	SW-846 8260C	4/2/15	4/2/15 10:45	MFF
1,2-Dibromoethane (EDB)	ND	0.0012	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:45	MFF
Dibromomethane	ND	0.0024	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:45	MFF
1,2-Dichlorobenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:45	MFF
1,3-Dichlorobenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:45	MFF
1,4-Dichlorobenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:45	MFF
trans-1,4-Dichloro-2-butene	ND	0.0048	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:45	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.024	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:45	MFF
1,1-Dichloroethane	ND	0.0024	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:45	MFF
1,2-Dichloroethane	ND	0.0024	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:45	MFF
1,1-Dichloroethylene	ND	0.0048	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:45	MFF
cis-1,2-Dichloroethylene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:45	MFF
trans-1,2-Dichloroethylene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:45	MFF
1,2-Dichloropropane	ND	0.0024	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:45	MFF
1,3-Dichloropropane	ND	0.0012	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:45	MFF
2,2-Dichloropropane	ND	0.0024	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:45	MFF
1,1-Dichloropropene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:45	MFF
cis-1,3-Dichloropropene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:45	MFF
trans-1,3-Dichloropropene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:45	MFF
Diethyl Ether	ND	0.024	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:45	MFF

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Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description:

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: SB-03-3.5-4.0'

Sampled: 3/24/2015 09:00

Sample ID: 15C1102-05

Sample Matrix: Soil

Sample Flags: PR-03, PR-15

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.0012	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:45	MFF
1,4-Dioxane	ND	0.12	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:45	MFF
Ethylbenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:45	MFF
Hexachlorobutadiene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:45	MFF
Isopropylbenzene (Cumene)	ND	0.0024	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:45	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0024	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:45	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0048	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:45	MFF
Methylene Chloride	ND	0.024	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:45	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.024	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:45	MFF
Naphthalene	ND	0.0048	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:45	MFF
n-Propylbenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:45	MFF
Styrene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:45	MFF
1,1,1,2-Tetrachloroethane	ND	0.0024	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:45	MFF
Tetrachloroethylene	0.0028	0.0024	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:45	MFF
Tetrahydrofuran	ND	0.012	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:45	MFF
Toluene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:45	MFF
1,2,3-Trichlorobenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:45	MFF
1,2,4-Trichlorobenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:45	MFF
1,3,5-Trichlorobenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:45	MFF
1,1,1-Trichloroethane	ND	0.0048	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:45	MFF
1,1,2-Trichloroethane	ND	0.0024	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:45	MFF
Trichloroethylene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:45	MFF
Trichlorofluoromethane (Freon 11)	ND	0.012	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:45	MFF
1,2,3-Trichloropropane	ND	0.0024	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:45	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.012	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:45	MFF
1,2,4-Trimethylbenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:45	MFF
1,3,5-Trimethylbenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:45	MFF
Vinyl Chloride	ND	0.012	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:45	MFF
m+p Xylene	ND	0.0048	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:45	MFF
o-Xylene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 10:45	MFF
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
1,2-Dichloroethane-d4	113	70-130							
Toluene-d8	99.3	70-130							
4-Bromofluorobenzene	97.2	70-130							

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Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description:

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: SB-03-3.5-4.0'

Sampled: 3/24/2015 09:00

Sample ID: 15C1102-05

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	74.3		% Wt	1		SM 2540G	4/1/15	4/1/15 23:12	JJL

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Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description:

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: SB-03-COMP

Sampled: 3/24/2015 09:05

Sample ID: 15C1102-06

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.22	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:04	CMR
Acenaphthylene	ND	0.22	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:04	CMR
Acetophenone	ND	0.44	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:04	CMR
Aniline	ND	0.44	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:04	CMR
Anthracene	0.23	0.22	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:04	CMR
Benzidine	ND	0.86	mg/Kg dry	1	V-04, V-05	SW-846 8270D	4/1/15	4/1/15 15:04	CMR
Benzo(a)anthracene	0.83	0.22	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:04	CMR
Benzo(a)pyrene	0.85	0.22	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:04	CMR
Benzo(b)fluoranthene	1.1	0.22	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:04	CMR
Benzo(g,h,i)perylene	0.85	0.22	mg/Kg dry	1	V-06	SW-846 8270D	4/1/15	4/1/15 15:04	CMR
Benzo(k)fluoranthene	0.37	0.22	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:04	CMR
Benzoic Acid	ND	1.3	mg/Kg dry	1	R-05	SW-846 8270D	4/1/15	4/1/15 15:04	CMR
Bis(2-chloroethoxy)methane	ND	0.44	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:04	CMR
Bis(2-chloroethyl)ether	ND	0.44	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:04	CMR
Bis(2-chloroisopropyl)ether	ND	0.44	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:04	CMR
Bis(2-Ethylhexyl)phthalate	ND	0.44	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:04	CMR
4-Bromophenylphenylether	ND	0.44	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:04	CMR
Butylbenzylphthalate	ND	0.44	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:04	CMR
Carbazole	ND	0.22	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:04	CMR
4-Chloroaniline	ND	0.86	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:04	CMR
4-Chloro-3-methylphenol	ND	0.86	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:04	CMR
2-Chloronaphthalene	ND	0.44	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:04	CMR
2-Chlorophenol	ND	0.44	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:04	CMR
4-Chlorophenylphenylether	ND	0.44	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:04	CMR
Chrysene	1.0	0.22	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:04	CMR
Dibenz(a,h)anthracene	ND	0.22	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:04	CMR
Dibenzofuran	ND	0.44	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:04	CMR
Di-n-butylphthalate	ND	0.44	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:04	CMR
1,2-Dichlorobenzene	ND	0.44	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:04	CMR
1,3-Dichlorobenzene	ND	0.44	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:04	CMR
1,4-Dichlorobenzene	ND	0.44	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:04	CMR
3,3-Dichlorobenzidine	ND	0.22	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:04	CMR
2,4-Dichlorophenol	ND	0.44	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:04	CMR
Diethylphthalate	ND	0.44	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:04	CMR
2,4-Dimethylphenol	ND	0.44	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:04	CMR
Dimethylphthalate	ND	0.44	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:04	CMR
4,6-Dinitro-2-methylphenol	ND	0.44	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:04	CMR
2,4-Dinitrophenol	ND	0.86	mg/Kg dry	1	L-04, R-05	SW-846 8270D	4/1/15	4/1/15 15:04	CMR
2,4-Dinitrotoluene	ND	0.44	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:04	CMR
2,6-Dinitrotoluene	ND	0.44	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:04	CMR
Di-n-octylphthalate	ND	0.44	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:04	CMR
1,2-Diphenylhydrazine (as Azobenzene)	ND	0.44	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:04	CMR
Fluoranthene	1.8	0.22	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:04	CMR
Fluorene	ND	0.22	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:04	CMR

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Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description:

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: SB-03-COMP

Sampled: 3/24/2015 09:05

Sample ID: 15C1102-06

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	0.44	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:04	CMR
Hexachlorobutadiene	ND	0.44	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:04	CMR
Hexachlorocyclopentadiene	ND	0.44	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:04	CMR
Hexachloroethane	ND	0.44	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:04	CMR
Indeno(1,2,3-cd)pyrene	0.63	0.22	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:04	CMR
Isophorone	ND	0.44	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:04	CMR
1-Methylnaphthalene	ND	0.22	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:04	CMR
2-Methylnaphthalene	ND	0.22	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:04	CMR
2-Methylphenol	ND	0.44	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:04	CMR
3/4-Methylphenol	ND	0.44	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:04	CMR
Naphthalene	ND	0.22	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:04	CMR
2-Nitroaniline	ND	0.44	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:04	CMR
3-Nitroaniline	ND	0.44	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:04	CMR
4-Nitroaniline	ND	0.44	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:04	CMR
Nitrobenzene	ND	0.44	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:04	CMR
2-Nitrophenol	ND	0.44	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:04	CMR
4-Nitrophenol	ND	0.86	mg/Kg dry	1	V-20	SW-846 8270D	4/1/15	4/1/15 15:04	CMR
N-Nitrosodimethylamine	ND	0.44	mg/Kg dry	1	V-20	SW-846 8270D	4/1/15	4/1/15 15:04	CMR
N-Nitrosodiphenylamine	ND	0.44	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:04	CMR
N-Nitrosodi-n-propylamine	ND	0.44	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:04	CMR
Pentachloronitrobenzene	ND	0.44	mg/Kg dry	1	V-16	SW-846 8270D	4/1/15	4/1/15 15:04	CMR
Pentachlorophenol	ND	0.44	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:04	CMR
Phenanthrene	1.3	0.22	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:04	CMR
Phenol	ND	0.44	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:04	CMR
Pyrene	1.7	0.22	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:04	CMR
Pyridine	ND	0.44	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:04	CMR
1,2,4,5-Tetrachlorobenzene	ND	0.44	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:04	CMR
1,2,4-Trichlorobenzene	ND	0.44	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:04	CMR
2,4,5-Trichlorophenol	ND	0.44	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:04	CMR
2,4,6-Trichlorophenol	ND	0.44	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:04	CMR
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
2-Fluorophenol	64.2	30-130						4/1/15 15:04	
Phenol-d6	69.2	30-130						4/1/15 15:04	
Nitrobenzene-d5	76.9	30-130						4/1/15 15:04	
2-Fluorobiphenyl	75.9	30-130						4/1/15 15:04	
2,4,6-Tribromophenol	61.9	30-130						4/1/15 15:04	
p-Terphenyl-d14	71.6	30-130						4/1/15 15:04	

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Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description:

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: SB-03-COMP

Sampled: 3/24/2015 09:05

Sample ID: 15C1102-06

Sample Matrix: Soil

Sample Flags: RL-12

Organochloride Pesticides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Alachlor [1]	ND	0.13	mg/Kg dry	5		SW-846 8081B	3/31/15	4/1/15 18:27	PJG
Aldrin [1]	ND	0.032	mg/Kg dry	5		SW-846 8081B	3/31/15	4/1/15 18:27	PJG
alpha-BHC [1]	ND	0.032	mg/Kg dry	5		SW-846 8081B	3/31/15	4/1/15 18:27	PJG
beta-BHC [1]	ND	0.032	mg/Kg dry	5		SW-846 8081B	3/31/15	4/1/15 18:27	PJG
delta-BHC [1]	ND	0.032	mg/Kg dry	5		SW-846 8081B	3/31/15	4/1/15 18:27	PJG
gamma-BHC (Lindane) [1]	ND	0.013	mg/Kg dry	5		SW-846 8081B	3/31/15	4/1/15 18:27	PJG
Chlordane [1]	ND	0.13	mg/Kg dry	5		SW-846 8081B	3/31/15	4/1/15 18:27	PJG
4,4'-DDD [1]	ND	0.026	mg/Kg dry	5		SW-846 8081B	3/31/15	4/1/15 18:27	PJG
4,4'-DDE [1]	ND	0.026	mg/Kg dry	5		SW-846 8081B	3/31/15	4/1/15 18:27	PJG
4,4'-DDT [1]	ND	0.026	mg/Kg dry	5		SW-846 8081B	3/31/15	4/1/15 18:27	PJG
Dieldrin [1]	ND	0.026	mg/Kg dry	5		SW-846 8081B	3/31/15	4/1/15 18:27	PJG
Endosulfan I [1]	ND	0.032	mg/Kg dry	5		SW-846 8081B	3/31/15	4/1/15 18:27	PJG
Endosulfan II [1]	ND	0.052	mg/Kg dry	5		SW-846 8081B	3/31/15	4/1/15 18:27	PJG
Endosulfan sulfate [1]	ND	0.052	mg/Kg dry	5		SW-846 8081B	3/31/15	4/1/15 18:27	PJG
Endrin [1]	ND	0.052	mg/Kg dry	5		SW-846 8081B	3/31/15	4/1/15 18:27	PJG
Endrin aldehyde [1]	ND	0.010	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 5:04	PJG
Endrin ketone [1]	ND	0.052	mg/Kg dry	5		SW-846 8081B	3/31/15	4/1/15 18:27	PJG
Heptachlor [1]	ND	0.032	mg/Kg dry	5		SW-846 8081B	3/31/15	4/1/15 18:27	PJG
Heptachlor epoxide [1]	ND	0.032	mg/Kg dry	5		SW-846 8081B	3/31/15	4/1/15 18:27	PJG
Hexachlorobenzene [1]	ND	0.039	mg/Kg dry	5		SW-846 8081B	3/31/15	4/1/15 18:27	PJG
Methoxychlor [1]	ND	0.32	mg/Kg dry	5		SW-846 8081B	3/31/15	4/1/15 18:27	PJG
Toxaphene [1]	ND	0.65	mg/Kg dry	5		SW-846 8081B	3/31/15	4/1/15 18:27	PJG
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
Decachlorobiphenyl [1]	82.5	30-150						4/1/15 18:27	
Decachlorobiphenyl [2]	95.4	30-150						4/1/15 18:27	
Tetrachloro-m-xylene [1]	78.2	30-150						4/1/15 18:27	
Tetrachloro-m-xylene [2]	75.1	30-150						4/1/15 18:27	

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Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description:

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: SB-03-COMP

Sampled: 3/24/2015 09:05

Sample ID: 15C1102-06

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.13	mg/Kg dry	5		SW-846 8082A	3/31/15	4/1/15 22:31	PJG
Aroclor-1221 [1]	ND	0.13	mg/Kg dry	5		SW-846 8082A	3/31/15	4/1/15 22:31	PJG
Aroclor-1232 [1]	ND	0.13	mg/Kg dry	5		SW-846 8082A	3/31/15	4/1/15 22:31	PJG
Aroclor-1242 [1]	ND	0.13	mg/Kg dry	5		SW-846 8082A	3/31/15	4/1/15 22:31	PJG
Aroclor-1248 [1]	ND	0.13	mg/Kg dry	5		SW-846 8082A	3/31/15	4/1/15 22:31	PJG
Aroclor-1254 [1]	ND	0.13	mg/Kg dry	5		SW-846 8082A	3/31/15	4/1/15 22:31	PJG
Aroclor-1260 [1]	ND	0.13	mg/Kg dry	5		SW-846 8082A	3/31/15	4/1/15 22:31	PJG
Aroclor-1262 [1]	ND	0.13	mg/Kg dry	5		SW-846 8082A	3/31/15	4/1/15 22:31	PJG
Aroclor-1268 [1]	ND	0.13	mg/Kg dry	5		SW-846 8082A	3/31/15	4/1/15 22:31	PJG
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
Decachlorobiphenyl [1]	68.4	30-150							
Decachlorobiphenyl [2]	79.7	30-150							
Tetrachloro-m-xylene [1]	77.8	30-150							
Tetrachloro-m-xylene [2]	77.3	30-150							

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Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description:

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: SB-03-COMP

Sampled: 3/24/2015 09:05

Sample ID: 15C1102-06

Sample Matrix: Soil

Herbicides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2,4-D [1]	ND	33	µg/kg dry	1		SW-846 8151A	3/27/15	4/1/15 4:36	PJG
2,4-DB [1]	ND	33	µg/kg dry	1		SW-846 8151A	3/27/15	4/1/15 4:36	PJG
2,4,5-TP (Silvex) [1]	ND	3.3	µg/kg dry	1		SW-846 8151A	3/27/15	4/1/15 4:36	PJG
2,4,5-T [1]	ND	3.3	µg/kg dry	1		SW-846 8151A	3/27/15	4/1/15 4:36	PJG
Dalapon [2]	ND	82	µg/kg dry	1		SW-846 8151A	3/27/15	4/1/15 4:36	PJG
Dicamba [1]	ND	3.3	µg/kg dry	1		SW-846 8151A	3/27/15	4/1/15 4:36	PJG
Dichloroprop [1]	ND	33	µg/kg dry	1		SW-846 8151A	3/27/15	4/1/15 4:36	PJG
Dinoseb [1]	ND	16	µg/kg dry	1		SW-846 8151A	3/27/15	4/1/15 4:36	PJG
MCPA [1]	ND	3300	µg/kg dry	1		SW-846 8151A	3/27/15	4/1/15 4:36	PJG
MCPP [1]	ND	3300	µg/kg dry	1		SW-846 8151A	3/27/15	4/1/15 4:36	PJG
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
2,4-Dichlorophenylacetic acid [1]	105	30-150						4/1/15 4:36	
2,4-Dichlorophenylacetic acid [2]	136	30-150						4/1/15 4:36	

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Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description:

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: SB-03-COMP

Sampled: 3/24/2015 09:05

Sample ID: 15C1102-06

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aluminum	2800	3.2	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:24	MJH
Antimony	8.3	3.2	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:24	MJH
Arsenic	16	3.2	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:24	MJH
Barium	150	3.2	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:24	MJH
Beryllium	1.7	0.32	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:24	MJH
Cadmium	1.0	0.32	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:24	MJH
Calcium	48000	9.6	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:24	MJH
Chromium	16	0.64	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:24	MJH
Cobalt	7.2	3.2	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:24	MJH
Copper	420	0.64	mg/Kg dry	1	B, B-07	SW-846 6010C	3/31/15	4/1/15 14:24	MJH
Iron	38000	32	mg/Kg dry	10	B, B-07	SW-846 6010C	3/31/15	4/2/15 14:23	MJH
Lead	500	0.96	mg/Kg dry	1	L-07A	SW-846 6010C	3/31/15	4/1/15 14:24	MJH
Magnesium	29000	96	mg/Kg dry	10		SW-846 6010C	3/31/15	4/2/15 14:23	MJH
Manganese	260	0.64	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:24	MJH
Mercury	0.21	0.032	mg/Kg dry	1		SW-846 7471B	3/31/15	4/1/15 10:01	SCB
Nickel	15	0.64	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:24	MJH
Potassium	530	130	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:24	MJH
Selenium	ND	6.4	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:24	MJH
Silver	ND	0.64	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:24	MJH
Sodium	2500	130	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:24	MJH
Thallium	ND	3.2	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:24	MJH
Vanadium	19	1.3	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:24	MJH
Zinc	230	1.3	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:24	MJH

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Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description:

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: SB-03-COMP

Sampled: 3/24/2015 09:05

Sample ID: 15C1102-06

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	76.5		% Wt	1		SM 2540G	4/1/15	4/1/15 22:54	JJL

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Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description:

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: SB-04-3.5-4.0'

Sampled: 3/24/2015 09:30

Sample ID: 15C1102-07

Sample Matrix: Soil

Sample Flags: PR-03, PR-15

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.13	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:17	MFF
Acrylonitrile	ND	0.0078	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:17	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.0013	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:17	MFF
Benzene	ND	0.0026	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:17	MFF
Bromobenzene	ND	0.0026	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:17	MFF
Bromochloromethane	ND	0.0026	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:17	MFF
Bromodichloromethane	ND	0.0026	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:17	MFF
Bromoform	ND	0.0026	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:17	MFF
Bromomethane	ND	0.013	mg/Kg dry	1	R-05	SW-846 8260C	4/2/15	4/2/15 11:17	MFF
2-Butanone (MEK)	ND	0.052	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:17	MFF
tert-Butyl Alcohol (TBA)	ND	0.052	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:17	MFF
n-Butylbenzene	ND	0.0026	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:17	MFF
sec-Butylbenzene	ND	0.0026	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:17	MFF
tert-Butylbenzene	ND	0.0026	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:17	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.0013	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:17	MFF
Carbon Disulfide	ND	0.026	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:17	MFF
Carbon Tetrachloride	ND	0.0026	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:17	MFF
Chlorobenzene	ND	0.0026	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:17	MFF
Chlorodibromomethane	ND	0.0013	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:17	MFF
Chloroethane	ND	0.026	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:17	MFF
Chloroform	ND	0.0052	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:17	MFF
Chloromethane	ND	0.013	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:17	MFF
2-Chlorotoluene	ND	0.0026	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:17	MFF
4-Chlorotoluene	ND	0.0026	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:17	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0026	mg/Kg dry	1	V-05	SW-846 8260C	4/2/15	4/2/15 11:17	MFF
1,2-Dibromoethane (EDB)	ND	0.0013	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:17	MFF
Dibromomethane	ND	0.0026	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:17	MFF
1,2-Dichlorobenzene	ND	0.0026	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:17	MFF
1,3-Dichlorobenzene	ND	0.0026	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:17	MFF
1,4-Dichlorobenzene	ND	0.0026	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:17	MFF
trans-1,4-Dichloro-2-butene	ND	0.0052	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:17	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.026	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:17	MFF
1,1-Dichloroethane	ND	0.0026	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:17	MFF
1,2-Dichloroethane	ND	0.0026	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:17	MFF
1,1-Dichloroethylene	ND	0.0052	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:17	MFF
cis-1,2-Dichloroethylene	ND	0.0026	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:17	MFF
trans-1,2-Dichloroethylene	ND	0.0026	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:17	MFF
1,2-Dichloropropane	ND	0.0026	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:17	MFF
1,3-Dichloropropane	ND	0.0013	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:17	MFF
2,2-Dichloropropane	ND	0.0026	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:17	MFF
1,1-Dichloropropene	ND	0.0026	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:17	MFF
cis-1,3-Dichloropropene	ND	0.0013	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:17	MFF
trans-1,3-Dichloropropene	ND	0.0013	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:17	MFF
Diethyl Ether	ND	0.026	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:17	MFF

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Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description:

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: SB-04-3.5-4.0'

Sampled: 3/24/2015 09:30

Sample ID: 15C1102-07

Sample Matrix: Soil

Sample Flags: PR-03, PR-15

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.0013	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:17	MFF
1,4-Dioxane	ND	0.13	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:17	MFF
Ethylbenzene	ND	0.0026	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:17	MFF
Hexachlorobutadiene	ND	0.0026	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:17	MFF
Isopropylbenzene (Cumene)	ND	0.0026	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:17	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0026	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:17	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0052	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:17	MFF
Methylene Chloride	ND	0.026	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:17	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.026	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:17	MFF
Naphthalene	ND	0.0052	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:17	MFF
n-Propylbenzene	ND	0.0026	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:17	MFF
Styrene	ND	0.0026	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:17	MFF
1,1,1,2-Tetrachloroethane	ND	0.0026	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:17	MFF
Tetrachloroethylene	ND	0.0026	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:17	MFF
Tetrahydrofuran	ND	0.013	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:17	MFF
Toluene	ND	0.0026	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:17	MFF
1,2,3-Trichlorobenzene	ND	0.0026	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:17	MFF
1,2,4-Trichlorobenzene	ND	0.0026	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:17	MFF
1,3,5-Trichlorobenzene	ND	0.0026	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:17	MFF
1,1,1-Trichloroethane	ND	0.0052	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:17	MFF
1,1,2-Trichloroethane	ND	0.0026	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:17	MFF
Trichloroethylene	ND	0.0026	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:17	MFF
Trichlorofluoromethane (Freon 11)	ND	0.013	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:17	MFF
1,2,3-Trichloropropane	ND	0.0026	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:17	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.013	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:17	MFF
1,2,4-Trimethylbenzene	ND	0.0026	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:17	MFF
1,3,5-Trimethylbenzene	ND	0.0026	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:17	MFF
Vinyl Chloride	ND	0.013	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:17	MFF
m+p Xylene	ND	0.0052	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:17	MFF
o-Xylene	ND	0.0026	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:17	MFF
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
1,2-Dichloroethane-d4	114	70-130							
Toluene-d8	100	70-130							
4-Bromofluorobenzene	95.8	70-130							

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Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description:

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: SB-04-3.5-4.0'

Sampled: 3/24/2015 09:30

Sample ID: 15C1102-07

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	75.7		% Wt	1		SM 2540G	4/1/15	4/1/15 23:12	JJL

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Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description:

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: SB-04-COMP

Sampled: 3/24/2015 09:35

Sample ID: 15C1102-08

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	0.24	0.21	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:26	CMR
Acenaphthylene	ND	0.21	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:26	CMR
Acetophenone	ND	0.43	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:26	CMR
Aniline	ND	0.43	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:26	CMR
Anthracene	0.74	0.21	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:26	CMR
Benzidine	ND	0.83	mg/Kg dry	1	V-04, V-05	SW-846 8270D	4/1/15	4/1/15 15:26	CMR
Benzo(a)anthracene	2.5	0.21	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:26	CMR
Benzo(a)pyrene	2.4	0.21	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:26	CMR
Benzo(b)fluoranthene	3.0	0.21	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:26	CMR
Benzo(g,h,i)perylene	1.5	0.21	mg/Kg dry	1	V-06	SW-846 8270D	4/1/15	4/1/15 15:26	CMR
Benzo(k)fluoranthene	1.1	0.21	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:26	CMR
Benzoic Acid	ND	1.3	mg/Kg dry	1	R-05	SW-846 8270D	4/1/15	4/1/15 15:26	CMR
Bis(2-chloroethoxy)methane	ND	0.43	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:26	CMR
Bis(2-chloroethyl)ether	ND	0.43	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:26	CMR
Bis(2-chloroisopropyl)ether	ND	0.43	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:26	CMR
Bis(2-Ethylhexyl)phthalate	0.64	0.43	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:26	CMR
4-Bromophenylphenylether	ND	0.43	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:26	CMR
Butylbenzylphthalate	ND	0.43	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:26	CMR
Carbazole	0.33	0.21	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:26	CMR
4-Chloroaniline	ND	0.83	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:26	CMR
4-Chloro-3-methylphenol	ND	0.83	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:26	CMR
2-Chloronaphthalene	ND	0.43	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:26	CMR
2-Chlorophenol	ND	0.43	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:26	CMR
4-Chlorophenylphenylether	ND	0.43	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:26	CMR
Chrysene	2.8	0.21	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:26	CMR
Dibenz(a,h)anthracene	0.32	0.21	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:26	CMR
Dibenzofuran	ND	0.43	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:26	CMR
Di-n-butylphthalate	ND	0.43	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:26	CMR
1,2-Dichlorobenzene	ND	0.43	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:26	CMR
1,3-Dichlorobenzene	ND	0.43	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:26	CMR
1,4-Dichlorobenzene	ND	0.43	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:26	CMR
3,3-Dichlorobenzidine	ND	0.21	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:26	CMR
2,4-Dichlorophenol	ND	0.43	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:26	CMR
Diethylphthalate	ND	0.43	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:26	CMR
2,4-Dimethylphenol	ND	0.43	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:26	CMR
Dimethylphthalate	ND	0.43	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:26	CMR
4,6-Dinitro-2-methylphenol	ND	0.43	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:26	CMR
2,4-Dinitrophenol	ND	0.83	mg/Kg dry	1	L-04, R-05	SW-846 8270D	4/1/15	4/1/15 15:26	CMR
2,4-Dinitrotoluene	ND	0.43	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:26	CMR
2,6-Dinitrotoluene	ND	0.43	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:26	CMR
Di-n-octylphthalate	ND	0.43	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:26	CMR
1,2-Diphenylhydrazine (as Azobenzene)	ND	0.43	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:26	CMR
Fluoranthene	5.4	0.43	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 19:16	CMR
Fluorene	0.22	0.21	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:26	CMR

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Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description:

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: SB-04-COMP

Sampled: 3/24/2015 09:35

Sample ID: 15C1102-08

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	0.43	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:26	CMR
Hexachlorobutadiene	ND	0.43	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:26	CMR
Hexachlorocyclopentadiene	ND	0.43	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:26	CMR
Hexachloroethane	ND	0.43	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:26	CMR
Indeno(1,2,3-cd)pyrene	1.5	0.21	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:26	CMR
Isophorone	ND	0.43	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:26	CMR
1-Methylnaphthalene	ND	0.21	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:26	CMR
2-Methylnaphthalene	0.24	0.21	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:26	CMR
2-Methylphenol	ND	0.43	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:26	CMR
3/4-Methylphenol	ND	0.43	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:26	CMR
Naphthalene	0.31	0.21	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:26	CMR
2-Nitroaniline	ND	0.43	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:26	CMR
3-Nitroaniline	ND	0.43	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:26	CMR
4-Nitroaniline	ND	0.43	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:26	CMR
Nitrobenzene	ND	0.43	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:26	CMR
2-Nitrophenol	ND	0.43	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:26	CMR
4-Nitrophenol	ND	0.83	mg/Kg dry	1	V-20	SW-846 8270D	4/1/15	4/1/15 15:26	CMR
N-Nitrosodimethylamine	ND	0.43	mg/Kg dry	1	V-20	SW-846 8270D	4/1/15	4/1/15 15:26	CMR
N-Nitrosodiphenylamine	ND	0.43	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:26	CMR
N-Nitrosodi-n-propylamine	ND	0.43	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:26	CMR
Pentachloronitrobenzene	ND	0.43	mg/Kg dry	1	V-16	SW-846 8270D	4/1/15	4/1/15 15:26	CMR
Pentachlorophenol	ND	0.43	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:26	CMR
Phenanthrene	4.1	0.21	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:26	CMR
Phenol	ND	0.43	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:26	CMR
Pyrene	5.6	0.43	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 19:16	CMR
Pyridine	ND	0.43	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:26	CMR
1,2,4,5-Tetrachlorobenzene	ND	0.43	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:26	CMR
1,2,4-Trichlorobenzene	ND	0.43	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:26	CMR
2,4,5-Trichlorophenol	ND	0.43	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:26	CMR
2,4,6-Trichlorophenol	ND	0.43	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:26	CMR
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
2-Fluorophenol	72.0	30-130						4/1/15 15:26	
Phenol-d6	76.3	30-130						4/1/15 15:26	
Nitrobenzene-d5	82.8	30-130						4/1/15 15:26	
2-Fluorobiphenyl	80.4	30-130						4/1/15 15:26	
2,4,6-Tribromophenol	72.3	30-130						4/1/15 15:26	
p-Terphenyl-d14	76.6	30-130						4/1/15 15:26	

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Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description:

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: SB-04-COMP

Sampled: 3/24/2015 09:35

Sample ID: 15C1102-08

Sample Matrix: Soil

Sample Flags: RL-11

Organochloride Pesticides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Alachlor [1]	ND	1.3	mg/Kg dry	50		SW-846 8081B	3/31/15	4/1/15 18:50	PJG
Aldrin [1]	ND	0.31	mg/Kg dry	50		SW-846 8081B	3/31/15	4/1/15 18:50	PJG
alpha-BHC [1]	ND	0.31	mg/Kg dry	50		SW-846 8081B	3/31/15	4/1/15 18:50	PJG
beta-BHC [1]	ND	0.31	mg/Kg dry	50		SW-846 8081B	3/31/15	4/1/15 18:50	PJG
delta-BHC [1]	ND	0.31	mg/Kg dry	50		SW-846 8081B	3/31/15	4/1/15 18:50	PJG
gamma-BHC (Lindane) [1]	ND	0.13	mg/Kg dry	50		SW-846 8081B	3/31/15	4/1/15 18:50	PJG
Chlordane [2]	5.1	1.3	mg/Kg dry	50		SW-846 8081B	3/31/15	4/1/15 18:50	PJG
4,4'-DDD [1]	ND	0.25	mg/Kg dry	50		SW-846 8081B	3/31/15	4/1/15 18:50	PJG
4,4'-DDE [1]	ND	0.25	mg/Kg dry	50		SW-846 8081B	3/31/15	4/1/15 18:50	PJG
4,4'-DDT [1]	ND	0.25	mg/Kg dry	50		SW-846 8081B	3/31/15	4/1/15 18:50	PJG
Dieldrin [1]	ND	0.25	mg/Kg dry	50		SW-846 8081B	3/31/15	4/1/15 18:50	PJG
Endosulfan I [1]	ND	0.31	mg/Kg dry	50		SW-846 8081B	3/31/15	4/1/15 18:50	PJG
Endosulfan II [1]	ND	0.50	mg/Kg dry	50		SW-846 8081B	3/31/15	4/1/15 18:50	PJG
Endosulfan sulfate [1]	ND	0.50	mg/Kg dry	50		SW-846 8081B	3/31/15	4/1/15 18:50	PJG
Endrin [1]	ND	0.50	mg/Kg dry	50		SW-846 8081B	3/31/15	4/1/15 18:50	PJG
Endrin aldehyde [1]	ND	0.50	mg/Kg dry	50		SW-846 8081B	3/31/15	4/1/15 23:49	PJG
Endrin ketone [1]	ND	0.50	mg/Kg dry	50		SW-846 8081B	3/31/15	4/1/15 18:50	PJG
Heptachlor [1]	ND	0.31	mg/Kg dry	50		SW-846 8081B	3/31/15	4/1/15 18:50	PJG
Heptachlor epoxide [1]	ND	0.31	mg/Kg dry	50		SW-846 8081B	3/31/15	4/1/15 18:50	PJG
Hexachlorobenzene [1]	ND	0.38	mg/Kg dry	50		SW-846 8081B	3/31/15	4/1/15 18:50	PJG
Methoxychlor [1]	ND	3.1	mg/Kg dry	50		SW-846 8081B	3/31/15	4/1/15 18:50	PJG
Toxaphene [1]	ND	6.3	mg/Kg dry	50		SW-846 8081B	3/31/15	4/1/15 18:50	PJG
Surrogates	% Recovery	Recovery Limits			Flag/Qual				
Decachlorobiphenyl [1]	*	30-150			S-01			4/1/15 18:50	
Decachlorobiphenyl [2]	*	30-150			S-01			4/1/15 18:50	
Tetrachloro-m-xylene [1]	*	30-150			S-01			4/1/15 18:50	
Tetrachloro-m-xylene [2]	*	30-150			S-01			4/1/15 18:50	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description:

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: SB-04-COMP

Sampled: 3/24/2015 09:35

Sample ID: 15C1102-08

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.63	mg/Kg dry	25		SW-846 8082A	3/31/15	4/1/15 22:43	PJG
Aroclor-1221 [1]	ND	0.63	mg/Kg dry	25		SW-846 8082A	3/31/15	4/1/15 22:43	PJG
Aroclor-1232 [1]	ND	0.63	mg/Kg dry	25		SW-846 8082A	3/31/15	4/1/15 22:43	PJG
Aroclor-1242 [1]	ND	0.63	mg/Kg dry	25		SW-846 8082A	3/31/15	4/1/15 22:43	PJG
Aroclor-1248 [1]	ND	0.63	mg/Kg dry	25		SW-846 8082A	3/31/15	4/1/15 22:43	PJG
Aroclor-1254 [2]	1.1	0.63	mg/Kg dry	25	P-01	SW-846 8082A	3/31/15	4/1/15 22:43	PJG
Aroclor-1260 [1]	ND	0.63	mg/Kg dry	25		SW-846 8082A	3/31/15	4/1/15 22:43	PJG
Aroclor-1262 [1]	ND	0.63	mg/Kg dry	25		SW-846 8082A	3/31/15	4/1/15 22:43	PJG
Aroclor-1268 [1]	ND	0.63	mg/Kg dry	25		SW-846 8082A	3/31/15	4/1/15 22:43	PJG
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]	76.6		30-150				4/1/15 22:43		
Decachlorobiphenyl [2]	90.8		30-150				4/1/15 22:43		
Tetrachloro-m-xylene [1]	78.9		30-150				4/1/15 22:43		
Tetrachloro-m-xylene [2]	82.9		30-150				4/1/15 22:43		

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Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description:

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: SB-04-COMP

Sampled: 3/24/2015 09:35

Sample ID: 15C1102-08

Sample Matrix: Soil

Herbicides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2,4-D [1]	ND	31	µg/kg dry	1		SW-846 8151A	3/27/15	4/1/15 5:15	PJG
2,4-DB [1]	ND	31	µg/kg dry	1		SW-846 8151A	3/27/15	4/1/15 5:15	PJG
2,4,5-TP (Silvex) [1]	ND	3.1	µg/kg dry	1		SW-846 8151A	3/27/15	4/1/15 5:15	PJG
2,4,5-T [1]	ND	3.1	µg/kg dry	1		SW-846 8151A	3/27/15	4/1/15 5:15	PJG
Dalapon [2]	ND	78	µg/kg dry	1		SW-846 8151A	3/27/15	4/1/15 5:15	PJG
Dicamba [1]	ND	3.1	µg/kg dry	1		SW-846 8151A	3/27/15	4/1/15 5:15	PJG
Dichloroprop [1]	ND	31	µg/kg dry	1		SW-846 8151A	3/27/15	4/1/15 5:15	PJG
Dinoseb [1]	ND	16	µg/kg dry	1		SW-846 8151A	3/27/15	4/1/15 5:15	PJG
MCPA [1]	ND	3100	µg/kg dry	1		SW-846 8151A	3/27/15	4/1/15 5:15	PJG
MCPP [1]	ND	3100	µg/kg dry	1		SW-846 8151A	3/27/15	4/1/15 5:15	PJG
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
2,4-Dichlorophenylacetic acid [1]	88.5	30-150							
2,4-Dichlorophenylacetic acid [2]	152 *	30-150	S-03						

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Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description:

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: SB-04-COMP

Sampled: 3/24/2015 09:35

Sample ID: 15C1102-08

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aluminum	4600	3.1	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:29	MJH
Antimony	4.4	3.1	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:29	MJH
Arsenic	14	3.1	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:29	MJH
Barium	310	3.1	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:29	MJH
Beryllium	3.0	0.31	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:29	MJH
Cadmium	2.0	0.31	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:29	MJH
Calcium	2000	9.2	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:29	MJH
Chromium	38	0.61	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:29	MJH
Cobalt	13	3.1	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:29	MJH
Copper	1600	0.61	mg/Kg dry	1	B, B-07	SW-846 6010C	3/31/15	4/1/15 14:29	MJH
Iron	47000	31	mg/Kg dry	10	B-07, B	SW-846 6010C	3/31/15	4/2/15 14:28	MJH
Lead	730	0.92	mg/Kg dry	1	L-07A	SW-846 6010C	3/31/15	4/1/15 14:29	MJH
Magnesium	1800	9.2	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:29	MJH
Manganese	450	0.61	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:29	MJH
Mercury	0.53	0.030	mg/Kg dry	1		SW-846 7471B	3/31/15	4/1/15 10:03	SCB
Nickel	38	0.61	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:29	MJH
Potassium	740	120	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:29	MJH
Selenium	ND	6.1	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:29	MJH
Silver	ND	0.61	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:29	MJH
Sodium	1700	120	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:29	MJH
Thallium	ND	3.1	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:29	MJH
Vanadium	46	1.2	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:29	MJH
Zinc	780	1.2	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:29	MJH

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Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description:

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: SB-04-COMP

Sampled: 3/24/2015 09:35

Sample ID: 15C1102-08

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	79.5		% Wt	1		SM 2540G	4/1/15	4/1/15 22:54	JJL

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Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description:

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: SB-05-4.5-5.0'

Sampled: 3/24/2015 11:45

Sample ID: 15C1102-09

Sample Matrix: Soil

Sample Flags: PR-15, PR-03

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.11	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:50	MFF
Acrylonitrile	ND	0.0067	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:50	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.0011	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:50	MFF
Benzene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:50	MFF
Bromobenzene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:50	MFF
Bromochloromethane	ND	0.0022	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:50	MFF
Bromodichloromethane	ND	0.0022	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:50	MFF
Bromoform	ND	0.0022	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:50	MFF
Bromomethane	ND	0.011	mg/Kg dry	1	R-05	SW-846 8260C	4/2/15	4/2/15 11:50	MFF
2-Butanone (MEK)	ND	0.044	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:50	MFF
tert-Butyl Alcohol (TBA)	ND	0.044	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:50	MFF
n-Butylbenzene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:50	MFF
sec-Butylbenzene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:50	MFF
tert-Butylbenzene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:50	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.0011	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:50	MFF
Carbon Disulfide	ND	0.022	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:50	MFF
Carbon Tetrachloride	ND	0.0022	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:50	MFF
Chlorobenzene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:50	MFF
Chlorodibromomethane	ND	0.0011	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:50	MFF
Chloroethane	ND	0.022	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:50	MFF
Chloroform	ND	0.0044	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:50	MFF
Chloromethane	ND	0.011	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:50	MFF
2-Chlorotoluene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:50	MFF
4-Chlorotoluene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:50	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0022	mg/Kg dry	1	V-05	SW-846 8260C	4/2/15	4/2/15 11:50	MFF
1,2-Dibromoethane (EDB)	ND	0.0011	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:50	MFF
Dibromomethane	ND	0.0022	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:50	MFF
1,2-Dichlorobenzene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:50	MFF
1,3-Dichlorobenzene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:50	MFF
1,4-Dichlorobenzene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:50	MFF
trans-1,4-Dichloro-2-butene	ND	0.0044	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:50	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.022	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:50	MFF
1,1-Dichloroethane	ND	0.0022	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:50	MFF
1,2-Dichloroethane	ND	0.0022	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:50	MFF
1,1-Dichloroethylene	ND	0.0044	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:50	MFF
cis-1,2-Dichloroethylene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:50	MFF
trans-1,2-Dichloroethylene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:50	MFF
1,2-Dichloropropane	ND	0.0022	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:50	MFF
1,3-Dichloropropane	ND	0.0011	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:50	MFF
2,2-Dichloropropane	ND	0.0022	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:50	MFF
1,1-Dichloropropene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:50	MFF
cis-1,3-Dichloropropene	ND	0.0011	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:50	MFF
trans-1,3-Dichloropropene	ND	0.0011	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:50	MFF
Diethyl Ether	ND	0.022	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:50	MFF

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Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description:

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: SB-05-4.5-5.0'

Sampled: 3/24/2015 11:45

Sample ID: 15C1102-09

Sample Matrix: Soil

Sample Flags: PR-15, PR-03

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.0011	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:50	MFF
1,4-Dioxane	ND	0.11	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:50	MFF
Ethylbenzene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:50	MFF
Hexachlorobutadiene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:50	MFF
Isopropylbenzene (Cumene)	ND	0.0022	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:50	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0022	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:50	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0044	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:50	MFF
Methylene Chloride	ND	0.022	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:50	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.022	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:50	MFF
Naphthalene	ND	0.0044	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:50	MFF
n-Propylbenzene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:50	MFF
Styrene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:50	MFF
1,1,1,2-Tetrachloroethane	ND	0.0022	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:50	MFF
Tetrachloroethylene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:50	MFF
Tetrahydrofuran	ND	0.011	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:50	MFF
Toluene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:50	MFF
1,2,3-Trichlorobenzene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:50	MFF
1,2,4-Trichlorobenzene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:50	MFF
1,3,5-Trichlorobenzene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:50	MFF
1,1,1-Trichloroethane	ND	0.0044	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:50	MFF
1,1,2-Trichloroethane	ND	0.0022	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:50	MFF
Trichloroethylene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:50	MFF
Trichlorofluoromethane (Freon 11)	ND	0.011	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:50	MFF
1,2,3-Trichloropropane	ND	0.0022	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:50	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.011	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:50	MFF
1,2,4-Trimethylbenzene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:50	MFF
1,3,5-Trimethylbenzene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:50	MFF
Vinyl Chloride	ND	0.011	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:50	MFF
m+p Xylene	ND	0.0044	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:50	MFF
o-Xylene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 11:50	MFF
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
1,2-Dichloroethane-d4	115	70-130							
Toluene-d8	101	70-130							
4-Bromofluorobenzene	96.8	70-130							

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Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description:

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: SB-05-4.5-5.0'

Sampled: 3/24/2015 11:45

Sample ID: 15C1102-09

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	85.1		% Wt	1		SM 2540G	4/1/15	4/1/15 23:12	JJL

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Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description:

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: SB-05-COMP

Sampled: 3/24/2015 12:00

Sample ID: 15C1102-10

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	0.64	0.20	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:49	CMR
Acenaphthylene	ND	0.20	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:49	CMR
Acetophenone	ND	0.40	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:49	CMR
Aniline	ND	0.40	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:49	CMR
Anthracene	1.5	0.20	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:49	CMR
Benzidine	ND	0.78	mg/Kg dry	1	V-04, V-05	SW-846 8270D	4/1/15	4/1/15 15:49	CMR
Benzo(a)anthracene	3.2	0.20	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:49	CMR
Benzo(a)pyrene	2.4	0.20	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:49	CMR
Benzo(b)fluoranthene	3.0	0.20	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:49	CMR
Benzo(g,h,i)perylene	1.3	0.20	mg/Kg dry	1	V-06	SW-846 8270D	4/1/15	4/1/15 15:49	CMR
Benzo(k)fluoranthene	1.1	0.20	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:49	CMR
Benzoic Acid	ND	1.2	mg/Kg dry	1	R-05	SW-846 8270D	4/1/15	4/1/15 15:49	CMR
Bis(2-chloroethoxy)methane	ND	0.40	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:49	CMR
Bis(2-chloroethyl)ether	ND	0.40	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:49	CMR
Bis(2-chloroisopropyl)ether	ND	0.40	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:49	CMR
Bis(2-Ethylhexyl)phthalate	ND	0.40	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:49	CMR
4-Bromophenylphenylether	ND	0.40	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:49	CMR
Butylbenzylphthalate	ND	0.40	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:49	CMR
Carbazole	0.38	0.20	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:49	CMR
4-Chloroaniline	ND	0.78	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:49	CMR
4-Chloro-3-methylphenol	ND	0.78	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:49	CMR
2-Chloronaphthalene	ND	0.40	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:49	CMR
2-Chlorophenol	ND	0.40	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:49	CMR
4-Chlorophenylphenylether	ND	0.40	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:49	CMR
Chrysene	3.4	0.20	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:49	CMR
Dibenz(a,h)anthracene	0.40	0.20	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:49	CMR
Dibenzofuran	ND	0.40	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:49	CMR
Di-n-butylphthalate	ND	0.40	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:49	CMR
1,2-Dichlorobenzene	ND	0.40	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:49	CMR
1,3-Dichlorobenzene	ND	0.40	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:49	CMR
1,4-Dichlorobenzene	ND	0.40	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:49	CMR
3,3-Dichlorobenzidine	ND	0.20	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:49	CMR
2,4-Dichlorophenol	ND	0.40	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:49	CMR
Diethylphthalate	ND	0.40	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:49	CMR
2,4-Dimethylphenol	ND	0.40	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:49	CMR
Dimethylphthalate	ND	0.40	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:49	CMR
4,6-Dinitro-2-methylphenol	ND	0.40	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:49	CMR
2,4-Dinitrophenol	ND	0.78	mg/Kg dry	1	L-04, R-05	SW-846 8270D	4/1/15	4/1/15 15:49	CMR
2,4-Dinitrotoluene	ND	0.40	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:49	CMR
2,6-Dinitrotoluene	ND	0.40	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:49	CMR
Di-n-octylphthalate	ND	0.40	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:49	CMR
1,2-Diphenylhydrazine (as Azobenzene)	ND	0.40	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:49	CMR
Fluoranthene	6.1	1.0	mg/Kg dry	5		SW-846 8270D	4/1/15	4/1/15 19:40	CMR
Fluorene	0.83	0.20	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:49	CMR

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Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description:

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: SB-05-COMP

Sampled: 3/24/2015 12:00

Sample ID: 15C1102-10

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	0.40	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:49	CMR
Hexachlorobutadiene	ND	0.40	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:49	CMR
Hexachlorocyclopentadiene	ND	0.40	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:49	CMR
Hexachloroethane	ND	0.40	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:49	CMR
Indeno(1,2,3-cd)pyrene	1.3	0.20	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:49	CMR
Isophorone	ND	0.40	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:49	CMR
1-Methylnaphthalene	0.85	0.20	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:49	CMR
2-Methylnaphthalene	0.62	0.20	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:49	CMR
2-Methylphenol	ND	0.40	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:49	CMR
3/4-Methylphenol	ND	0.40	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:49	CMR
Naphthalene	0.57	0.20	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:49	CMR
2-Nitroaniline	ND	0.40	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:49	CMR
3-Nitroaniline	ND	0.40	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:49	CMR
4-Nitroaniline	ND	0.40	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:49	CMR
Nitrobenzene	ND	0.40	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:49	CMR
2-Nitrophenol	ND	0.40	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:49	CMR
4-Nitrophenol	ND	0.78	mg/Kg dry	1	V-20	SW-846 8270D	4/1/15	4/1/15 15:49	CMR
N-Nitrosodimethylamine	ND	0.40	mg/Kg dry	1	V-20	SW-846 8270D	4/1/15	4/1/15 15:49	CMR
N-Nitrosodiphenylamine	ND	0.40	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:49	CMR
N-Nitrosodi-n-propylamine	ND	0.40	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:49	CMR
Pentachloronitrobenzene	ND	0.40	mg/Kg dry	1	V-16	SW-846 8270D	4/1/15	4/1/15 15:49	CMR
Pentachlorophenol	ND	0.40	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:49	CMR
Phenanthrene	7.6	1.0	mg/Kg dry	5		SW-846 8270D	4/1/15	4/1/15 19:40	CMR
Phenol	ND	0.40	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:49	CMR
Pyrene	7.4	1.0	mg/Kg dry	5		SW-846 8270D	4/1/15	4/1/15 19:40	CMR
Pyridine	ND	0.40	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:49	CMR
1,2,4,5-Tetrachlorobenzene	ND	0.40	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:49	CMR
1,2,4-Trichlorobenzene	ND	0.40	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:49	CMR
2,4,5-Trichlorophenol	ND	0.40	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:49	CMR
2,4,6-Trichlorophenol	ND	0.40	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 15:49	CMR
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
2-Fluorophenol	69.0	30-130						4/1/15 15:49	
Phenol-d6	76.5	30-130						4/1/15 15:49	
Nitrobenzene-d5	82.1	30-130						4/1/15 15:49	
2-Fluorobiphenyl	90.9	30-130						4/1/15 15:49	
2,4,6-Tribromophenol	72.2	30-130						4/1/15 15:49	
p-Terphenyl-d14	91.9	30-130						4/1/15 15:49	

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Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description:

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: SB-05-COMP

Sampled: 3/24/2015 12:00

Sample ID: 15C1102-10

Sample Matrix: Soil

Organochloride Pesticides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Alachlor [1]	ND	0.024	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 19:13	PJG
Aldrin [1]	ND	0.0059	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 19:13	PJG
alpha-BHC [1]	ND	0.0059	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 19:13	PJG
beta-BHC [1]	ND	0.0059	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 19:13	PJG
delta-BHC [1]	ND	0.0059	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 19:13	PJG
gamma-BHC (Lindane) [1]	ND	0.0024	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 19:13	PJG
Chlordane [1]	ND	0.024	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 19:13	PJG
4,4'-DDD [1]	ND	0.0047	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 19:13	PJG
4,4'-DDE [1]	ND	0.0047	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 19:13	PJG
4,4'-DDT [1]	0.014	0.0047	mg/Kg dry	1	P-01	SW-846 8081B	3/31/15	4/1/15 19:13	PJG
Dieldrin [2]	0.0069	0.0047	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 19:13	PJG
Endosulfan I [1]	ND	0.0059	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 19:13	PJG
Endosulfan II [1]	ND	0.0094	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 19:13	PJG
Endosulfan sulfate [1]	ND	0.0094	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 19:13	PJG
Endrin [1]	ND	0.0094	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 19:13	PJG
Endrin aldehyde [1]	ND	0.0094	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 5:49	PJG
Endrin ketone [1]	ND	0.0094	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 19:13	PJG
Heptachlor [1]	ND	0.0059	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 19:13	PJG
Heptachlor epoxide [1]	ND	0.0059	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 19:13	PJG
Hexachlorobenzene [1]	ND	0.0071	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 19:13	PJG
Methoxychlor [1]	ND	0.059	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 19:13	PJG
Toxaphene [1]	ND	0.12	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 19:13	PJG
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
Decachlorobiphenyl [1]	98.5	30-150							
Decachlorobiphenyl [2]	122	30-150							
Tetrachloro-m-xylene [1]	85.7	30-150							
Tetrachloro-m-xylene [2]	82.5	30-150							

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Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description:

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: SB-05-COMP

Sampled: 3/24/2015 12:00

Sample ID: 15C1102-10

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.12	mg/Kg dry	5		SW-846 8082A	3/31/15	3/31/15 19:48	JMB
Aroclor-1221 [1]	ND	0.12	mg/Kg dry	5		SW-846 8082A	3/31/15	3/31/15 19:48	JMB
Aroclor-1232 [1]	ND	0.12	mg/Kg dry	5		SW-846 8082A	3/31/15	3/31/15 19:48	JMB
Aroclor-1242 [1]	ND	0.12	mg/Kg dry	5		SW-846 8082A	3/31/15	3/31/15 19:48	JMB
Aroclor-1248 [1]	ND	0.12	mg/Kg dry	5		SW-846 8082A	3/31/15	3/31/15 19:48	JMB
Aroclor-1254 [1]	ND	0.12	mg/Kg dry	5		SW-846 8082A	3/31/15	3/31/15 19:48	JMB
Aroclor-1260 [1]	ND	0.12	mg/Kg dry	5		SW-846 8082A	3/31/15	3/31/15 19:48	JMB
Aroclor-1262 [1]	ND	0.12	mg/Kg dry	5		SW-846 8082A	3/31/15	3/31/15 19:48	JMB
Aroclor-1268 [1]	ND	0.12	mg/Kg dry	5		SW-846 8082A	3/31/15	3/31/15 19:48	JMB
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
Decachlorobiphenyl [1]	79.7	30-150						3/31/15 19:48	
Decachlorobiphenyl [2]	90.1	30-150						3/31/15 19:48	
Tetrachloro-m-xylene [1]	87.6	30-150						3/31/15 19:48	
Tetrachloro-m-xylene [2]	86.5	30-150						3/31/15 19:48	

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Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description:

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: SB-05-COMP

Sampled: 3/24/2015 12:00

Sample ID: 15C1102-10

Sample Matrix: Soil

Herbicides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2,4-D [1]	ND	29	µg/kg dry	1		SW-846 8151A	3/27/15	4/1/15 5:53	PJG
2,4-DB [1]	ND	29	µg/kg dry	1		SW-846 8151A	3/27/15	4/1/15 5:53	PJG
2,4,5-TP (Silvex) [1]	ND	2.9	µg/kg dry	1		SW-846 8151A	3/27/15	4/1/15 5:53	PJG
2,4,5-T [1]	ND	2.9	µg/kg dry	1		SW-846 8151A	3/27/15	4/1/15 5:53	PJG
Dalapon [2]	ND	73	µg/kg dry	1		SW-846 8151A	3/27/15	4/1/15 5:53	PJG
Dicamba [1]	ND	2.9	µg/kg dry	1		SW-846 8151A	3/27/15	4/1/15 5:53	PJG
Dichloroprop [1]	ND	29	µg/kg dry	1		SW-846 8151A	3/27/15	4/1/15 5:53	PJG
Dinoseb [1]	ND	15	µg/kg dry	1		SW-846 8151A	3/27/15	4/1/15 5:53	PJG
MCPA [1]	ND	2900	µg/kg dry	1		SW-846 8151A	3/27/15	4/1/15 5:53	PJG
MCPP [1]	ND	2900	µg/kg dry	1		SW-846 8151A	3/27/15	4/1/15 5:53	PJG
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
2,4-Dichlorophenylacetic acid [1]	98.0	30-150						4/1/15 5:53	
2,4-Dichlorophenylacetic acid [2]	103	30-150						4/1/15 5:53	

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Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description:

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: SB-05-COMP

Sampled: 3/24/2015 12:00

Sample ID: 15C1102-10

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aluminum	4500	2.9	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:34	MJH
Antimony	ND	2.9	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:34	MJH
Arsenic	11	2.9	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:34	MJH
Barium	97	2.9	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:34	MJH
Beryllium	1.8	0.29	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:34	MJH
Cadmium	1.2	0.29	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:34	MJH
Calcium	12000	8.6	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:34	MJH
Chromium	11	0.57	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:34	MJH
Cobalt	6.6	2.9	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:34	MJH
Copper	82	0.57	mg/Kg dry	1	B, B-07	SW-846 6010C	3/31/15	4/1/15 14:34	MJH
Iron	43000	29	mg/Kg dry	10	B, B-07	SW-846 6010C	3/31/15	4/2/15 14:34	MJH
Lead	310	0.86	mg/Kg dry	1	L-07A	SW-846 6010C	3/31/15	4/1/15 14:34	MJH
Magnesium	1600	8.6	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:34	MJH
Manganese	240	0.57	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:34	MJH
Mercury	0.27	0.028	mg/Kg dry	1		SW-846 7471B	3/31/15	4/1/15 10:04	SCB
Nickel	14	0.57	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:34	MJH
Potassium	750	110	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:34	MJH
Selenium	ND	5.7	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:34	MJH
Silver	ND	0.57	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:34	MJH
Sodium	180	110	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:34	MJH
Thallium	ND	2.9	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:34	MJH
Vanadium	20	1.1	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:34	MJH
Zinc	190	1.1	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:34	MJH

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description:

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: SB-05-COMP

Sampled: 3/24/2015 12:00

Sample ID: 15C1102-10

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	84.8		% Wt	1		SM 2540G	4/1/15	4/1/15 22:54	JJL

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description:

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: SB-06-4.5-5.0'

Sampled: 3/24/2015 14:00

Sample ID: 15C1102-11

Sample Matrix: Soil

Sample Flags: PR-03, PR-15

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.11	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:21	MFF
Acrylonitrile	ND	0.0064	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:21	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.0011	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:21	MFF
Benzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:21	MFF
Bromobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:21	MFF
Bromochloromethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:21	MFF
Bromodichloromethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:21	MFF
Bromoform	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:21	MFF
Bromomethane	ND	0.011	mg/Kg dry	1	R-05	SW-846 8260C	4/2/15	4/2/15 12:21	MFF
2-Butanone (MEK)	ND	0.042	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:21	MFF
tert-Butyl Alcohol (TBA)	ND	0.042	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:21	MFF
n-Butylbenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:21	MFF
sec-Butylbenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:21	MFF
tert-Butylbenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:21	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.0011	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:21	MFF
Carbon Disulfide	ND	0.021	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:21	MFF
Carbon Tetrachloride	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:21	MFF
Chlorobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:21	MFF
Chlorodibromomethane	ND	0.0011	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:21	MFF
Chloroethane	ND	0.021	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:21	MFF
Chloroform	ND	0.0042	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:21	MFF
Chloromethane	ND	0.011	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:21	MFF
2-Chlorotoluene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:21	MFF
4-Chlorotoluene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:21	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0021	mg/Kg dry	1	V-05	SW-846 8260C	4/2/15	4/2/15 12:21	MFF
1,2-Dibromoethane (EDB)	ND	0.0011	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:21	MFF
Dibromomethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:21	MFF
1,2-Dichlorobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:21	MFF
1,3-Dichlorobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:21	MFF
1,4-Dichlorobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:21	MFF
trans-1,4-Dichloro-2-butene	ND	0.0042	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:21	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.021	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:21	MFF
1,1-Dichloroethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:21	MFF
1,2-Dichloroethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:21	MFF
1,1-Dichloroethylene	ND	0.0042	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:21	MFF
cis-1,2-Dichloroethylene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:21	MFF
trans-1,2-Dichloroethylene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:21	MFF
1,2-Dichloropropane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:21	MFF
1,3-Dichloropropane	ND	0.0011	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:21	MFF
2,2-Dichloropropane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:21	MFF
1,1-Dichloropropene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:21	MFF
cis-1,3-Dichloropropene	ND	0.0011	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:21	MFF
trans-1,3-Dichloropropene	ND	0.0011	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:21	MFF
Diethyl Ether	ND	0.021	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:21	MFF

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Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description:

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: SB-06-4.5-5.0'

Sampled: 3/24/2015 14:00

Sample ID: 15C1102-11

Sample Matrix: Soil

Sample Flags: PR-03, PR-15

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.0011	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:21	MFF
1,4-Dioxane	ND	0.11	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:21	MFF
Ethylbenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:21	MFF
Hexachlorobutadiene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:21	MFF
Isopropylbenzene (Cumene)	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:21	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:21	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0042	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:21	MFF
Methylene Chloride	ND	0.021	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:21	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.021	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:21	MFF
Naphthalene	ND	0.0042	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:21	MFF
n-Propylbenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:21	MFF
Styrene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:21	MFF
1,1,1,2-Tetrachloroethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:21	MFF
Tetrachloroethylene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:21	MFF
Tetrahydrofuran	ND	0.011	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:21	MFF
Toluene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:21	MFF
1,2,3-Trichlorobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:21	MFF
1,2,4-Trichlorobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:21	MFF
1,3,5-Trichlorobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:21	MFF
1,1,1-Trichloroethane	ND	0.0042	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:21	MFF
1,1,2-Trichloroethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:21	MFF
Trichloroethylene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:21	MFF
Trichlorofluoromethane (Freon 11)	ND	0.011	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:21	MFF
1,2,3-Trichloropropane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:21	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.011	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:21	MFF
1,2,4-Trimethylbenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:21	MFF
1,3,5-Trimethylbenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:21	MFF
Vinyl Chloride	ND	0.011	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:21	MFF
m+p Xylene	ND	0.0042	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:21	MFF
o-Xylene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:21	MFF
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
1,2-Dichloroethane-d4	114	70-130							
Toluene-d8	98.7	70-130							
4-Bromofluorobenzene	98.1	70-130							

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Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description:

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: SB-06-4.5-5.0'

Sampled: 3/24/2015 14:00

Sample ID: 15C1102-11

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	90.5		% Wt	1		SM 2540G	4/1/15	4/1/15 23:12	JJL

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Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description:

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: SB-06-COMP

Sampled: 3/24/2015 14:05

Sample ID: 15C1102-12

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.19	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:11	CMR
Acenaphthylene	ND	0.19	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:11	CMR
Acetophenone	ND	0.37	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:11	CMR
Aniline	ND	0.37	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:11	CMR
Anthracene	0.31	0.19	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:11	CMR
Benzidine	ND	0.72	mg/Kg dry	1	MS-09, V-04, V-05	SW-846 8270D	4/1/15	4/1/15 16:11	CMR
Benzo(a)anthracene	0.78	0.19	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:11	CMR
Benzo(a)pyrene	0.74	0.19	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:11	CMR
Benzo(b)fluoranthene	0.88	0.19	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:11	CMR
Benzo(g,h,i)perylene	0.41	0.19	mg/Kg dry	1	V-06	SW-846 8270D	4/1/15	4/1/15 16:11	CMR
Benzo(k)fluoranthene	0.37	0.19	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:11	CMR
Benzoic Acid	ND	1.1	mg/Kg dry	1	MS-09, R-05	SW-846 8270D	4/1/15	4/1/15 16:11	CMR
Bis(2-chloroethoxy)methane	ND	0.37	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:11	CMR
Bis(2-chloroethyl)ether	ND	0.37	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:11	CMR
Bis(2-chloroisopropyl)ether	ND	0.37	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:11	CMR
Bis(2-Ethylhexyl)phthalate	ND	0.37	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:11	CMR
4-Bromophenylphenylether	ND	0.37	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:11	CMR
Butylbenzylphthalate	ND	0.37	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:11	CMR
Carbazole	ND	0.19	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:11	CMR
4-Chloroaniline	ND	0.72	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:11	CMR
4-Chloro-3-methylphenol	ND	0.72	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:11	CMR
2-Chloronaphthalene	ND	0.37	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:11	CMR
2-Chlorophenol	ND	0.37	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:11	CMR
4-Chlorophenylphenylether	ND	0.37	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:11	CMR
Chrysene	0.74	0.19	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:11	CMR
Dibenz(a,h)anthracene	ND	0.19	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:11	CMR
Dibenzofuran	ND	0.37	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:11	CMR
Di-n-butylphthalate	ND	0.37	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:11	CMR
1,2-Dichlorobenzene	ND	0.37	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:11	CMR
1,3-Dichlorobenzene	ND	0.37	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:11	CMR
1,4-Dichlorobenzene	ND	0.37	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:11	CMR
3,3-Dichlorobenzidine	ND	0.19	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:11	CMR
2,4-Dichlorophenol	ND	0.37	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:11	CMR
Diethylphthalate	ND	0.37	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:11	CMR
2,4-Dimethylphenol	ND	0.37	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:11	CMR
Dimethylphthalate	ND	0.37	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:11	CMR
4,6-Dinitro-2-methylphenol	ND	0.37	mg/Kg dry	1	MS-09	SW-846 8270D	4/1/15	4/1/15 16:11	CMR
2,4-Dinitrophenol	ND	0.72	mg/Kg dry	1	L-04, MS-09, R-05	SW-846 8270D	4/1/15	4/1/15 16:11	CMR
2,4-Dinitrotoluene	ND	0.37	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:11	CMR
2,6-Dinitrotoluene	ND	0.37	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:11	CMR
Di-n-octylphthalate	ND	0.37	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:11	CMR
1,2-Diphenylhydrazine (as Azobenzene)	ND	0.37	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:11	CMR
Fluoranthene	1.5	0.19	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:11	CMR
Fluorene	ND	0.19	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:11	CMR

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Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description:

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: SB-06-COMP

Sampled: 3/24/2015 14:05

Sample ID: 15C1102-12

Sample Matrix: Soil

Semivolatiles Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	0.37	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:11	CMR
Hexachlorobutadiene	ND	0.37	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:11	CMR
Hexachlorocyclopentadiene	ND	0.37	mg/Kg dry	1	MS-09	SW-846 8270D	4/1/15	4/1/15 16:11	CMR
Hexachloroethane	ND	0.37	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:11	CMR
Indeno(1,2,3-cd)pyrene	0.45	0.19	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:11	CMR
Isophorone	ND	0.37	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:11	CMR
1-Methylnaphthalene	ND	0.19	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:11	CMR
2-Methylnaphthalene	ND	0.19	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:11	CMR
2-Methylphenol	ND	0.37	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:11	CMR
3/4-Methylphenol	ND	0.37	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:11	CMR
Naphthalene	ND	0.19	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:11	CMR
2-Nitroaniline	ND	0.37	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:11	CMR
3-Nitroaniline	ND	0.37	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:11	CMR
4-Nitroaniline	ND	0.37	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:11	CMR
Nitrobenzene	ND	0.37	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:11	CMR
2-Nitrophenol	ND	0.37	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:11	CMR
4-Nitrophenol	ND	0.72	mg/Kg dry	1	V-20	SW-846 8270D	4/1/15	4/1/15 16:11	CMR
N-Nitrosodimethylamine	ND	0.37	mg/Kg dry	1	V-20	SW-846 8270D	4/1/15	4/1/15 16:11	CMR
N-Nitrosodiphenylamine	ND	0.37	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:11	CMR
N-Nitrosodi-n-propylamine	ND	0.37	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:11	CMR
Pentachloronitrobenzene	ND	0.37	mg/Kg dry	1	V-16	SW-846 8270D	4/1/15	4/1/15 16:11	CMR
Pentachlorophenol	ND	0.37	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:11	CMR
Phenanthrene	1.2	0.19	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:11	CMR
Phenol	ND	0.37	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:11	CMR
Pyrene	1.4	0.19	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:11	CMR
Pyridine	ND	0.37	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:11	CMR
1,2,4,5-Tetrachlorobenzene	ND	0.37	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:11	CMR
1,2,4-Trichlorobenzene	ND	0.37	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:11	CMR
2,4,5-Trichlorophenol	ND	0.37	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:11	CMR
2,4,6-Trichlorophenol	ND	0.37	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:11	CMR
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
2-Fluorophenol	73.9	30-130						4/1/15 16:11	
Phenol-d6	76.1	30-130						4/1/15 16:11	
Nitrobenzene-d5	82.3	30-130						4/1/15 16:11	
2-Fluorobiphenyl	86.7	30-130						4/1/15 16:11	
2,4,6-Tribromophenol	79.1	30-130						4/1/15 16:11	
p-Terphenyl-d14	87.0	30-130						4/1/15 16:11	

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Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description:

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: SB-06-COMP

Sampled: 3/24/2015 14:05

Sample ID: 15C1102-12

Sample Matrix: Soil

Organochloride Pesticides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Alachlor [1]	ND	0.022	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 19:36	PJG
Aldrin [1]	ND	0.0055	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 19:36	PJG
alpha-BHC [1]	ND	0.0055	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 19:36	PJG
beta-BHC [1]	ND	0.0055	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 19:36	PJG
delta-BHC [1]	ND	0.0055	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 19:36	PJG
gamma-BHC (Lindane) [1]	ND	0.0022	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 19:36	PJG
Chlordane [1]	ND	0.022	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 19:36	PJG
4,4'-DDD [1]	0.012	0.0044	mg/Kg dry	1	P-01	SW-846 8081B	3/31/15	4/1/15 19:36	PJG
4,4'-DDE [1]	0.013	0.0044	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 19:36	PJG
4,4'-DDT [2]	0.057	0.0044	mg/Kg dry	1	P-01	SW-846 8081B	3/31/15	4/1/15 19:36	PJG
Dieldrin [1]	0.021	0.0044	mg/Kg dry	1	P-01	SW-846 8081B	3/31/15	4/1/15 19:36	PJG
Endosulfan I [1]	ND	0.0055	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 19:36	PJG
Endosulfan II [1]	ND	0.0087	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 19:36	PJG
Endosulfan sulfate [1]	ND	0.0087	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 19:36	PJG
Endrin [1]	ND	0.0087	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 19:36	PJG
Endrin aldehyde [1]	ND	0.0087	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 6:11	PJG
Endrin ketone [1]	ND	0.0087	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 19:36	PJG
Heptachlor [1]	ND	0.0055	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 19:36	PJG
Heptachlor epoxide [1]	ND	0.0055	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 19:36	PJG
Hexachlorobenzene [1]	ND	0.0066	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 19:36	PJG
Methoxychlor [1]	ND	0.055	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 19:36	PJG
Toxaphene [1]	ND	0.11	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 19:36	PJG
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
Decachlorobiphenyl [1]	91.7	30-150							
Decachlorobiphenyl [2]	100	30-150							
Tetrachloro-m-xylene [1]	84.6	30-150							
Tetrachloro-m-xylene [2]	81.6	30-150							

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Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description:

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: SB-06-COMP

Sampled: 3/24/2015 14:05

Sample ID: 15C1102-12

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	3/31/15	3/31/15 20:00	JMB
Aroclor-1221 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	3/31/15	3/31/15 20:00	JMB
Aroclor-1232 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	3/31/15	3/31/15 20:00	JMB
Aroclor-1242 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	3/31/15	3/31/15 20:00	JMB
Aroclor-1248 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	3/31/15	3/31/15 20:00	JMB
Aroclor-1254 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	3/31/15	3/31/15 20:00	JMB
Aroclor-1260 [1]	0.52	0.11	mg/Kg dry	5		SW-846 8082A	3/31/15	3/31/15 20:00	JMB
Aroclor-1262 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	3/31/15	3/31/15 20:00	JMB
Aroclor-1268 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	3/31/15	3/31/15 20:00	JMB
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
Decachlorobiphenyl [1]	78.2	30-150							
Decachlorobiphenyl [2]	81.9	30-150							
Tetrachloro-m-xylene [1]	86.1	30-150							
Tetrachloro-m-xylene [2]	87.5	30-150							

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Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description:

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: SB-06-COMP

Sampled: 3/24/2015 14:05

Sample ID: 15C1102-12

Sample Matrix: Soil

Herbicides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2,4-D [1]	ND	27	µg/kg dry	1		SW-846 8151A	3/27/15	4/1/15 6:32	PJG
2,4-DB [1]	ND	27	µg/kg dry	1		SW-846 8151A	3/27/15	4/1/15 6:32	PJG
2,4,5-TP (Silvex) [1]	ND	2.7	µg/kg dry	1		SW-846 8151A	3/27/15	4/1/15 6:32	PJG
2,4,5-T [1]	ND	2.7	µg/kg dry	1		SW-846 8151A	3/27/15	4/1/15 6:32	PJG
Dalapon [2]	ND	68	µg/kg dry	1		SW-846 8151A	3/27/15	4/1/15 6:32	PJG
Dicamba [1]	ND	2.7	µg/kg dry	1		SW-846 8151A	3/27/15	4/1/15 6:32	PJG
Dichloroprop [1]	ND	27	µg/kg dry	1		SW-846 8151A	3/27/15	4/1/15 6:32	PJG
Dinoseb [1]	ND	14	µg/kg dry	1		SW-846 8151A	3/27/15	4/1/15 6:32	PJG
MCPA [1]	ND	2700	µg/kg dry	1		SW-846 8151A	3/27/15	4/1/15 6:32	PJG
MCPP [1]	ND	2700	µg/kg dry	1		SW-846 8151A	3/27/15	4/1/15 6:32	PJG
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
2,4-Dichlorophenylacetic acid [1]	94.8	30-150						4/1/15 6:32	
2,4-Dichlorophenylacetic acid [2]	91.5	30-150						4/1/15 6:32	

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Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description:

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: SB-06-COMP

Sampled: 3/24/2015 14:05

Sample ID: 15C1102-12

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aluminum	8400	2.6	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:40	MJH
Antimony	ND	2.6	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:40	MJH
Arsenic	4.4	2.6	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:40	MJH
Barium	100	2.6	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:40	MJH
Beryllium	0.95	0.26	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:40	MJH
Cadmium	0.58	0.26	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:40	MJH
Calcium	24000	7.9	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:40	MJH
Chromium	19	0.52	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:40	MJH
Cobalt	6.7	2.6	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:40	MJH
Copper	36	0.52	mg/Kg dry	1	B, B-07	SW-846 6010C	3/31/15	4/1/15 14:40	MJH
Iron	16000	26	mg/Kg dry	10	B, B-07	SW-846 6010C	3/31/15	4/2/15 14:39	MJH
Lead	270	0.79	mg/Kg dry	1	L-07A	SW-846 6010C	3/31/15	4/1/15 14:40	MJH
Magnesium	12000	79	mg/Kg dry	10		SW-846 6010C	3/31/15	4/2/15 14:39	MJH
Manganese	240	0.52	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:40	MJH
Mercury	0.28	0.026	mg/Kg dry	1		SW-846 7471B	3/31/15	4/1/15 10:06	SCB
Nickel	15	0.52	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:40	MJH
Potassium	1700	100	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:40	MJH
Selenium	ND	5.2	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:40	MJH
Silver	ND	0.52	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:40	MJH
Sodium	130	100	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:40	MJH
Thallium	ND	2.6	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:40	MJH
Vanadium	29	1.0	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:40	MJH
Zinc	96	1.0	mg/Kg dry	1		SW-846 6010C	3/31/15	4/1/15 14:40	MJH

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Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description:

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: SB-06-COMP

Sampled: 3/24/2015 14:05

Sample ID: 15C1102-12

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	91.5		% Wt	1		SM 2540G	4/1/15	4/1/15 22:54	JJL

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Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description:

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: SB-07-4.5-5.0'

Sampled: 3/25/2015 12:30

Sample ID: 15C1102-13

Sample Matrix: Soil

Sample Flags: PR-03, PR-15

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.10	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:52	MFF
Acrylonitrile	ND	0.0061	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:52	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.0010	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:52	MFF
Benzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:52	MFF
Bromobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:52	MFF
Bromochloromethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:52	MFF
Bromodichloromethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:52	MFF
Bromoform	ND	0.0020	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:52	MFF
Bromomethane	ND	0.010	mg/Kg dry	1	R-05	SW-846 8260C	4/2/15	4/2/15 12:52	MFF
2-Butanone (MEK)	ND	0.041	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:52	MFF
tert-Butyl Alcohol (TBA)	ND	0.041	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:52	MFF
n-Butylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:52	MFF
sec-Butylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:52	MFF
tert-Butylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:52	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.0010	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:52	MFF
Carbon Disulfide	ND	0.020	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:52	MFF
Carbon Tetrachloride	ND	0.0020	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:52	MFF
Chlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:52	MFF
Chlorodibromomethane	ND	0.0010	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:52	MFF
Chloroethane	ND	0.020	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:52	MFF
Chloroform	ND	0.0041	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:52	MFF
Chloromethane	ND	0.010	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:52	MFF
2-Chlorotoluene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:52	MFF
4-Chlorotoluene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:52	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0020	mg/Kg dry	1	V-05	SW-846 8260C	4/2/15	4/2/15 12:52	MFF
1,2-Dibromoethane (EDB)	ND	0.0010	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:52	MFF
Dibromomethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:52	MFF
1,2-Dichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:52	MFF
1,3-Dichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:52	MFF
1,4-Dichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:52	MFF
trans-1,4-Dichloro-2-butene	ND	0.0041	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:52	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.020	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:52	MFF
1,1-Dichloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:52	MFF
1,2-Dichloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:52	MFF
1,1-Dichloroethylene	ND	0.0041	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:52	MFF
cis-1,2-Dichloroethylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:52	MFF
trans-1,2-Dichloroethylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:52	MFF
1,2-Dichloropropane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:52	MFF
1,3-Dichloropropane	ND	0.0010	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:52	MFF
2,2-Dichloropropane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:52	MFF
1,1-Dichloropropene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:52	MFF
cis-1,3-Dichloropropene	ND	0.0010	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:52	MFF
trans-1,3-Dichloropropene	ND	0.0010	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:52	MFF
Diethyl Ether	ND	0.020	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:52	MFF

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Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description:

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: SB-07-4.5-5.0'

Sampled: 3/25/2015 12:30

Sample ID: 15C1102-13

Sample Matrix: Soil

Sample Flags: PR-03, PR-15

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.0010	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:52	MFF
1,4-Dioxane	ND	0.10	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:52	MFF
Ethylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:52	MFF
Hexachlorobutadiene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:52	MFF
Isopropylbenzene (Cumene)	ND	0.0020	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:52	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0020	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:52	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0041	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:52	MFF
Methylene Chloride	ND	0.020	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:52	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.020	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:52	MFF
Naphthalene	ND	0.0041	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:52	MFF
n-Propylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:52	MFF
Styrene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:52	MFF
1,1,1,2-Tetrachloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:52	MFF
Tetrachloroethylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:52	MFF
Tetrahydrofuran	ND	0.010	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:52	MFF
Toluene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:52	MFF
1,2,3-Trichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:52	MFF
1,2,4-Trichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:52	MFF
1,3,5-Trichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:52	MFF
1,1,1-Trichloroethane	ND	0.0041	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:52	MFF
1,1,2-Trichloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:52	MFF
Trichloroethylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:52	MFF
Trichlorofluoromethane (Freon 11)	ND	0.010	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:52	MFF
1,2,3-Trichloropropane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:52	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.010	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:52	MFF
1,2,4-Trimethylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:52	MFF
1,3,5-Trimethylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:52	MFF
Vinyl Chloride	ND	0.010	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:52	MFF
m+p Xylene	ND	0.0041	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:52	MFF
o-Xylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 12:52	MFF
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
1,2-Dichloroethane-d4	114	70-130							
Toluene-d8	97.6	70-130							
4-Bromofluorobenzene	96.5	70-130							

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description:

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: SB-07-4.5-5.0'

Sampled: 3/25/2015 12:30

Sample ID: 15C1102-13

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	91.0		% Wt	1		SM 2540G	4/1/15	4/1/15 23:12	JJL

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Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description:

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: SB-07-COMP

Sampled: 3/25/2015 12:35

Sample ID: 15C1102-14

Sample Matrix: Soil

Sample Flags: RL-11

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	2.7	0.76	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 16:34	CMR
Acenaphthylene	ND	0.76	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 16:34	CMR
Acetophenone	ND	1.5	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 16:34	CMR
Aniline	ND	1.5	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 16:34	CMR
Anthracene	3.8	0.76	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 16:34	CMR
Benzidine	ND	2.9	mg/Kg dry	2	V-04, V-05	SW-846 8270D	4/1/15	4/1/15 16:34	CMR
Benzo(a)anthracene	5.3	0.76	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 16:34	CMR
Benzo(a)pyrene	4.8	0.76	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 16:34	CMR
Benzo(b)fluoranthene	5.9	0.76	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 16:34	CMR
Benzo(g,h,i)perylene	2.5	0.76	mg/Kg dry	2	V-06	SW-846 8270D	4/1/15	4/1/15 16:34	CMR
Benzo(k)fluoranthene	2.2	0.76	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 16:34	CMR
Benzoic Acid	ND	4.5	mg/Kg dry	2	R-05	SW-846 8270D	4/1/15	4/1/15 16:34	CMR
Bis(2-chloroethoxy)methane	ND	1.5	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 16:34	CMR
Bis(2-chloroethyl)ether	ND	1.5	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 16:34	CMR
Bis(2-chloroisopropyl)ether	ND	1.5	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 16:34	CMR
Bis(2-Ethylhexyl)phthalate	ND	1.5	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 16:34	CMR
4-Bromophenylphenylether	ND	1.5	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 16:34	CMR
Butylbenzylphthalate	ND	1.5	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 16:34	CMR
Carbazole	1.7	0.76	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 16:34	CMR
4-Chloroaniline	ND	2.9	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 16:34	CMR
4-Chloro-3-methylphenol	ND	2.9	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 16:34	CMR
2-Chloronaphthalene	ND	1.5	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 16:34	CMR
2-Chlorophenol	ND	1.5	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 16:34	CMR
4-Chlorophenylphenylether	ND	1.5	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 16:34	CMR
Chrysene	5.2	0.76	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 16:34	CMR
Dibenz(a,h)anthracene	ND	0.76	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 16:34	CMR
Dibenzofuran	1.6	1.5	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 16:34	CMR
Di-n-butylphthalate	ND	1.5	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 16:34	CMR
1,2-Dichlorobenzene	ND	1.5	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 16:34	CMR
1,3-Dichlorobenzene	ND	1.5	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 16:34	CMR
1,4-Dichlorobenzene	ND	1.5	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 16:34	CMR
3,3-Dichlorobenzidine	ND	0.76	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 16:34	CMR
2,4-Dichlorophenol	ND	1.5	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 16:34	CMR
Diethylphthalate	ND	1.5	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 16:34	CMR
2,4-Dimethylphenol	ND	1.5	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 16:34	CMR
Dimethylphthalate	ND	1.5	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 16:34	CMR
4,6-Dinitro-2-methylphenol	ND	1.5	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 16:34	CMR
2,4-Dinitrophenol	ND	2.9	mg/Kg dry	2	L-04, R-05	SW-846 8270D	4/1/15	4/1/15 16:34	CMR
2,4-Dinitrotoluene	ND	1.5	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 16:34	CMR
2,6-Dinitrotoluene	ND	1.5	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 16:34	CMR
Di-n-octylphthalate	ND	1.5	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 16:34	CMR
1,2-Diphenylhydrazine (as Azobenzene)	ND	1.5	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 16:34	CMR
Fluoranthene	15	0.76	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 16:34	CMR
Fluorene	2.4	0.76	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 16:34	CMR

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Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description:

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: SB-07-COMP

Sampled: 3/25/2015 12:35

Sample ID: 15C1102-14

Sample Matrix: Soil

Sample Flags: RL-11

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	1.5	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 16:34	CMR
Hexachlorobutadiene	ND	1.5	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 16:34	CMR
Hexachlorocyclopentadiene	ND	1.5	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 16:34	CMR
Hexachloroethane	ND	1.5	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 16:34	CMR
Indeno(1,2,3-cd)pyrene	2.5	0.76	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 16:34	CMR
Isophorone	ND	1.5	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 16:34	CMR
1-Methylnaphthalene	3.6	0.76	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 16:34	CMR
2-Methylnaphthalene	3.3	0.76	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 16:34	CMR
2-Methylphenol	ND	1.5	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 16:34	CMR
3/4-Methylphenol	ND	1.5	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 16:34	CMR
Naphthalene	ND	0.76	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 16:34	CMR
2-Nitroaniline	ND	1.5	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 16:34	CMR
3-Nitroaniline	ND	1.5	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 16:34	CMR
4-Nitroaniline	ND	1.5	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 16:34	CMR
Nitrobenzene	ND	1.5	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 16:34	CMR
2-Nitrophenol	ND	1.5	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 16:34	CMR
4-Nitrophenol	ND	2.9	mg/Kg dry	2	V-20	SW-846 8270D	4/1/15	4/1/15 16:34	CMR
N-Nitrosodimethylamine	ND	1.5	mg/Kg dry	2	V-20	SW-846 8270D	4/1/15	4/1/15 16:34	CMR
N-Nitrosodiphenylamine	ND	1.5	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 16:34	CMR
N-Nitrosodi-n-propylamine	ND	1.5	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 16:34	CMR
Pentachloronitrobenzene	ND	1.5	mg/Kg dry	2	V-16	SW-846 8270D	4/1/15	4/1/15 16:34	CMR
Pentachlorophenol	ND	1.5	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 16:34	CMR
Phenanthrene	20	1.9	mg/Kg dry	5		SW-846 8270D	4/1/15	4/2/15 11:43	CMR
Phenol	ND	1.5	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 16:34	CMR
Pyrene	14	0.76	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 16:34	CMR
Pyridine	ND	1.5	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 16:34	CMR
1,2,4,5-Tetrachlorobenzene	ND	1.5	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 16:34	CMR
1,2,4-Trichlorobenzene	ND	1.5	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 16:34	CMR
2,4,5-Trichlorophenol	ND	1.5	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 16:34	CMR
2,4,6-Trichlorophenol	ND	1.5	mg/Kg dry	2		SW-846 8270D	4/1/15	4/1/15 16:34	CMR
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
2-Fluorophenol	74.7	30-130						4/1/15 16:34	
Phenol-d6	77.7	30-130						4/1/15 16:34	
Nitrobenzene-d5	78.4	30-130						4/1/15 16:34	
2-Fluorobiphenyl	77.2	30-130						4/1/15 16:34	
2,4,6-Tribromophenol	71.7	30-130						4/1/15 16:34	
p-Terphenyl-d14	83.2	30-130						4/1/15 16:34	

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Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description:

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: SB-07-COMP

Sampled: 3/25/2015 12:35

Sample ID: 15C1102-14

Sample Matrix: Soil

Sample Flags: RL-12

Organochloride Pesticides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Alachlor [1]	ND	0.22	mg/Kg dry	10		SW-846 8081B	3/31/15	4/1/15 7:20	PJG
Aldrin [1]	ND	0.056	mg/Kg dry	10		SW-846 8081B	3/31/15	4/1/15 7:20	PJG
alpha-BHC [1]	ND	0.056	mg/Kg dry	10		SW-846 8081B	3/31/15	4/1/15 7:20	PJG
beta-BHC [1]	ND	0.056	mg/Kg dry	10		SW-846 8081B	3/31/15	4/1/15 7:20	PJG
delta-BHC [1]	ND	0.056	mg/Kg dry	10		SW-846 8081B	3/31/15	4/1/15 7:20	PJG
gamma-BHC (Lindane) [1]	ND	0.022	mg/Kg dry	10		SW-846 8081B	3/31/15	4/1/15 7:20	PJG
Chlordane [1]	ND	0.22	mg/Kg dry	10		SW-846 8081B	3/31/15	4/1/15 7:20	PJG
4,4'-DDD [1]	ND	0.045	mg/Kg dry	10		SW-846 8081B	3/31/15	4/1/15 7:20	PJG
4,4'-DDE [1]	ND	0.045	mg/Kg dry	10		SW-846 8081B	3/31/15	4/1/15 7:20	PJG
4,4'-DDT [1]	ND	0.045	mg/Kg dry	10		SW-846 8081B	3/31/15	4/1/15 7:20	PJG
Dieldrin [1]	ND	0.045	mg/Kg dry	10		SW-846 8081B	3/31/15	4/1/15 7:20	PJG
Endosulfan I [1]	ND	0.056	mg/Kg dry	10		SW-846 8081B	3/31/15	4/1/15 7:20	PJG
Endosulfan II [1]	ND	0.089	mg/Kg dry	10		SW-846 8081B	3/31/15	4/1/15 7:20	PJG
Endosulfan sulfate [1]	ND	0.089	mg/Kg dry	10		SW-846 8081B	3/31/15	4/1/15 7:20	PJG
Endrin [1]	ND	0.089	mg/Kg dry	10		SW-846 8081B	3/31/15	4/1/15 7:20	PJG
Endrin aldehyde [1]	ND	0.089	mg/Kg dry	10		SW-846 8081B	3/31/15	4/1/15 7:20	PJG
Endrin ketone [1]	ND	0.089	mg/Kg dry	10		SW-846 8081B	3/31/15	4/1/15 7:20	PJG
Heptachlor [1]	ND	0.056	mg/Kg dry	10		SW-846 8081B	3/31/15	4/1/15 7:20	PJG
Heptachlor epoxide [1]	ND	0.056	mg/Kg dry	10		SW-846 8081B	3/31/15	4/1/15 7:20	PJG
Hexachlorobenzene [1]	ND	0.067	mg/Kg dry	10		SW-846 8081B	3/31/15	4/1/15 7:20	PJG
Methoxychlor [1]	ND	0.56	mg/Kg dry	10		SW-846 8081B	3/31/15	4/1/15 7:20	PJG
Toxaphene [1]	ND	1.1	mg/Kg dry	10		SW-846 8081B	3/31/15	4/1/15 7:20	PJG
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
Decachlorobiphenyl [1]	65.7	30-150						4/1/15 7:20	
Decachlorobiphenyl [2]	72.1	30-150						4/1/15 7:20	
Tetrachloro-m-xylene [1]	69.7	30-150						4/1/15 7:20	
Tetrachloro-m-xylene [2]	67.3	30-150						4/1/15 7:20	

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Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description:

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: SB-07-COMP

Sampled: 3/25/2015 12:35

Sample ID: 15C1102-14

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	3/31/15	3/31/15 20:49	JMB
Aroclor-1221 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	3/31/15	3/31/15 20:49	JMB
Aroclor-1232 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	3/31/15	3/31/15 20:49	JMB
Aroclor-1242 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	3/31/15	3/31/15 20:49	JMB
Aroclor-1248 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	3/31/15	3/31/15 20:49	JMB
Aroclor-1254 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	3/31/15	3/31/15 20:49	JMB
Aroclor-1260 [2]	0.15	0.11	mg/Kg dry	5		SW-846 8082A	3/31/15	3/31/15 20:49	JMB
Aroclor-1262 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	3/31/15	3/31/15 20:49	JMB
Aroclor-1268 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	3/31/15	3/31/15 20:49	JMB
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
Decachlorobiphenyl [1]	80.3	30-150							
Decachlorobiphenyl [2]	86.3	30-150							
Tetrachloro-m-xylene [1]	93.8	30-150							
Tetrachloro-m-xylene [2]	91.1	30-150							

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Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description:

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: SB-07-COMP

Sampled: 3/25/2015 12:35

Sample ID: 15C1102-14

Sample Matrix: Soil

Herbicides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2,4-D [1]	ND	27	µg/kg dry	1		SW-846 8151A	3/27/15	4/1/15 7:10	PJG
2,4-DB [1]	ND	27	µg/kg dry	1		SW-846 8151A	3/27/15	4/1/15 7:10	PJG
2,4,5-TP (Silvex) [1]	ND	2.7	µg/kg dry	1		SW-846 8151A	3/27/15	4/1/15 7:10	PJG
2,4,5-T [1]	ND	2.7	µg/kg dry	1		SW-846 8151A	3/27/15	4/1/15 7:10	PJG
Dalapon [2]	ND	69	µg/kg dry	1		SW-846 8151A	3/27/15	4/1/15 7:10	PJG
Dicamba [1]	ND	2.7	µg/kg dry	1		SW-846 8151A	3/27/15	4/1/15 7:10	PJG
Dichloroprop [1]	ND	27	µg/kg dry	1		SW-846 8151A	3/27/15	4/1/15 7:10	PJG
Dinoseb [1]	ND	14	µg/kg dry	1		SW-846 8151A	3/27/15	4/1/15 7:10	PJG
MCPA [1]	ND	2700	µg/kg dry	1		SW-846 8151A	3/27/15	4/1/15 7:10	PJG
MCPP [1]	ND	2700	µg/kg dry	1		SW-846 8151A	3/27/15	4/1/15 7:10	PJG
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
2,4-Dichlorophenylacetic acid [1]	73.6	30-150						4/1/15 7:10	
2,4-Dichlorophenylacetic acid [2]	76.2	30-150						4/1/15 7:10	

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Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description:

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: SB-07-COMP

Sampled: 3/25/2015 12:35

Sample ID: 15C1102-14

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aluminum	5900	2.6	mg/Kg dry	1		SW-846 6010C	3/30/15	3/31/15 22:48	MJH
Antimony	ND	2.6	mg/Kg dry	1		SW-846 6010C	3/30/15	3/31/15 22:48	MJH
Arsenic	5.1	2.6	mg/Kg dry	1		SW-846 6010C	3/30/15	3/31/15 22:48	MJH
Barium	63	2.6	mg/Kg dry	1		SW-846 6010C	3/30/15	3/31/15 22:48	MJH
Beryllium	0.98	0.26	mg/Kg dry	1		SW-846 6010C	3/30/15	3/31/15 22:48	MJH
Cadmium	1.7	0.26	mg/Kg dry	1		SW-846 6010C	3/30/15	3/31/15 22:48	MJH
Calcium	12000	7.8	mg/Kg dry	1		SW-846 6010C	3/30/15	3/31/15 22:48	MJH
Chromium	13	0.52	mg/Kg dry	1		SW-846 6010C	3/30/15	3/31/15 22:48	MJH
Cobalt	6.3	2.6	mg/Kg dry	1		SW-846 6010C	3/30/15	3/31/15 22:48	MJH
Copper	79	0.52	mg/Kg dry	1	B, B-07	SW-846 6010C	3/30/15	3/31/15 22:48	MJH
Iron	20000	26	mg/Kg dry	10		SW-846 6010C	3/30/15	4/1/15 10:42	MJH
Lead	110	0.78	mg/Kg dry	1		SW-846 6010C	3/30/15	3/31/15 22:48	MJH
Magnesium	4600	7.8	mg/Kg dry	1		SW-846 6010C	3/30/15	3/31/15 22:48	MJH
Manganese	200	0.52	mg/Kg dry	1		SW-846 6010C	3/30/15	3/31/15 22:48	MJH
Mercury	0.12	0.027	mg/Kg dry	1		SW-846 7471B	3/31/15	4/1/15 10:07	SCB
Nickel	13	0.52	mg/Kg dry	1		SW-846 6010C	3/30/15	3/31/15 22:48	MJH
Potassium	720	100	mg/Kg dry	1		SW-846 6010C	3/30/15	3/31/15 22:48	MJH
Selenium	ND	5.2	mg/Kg dry	1		SW-846 6010C	3/30/15	3/31/15 22:48	MJH
Silver	ND	0.52	mg/Kg dry	1		SW-846 6010C	3/30/15	3/31/15 22:48	MJH
Sodium	120	100	mg/Kg dry	1		SW-846 6010C	3/30/15	3/31/15 22:48	MJH
Thallium	ND	2.6	mg/Kg dry	1		SW-846 6010C	3/30/15	3/31/15 22:48	MJH
Vanadium	32	1.0	mg/Kg dry	1		SW-846 6010C	3/30/15	3/31/15 22:48	MJH
Zinc	160	1.0	mg/Kg dry	1		SW-846 6010C	3/30/15	3/31/15 22:48	MJH

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Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description:

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: SB-07-COMP

Sampled: 3/25/2015 12:35

Sample ID: 15C1102-14

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	89.6		% Wt	1		SM 2540G	4/1/15	4/1/15 22:54	JJL

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Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description:

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: SED-01 (0-6")

Sampled: 3/24/2015 13:00

Sample ID: 15C1102-15

Sample Matrix: Soil

Sample Flags: PR-03, PR-15

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.13	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:26	MFF
Acrylonitrile	ND	0.0079	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:26	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.0013	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:26	MFF
Benzene	ND	0.0026	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:26	MFF
Bromobenzene	ND	0.0026	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:26	MFF
Bromochloromethane	ND	0.0026	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:26	MFF
Bromodichloromethane	ND	0.0026	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:26	MFF
Bromoform	ND	0.0026	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:26	MFF
Bromomethane	ND	0.013	mg/Kg dry	1	R-05	SW-846 8260C	4/2/15	4/2/15 13:26	MFF
2-Butanone (MEK)	ND	0.053	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:26	MFF
tert-Butyl Alcohol (TBA)	ND	0.053	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:26	MFF
n-Butylbenzene	ND	0.0026	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:26	MFF
sec-Butylbenzene	ND	0.0026	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:26	MFF
tert-Butylbenzene	ND	0.0026	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:26	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.0013	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:26	MFF
Carbon Disulfide	ND	0.026	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:26	MFF
Carbon Tetrachloride	ND	0.0026	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:26	MFF
Chlorobenzene	ND	0.0026	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:26	MFF
Chlorodibromomethane	ND	0.0013	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:26	MFF
Chloroethane	ND	0.026	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:26	MFF
Chloroform	ND	0.0053	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:26	MFF
Chloromethane	ND	0.013	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:26	MFF
2-Chlorotoluene	ND	0.0026	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:26	MFF
4-Chlorotoluene	ND	0.0026	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:26	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0026	mg/Kg dry	1	V-05	SW-846 8260C	4/2/15	4/2/15 13:26	MFF
1,2-Dibromoethane (EDB)	ND	0.0013	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:26	MFF
Dibromomethane	ND	0.0026	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:26	MFF
1,2-Dichlorobenzene	ND	0.0026	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:26	MFF
1,3-Dichlorobenzene	ND	0.0026	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:26	MFF
1,4-Dichlorobenzene	ND	0.0026	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:26	MFF
trans-1,4-Dichloro-2-butene	ND	0.0053	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:26	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.026	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:26	MFF
1,1-Dichloroethane	ND	0.0026	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:26	MFF
1,2-Dichloroethane	ND	0.0026	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:26	MFF
1,1-Dichloroethylene	ND	0.0053	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:26	MFF
cis-1,2-Dichloroethylene	ND	0.0026	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:26	MFF
trans-1,2-Dichloroethylene	ND	0.0026	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:26	MFF
1,2-Dichloropropane	ND	0.0026	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:26	MFF
1,3-Dichloropropane	ND	0.0013	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:26	MFF
2,2-Dichloropropane	ND	0.0026	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:26	MFF
1,1-Dichloropropene	ND	0.0026	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:26	MFF
cis-1,3-Dichloropropene	ND	0.0013	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:26	MFF
trans-1,3-Dichloropropene	ND	0.0013	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:26	MFF
Diethyl Ether	ND	0.026	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:26	MFF

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Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description:

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: SED-01 (0-6")

Sampled: 3/24/2015 13:00

Sample ID: 15C1102-15

Sample Matrix: Soil

Sample Flags: PR-03, PR-15

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.0013	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:26	MFF
1,4-Dioxane	ND	0.13	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:26	MFF
Ethylbenzene	ND	0.0026	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:26	MFF
Hexachlorobutadiene	ND	0.0026	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:26	MFF
Isopropylbenzene (Cumene)	ND	0.0026	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:26	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0026	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:26	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0053	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:26	MFF
Methylene Chloride	ND	0.026	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:26	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.026	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:26	MFF
Naphthalene	ND	0.0053	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:26	MFF
n-Propylbenzene	ND	0.0026	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:26	MFF
Styrene	ND	0.0026	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:26	MFF
1,1,1,2-Tetrachloroethane	ND	0.0026	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:26	MFF
Tetrachloroethylene	ND	0.0026	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:26	MFF
Tetrahydrofuran	ND	0.013	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:26	MFF
Toluene	ND	0.0026	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:26	MFF
1,2,3-Trichlorobenzene	ND	0.0026	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:26	MFF
1,2,4-Trichlorobenzene	ND	0.0026	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:26	MFF
1,3,5-Trichlorobenzene	ND	0.0026	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:26	MFF
1,1,1-Trichloroethane	ND	0.0053	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:26	MFF
1,1,2-Trichloroethane	ND	0.0026	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:26	MFF
Trichloroethylene	ND	0.0026	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:26	MFF
Trichlorofluoromethane (Freon 11)	ND	0.013	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:26	MFF
1,2,3-Trichloropropane	ND	0.0026	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:26	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.013	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:26	MFF
1,2,4-Trimethylbenzene	ND	0.0026	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:26	MFF
1,3,5-Trimethylbenzene	ND	0.0026	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:26	MFF
Vinyl Chloride	ND	0.013	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:26	MFF
m+p Xylene	ND	0.0053	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:26	MFF
o-Xylene	ND	0.0026	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:26	MFF
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
1,2-Dichloroethane-d4	113	70-130							
Toluene-d8	99.0	70-130							
4-Bromofluorobenzene	98.3	70-130							

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Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description:

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: SED-01 (0-6")

Sampled: 3/24/2015 13:00

Sample ID: 15C1102-15

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	0.33	0.24	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:57	CMR
Acenaphthylene	ND	0.24	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:57	CMR
Acetophenone	ND	0.49	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:57	CMR
Aniline	ND	0.49	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:57	CMR
Anthracene	0.83	0.24	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:57	CMR
Benzidine	ND	0.94	mg/Kg dry	1	V-04, V-05	SW-846 8270D	4/1/15	4/1/15 16:57	CMR
Benzo(a)anthracene	2.2	0.24	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:57	CMR
Benzo(a)pyrene	1.9	0.24	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:57	CMR
Benzo(b)fluoranthene	2.1	0.24	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:57	CMR
Benzo(g,h,i)perylene	0.99	0.24	mg/Kg dry	1	V-06	SW-846 8270D	4/1/15	4/1/15 16:57	CMR
Benzo(k)fluoranthene	0.78	0.24	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:57	CMR
Benzoic Acid	ND	1.4	mg/Kg dry	1	R-05	SW-846 8270D	4/1/15	4/1/15 16:57	CMR
Bis(2-chloroethoxy)methane	ND	0.49	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:57	CMR
Bis(2-chloroethyl)ether	ND	0.49	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:57	CMR
Bis(2-chloroisopropyl)ether	ND	0.49	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:57	CMR
Bis(2-Ethylhexyl)phthalate	ND	0.49	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:57	CMR
4-Bromophenylphenylether	ND	0.49	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:57	CMR
Butylbenzylphthalate	ND	0.49	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:57	CMR
Carbazole	ND	0.24	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:57	CMR
4-Chloroaniline	ND	0.94	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:57	CMR
4-Chloro-3-methylphenol	ND	0.94	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:57	CMR
2-Chloronaphthalene	ND	0.49	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:57	CMR
2-Chlorophenol	ND	0.49	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:57	CMR
4-Chlorophenylphenylether	ND	0.49	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:57	CMR
Chrysene	2.3	0.24	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:57	CMR
Dibenz(a,h)anthracene	0.24	0.24	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:57	CMR
Dibenzofuran	ND	0.49	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:57	CMR
Di-n-butylphthalate	ND	0.49	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:57	CMR
1,2-Dichlorobenzene	ND	0.49	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:57	CMR
1,3-Dichlorobenzene	ND	0.49	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:57	CMR
1,4-Dichlorobenzene	ND	0.49	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:57	CMR
3,3-Dichlorobenzidine	ND	0.24	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:57	CMR
2,4-Dichlorophenol	ND	0.49	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:57	CMR
Diethylphthalate	ND	0.49	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:57	CMR
2,4-Dimethylphenol	ND	0.49	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:57	CMR
Dimethylphthalate	ND	0.49	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:57	CMR
4,6-Dinitro-2-methylphenol	ND	0.49	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:57	CMR
2,4-Dinitrophenol	ND	0.94	mg/Kg dry	1	L-04, R-05	SW-846 8270D	4/1/15	4/1/15 16:57	CMR
2,4-Dinitrotoluene	ND	0.49	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:57	CMR
2,6-Dinitrotoluene	ND	0.49	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:57	CMR
Di-n-octylphthalate	ND	0.49	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:57	CMR
1,2-Diphenylhydrazine (as Azobenzene)	ND	0.49	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:57	CMR
Fluoranthene	4.7	0.24	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:57	CMR
Fluorene	0.27	0.24	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:57	CMR

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Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description:

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: SED-01 (0-6")

Sampled: 3/24/2015 13:00

Sample ID: 15C1102-15

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	0.49	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:57	CMR
Hexachlorobutadiene	ND	0.49	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:57	CMR
Hexachlorocyclopentadiene	ND	0.49	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:57	CMR
Hexachloroethane	ND	0.49	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:57	CMR
Indeno(1,2,3-cd)pyrene	0.88	0.24	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:57	CMR
Isophorone	ND	0.49	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:57	CMR
1-Methylnaphthalene	ND	0.24	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:57	CMR
2-Methylnaphthalene	ND	0.24	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:57	CMR
2-Methylphenol	ND	0.49	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:57	CMR
3/4-Methylphenol	ND	0.49	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:57	CMR
Naphthalene	ND	0.24	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:57	CMR
2-Nitroaniline	ND	0.49	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:57	CMR
3-Nitroaniline	ND	0.49	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:57	CMR
4-Nitroaniline	ND	0.49	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:57	CMR
Nitrobenzene	ND	0.49	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:57	CMR
2-Nitrophenol	ND	0.49	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:57	CMR
4-Nitrophenol	ND	0.94	mg/Kg dry	1	V-20	SW-846 8270D	4/1/15	4/1/15 16:57	CMR
N-Nitrosodimethylamine	ND	0.49	mg/Kg dry	1	V-20	SW-846 8270D	4/1/15	4/1/15 16:57	CMR
N-Nitrosodiphenylamine	ND	0.49	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:57	CMR
N-Nitrosodi-n-propylamine	ND	0.49	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:57	CMR
Pentachloronitrobenzene	ND	0.49	mg/Kg dry	1	V-16	SW-846 8270D	4/1/15	4/1/15 16:57	CMR
Pentachlorophenol	ND	0.49	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:57	CMR
Phenanthrene	4.7	0.24	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:57	CMR
Phenol	ND	0.49	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:57	CMR
Pyrene	5.4	0.49	mg/Kg dry	2		SW-846 8270D	4/1/15	4/2/15 12:06	CMR
Pyridine	ND	0.49	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:57	CMR
1,2,4,5-Tetrachlorobenzene	ND	0.49	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:57	CMR
1,2,4-Trichlorobenzene	ND	0.49	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:57	CMR
2,4,5-Trichlorophenol	ND	0.49	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:57	CMR
2,4,6-Trichlorophenol	ND	0.49	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 16:57	CMR
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
2-Fluorophenol	102	30-130							
Phenol-d6	102	30-130							
Nitrobenzene-d5	106	30-130							
2-Fluorobiphenyl	99.4	30-130							
2,4,6-Tribromophenol	111	30-130							
p-Terphenyl-d14	98.0	30-130							

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Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description:

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: SED-01 (0-6")

Sampled: 3/24/2015 13:00

Sample ID: 15C1102-15

Sample Matrix: Soil

Organochloride Pesticides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Alachlor [1]	ND	0.028	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 20:00	PJG
Aldrin [1]	ND	0.0071	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 20:00	PJG
alpha-BHC [1]	ND	0.0071	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 20:00	PJG
beta-BHC [1]	ND	0.0071	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 20:00	PJG
delta-BHC [1]	ND	0.0071	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 20:00	PJG
gamma-BHC (Lindane) [1]	ND	0.0028	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 20:00	PJG
Chlordane [2]	0.048	0.028	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 20:00	PJG
4,4'-DDD [1]	ND	0.0056	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 20:00	PJG
4,4'-DDE [1]	ND	0.0056	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 20:00	PJG
4,4'-DDT [1]	0.0077	0.0056	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 20:00	PJG
Dieldrin [1]	ND	0.0056	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 20:00	PJG
Endosulfan I [1]	ND	0.0071	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 20:00	PJG
Endosulfan II [1]	ND	0.011	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 20:00	PJG
Endosulfan sulfate [1]	ND	0.011	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 20:00	PJG
Endrin [1]	ND	0.011	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 20:00	PJG
Endrin aldehyde [1]	ND	0.011	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 6:34	PJG
Endrin ketone [1]	ND	0.011	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 20:00	PJG
Heptachlor [1]	ND	0.0071	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 20:00	PJG
Heptachlor epoxide [1]	ND	0.0071	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 20:00	PJG
Hexachlorobenzene [1]	ND	0.0085	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 20:00	PJG
Methoxychlor [1]	ND	0.071	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 20:00	PJG
Toxaphene [1]	ND	0.14	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 20:00	PJG
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
Decachlorobiphenyl [1]	78.4	30-150						4/1/15 20:00	
Decachlorobiphenyl [2]	92.2	30-150						4/1/15 20:00	
Tetrachloro-m-xylene [1]	74.6	30-150						4/1/15 20:00	
Tetrachloro-m-xylene [2]	72.1	30-150						4/1/15 20:00	

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Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description:

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: SED-01 (0-6")

Sampled: 3/24/2015 13:00

Sample ID: 15C1102-15

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.14	mg/Kg dry	5		SW-846 8082A	3/31/15	3/31/15 21:01	JMB
Aroclor-1221 [1]	ND	0.14	mg/Kg dry	5		SW-846 8082A	3/31/15	3/31/15 21:01	JMB
Aroclor-1232 [1]	ND	0.14	mg/Kg dry	5		SW-846 8082A	3/31/15	3/31/15 21:01	JMB
Aroclor-1242 [1]	ND	0.14	mg/Kg dry	5		SW-846 8082A	3/31/15	3/31/15 21:01	JMB
Aroclor-1248 [1]	ND	0.14	mg/Kg dry	5		SW-846 8082A	3/31/15	3/31/15 21:01	JMB
Aroclor-1254 [1]	ND	0.14	mg/Kg dry	5		SW-846 8082A	3/31/15	3/31/15 21:01	JMB
Aroclor-1260 [1]	ND	0.14	mg/Kg dry	5		SW-846 8082A	3/31/15	3/31/15 21:01	JMB
Aroclor-1262 [1]	ND	0.14	mg/Kg dry	5		SW-846 8082A	3/31/15	3/31/15 21:01	JMB
Aroclor-1268 [1]	ND	0.14	mg/Kg dry	5		SW-846 8082A	3/31/15	3/31/15 21:01	JMB
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]	68.0		30-150				3/31/15 21:01		
Decachlorobiphenyl [2]	76.3		30-150				3/31/15 21:01		
Tetrachloro-m-xylene [1]	79.1		30-150				3/31/15 21:01		
Tetrachloro-m-xylene [2]	78.4		30-150				3/31/15 21:01		

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Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description:

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: SED-01 (0-6")

Sampled: 3/24/2015 13:00

Sample ID: 15C1102-15

Sample Matrix: Soil

Herbicides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2,4-D [1]	ND	35	µg/kg dry	1		SW-846 8151A	3/27/15	4/1/15 7:49	PJG
2,4-DB [1]	ND	35	µg/kg dry	1		SW-846 8151A	3/27/15	4/1/15 7:49	PJG
2,4,5-TP (Silvex) [1]	ND	3.5	µg/kg dry	1		SW-846 8151A	3/27/15	4/1/15 7:49	PJG
2,4,5-T [1]	ND	3.5	µg/kg dry	1		SW-846 8151A	3/27/15	4/1/15 7:49	PJG
Dalapon [2]	ND	88	µg/kg dry	1		SW-846 8151A	3/27/15	4/1/15 7:49	PJG
Dicamba [1]	ND	3.5	µg/kg dry	1		SW-846 8151A	3/27/15	4/1/15 7:49	PJG
Dichloroprop [1]	ND	35	µg/kg dry	1		SW-846 8151A	3/27/15	4/1/15 7:49	PJG
Dinoseb [1]	ND	18	µg/kg dry	1		SW-846 8151A	3/27/15	4/1/15 7:49	PJG
MCPA [1]	3700	3500	µg/kg dry	1		SW-846 8151A	3/27/15	4/1/15 7:49	PJG
MCPP [1]	ND	3500	µg/kg dry	1		SW-846 8151A	3/27/15	4/1/15 7:49	PJG
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
2,4-Dichlorophenylacetic acid [1]	175	*	30-150		S-03		4/1/15	7:49	
2,4-Dichlorophenylacetic acid [2]	238	*	30-150		S-03		4/1/15	7:49	

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Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description:

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: SED-01 (0-6")

Sampled: 3/24/2015 13:00

Sample ID: 15C1102-15

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aluminum	3900	3.7	mg/Kg dry	1		SW-846 6010C	3/30/15	3/31/15 22:53	MJH
Antimony	ND	3.7	mg/Kg dry	1		SW-846 6010C	3/30/15	3/31/15 22:53	MJH
Arsenic	30	3.7	mg/Kg dry	1		SW-846 6010C	3/30/15	3/31/15 22:53	MJH
Barium	82	3.7	mg/Kg dry	1		SW-846 6010C	3/30/15	3/31/15 22:53	MJH
Beryllium	3.7	0.37	mg/Kg dry	1		SW-846 6010C	3/30/15	3/31/15 22:53	MJH
Cadmium	1.8	0.37	mg/Kg dry	1		SW-846 6010C	3/30/15	3/31/15 22:53	MJH
Calcium	2000	11	mg/Kg dry	1		SW-846 6010C	3/30/15	3/31/15 22:53	MJH
Chromium	22	0.75	mg/Kg dry	1		SW-846 6010C	3/30/15	3/31/15 22:53	MJH
Cobalt	15	3.7	mg/Kg dry	1		SW-846 6010C	3/30/15	3/31/15 22:53	MJH
Copper	4200	0.75	mg/Kg dry	1	B, B-07	SW-846 6010C	3/30/15	3/31/15 22:53	MJH
Iron	65000	37	mg/Kg dry	10		SW-846 6010C	3/30/15	4/1/15 10:47	MJH
Lead	550	1.1	mg/Kg dry	1		SW-846 6010C	3/30/15	3/31/15 22:53	MJH
Magnesium	1900	11	mg/Kg dry	1		SW-846 6010C	3/30/15	3/31/15 22:53	MJH
Manganese	1200	0.75	mg/Kg dry	1		SW-846 6010C	3/30/15	3/31/15 22:53	MJH
Mercury	0.40	0.034	mg/Kg dry	1		SW-846 7471B	3/31/15	4/1/15 10:12	SCB
Nickel	28	0.75	mg/Kg dry	1		SW-846 6010C	3/30/15	3/31/15 22:53	MJH
Potassium	840	150	mg/Kg dry	1		SW-846 6010C	3/30/15	3/31/15 22:53	MJH
Selenium	ND	7.5	mg/Kg dry	1		SW-846 6010C	3/30/15	3/31/15 22:53	MJH
Silver	ND	0.75	mg/Kg dry	1		SW-846 6010C	3/30/15	3/31/15 22:53	MJH
Sodium	3500	150	mg/Kg dry	1		SW-846 6010C	3/30/15	3/31/15 22:53	MJH
Thallium	ND	3.7	mg/Kg dry	1		SW-846 6010C	3/30/15	3/31/15 22:53	MJH
Vanadium	32	1.5	mg/Kg dry	1		SW-846 6010C	3/30/15	3/31/15 22:53	MJH
Zinc	550	1.5	mg/Kg dry	1		SW-846 6010C	3/30/15	3/31/15 22:53	MJH

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Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description:

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: SED-01 (0-6")

Sampled: 3/24/2015 13:00

Sample ID: 15C1102-15

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	70.1		% Wt	1		SM 2540G	4/1/15	4/1/15 22:54	JJL

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Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description:

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: SED-02 (0-6")

Sampled: 3/24/2015 13:20

Sample ID: 15C1102-16

Sample Matrix: Soil

Sample Flags: PR-03, PR-15

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.13	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:59	MFF
Acrylonitrile	ND	0.0080	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:59	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.0013	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:59	MFF
Benzene	ND	0.0027	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:59	MFF
Bromobenzene	ND	0.0027	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:59	MFF
Bromochloromethane	ND	0.0027	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:59	MFF
Bromodichloromethane	ND	0.0027	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:59	MFF
Bromoform	ND	0.0027	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:59	MFF
Bromomethane	ND	0.013	mg/Kg dry	1	R-05	SW-846 8260C	4/2/15	4/2/15 13:59	MFF
2-Butanone (MEK)	ND	0.053	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:59	MFF
tert-Butyl Alcohol (TBA)	ND	0.053	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:59	MFF
n-Butylbenzene	ND	0.0027	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:59	MFF
sec-Butylbenzene	ND	0.0027	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:59	MFF
tert-Butylbenzene	ND	0.0027	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:59	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.0013	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:59	MFF
Carbon Disulfide	ND	0.027	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:59	MFF
Carbon Tetrachloride	ND	0.0027	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:59	MFF
Chlorobenzene	ND	0.0027	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:59	MFF
Chlorodibromomethane	ND	0.0013	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:59	MFF
Chloroethane	ND	0.027	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:59	MFF
Chloroform	ND	0.0053	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:59	MFF
Chloromethane	ND	0.013	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:59	MFF
2-Chlorotoluene	ND	0.0027	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:59	MFF
4-Chlorotoluene	ND	0.0027	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:59	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0027	mg/Kg dry	1	V-05	SW-846 8260C	4/2/15	4/2/15 13:59	MFF
1,2-Dibromoethane (EDB)	ND	0.0013	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:59	MFF
Dibromomethane	ND	0.0027	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:59	MFF
1,2-Dichlorobenzene	ND	0.0027	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:59	MFF
1,3-Dichlorobenzene	ND	0.0027	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:59	MFF
1,4-Dichlorobenzene	ND	0.0027	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:59	MFF
trans-1,4-Dichloro-2-butene	ND	0.0053	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:59	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.027	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:59	MFF
1,1-Dichloroethane	ND	0.0027	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:59	MFF
1,2-Dichloroethane	ND	0.0027	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:59	MFF
1,1-Dichloroethylene	ND	0.0053	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:59	MFF
cis-1,2-Dichloroethylene	ND	0.0027	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:59	MFF
trans-1,2-Dichloroethylene	ND	0.0027	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:59	MFF
1,2-Dichloropropane	ND	0.0027	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:59	MFF
1,3-Dichloropropane	ND	0.0013	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:59	MFF
2,2-Dichloropropane	ND	0.0027	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:59	MFF
1,1-Dichloropropene	ND	0.0027	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:59	MFF
cis-1,3-Dichloropropene	ND	0.0013	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:59	MFF
trans-1,3-Dichloropropene	ND	0.0013	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:59	MFF
Diethyl Ether	ND	0.027	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:59	MFF

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Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description:

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: SED-02 (0-6")

Sampled: 3/24/2015 13:20

Sample ID: 15C1102-16

Sample Matrix: Soil

Sample Flags: PR-03, PR-15

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.0013	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:59	MFF
1,4-Dioxane	ND	0.13	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:59	MFF
Ethylbenzene	ND	0.0027	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:59	MFF
Hexachlorobutadiene	ND	0.0027	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:59	MFF
Isopropylbenzene (Cumene)	ND	0.0027	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:59	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0027	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:59	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0053	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:59	MFF
Methylene Chloride	ND	0.027	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:59	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.027	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:59	MFF
Naphthalene	ND	0.0053	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:59	MFF
n-Propylbenzene	ND	0.0027	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:59	MFF
Styrene	ND	0.0027	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:59	MFF
1,1,1,2-Tetrachloroethane	ND	0.0027	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:59	MFF
Tetrachloroethylene	0.0057	0.0027	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:59	MFF
Tetrahydrofuran	ND	0.013	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:59	MFF
Toluene	ND	0.0027	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:59	MFF
1,2,3-Trichlorobenzene	ND	0.0027	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:59	MFF
1,2,4-Trichlorobenzene	ND	0.0027	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:59	MFF
1,3,5-Trichlorobenzene	ND	0.0027	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:59	MFF
1,1,1-Trichloroethane	ND	0.0053	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:59	MFF
1,1,2-Trichloroethane	ND	0.0027	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:59	MFF
Trichloroethylene	0.0041	0.0027	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:59	MFF
Trichlorofluoromethane (Freon 11)	ND	0.013	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:59	MFF
1,2,3-Trichloropropane	ND	0.0027	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:59	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.013	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:59	MFF
1,2,4-Trimethylbenzene	ND	0.0027	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:59	MFF
1,3,5-Trimethylbenzene	ND	0.0027	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:59	MFF
Vinyl Chloride	ND	0.013	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:59	MFF
m+p Xylene	ND	0.0053	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:59	MFF
o-Xylene	ND	0.0027	mg/Kg dry	1		SW-846 8260C	4/2/15	4/2/15 13:59	MFF
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
1,2-Dichloroethane-d4	114	70-130							
Toluene-d8	98.8	70-130							
4-Bromofluorobenzene	97.0	70-130							

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Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description:

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: SED-02 (0-6")

Sampled: 3/24/2015 13:20

Sample ID: 15C1102-16

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.23	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 17:20	CMR
Acenaphthylene	ND	0.23	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 17:20	CMR
Acetophenone	ND	0.45	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 17:20	CMR
Aniline	ND	0.45	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 17:20	CMR
Anthracene	ND	0.23	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 17:20	CMR
Benzidine	ND	0.88	mg/Kg dry	1	V-04, V-05	SW-846 8270D	4/1/15	4/1/15 17:20	CMR
Benzo(a)anthracene	0.95	0.23	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 17:20	CMR
Benzo(a)pyrene	0.76	0.23	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 17:20	CMR
Benzo(b)fluoranthene	0.91	0.23	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 17:20	CMR
Benzo(g,h,i)perylene	0.51	0.23	mg/Kg dry	1	V-06	SW-846 8270D	4/1/15	4/1/15 17:20	CMR
Benzo(k)fluoranthene	0.31	0.23	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 17:20	CMR
Benzoic Acid	ND	1.3	mg/Kg dry	1	R-05	SW-846 8270D	4/1/15	4/1/15 17:20	CMR
Bis(2-chloroethoxy)methane	ND	0.45	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 17:20	CMR
Bis(2-chloroethyl)ether	ND	0.45	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 17:20	CMR
Bis(2-chloroisopropyl)ether	ND	0.45	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 17:20	CMR
Bis(2-Ethylhexyl)phthalate	ND	0.45	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 17:20	CMR
4-Bromophenylphenylether	ND	0.45	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 17:20	CMR
Butylbenzylphthalate	ND	0.45	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 17:20	CMR
Carbazole	ND	0.23	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 17:20	CMR
4-Chloroaniline	ND	0.88	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 17:20	CMR
4-Chloro-3-methylphenol	ND	0.88	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 17:20	CMR
2-Chloronaphthalene	ND	0.45	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 17:20	CMR
2-Chlorophenol	ND	0.45	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 17:20	CMR
4-Chlorophenylphenylether	ND	0.45	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 17:20	CMR
Chrysene	1.3	0.23	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 17:20	CMR
Dibenz(a,h)anthracene	ND	0.23	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 17:20	CMR
Dibenzofuran	ND	0.45	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 17:20	CMR
Di-n-butylphthalate	ND	0.45	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 17:20	CMR
1,2-Dichlorobenzene	ND	0.45	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 17:20	CMR
1,3-Dichlorobenzene	ND	0.45	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 17:20	CMR
1,4-Dichlorobenzene	ND	0.45	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 17:20	CMR
3,3-Dichlorobenzidine	ND	0.23	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 17:20	CMR
2,4-Dichlorophenol	ND	0.45	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 17:20	CMR
Diethylphthalate	ND	0.45	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 17:20	CMR
2,4-Dimethylphenol	ND	0.45	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 17:20	CMR
Dimethylphthalate	ND	0.45	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 17:20	CMR
4,6-Dinitro-2-methylphenol	ND	0.45	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 17:20	CMR
2,4-Dinitrophenol	ND	0.88	mg/Kg dry	1	L-04, R-05	SW-846 8270D	4/1/15	4/1/15 17:20	CMR
2,4-Dinitrotoluene	ND	0.45	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 17:20	CMR
2,6-Dinitrotoluene	ND	0.45	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 17:20	CMR
Di-n-octylphthalate	ND	0.45	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 17:20	CMR
1,2-Diphenylhydrazine (as Azobenzene)	ND	0.45	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 17:20	CMR
Fluoranthene	1.5	0.23	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 17:20	CMR
Fluorene	ND	0.23	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 17:20	CMR

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Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description:

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: SED-02 (0-6")

Sampled: 3/24/2015 13:20

Sample ID: 15C1102-16

Sample Matrix: Soil

Semivolatiles Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	0.45	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 17:20	CMR
Hexachlorobutadiene	ND	0.45	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 17:20	CMR
Hexachlorocyclopentadiene	ND	0.45	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 17:20	CMR
Hexachloroethane	ND	0.45	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 17:20	CMR
Indeno(1,2,3-cd)pyrene	0.42	0.23	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 17:20	CMR
Isophorone	ND	0.45	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 17:20	CMR
1-Methylnaphthalene	ND	0.23	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 17:20	CMR
2-Methylnaphthalene	ND	0.23	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 17:20	CMR
2-Methylphenol	ND	0.45	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 17:20	CMR
3/4-Methylphenol	ND	0.45	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 17:20	CMR
Naphthalene	ND	0.23	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 17:20	CMR
2-Nitroaniline	ND	0.45	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 17:20	CMR
3-Nitroaniline	ND	0.45	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 17:20	CMR
4-Nitroaniline	ND	0.45	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 17:20	CMR
Nitrobenzene	ND	0.45	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 17:20	CMR
2-Nitrophenol	ND	0.45	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 17:20	CMR
4-Nitrophenol	ND	0.88	mg/Kg dry	1	V-20	SW-846 8270D	4/1/15	4/1/15 17:20	CMR
N-Nitrosodimethylamine	ND	0.45	mg/Kg dry	1	V-20	SW-846 8270D	4/1/15	4/1/15 17:20	CMR
N-Nitrosodiphenylamine	ND	0.45	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 17:20	CMR
N-Nitrosodi-n-propylamine	ND	0.45	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 17:20	CMR
Pentachloronitrobenzene	ND	0.45	mg/Kg dry	1	V-16	SW-846 8270D	4/1/15	4/1/15 17:20	CMR
Pentachlorophenol	ND	0.45	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 17:20	CMR
Phenanthrene	2.1	0.23	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 17:20	CMR
Phenol	ND	0.45	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 17:20	CMR
Pyrene	2.3	0.23	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 17:20	CMR
Pyridine	ND	0.45	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 17:20	CMR
1,2,4,5-Tetrachlorobenzene	ND	0.45	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 17:20	CMR
1,2,4-Trichlorobenzene	ND	0.45	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 17:20	CMR
2,4,5-Trichlorophenol	ND	0.45	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 17:20	CMR
2,4,6-Trichlorophenol	ND	0.45	mg/Kg dry	1		SW-846 8270D	4/1/15	4/1/15 17:20	CMR
Surrogates	% Recovery	Recovery Limits			Flag/Qual				
2-Fluorophenol	92.1	30-130						4/1/15 17:20	
Phenol-d6	96.7	30-130						4/1/15 17:20	
Nitrobenzene-d5	101	30-130						4/1/15 17:20	
2-Fluorobiphenyl	102	30-130						4/1/15 17:20	
2,4,6-Tribromophenol	101	30-130						4/1/15 17:20	
p-Terphenyl-d14	98.3	30-130						4/1/15 17:20	

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Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description:

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: SED-02 (0-6")

Sampled: 3/24/2015 13:20

Sample ID: 15C1102-16

Sample Matrix: Soil

Organochloride Pesticides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Alachlor [1]	ND	0.027	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 20:23	PJG
Aldrin [1]	ND	0.0067	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 20:23	PJG
alpha-BHC [1]	ND	0.0067	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 20:23	PJG
beta-BHC [1]	ND	0.0067	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 20:23	PJG
delta-BHC [1]	ND	0.0067	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 20:23	PJG
gamma-BHC (Lindane) [1]	ND	0.0027	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 20:23	PJG
Chlordane [2]	0.051	0.027	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 20:23	PJG
4,4'-DDD [1]	ND	0.0053	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 20:23	PJG
4,4'-DDE [1]	0.0066	0.0053	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 20:23	PJG
4,4'-DDT [2]	0.014	0.0053	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 20:23	PJG
Dieldrin [1]	ND	0.0053	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 20:23	PJG
Endosulfan I [1]	ND	0.0067	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 20:23	PJG
Endosulfan II [1]	ND	0.011	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 20:23	PJG
Endosulfan sulfate [1]	ND	0.011	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 20:23	PJG
Endrin [1]	ND	0.011	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 20:23	PJG
Endrin aldehyde [1]	ND	0.011	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 6:57	PJG
Endrin ketone [1]	ND	0.011	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 20:23	PJG
Heptachlor [1]	ND	0.0067	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 20:23	PJG
Heptachlor epoxide [1]	ND	0.0067	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 20:23	PJG
Hexachlorobenzene [1]	ND	0.0080	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 20:23	PJG
Methoxychlor [1]	ND	0.067	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 20:23	PJG
Toxaphene [1]	ND	0.13	mg/Kg dry	1		SW-846 8081B	3/31/15	4/1/15 20:23	PJG
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
Decachlorobiphenyl [1]	107	30-150							
Decachlorobiphenyl [2]	119	30-150							
Tetrachloro-m-xylene [1]	90.1	30-150							
Tetrachloro-m-xylene [2]	87.3	30-150							

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Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description:

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: SED-02 (0-6")

Sampled: 3/24/2015 13:20

Sample ID: 15C1102-16

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.13	mg/Kg dry	5		SW-846 8082A	3/31/15	4/1/15 22:55	PJG
Aroclor-1221 [1]	ND	0.13	mg/Kg dry	5		SW-846 8082A	3/31/15	4/1/15 22:55	PJG
Aroclor-1232 [1]	ND	0.13	mg/Kg dry	5		SW-846 8082A	3/31/15	4/1/15 22:55	PJG
Aroclor-1242 [1]	ND	0.13	mg/Kg dry	5		SW-846 8082A	3/31/15	4/1/15 22:55	PJG
Aroclor-1248 [1]	ND	0.13	mg/Kg dry	5		SW-846 8082A	3/31/15	4/1/15 22:55	PJG
Aroclor-1254 [2]	0.17	0.13	mg/Kg dry	5	P-01	SW-846 8082A	3/31/15	4/1/15 22:55	PJG
Aroclor-1260 [1]	ND	0.13	mg/Kg dry	5		SW-846 8082A	3/31/15	4/1/15 22:55	PJG
Aroclor-1262 [1]	ND	0.13	mg/Kg dry	5		SW-846 8082A	3/31/15	4/1/15 22:55	PJG
Aroclor-1268 [1]	ND	0.13	mg/Kg dry	5		SW-846 8082A	3/31/15	4/1/15 22:55	PJG
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]	82.4		30-150				4/1/15 22:55		
Decachlorobiphenyl [2]	86.2		30-150				4/1/15 22:55		
Tetrachloro-m-xylene [1]	91.0		30-150				4/1/15 22:55		
Tetrachloro-m-xylene [2]	89.4		30-150				4/1/15 22:55		

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Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description:

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: SED-02 (0-6")

Sampled: 3/24/2015 13:20

Sample ID: 15C1102-16

Sample Matrix: Soil

Herbicides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2,4-D [1]	ND	33	µg/kg dry	1		SW-846 8151A	3/27/15	4/1/15 8:28	PJG
2,4-DB [1]	ND	33	µg/kg dry	1		SW-846 8151A	3/27/15	4/1/15 8:28	PJG
2,4,5-TP (Silvex) [1]	ND	3.3	µg/kg dry	1		SW-846 8151A	3/27/15	4/1/15 8:28	PJG
2,4,5-T [1]	ND	3.3	µg/kg dry	1		SW-846 8151A	3/27/15	4/1/15 8:28	PJG
Dalapon [2]	ND	82	µg/kg dry	1		SW-846 8151A	3/27/15	4/1/15 8:28	PJG
Dicamba [1]	ND	3.3	µg/kg dry	1		SW-846 8151A	3/27/15	4/1/15 8:28	PJG
Dichloroprop [1]	ND	33	µg/kg dry	1		SW-846 8151A	3/27/15	4/1/15 8:28	PJG
Dinoseb [1]	ND	16	µg/kg dry	1		SW-846 8151A	3/27/15	4/1/15 8:28	PJG
MCPA [2]	15000	3300	µg/kg dry	1		SW-846 8151A	3/27/15	4/1/15 8:28	PJG
MCPP [1]	ND	3300	µg/kg dry	1		SW-846 8151A	3/27/15	4/1/15 8:28	PJG
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
2,4-Dichlorophenylacetic acid [1]	183	*	30-150		S-03			4/1/15 8:28	
2,4-Dichlorophenylacetic acid [2]	238	*	30-150		S-03			4/1/15 8:28	

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Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description:

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: SED-02 (0-6")

Sampled: 3/24/2015 13:20

Sample ID: 15C1102-16

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aluminum	2100	3.2	mg/Kg dry	1		SW-846 6010C	3/30/15	3/31/15 22:59	MJH
Antimony	4.1	3.2	mg/Kg dry	1		SW-846 6010C	3/30/15	3/31/15 22:59	MJH
Arsenic	44	3.2	mg/Kg dry	1		SW-846 6010C	3/30/15	3/31/15 22:59	MJH
Barium	490	3.2	mg/Kg dry	1		SW-846 6010C	3/30/15	3/31/15 22:59	MJH
Beryllium	2.2	0.32	mg/Kg dry	1		SW-846 6010C	3/30/15	3/31/15 22:59	MJH
Cadmium	1.9	0.32	mg/Kg dry	1		SW-846 6010C	3/30/15	3/31/15 22:59	MJH
Calcium	1700	9.5	mg/Kg dry	1		SW-846 6010C	3/30/15	3/31/15 22:59	MJH
Chromium	41	0.63	mg/Kg dry	1		SW-846 6010C	3/30/15	3/31/15 22:59	MJH
Cobalt	11	3.2	mg/Kg dry	1		SW-846 6010C	3/30/15	3/31/15 22:59	MJH
Copper	1000	0.63	mg/Kg dry	1	B, B-07	SW-846 6010C	3/30/15	3/31/15 22:59	MJH
Iron	58000	32	mg/Kg dry	10		SW-846 6010C	3/30/15	4/1/15 10:53	MJH
Lead	980	0.95	mg/Kg dry	1		SW-846 6010C	3/30/15	3/31/15 22:59	MJH
Magnesium	1400	9.5	mg/Kg dry	1		SW-846 6010C	3/30/15	3/31/15 22:59	MJH
Manganese	790	0.63	mg/Kg dry	1		SW-846 6010C	3/30/15	3/31/15 22:59	MJH
Mercury	0.50	0.033	mg/Kg dry	1		SW-846 7471B	3/31/15	4/1/15 10:14	SCB
Nickel	15	0.63	mg/Kg dry	1		SW-846 6010C	3/30/15	3/31/15 22:59	MJH
Potassium	1300	130	mg/Kg dry	1		SW-846 6010C	3/30/15	3/31/15 22:59	MJH
Selenium	ND	6.3	mg/Kg dry	1		SW-846 6010C	3/30/15	3/31/15 22:59	MJH
Silver	ND	0.63	mg/Kg dry	1		SW-846 6010C	3/30/15	3/31/15 22:59	MJH
Sodium	3700	130	mg/Kg dry	1		SW-846 6010C	3/30/15	3/31/15 22:59	MJH
Thallium	ND	3.2	mg/Kg dry	1		SW-846 6010C	3/30/15	3/31/15 22:59	MJH
Vanadium	24	1.3	mg/Kg dry	1		SW-846 6010C	3/30/15	3/31/15 22:59	MJH
Zinc	340	1.3	mg/Kg dry	1		SW-846 6010C	3/30/15	3/31/15 22:59	MJH

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Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description:

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: SED-02 (0-6")

Sampled: 3/24/2015 13:20

Sample ID: 15C1102-16

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	75.0		% Wt	1		SM 2540G	4/1/15	4/1/15 22:54	JJL

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Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description: SB-01 through SB-05

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: WC-01

Sampled: 3/25/2015 11:20

Sample ID: 15C1102-17

Sample Matrix: Soil

Sample Flags: PR-03

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Gasoline Range Organics (GRO)	ND	1.4	mg/Kg dry	1		SW-846 8015C	3/27/15	3/28/15 9:33	EEH
Diesel Range Organics	420	45	mg/Kg dry	1		SW-846 8015C	4/1/15	4/1/15 22:26	SCS
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
1-Chloro-3-fluorobenzene	105		70-130				3/28/15 9:33		
o-Terphenyl	91.3		40-140				4/1/15 22:26		

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Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description: SB-01 through SB-05

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: WC-01

Sampled: 3/25/2015 11:20

Sample ID: 15C1102-17

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Free Liquid	Absent		present/absent	1		SW-846 9095B	3/27/15	3/27/15 9:30	LL
Ignitability	Absent		present/absent	1		SW-846 1030	3/27/15	3/27/15 10:00	LL
pH @19.2°C	7.6		pH Units	1	H-03	SW-846 9045C	3/27/15	3/27/15 8:35	LL
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	3/31/15	3/31/15 15:35	AG
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	3/31/15	4/1/15 14:25	DJM
% Solids	84.1		% Wt	1		SM 2540G	3/30/15	3/30/15 14:09	DRA

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Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description: SB-01 through SB-05

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: WC-01

Sampled: 3/25/2015 11:20

Sample ID: 15C1102-17

Sample Matrix: Soil

TCLP - Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Benzene	ND	0.010	mg/L	10		SW-846 8260C	4/2/15	4/2/15 10:31	EEH
2-Butanone (MEK)	ND	0.20	mg/L	10		SW-846 8260C	4/2/15	4/2/15 10:31	EEH
Carbon Tetrachloride	ND	0.050	mg/L	10		SW-846 8260C	4/2/15	4/2/15 10:31	EEH
Chlorobenzene	ND	0.010	mg/L	10		SW-846 8260C	4/2/15	4/2/15 10:31	EEH
Chloroform	ND	0.020	mg/L	10		SW-846 8260C	4/2/15	4/2/15 10:31	EEH
1,4-Dichlorobenzene	ND	0.010	mg/L	10		SW-846 8260C	4/2/15	4/2/15 10:31	EEH
1,2-Dichloroethane	ND	0.010	mg/L	10		SW-846 8260C	4/2/15	4/2/15 10:31	EEH
1,1-Dichloroethylene	ND	0.010	mg/L	10		SW-846 8260C	4/2/15	4/2/15 10:31	EEH
Tetrachloroethylene	ND	0.010	mg/L	10		SW-846 8260C	4/2/15	4/2/15 10:31	EEH
Trichloroethylene	ND	0.010	mg/L	10		SW-846 8260C	4/2/15	4/2/15 10:31	EEH
Vinyl Chloride	ND	0.020	mg/L	10		SW-846 8260C	4/2/15	4/2/15 10:31	EEH
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
1,2-Dichloroethane-d4	99.0	70-130						4/2/15 10:31	
Toluene-d8	95.0	70-130						4/2/15 10:31	
4-Bromofluorobenzene	94.0	70-130						4/2/15 10:31	

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Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description: SB-01 through SB-05

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: WC-01

Sampled: 3/25/2015 11:20

Sample ID: 15C1102-17

Sample Matrix: Soil

TCLP - Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2,4-Dinitrotoluene	ND	0.050	mg/L	1		SW-846 8270D	4/1/15	4/2/15 11:42	CMR
Hexachlorobenzene	ND	0.050	mg/L	1		SW-846 8270D	4/1/15	4/2/15 11:42	CMR
Hexachlorobutadiene	ND	0.050	mg/L	1		SW-846 8270D	4/1/15	4/2/15 11:42	CMR
Hexachloroethane	ND	0.050	mg/L	1		SW-846 8270D	4/1/15	4/2/15 11:42	CMR
2-Methylphenol	ND	0.050	mg/L	1		SW-846 8270D	4/1/15	4/2/15 11:42	CMR
3/4-Methylphenol	ND	0.050	mg/L	1		SW-846 8270D	4/1/15	4/2/15 11:42	CMR
Nitrobenzene	ND	0.050	mg/L	1		SW-846 8270D	4/1/15	4/2/15 11:42	CMR
Pentachlorophenol	ND	0.050	mg/L	1		SW-846 8270D	4/1/15	4/2/15 11:42	CMR
Pyridine	ND	0.025	mg/L	1		SW-846 8270D	4/1/15	4/2/15 11:42	CMR
2,4,5-Trichlorophenol	ND	0.050	mg/L	1		SW-846 8270D	4/1/15	4/2/15 11:42	CMR
2,4,6-Trichlorophenol	ND	0.050	mg/L	1		SW-846 8270D	4/1/15	4/2/15 11:42	CMR
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
2-Fluorophenol	54.0		15-110					4/2/15 11:42	
Phenol-d6	40.1		15-110					4/2/15 11:42	
Nitrobenzene-d5	66.6		30-130					4/2/15 11:42	
2-Fluorobiphenyl	91.7		30-130					4/2/15 11:42	
2,4,6-Tribromophenol	124 *		15-110		S-07			4/2/15 11:42	
p-Terphenyl-d14	89.9		30-130					4/2/15 11:42	

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Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description: SB-01 through SB-05

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: WC-01

Sampled: 3/25/2015 11:20

Sample ID: 15C1102-17

Sample Matrix: Soil

TCLP - Organochloride Pesticides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
gamma-BHC (Lindane) [1]	ND	0.030	µg/L	1		SW-846 8081B	4/1/15	4/2/15 17:01	PJG
Chlordane [1]	ND	0.20	µg/L	1		SW-846 8081B	4/1/15	4/2/15 17:01	PJG
Endrin [1]	ND	0.080	µg/L	1		SW-846 8081B	4/1/15	4/2/15 17:01	PJG
Heptachlor [1]	ND	0.050	µg/L	1		SW-846 8081B	4/1/15	4/2/15 17:01	PJG
Heptachlor epoxide [1]	ND	0.050	µg/L	1		SW-846 8081B	4/1/15	4/2/15 17:01	PJG
Methoxychlor [1]	ND	0.50	µg/L	1		SW-846 8081B	4/1/15	4/2/15 17:01	PJG
Toxaphene [1]	ND	1.0	µg/L	1		SW-846 8081B	4/1/15	4/2/15 17:01	PJG
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
Decachlorobiphenyl [1]	83.3	30-150						4/2/15 17:01	
Decachlorobiphenyl [2]	78.1	30-150						4/2/15 17:01	
Tetrachloro-m-xylene [1]	83.7	30-150						4/2/15 17:01	
Tetrachloro-m-xylene [2]	78.3	30-150						4/2/15 17:01	

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Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description: SB-01 through SB-05

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: WC-01

Sampled: 3/25/2015 11:20

Sample ID: 15C1102-17

Sample Matrix: Soil

TCLP - Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.20	µg/L	1		SW-846 8082A	4/1/15	4/2/15 11:15	KAL
Aroclor-1221 [1]	ND	0.20	µg/L	1		SW-846 8082A	4/1/15	4/2/15 11:15	KAL
Aroclor-1232 [1]	ND	0.20	µg/L	1		SW-846 8082A	4/1/15	4/2/15 11:15	KAL
Aroclor-1242 [1]	ND	0.20	µg/L	1		SW-846 8082A	4/1/15	4/2/15 11:15	KAL
Aroclor-1248 [1]	ND	0.20	µg/L	1		SW-846 8082A	4/1/15	4/2/15 11:15	KAL
Aroclor-1254 [1]	ND	0.20	µg/L	1		SW-846 8082A	4/1/15	4/2/15 11:15	KAL
Aroclor-1260 [1]	ND	0.20	µg/L	1		SW-846 8082A	4/1/15	4/2/15 11:15	KAL
Aroclor-1262 [1]	ND	0.20	µg/L	1		SW-846 8082A	4/1/15	4/2/15 11:15	KAL
Aroclor-1268 [1]	ND	0.20	µg/L	1		SW-846 8082A	4/1/15	4/2/15 11:15	KAL
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
Decachlorobiphenyl [1]	46.5	30-150						4/2/15 11:15	
Decachlorobiphenyl [2]	44.7	30-150						4/2/15 11:15	
Tetrachloro-m-xylene [1]	43.7	30-150						4/2/15 11:15	
Tetrachloro-m-xylene [2]	42.4	30-150						4/2/15 11:15	

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Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description: SB-01 through SB-05

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: WC-01

Sampled: 3/25/2015 11:20

Sample ID: 15C1102-17

Sample Matrix: Soil

TCLP - Herbicides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2,4-D [1]	ND	0.050	mg/L	1		SW-846 8151A	4/2/15	4/3/15 13:29	JMB
2,4,5-TP (Silvex) [1]	ND	0.0050	mg/L	1		SW-846 8151A	4/2/15	4/3/15 13:29	JMB
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
2,4-Dichlorophenylacetic acid [1]	105		30-150					4/3/15 13:29	
2,4-Dichlorophenylacetic acid [2]	94.1		30-150					4/3/15 13:29	

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Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description: SB-01 through SB-05

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: WC-01

Sampled: 3/25/2015 11:20

Sample ID: 15C1102-17

Sample Matrix: Soil

TCLP - Metals Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	ND	0.010	mg/L	1		SW-846 6010C	3/31/15	3/31/15 15:54	MJH
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	3/31/15	3/31/15 13:31	SCB
Barium	1.1	0.050	mg/L	1		SW-846 6010C	3/31/15	3/31/15 15:54	MJH
Cadmium	0.016	0.0040	mg/L	1		SW-846 6010C	3/31/15	3/31/15 15:54	MJH
Chromium	ND	0.010	mg/L	1		SW-846 6010C	3/31/15	3/31/15 15:54	MJH
Lead	0.58	0.010	mg/L	1		SW-846 6010C	3/31/15	3/31/15 15:54	MJH
Selenium	ND	0.050	mg/L	1		SW-846 6010C	3/31/15	3/31/15 15:54	MJH
Silver	ND	0.0050	mg/L	1		SW-846 6010C	3/31/15	3/31/15 15:54	MJH

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Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description: SB-06 & SB-07

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: WC-02

Sampled: 3/25/2015 11:25

Sample ID: 15C1102-18

Sample Matrix: Soil

Sample Flags: PR-03

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Gasoline Range Organics (GRO)	ND	1.3	mg/Kg dry	1		SW-846 8015C	3/27/15	3/28/15 10:08	EEH
Diesel Range Organics	150	24	mg/Kg dry	1		SW-846 8015C	4/1/15	4/1/15 22:43	SCS
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
1-Chloro-3-fluorobenzene	106		70-130				3/28/15 10:08		
o-Terphenyl	95.0		40-140				4/1/15 22:43		

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description: SB-06 & SB-07

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: WC-02

Sampled: 3/25/2015 11:25

Sample ID: 15C1102-18

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Free Liquid	Absent		present/absent	1		SW-846 9095B	3/27/15	3/27/15 9:30	LL
Ignitability	Absent		present/absent	1		SW-846 1030	3/27/15	3/27/15 10:00	LL
pH @22.1°C	8.4		pH Units	1	H-03	SW-846 9045C	3/27/15	3/27/15 8:35	LL
Reactive Cyanide	ND	4.0	mg/Kg	1		SW-846 9014	3/31/15	3/31/15 15:35	AG
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	3/31/15	4/1/15 14:25	DJM
% Solids	86.9		% Wt	1		SM 2540G	3/30/15	3/30/15 14:09	DRA

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Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description: SB-06 & SB-07

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: WC-02

Sampled: 3/25/2015 11:25

Sample ID: 15C1102-18

Sample Matrix: Soil

TCLP - Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Benzene	ND	0.010	mg/L	10		SW-846 8260C	4/2/15	4/2/15 10:58	EEH
2-Butanone (MEK)	ND	0.20	mg/L	10		SW-846 8260C	4/2/15	4/2/15 10:58	EEH
Carbon Tetrachloride	ND	0.050	mg/L	10		SW-846 8260C	4/2/15	4/2/15 10:58	EEH
Chlorobenzene	ND	0.010	mg/L	10		SW-846 8260C	4/2/15	4/2/15 10:58	EEH
Chloroform	ND	0.020	mg/L	10		SW-846 8260C	4/2/15	4/2/15 10:58	EEH
1,4-Dichlorobenzene	ND	0.010	mg/L	10		SW-846 8260C	4/2/15	4/2/15 10:58	EEH
1,2-Dichloroethane	ND	0.010	mg/L	10		SW-846 8260C	4/2/15	4/2/15 10:58	EEH
1,1-Dichloroethylene	ND	0.010	mg/L	10		SW-846 8260C	4/2/15	4/2/15 10:58	EEH
Tetrachloroethylene	ND	0.010	mg/L	10		SW-846 8260C	4/2/15	4/2/15 10:58	EEH
Trichloroethylene	ND	0.010	mg/L	10		SW-846 8260C	4/2/15	4/2/15 10:58	EEH
Vinyl Chloride	ND	0.020	mg/L	10		SW-846 8260C	4/2/15	4/2/15 10:58	EEH
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
1,2-Dichloroethane-d4	95.9	70-130						4/2/15 10:58	
Toluene-d8	96.4	70-130						4/2/15 10:58	
4-Bromofluorobenzene	93.4	70-130						4/2/15 10:58	

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Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description: SB-06 & SB-07

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: WC-02

Sampled: 3/25/2015 11:25

Sample ID: 15C1102-18

Sample Matrix: Soil

TCLP - Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2,4-Dinitrotoluene	ND	0.050	mg/L	1		SW-846 8270D	4/1/15	4/2/15 12:05	CMR
Hexachlorobenzene	ND	0.050	mg/L	1		SW-846 8270D	4/1/15	4/2/15 12:05	CMR
Hexachlorobutadiene	ND	0.050	mg/L	1		SW-846 8270D	4/1/15	4/2/15 12:05	CMR
Hexachloroethane	ND	0.050	mg/L	1		SW-846 8270D	4/1/15	4/2/15 12:05	CMR
2-Methylphenol	ND	0.050	mg/L	1		SW-846 8270D	4/1/15	4/2/15 12:05	CMR
3/4-Methylphenol	ND	0.050	mg/L	1		SW-846 8270D	4/1/15	4/2/15 12:05	CMR
Nitrobenzene	ND	0.050	mg/L	1		SW-846 8270D	4/1/15	4/2/15 12:05	CMR
Pentachlorophenol	ND	0.050	mg/L	1		SW-846 8270D	4/1/15	4/2/15 12:05	CMR
Pyridine	ND	0.025	mg/L	1		SW-846 8270D	4/1/15	4/2/15 12:05	CMR
2,4,5-Trichlorophenol	ND	0.050	mg/L	1		SW-846 8270D	4/1/15	4/2/15 12:05	CMR
2,4,6-Trichlorophenol	ND	0.050	mg/L	1		SW-846 8270D	4/1/15	4/2/15 12:05	CMR
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
2-Fluorophenol	63.5		15-110					4/2/15 12:05	
Phenol-d6	49.0		15-110					4/2/15 12:05	
Nitrobenzene-d5	73.5		30-130					4/2/15 12:05	
2-Fluorobiphenyl	103		30-130					4/2/15 12:05	
2,4,6-Tribromophenol	131 *		15-110		S-07			4/2/15 12:05	
p-Terphenyl-d14	95.2		30-130					4/2/15 12:05	

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Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description: SB-06 & SB-07

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: WC-02

Sampled: 3/25/2015 11:25

Sample ID: 15C1102-18

Sample Matrix: Soil

TCLP - Organochloride Pesticides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
gamma-BHC (Lindane) [1]	ND	0.030	µg/L	1		SW-846 8081B	4/1/15	4/2/15 17:23	PJG
Chlordane [1]	ND	0.20	µg/L	1		SW-846 8081B	4/1/15	4/2/15 17:23	PJG
Endrin [1]	ND	0.080	µg/L	1		SW-846 8081B	4/1/15	4/2/15 17:23	PJG
Heptachlor [1]	ND	0.050	µg/L	1		SW-846 8081B	4/1/15	4/2/15 17:23	PJG
Heptachlor epoxide [1]	ND	0.050	µg/L	1		SW-846 8081B	4/1/15	4/2/15 17:23	PJG
Methoxychlor [1]	ND	0.50	µg/L	1		SW-846 8081B	4/1/15	4/2/15 17:23	PJG
Toxaphene [1]	ND	1.0	µg/L	1		SW-846 8081B	4/1/15	4/2/15 17:23	PJG
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]	91.8		30-150					4/2/15 17:23	
Decachlorobiphenyl [2]	83.8		30-150					4/2/15 17:23	
Tetrachloro-m-xylene [1]	86.6		30-150					4/2/15 17:23	
Tetrachloro-m-xylene [2]	79.5		30-150					4/2/15 17:23	

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Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description: SB-06 & SB-07

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: WC-02

Sampled: 3/25/2015 11:25

Sample ID: 15C1102-18

Sample Matrix: Soil

TCLP - Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.20	µg/L	1		SW-846 8082A	4/1/15	4/2/15 11:28	KAL
Aroclor-1221 [1]	ND	0.20	µg/L	1		SW-846 8082A	4/1/15	4/2/15 11:28	KAL
Aroclor-1232 [1]	ND	0.20	µg/L	1		SW-846 8082A	4/1/15	4/2/15 11:28	KAL
Aroclor-1242 [1]	ND	0.20	µg/L	1		SW-846 8082A	4/1/15	4/2/15 11:28	KAL
Aroclor-1248 [1]	ND	0.20	µg/L	1		SW-846 8082A	4/1/15	4/2/15 11:28	KAL
Aroclor-1254 [1]	ND	0.20	µg/L	1		SW-846 8082A	4/1/15	4/2/15 11:28	KAL
Aroclor-1260 [1]	ND	0.20	µg/L	1		SW-846 8082A	4/1/15	4/2/15 11:28	KAL
Aroclor-1262 [1]	ND	0.20	µg/L	1		SW-846 8082A	4/1/15	4/2/15 11:28	KAL
Aroclor-1268 [1]	ND	0.20	µg/L	1		SW-846 8082A	4/1/15	4/2/15 11:28	KAL
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
Decachlorobiphenyl [1]	98.8	30-150						4/2/15 11:28	
Decachlorobiphenyl [2]	95.2	30-150						4/2/15 11:28	
Tetrachloro-m-xylene [1]	87.4	30-150						4/2/15 11:28	
Tetrachloro-m-xylene [2]	85.0	30-150						4/2/15 11:28	

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Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description: SB-06 & SB-07

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: WC-02

Sampled: 3/25/2015 11:25

Sample ID: 15C1102-18

Sample Matrix: Soil

TCLP - Herbicides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2,4-D [1]	ND	0.050	mg/L	1		SW-846 8151A	4/2/15	4/3/15 14:07	JMB
2,4,5-TP (Silvex) [1]	ND	0.0050	mg/L	1		SW-846 8151A	4/2/15	4/3/15 14:07	JMB
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
2,4-Dichlorophenylacetic acid [1]	104		30-150					4/3/15 14:07	
2,4-Dichlorophenylacetic acid [2]	99.3		30-150					4/3/15 14:07	

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Project Location: Motiva Site - Bushiwick Inlet Par

Sample Description: SB-06 & SB-07

Work Order: 15C1102

Date Received: 3/26/2015

Field Sample #: WC-02

Sampled: 3/25/2015 11:25

Sample ID: 15C1102-18

Sample Matrix: Soil

TCLP - Metals Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	0.011	0.010	mg/L	1		SW-846 6010C	3/31/15	3/31/15 15:59	MJH
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	3/31/15	3/31/15 13:32	SCB
Barium	0.53	0.050	mg/L	1		SW-846 6010C	3/31/15	3/31/15 15:59	MJH
Cadmium	ND	0.0040	mg/L	1		SW-846 6010C	3/31/15	3/31/15 15:59	MJH
Chromium	ND	0.010	mg/L	1		SW-846 6010C	3/31/15	3/31/15 15:59	MJH
Lead	0.37	0.010	mg/L	1		SW-846 6010C	3/31/15	3/31/15 15:59	MJH
Selenium	ND	0.050	mg/L	1		SW-846 6010C	3/31/15	3/31/15 15:59	MJH
Silver	ND	0.0050	mg/L	1		SW-846 6010C	3/31/15	3/31/15 15:59	MJH

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Sample Extraction Data

Prep Method: % Solids-SM 2540G

Lab Number [Field ID]	Batch	Date
15C1102-17 [WC-01]	B118041	03/30/15
15C1102-18 [WC-02]	B118041	03/30/15

Prep Method: % Solids-SM 2540G

Lab Number [Field ID]	Batch	Date
15C1102-02 [SB-01-COMP]	B118264	04/01/15
15C1102-04 [SB-02-COMP]	B118264	04/01/15
15C1102-06 [SB-03-COMP]	B118264	04/01/15
15C1102-08 [SB-04-COMP]	B118264	04/01/15
15C1102-10 [SB-05-COMP]	B118264	04/01/15
15C1102-12 [SB-06-COMP]	B118264	04/01/15
15C1102-14 [SB-07-COMP]	B118264	04/01/15
15C1102-15 [SED-01 (0-6")]	B118264	04/01/15
15C1102-16 [SED-02 (0-6")]	B118264	04/01/15

Prep Method: % Solids-SM 2540G

Lab Number [Field ID]	Batch	Date
15C1102-01 [SB-01-5.5-6.0']	B118332	04/01/15
15C1102-03 [SB-02-5.5-6.0']	B118332	04/01/15
15C1102-05 [SB-03-3.5-4.0']	B118332	04/01/15
15C1102-07 [SB-04-3.5-4.0']	B118332	04/01/15
15C1102-09 [SB-05-4.5-5.0']	B118332	04/01/15
15C1102-11 [SB-06-4.5-5.0']	B118332	04/01/15
15C1102-13 [SB-07-4.5-5.0']	B118332	04/01/15

SW-846 1030

Lab Number [Field ID]	Batch	Initial [g]	Date
15C1102-17 [WC-01]	B117919	50.0	03/27/15
15C1102-18 [WC-02]	B117919	50.0	03/27/15

Prep Method: SW-846 3050B-SW-846 6010C

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
15C1102-14 [SB-07-COMP]	B118098	1.07	50.0	03/30/15
15C1102-15 [SED-01 (0-6")]	B118098	0.954	50.0	03/30/15
15C1102-16 [SED-02 (0-6")]	B118098	1.05	50.0	03/30/15

Prep Method: SW-846 3050B-SW-846 6010C

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
15C1102-02 [SB-01-COMP]	B118200	1.04	50.0	03/31/15
15C1102-04 [SB-02-COMP]	B118200	1.01	50.0	03/31/15
15C1102-06 [SB-03-COMP]	B118200	1.02	50.0	03/31/15
15C1102-08 [SB-04-COMP]	B118200	1.03	50.0	03/31/15
15C1102-10 [SB-05-COMP]	B118200	1.03	50.0	03/31/15
15C1102-12 [SB-06-COMP]	B118200	1.04	50.0	03/31/15

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Sample Extraction Data

Prep Method: SW-846 3010A-SW-846 6010C

Leachates were extracted on 3/30/2015 per SW-846 1311 in Batch B118031

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
15C1102-17 [WC-01]	B118180	50.0	50.0	03/31/15
15C1102-18 [WC-02]	B118180	50.0	50.0	03/31/15

Prep Method: SW-846 7470A Prep-SW-846 7470A

Leachates were extracted on 3/30/2015 per SW-846 1311 in Batch B118031

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
15C1102-17 [WC-01]	B118171	6.00	6.00	03/31/15
15C1102-18 [WC-02]	B118171	6.00	6.00	03/31/15

Prep Method: SW-846 7471-SW-846 7471B

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
15C1102-02 [SB-01-COMP]	B118144	0.616	50.0	03/31/15
15C1102-04 [SB-02-COMP]	B118144	0.639	50.0	03/31/15
15C1102-06 [SB-03-COMP]	B118144	0.619	50.0	03/31/15
15C1102-08 [SB-04-COMP]	B118144	0.625	50.0	03/31/15
15C1102-10 [SB-05-COMP]	B118144	0.629	50.0	03/31/15
15C1102-12 [SB-06-COMP]	B118144	0.633	50.0	03/31/15
15C1102-14 [SB-07-COMP]	B118144	0.610	50.0	03/31/15
15C1102-15 [SED-01 (0-6")]	B118144	0.625	50.0	03/31/15
15C1102-16 [SED-02 (0-6")]	B118144	0.615	50.0	03/31/15

Prep Method: SW-846 5035/5030B-SW-846 8015C

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
15C1102-17 [WC-01]	B117942	15.0	17.4	03/27/15
15C1102-18 [WC-02]	B117942	15.0	17.0	03/27/15

Prep Method: SW-846 3546-SW-846 8015C

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
15C1102-17 [WC-01]	B118237	6.60	1.00	04/01/15
15C1102-18 [WC-02]	B118237	11.8	1.00	04/01/15

Prep Method: SW-846 3546-SW-846 8081B

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
15C1102-02 [SB-01-COMP]	B118124	10.0	10.0	03/31/15
15C1102-04 [SB-02-COMP]	B118124	10.0	10.0	03/31/15
15C1102-06 [SB-03-COMP]	B118124	10.1	10.0	03/31/15
15C1102-08 [SB-04-COMP]	B118124	10.0	10.0	03/31/15
15C1102-10 [SB-05-COMP]	B118124	10.0	10.0	03/31/15
15C1102-12 [SB-06-COMP]	B118124	10.0	10.0	03/31/15
15C1102-14 [SB-07-COMP]	B118124	10.0	10.0	03/31/15
15C1102-15 [SED-01 (0-6")]	B118124	10.1	10.0	03/31/15
15C1102-16 [SED-02 (0-6")]	B118124	10.0	10.0	03/31/15

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Sample Extraction Data

Prep Method: SW-846 3510C-SW-846 8081B

Leachates were extracted on 3/30/2015 per SW-846 1311 in Batch B118031

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
15C1102-17 [WC-01]	B118246	500	5.00	04/01/15
15C1102-18 [WC-02]	B118246	500	5.00	04/01/15

Prep Method: SW-846 3546-SW-846 8082A

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
15C1102-02 [SB-01-COMP]	B118123	10.0	10.0	03/31/15
15C1102-04 [SB-02-COMP]	B118123	10.0	10.0	03/31/15
15C1102-06 [SB-03-COMP]	B118123	10.1	10.0	03/31/15
15C1102-08 [SB-04-COMP]	B118123	10.0	10.0	03/31/15
15C1102-10 [SB-05-COMP]	B118123	10.0	10.0	03/31/15
15C1102-12 [SB-06-COMP]	B118123	10.1	10.0	03/31/15
15C1102-14 [SB-07-COMP]	B118123	10.0	10.0	03/31/15
15C1102-15 [SED-01 (0-6")]	B118123	10.1	10.0	03/31/15
15C1102-16 [SED-02 (0-6")]	B118123	10.0	10.0	03/31/15

Prep Method: SW-846 3510C-SW-846 8082A

Leachates were extracted on 3/30/2015 per SW-846 1311 in Batch B118031

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
15C1102-17 [WC-01]	B118248	250	2.50	04/01/15
15C1102-18 [WC-02]	B118248	500	5.00	04/01/15

Prep Method: SW-846 8151-SW-846 8151A

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
15C1102-02 [SB-01-COMP]	B117934	20.4	5.00	03/27/15
15C1102-04 [SB-02-COMP]	B117934	20.0	5.00	03/27/15
15C1102-06 [SB-03-COMP]	B117934	20.0	5.00	03/27/15
15C1102-08 [SB-04-COMP]	B117934	20.1	5.00	03/27/15
15C1102-10 [SB-05-COMP]	B117934	20.2	5.00	03/27/15
15C1102-12 [SB-06-COMP]	B117934	20.0	5.00	03/27/15
15C1102-14 [SB-07-COMP]	B117934	20.3	5.00	03/27/15
15C1102-15 [SED-01 (0-6")]	B117934	20.2	5.00	03/27/15
15C1102-16 [SED-02 (0-6")]	B117934	20.4	5.00	03/27/15

Prep Method: SW-846 3510C-SW-846 8151A

Leachates were extracted on 3/30/2015 per SW-846 1311 in Batch B118031

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
15C1102-17 [WC-01]	B118354	10.0	5.00	04/02/15
15C1102-18 [WC-02]	B118354	10.0	5.00	04/02/15

Prep Method: SW-846 5030B-SW-846 8260C

Leachates were extracted on 3/31/2015 per SW-846 1311 in Batch B118157

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
15C1102-17 [WC-01]	B118353	5.00	5.00	04/02/15
15C1102-18 [WC-02]	B118353	5.00	5.00	04/02/15

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Extraction Data

Prep Method: SW-846 5035-SW-846 8260C

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
15C1102-01 [SB-01-5.5-6.0']	B118395	5.00	10.0	04/02/15
15C1102-03 [SB-02-5.5-6.0']	B118395	5.60	10.0	04/02/15
15C1102-05 [SB-03-3.5-4.0']	B118395	5.60	10.0	04/02/15
15C1102-07 [SB-04-3.5-4.0']	B118395	5.10	10.0	04/02/15
15C1102-09 [SB-05-4.5-5.0']	B118395	5.30	10.0	04/02/15
15C1102-11 [SB-06-4.5-5.0']	B118395	5.20	10.0	04/02/15
15C1102-13 [SB-07-4.5-5.0']	B118395	5.40	10.0	04/02/15
15C1102-15 [SED-01 (0-6")]	B118395	5.40	10.0	04/02/15
15C1102-16 [SED-02 (0-6")]	B118395	5.00	10.0	04/02/15

Prep Method: SW-846 3546-SW-846 8270D

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
15C1102-02 [SB-01-COMP]	B118238	30.0	1.00	04/01/15
15C1102-04 [SB-02-COMP]	B118238	30.0	1.00	04/01/15
15C1102-04RE1 [SB-02-COMP]	B118238	30.0	1.00	04/01/15
15C1102-06 [SB-03-COMP]	B118238	30.0	1.00	04/01/15
15C1102-08 [SB-04-COMP]	B118238	30.0	1.00	04/01/15
15C1102-08RE1 [SB-04-COMP]	B118238	30.0	1.00	04/01/15
15C1102-10 [SB-05-COMP]	B118238	30.0	1.00	04/01/15
15C1102-10RE1 [SB-05-COMP]	B118238	30.0	1.00	04/01/15
15C1102-12 [SB-06-COMP]	B118238	30.0	1.00	04/01/15
15C1102-14 [SB-07-COMP]	B118238	30.0	2.00	04/01/15
15C1102-14RE1 [SB-07-COMP]	B118238	30.0	2.00	04/01/15
15C1102-15 [SED-01 (0-6")]	B118238	30.0	1.00	04/01/15
15C1102-15RE1 [SED-01 (0-6")]	B118238	30.0	1.00	04/01/15
15C1102-16 [SED-02 (0-6")]	B118238	30.0	1.00	04/01/15

Prep Method: SW-846 3510C-SW-846 8270D

Leachates were extracted on 3/30/2015 per SW-846 1311 in Batch B118031

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
15C1102-17 [WC-01]	B118251	200	1.00	04/01/15
15C1102-18 [WC-02]	B118251	200	1.00	04/01/15

SW-846 9014

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
15C1102-17 [WC-01]	B118189	25.4	250	03/31/15
15C1102-18 [WC-02]	B118189	25.0	250	03/31/15

SW-846 9030A

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
15C1102-17 [WC-01]	B118305	25.4	250	03/31/15
15C1102-18 [WC-02]	B118305	25.0	250	03/31/15

SW-846 9045C

Lab Number [Field ID]	Batch	Initial [g]	Date

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Sample Extraction Data

SW-846 9045C

Lab Number [Field ID]	Batch	Initial [g]	Date	
15C1102-17 [WC-01]	B117915	20.0	03/27/15	
15C1102-18 [WC-02]	B117915	20.0	03/27/15	

SW-846 9095B

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
15C1102-17 [WC-01]	B117920	100	100	03/27/15
15C1102-18 [WC-02]	B117920	100	100	03/27/15

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes

Batch B118395 - SW-846 5035

Blank (B118395-BLK1)

Prepared & Analyzed: 04/02/15

Acetone	ND	0.10	mg/Kg wet							
Acrylonitrile	ND	0.0060	mg/Kg wet							
tert-Amyl Methyl Ether (TAME)	ND	0.0010	mg/Kg wet							
Benzene	ND	0.0020	mg/Kg wet							
Bromobenzene	ND	0.0020	mg/Kg wet							
Bromochloromethane	ND	0.0020	mg/Kg wet							
Bromodichloromethane	ND	0.0020	mg/Kg wet							
Bromoform	ND	0.0020	mg/Kg wet							
Bromomethane	ND	0.010	mg/Kg wet							R-05
2-Butanone (MEK)	ND	0.040	mg/Kg wet							
tert-Butyl Alcohol (TBA)	ND	0.040	mg/Kg wet							
n-Butylbenzene	ND	0.0020	mg/Kg wet							
sec-Butylbenzene	ND	0.0020	mg/Kg wet							
tert-Butylbenzene	ND	0.0020	mg/Kg wet							
tert-Butyl Ethyl Ether (TBEE)	ND	0.0010	mg/Kg wet							
Carbon Disulfide	ND	0.020	mg/Kg wet							
Carbon Tetrachloride	ND	0.0020	mg/Kg wet							
Chlorobenzene	ND	0.0020	mg/Kg wet							
Chlorodibromomethane	ND	0.0010	mg/Kg wet							
Chloroethane	ND	0.020	mg/Kg wet							
Chloroform	ND	0.0040	mg/Kg wet							
Chloromethane	ND	0.010	mg/Kg wet							
2-Chlorotoluene	ND	0.0020	mg/Kg wet							
4-Chlorotoluene	ND	0.0020	mg/Kg wet							
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0020	mg/Kg wet							V-05
1,2-Dibromoethane (EDB)	ND	0.0010	mg/Kg wet							
Dibromomethane	ND	0.0020	mg/Kg wet							
1,2-Dichlorobenzene	ND	0.0020	mg/Kg wet							
1,3-Dichlorobenzene	ND	0.0020	mg/Kg wet							
1,4-Dichlorobenzene	ND	0.0020	mg/Kg wet							
trans-1,4-Dichloro-2-butene	ND	0.0040	mg/Kg wet							
Dichlorodifluoromethane (Freon 12)	ND	0.020	mg/Kg wet							
1,1-Dichloroethane	ND	0.0020	mg/Kg wet							
1,2-Dichloroethane	ND	0.0020	mg/Kg wet							
1,1-Dichloroethylene	ND	0.0040	mg/Kg wet							
cis-1,2-Dichloroethylene	ND	0.0020	mg/Kg wet							
trans-1,2-Dichloroethylene	ND	0.0020	mg/Kg wet							
1,2-Dichloropropane	ND	0.0020	mg/Kg wet							
1,3-Dichloropropane	ND	0.0010	mg/Kg wet							
2,2-Dichloropropane	ND	0.0020	mg/Kg wet							
1,1-Dichloropropene	ND	0.0020	mg/Kg wet							
cis-1,3-Dichloropropene	ND	0.0010	mg/Kg wet							
trans-1,3-Dichloropropene	ND	0.0010	mg/Kg wet							
Diethyl Ether	ND	0.020	mg/Kg wet							
Diisopropyl Ether (DIPE)	ND	0.0010	mg/Kg wet							
1,4-Dioxane	ND	0.10	mg/Kg wet							
Ethylbenzene	ND	0.0020	mg/Kg wet							
Hexachlorobutadiene	ND	0.0020	mg/Kg wet							
Isopropylbenzene (Cumene)	ND	0.0020	mg/Kg wet							
p-Isopropyltoluene (p-Cymene)	ND	0.0020	mg/Kg wet							
Methyl tert-Butyl Ether (MTBE)	ND	0.0040	mg/Kg wet							
Methylene Chloride	ND	0.020	mg/Kg wet							

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes

Batch B118395 - SW-846 5035

Blank (B118395-BLK1)

Prepared & Analyzed: 04/02/15

4-Methyl-2-pentanone (MIBK)	ND	0.020	mg/Kg wet							
Naphthalene	ND	0.0040	mg/Kg wet							
n-Propylbenzene	ND	0.0020	mg/Kg wet							
Styrene	ND	0.0020	mg/Kg wet							
1,1,1,2-Tetrachloroethane	ND	0.0020	mg/Kg wet							
Tetrachloroethylene	ND	0.0020	mg/Kg wet							
Tetrahydrofuran	ND	0.010	mg/Kg wet							
Toluene	ND	0.0020	mg/Kg wet							
1,2,3-Trichlorobenzene	ND	0.0020	mg/Kg wet							
1,2,4-Trichlorobenzene	ND	0.0020	mg/Kg wet							
1,3,5-Trichlorobenzene	ND	0.0020	mg/Kg wet							
1,1,1-Trichloroethane	ND	0.0040	mg/Kg wet							
1,1,2-Trichloroethane	ND	0.0020	mg/Kg wet							
Trichloroethylene	ND	0.0020	mg/Kg wet							
Trichlorofluoromethane (Freon 11)	ND	0.010	mg/Kg wet							
1,2,3-Trichloropropane	ND	0.0020	mg/Kg wet							
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.010	mg/Kg wet							
1,2,4-Trimethylbenzene	ND	0.0020	mg/Kg wet							
1,3,5-Trimethylbenzene	ND	0.0020	mg/Kg wet							
Vinyl Chloride	ND	0.010	mg/Kg wet							
m+p Xylene	ND	0.0040	mg/Kg wet							
o-Xylene	ND	0.0020	mg/Kg wet							
Surrogate: 1,2-Dichloroethane-d4	0.0550		mg/Kg wet	0.0500		110	70-130			
Surrogate: Toluene-d8	0.0501		mg/Kg wet	0.0500		100	70-130			
Surrogate: 4-Bromofluorobenzene	0.0489		mg/Kg wet	0.0500		97.8	70-130			

LCS (B118395-BS1)

Prepared & Analyzed: 04/02/15

Acetone	0.219	0.10	mg/Kg wet	0.200		110	70-160		V-20	†
Acrylonitrile	0.0184	0.0060	mg/Kg wet	0.0200		92.1	70-130			
tert-Amyl Methyl Ether (TAME)	0.0196	0.0010	mg/Kg wet	0.0200		98.2	70-130			
Benzene	0.0225	0.0020	mg/Kg wet	0.0200		112	70-130			
Bromobenzene	0.0215	0.0020	mg/Kg wet	0.0200		107	70-130			
Bromochloromethane	0.0240	0.0020	mg/Kg wet	0.0200		120	70-130			
Bromodichloromethane	0.0239	0.0020	mg/Kg wet	0.0200		119	70-130			
Bromoform	0.0220	0.0020	mg/Kg wet	0.0200		110	70-130			
Bromomethane	0.0201	0.010	mg/Kg wet	0.0200		100	40-130		R-05, V-20	†
2-Butanone (MEK)	0.200	0.040	mg/Kg wet	0.200		99.8	70-160			†
tert-Butyl Alcohol (TBA)	0.208	0.040	mg/Kg wet	0.200		104	40-130			†
n-Butylbenzene	0.0228	0.0020	mg/Kg wet	0.0200		114	70-130			
sec-Butylbenzene	0.0223	0.0020	mg/Kg wet	0.0200		112	70-130			
tert-Butylbenzene	0.0222	0.0020	mg/Kg wet	0.0200		111	70-160			†
tert-Butyl Ethyl Ether (TBEE)	0.0211	0.0010	mg/Kg wet	0.0200		105	70-130			
Carbon Disulfide	0.0239	0.020	mg/Kg wet	0.0200		119	70-130			
Carbon Tetrachloride	0.0206	0.0020	mg/Kg wet	0.0200		103	70-130			
Chlorobenzene	0.0216	0.0020	mg/Kg wet	0.0200		108	70-130			
Chlorodibromomethane	0.0230	0.0010	mg/Kg wet	0.0200		115	70-130			
Chloroethane	0.0243	0.020	mg/Kg wet	0.0200		122	70-130			
Chloroform	0.0250	0.0040	mg/Kg wet	0.0200		125	70-130			
Chloromethane	0.0203	0.010	mg/Kg wet	0.0200		102	70-130			
2-Chlorotoluene	0.0226	0.0020	mg/Kg wet	0.0200		113	70-130			
4-Chlorotoluene	0.0230	0.0020	mg/Kg wet	0.0200		115	70-130			
1,2-Dibromo-3-chloropropane (DBCP)	0.0166	0.0020	mg/Kg wet	0.0200		83.2	70-130			

V-05

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QUALITY CONTROL
Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B118395 - SW-846 5035										
LCS (B118395-BS1)				Prepared & Analyzed: 04/02/15						
1,2-Dibromoethane (EDB)	0.0220	0.0010	mg/Kg wet	0.0200		110	70-130			
Dibromomethane	0.0218	0.0020	mg/Kg wet	0.0200		109	70-130			
1,2-Dichlorobenzene	0.0211	0.0020	mg/Kg wet	0.0200		106	70-130			
1,3-Dichlorobenzene	0.0218	0.0020	mg/Kg wet	0.0200		109	70-130			
1,4-Dichlorobenzene	0.0209	0.0020	mg/Kg wet	0.0200		105	70-130			
trans-1,4-Dichloro-2-butene	0.0205	0.0040	mg/Kg wet	0.0200		103	70-130			
Dichlorodifluoromethane (Freon 12)	0.0179	0.020	mg/Kg wet	0.0200		89.6	40-160			†
1,1-Dichloroethane	0.0222	0.0020	mg/Kg wet	0.0200		111	70-130			
1,2-Dichloroethane	0.0224	0.0020	mg/Kg wet	0.0200		112	70-130			
1,1-Dichloroethylene	0.0259	0.0040	mg/Kg wet	0.0200		130	70-130			
cis-1,2-Dichloroethylene	0.0216	0.0020	mg/Kg wet	0.0200		108	70-130			
trans-1,2-Dichloroethylene	0.0250	0.0020	mg/Kg wet	0.0200		125	70-130			
1,2-Dichloropropane	0.0208	0.0020	mg/Kg wet	0.0200		104	70-130			
1,3-Dichloropropane	0.0207	0.0010	mg/Kg wet	0.0200		104	70-130			
2,2-Dichloropropane	0.0194	0.0020	mg/Kg wet	0.0200		97.2	70-130			
1,1-Dichloropropene	0.0253	0.0020	mg/Kg wet	0.0200		127	70-130			
cis-1,3-Dichloropropene	0.0197	0.0010	mg/Kg wet	0.0200		98.5	70-130			
trans-1,3-Dichloropropene	0.0219	0.0010	mg/Kg wet	0.0200		109	70-130			
Diethyl Ether	0.0231	0.020	mg/Kg wet	0.0200		115	70-130			
Diisopropyl Ether (DIPE)	0.0235	0.0010	mg/Kg wet	0.0200		117	70-130			
1,4-Dioxane	0.234	0.10	mg/Kg wet	0.200		117	40-160			†
Ethylbenzene	0.0235	0.0020	mg/Kg wet	0.0200		117	70-130			
Hexachlorobutadiene	0.0229	0.0020	mg/Kg wet	0.0200		114	70-160			
Isopropylbenzene (Cumene)	0.0235	0.0020	mg/Kg wet	0.0200		118	70-130			
p-Isopropyltoluene (p-Cymene)	0.0223	0.0020	mg/Kg wet	0.0200		112	70-130			
Methyl tert-Butyl Ether (MTBE)	0.0212	0.0040	mg/Kg wet	0.0200		106	70-130			
Methylene Chloride	0.0234	0.020	mg/Kg wet	0.0200		117	40-160			†
4-Methyl-2-pentanone (MIBK)	0.222	0.020	mg/Kg wet	0.200		111	70-160			†
Naphthalene	0.0205	0.0040	mg/Kg wet	0.0200		102	40-130			†
n-Propylbenzene	0.0242	0.0020	mg/Kg wet	0.0200		121	70-130			
Styrene	0.0223	0.0020	mg/Kg wet	0.0200		111	70-130			
1,1,1,2-Tetrachloroethane	0.0233	0.0020	mg/Kg wet	0.0200		117	70-130			
Tetrachloroethylene	0.0244	0.0020	mg/Kg wet	0.0200		122	70-130			
Tetrahydrofuran	0.0197	0.010	mg/Kg wet	0.0200		98.5	70-130			
Toluene	0.0225	0.0020	mg/Kg wet	0.0200		112	70-130			
1,2,3-Trichlorobenzene	0.0209	0.0020	mg/Kg wet	0.0200		104	70-130			
1,2,4-Trichlorobenzene	0.0212	0.0020	mg/Kg wet	0.0200		106	70-130			
1,3,5-Trichlorobenzene	0.0214	0.0020	mg/Kg wet	0.0200		107	70-130			
1,1,1-Trichloroethane	0.0221	0.0040	mg/Kg wet	0.0200		111	70-130			
1,1,2-Trichloroethane	0.0217	0.0020	mg/Kg wet	0.0200		109	70-130			
Trichloroethylene	0.0219	0.0020	mg/Kg wet	0.0200		110	70-130			
Trichlorofluoromethane (Freon 11)	0.0263	0.010	mg/Kg wet	0.0200		132	* 70-130			L-02, V-20
1,2,3-Trichloropropane	0.0192	0.0020	mg/Kg wet	0.0200		96.2	70-130			
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.0234	0.010	mg/Kg wet	0.0200		117	70-130			
1,2,4-Trimethylbenzene	0.0222	0.0020	mg/Kg wet	0.0200		111	70-130			
1,3,5-Trimethylbenzene	0.0237	0.0020	mg/Kg wet	0.0200		119	70-130			
Vinyl Chloride	0.0205	0.010	mg/Kg wet	0.0200		102	40-130			†
m+p Xylene	0.0461	0.0040	mg/Kg wet	0.0400		115	70-130			
o-Xylene	0.0225	0.0020	mg/Kg wet	0.0200		113	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0536		mg/Kg wet	0.0500		107	70-130			
Surrogate: Toluene-d8	0.0507		mg/Kg wet	0.0500		101	70-130			

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QUALITY CONTROL
Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B118395 - SW-846 5035										
LCS (B118395-BS1)					Prepared & Analyzed: 04/02/15					
Surrogate: 4-Bromofluorobenzene	0.0501		mg/Kg wet	0.0500		100	70-130			
LCS Dup (B118395-BSD1)					Prepared & Analyzed: 04/02/15					
Acetone	0.200	0.10	mg/Kg wet	0.200		100	70-160	9.07	25	V-20 †
Acrylonitrile	0.0184	0.0060	mg/Kg wet	0.0200		91.8	70-130	0.326	25	
tert-Amyl Methyl Ether (TAME)	0.0202	0.0010	mg/Kg wet	0.0200		101	70-130	2.61	25	
Benzene	0.0230	0.0020	mg/Kg wet	0.0200		115	70-130	2.37	25	
Bromobenzene	0.0216	0.0020	mg/Kg wet	0.0200		108	70-130	0.650	25	
Bromochloromethane	0.0241	0.0020	mg/Kg wet	0.0200		120	70-130	0.166	25	
Bromodichloromethane	0.0243	0.0020	mg/Kg wet	0.0200		121	70-130	1.74	25	
Bromoform	0.0219	0.0020	mg/Kg wet	0.0200		109	70-130	0.638	25	
Bromomethane	0.0269	0.010	mg/Kg wet	0.0200		135 *	40-130	29.3 *	25	L-07A, R-05, V-20 †
2-Butanone (MEK)	0.185	0.040	mg/Kg wet	0.200		92.5	70-160	7.58	25	†
tert-Butyl Alcohol (TBA)	0.190	0.040	mg/Kg wet	0.200		94.9	40-130	9.39	25	†
n-Butylbenzene	0.0229	0.0020	mg/Kg wet	0.0200		114	70-130	0.350	25	
sec-Butylbenzene	0.0225	0.0020	mg/Kg wet	0.0200		112	70-130	0.804	25	
tert-Butylbenzene	0.0225	0.0020	mg/Kg wet	0.0200		113	70-160	1.52	25	†
tert-Butyl Ethyl Ether (TBEE)	0.0220	0.0010	mg/Kg wet	0.0200		110	70-130	4.55	25	
Carbon Disulfide	0.0257	0.020	mg/Kg wet	0.0200		128	70-130	7.26	25	
Carbon Tetrachloride	0.0212	0.0020	mg/Kg wet	0.0200		106	70-130	2.87	25	
Chlorobenzene	0.0221	0.0020	mg/Kg wet	0.0200		110	70-130	2.01	25	
Chlorodibromomethane	0.0233	0.0010	mg/Kg wet	0.0200		116	70-130	1.30	25	
Chloroethane	0.0262	0.020	mg/Kg wet	0.0200		131 *	70-130	7.60	25	L-07
Chloroform	0.0253	0.0040	mg/Kg wet	0.0200		126	70-130	1.03	25	
Chloromethane	0.0218	0.010	mg/Kg wet	0.0200		109	70-130	6.94	25	
2-Chlorotoluene	0.0232	0.0020	mg/Kg wet	0.0200		116	70-130	2.53	25	
4-Chlorotoluene	0.0230	0.0020	mg/Kg wet	0.0200		115	70-130	0.261	25	
1,2-Dibromo-3-chloropropane (DBCP)	0.0160	0.0020	mg/Kg wet	0.0200		79.8	70-130	4.17	25	V-05
1,2-Dibromoethane (EDB)	0.0221	0.0010	mg/Kg wet	0.0200		110	70-130	0.363	25	
Dibromomethane	0.0219	0.0020	mg/Kg wet	0.0200		110	70-130	0.733	25	
1,2-Dichlorobenzene	0.0212	0.0020	mg/Kg wet	0.0200		106	70-130	0.189	25	
1,3-Dichlorobenzene	0.0217	0.0020	mg/Kg wet	0.0200		109	70-130	0.0920	25	
1,4-Dichlorobenzene	0.0207	0.0020	mg/Kg wet	0.0200		103	70-130	1.25	25	
trans-1,4-Dichloro-2-butene	0.0210	0.0040	mg/Kg wet	0.0200		105	70-130	2.02	25	
Dichlorodifluoromethane (Freon 12)	0.0196	0.020	mg/Kg wet	0.0200		97.8	40-160	8.75	25	†
1,1-Dichloroethane	0.0235	0.0020	mg/Kg wet	0.0200		118	70-130	6.04	25	
1,2-Dichloroethane	0.0234	0.0020	mg/Kg wet	0.0200		117	70-130	4.28	25	
1,1-Dichloroethylene	0.0285	0.0040	mg/Kg wet	0.0200		142 *	70-130	9.40	25	L-07
cis-1,2-Dichloroethylene	0.0226	0.0020	mg/Kg wet	0.0200		113	70-130	4.71	25	
trans-1,2-Dichloroethylene	0.0260	0.0020	mg/Kg wet	0.0200		130	70-130	3.93	25	
1,2-Dichloropropane	0.0213	0.0020	mg/Kg wet	0.0200		106	70-130	2.38	25	
1,3-Dichloropropane	0.0208	0.0010	mg/Kg wet	0.0200		104	70-130	0.386	25	
2,2-Dichloropropane	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130	3.93	25	
1,1-Dichloropropene	0.0262	0.0020	mg/Kg wet	0.0200		131 *	70-130	3.41	25	L-07
cis-1,3-Dichloropropene	0.0201	0.0010	mg/Kg wet	0.0200		100	70-130	2.01	25	
trans-1,3-Dichloropropene	0.0221	0.0010	mg/Kg wet	0.0200		110	70-130	0.819	25	
Diethyl Ether	0.0249	0.020	mg/Kg wet	0.0200		124	70-130	7.67	25	
Diisopropyl Ether (DIPE)	0.0241	0.0010	mg/Kg wet	0.0200		120	70-130	2.69	25	
1,4-Dioxane	0.170	0.10	mg/Kg wet	0.200		84.8	40-160	31.8	50	† ‡
Ethylbenzene	0.0237	0.0020	mg/Kg wet	0.0200		118	70-130	1.02	25	
Hexachlorobutadiene	0.0227	0.0020	mg/Kg wet	0.0200		113	70-160	0.966	25	
Isopropylbenzene (Cumene)	0.0241	0.0020	mg/Kg wet	0.0200		121	70-130	2.52	25	

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QUALITY CONTROL
Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B118395 - SW-846 5035										
LCS Dup (B118395-BSD1)				Prepared & Analyzed: 04/02/15						
p-Isopropyltoluene (p-Cymene)	0.0231	0.0020	mg/Kg wet	0.0200		115	70-130	3.17	25	
Methyl tert-Butyl Ether (MTBE)	0.0222	0.0040	mg/Kg wet	0.0200		111	70-130	4.42	25	
Methylene Chloride	0.0220	0.020	mg/Kg wet	0.0200		110	40-160	6.34	25	†
4-Methyl-2-pentanone (MIBK)	0.213	0.020	mg/Kg wet	0.200		107	70-160	4.23	25	†
Naphthalene	0.0204	0.0040	mg/Kg wet	0.0200		102	40-130	0.490	25	†
n-Propylbenzene	0.0244	0.0020	mg/Kg wet	0.0200		122	70-130	0.742	25	
Styrene	0.0231	0.0020	mg/Kg wet	0.0200		116	70-130	3.61	25	
1,1,1,2-Tetrachloroethane	0.0231	0.0020	mg/Kg wet	0.0200		116	70-130	0.861	25	
Tetrachloroethylene	0.0250	0.0020	mg/Kg wet	0.0200		125	70-130	2.59	25	
Tetrahydrofuran	0.0187	0.010	mg/Kg wet	0.0200		93.3	70-130	5.42	25	
Toluene	0.0229	0.0020	mg/Kg wet	0.0200		114	70-130	1.76	25	
1,2,3-Trichlorobenzene	0.0209	0.0020	mg/Kg wet	0.0200		105	70-130	0.191	25	
1,2,4-Trichlorobenzene	0.0210	0.0020	mg/Kg wet	0.0200		105	70-130	1.04	25	
1,3,5-Trichlorobenzene	0.0212	0.0020	mg/Kg wet	0.0200		106	70-130	1.13	25	
1,1,1-Trichloroethane	0.0233	0.0040	mg/Kg wet	0.0200		117	70-130	5.37	25	
1,1,2-Trichloroethane	0.0214	0.0020	mg/Kg wet	0.0200		107	70-130	1.48	25	
Trichloroethylene	0.0220	0.0020	mg/Kg wet	0.0200		110	70-130	0.182	25	
Trichlorofluoromethane (Freon 11)	0.0286	0.010	mg/Kg wet	0.0200		143	* 70-130	8.38	25	L-02, V-20
1,2,3-Trichloropropane	0.0186	0.0020	mg/Kg wet	0.0200		92.8	70-130	3.60	25	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.0256	0.010	mg/Kg wet	0.0200		128	70-130	9.23	25	
1,2,4-Trimethylbenzene	0.0225	0.0020	mg/Kg wet	0.0200		113	70-130	1.25	25	
1,3,5-Trimethylbenzene	0.0240	0.0020	mg/Kg wet	0.0200		120	70-130	1.09	25	
Vinyl Chloride	0.0220	0.010	mg/Kg wet	0.0200		110	40-130	7.34	25	†
m+p Xylene	0.0468	0.0040	mg/Kg wet	0.0400		117	70-130	1.33	25	
o-Xylene	0.0230	0.0020	mg/Kg wet	0.0200		115	70-130	2.19	25	
Surrogate: 1,2-Dichloroethane-d4	0.0537		mg/Kg wet	0.0500		107	70-130			
Surrogate: Toluene-d8	0.0504		mg/Kg wet	0.0500		101	70-130			
Surrogate: 4-Bromofluorobenzene	0.0508		mg/Kg wet	0.0500		102	70-130			

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QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B118238 - SW-846 3546										
Blank (B118238-BLK1)				Prepared & Analyzed: 04/01/15						
Acenaphthene	ND	0.17	mg/Kg wet							
Acenaphthylene	ND	0.17	mg/Kg wet							
Acetophenone	ND	0.34	mg/Kg wet							
Aniline	ND	0.34	mg/Kg wet							
Anthracene	ND	0.17	mg/Kg wet							
Benzidine	ND	0.66	mg/Kg wet							V-04, V-05
Benzo(a)anthracene	ND	0.17	mg/Kg wet							
Benzo(a)pyrene	ND	0.17	mg/Kg wet							
Benzo(b)fluoranthene	ND	0.17	mg/Kg wet							
Benzo(g,h,i)perylene	ND	0.17	mg/Kg wet							V-20
Benzo(k)fluoranthene	ND	0.17	mg/Kg wet							
Benzoic Acid	ND	1.0	mg/Kg wet							R-05
Bis(2-chloroethoxy)methane	ND	0.34	mg/Kg wet							
Bis(2-chloroethyl)ether	ND	0.34	mg/Kg wet							
Bis(2-chloroisopropyl)ether	ND	0.34	mg/Kg wet							
Bis(2-Ethylhexyl)phthalate	ND	0.34	mg/Kg wet							
4-Bromophenylphenylether	ND	0.34	mg/Kg wet							
Butylbenzylphthalate	ND	0.34	mg/Kg wet							
Carbazole	ND	0.17	mg/Kg wet							
4-Chloroaniline	ND	0.66	mg/Kg wet							
4-Chloro-3-methylphenol	ND	0.66	mg/Kg wet							
2-Chloronaphthalene	ND	0.34	mg/Kg wet							
2-Chlorophenol	ND	0.34	mg/Kg wet							
4-Chlorophenylphenylether	ND	0.34	mg/Kg wet							
Chrysene	ND	0.17	mg/Kg wet							
Dibenz(a,h)anthracene	ND	0.17	mg/Kg wet							
Dibenzofuran	ND	0.34	mg/Kg wet							
Di-n-butylphthalate	ND	0.34	mg/Kg wet							
1,2-Dichlorobenzene	ND	0.34	mg/Kg wet							
1,3-Dichlorobenzene	ND	0.34	mg/Kg wet							
1,4-Dichlorobenzene	ND	0.34	mg/Kg wet							
3,3-Dichlorobenzidine	ND	0.17	mg/Kg wet							
2,4-Dichlorophenol	ND	0.34	mg/Kg wet							
Diethylphthalate	ND	0.34	mg/Kg wet							
2,4-Dimethylphenol	ND	0.34	mg/Kg wet							
Dimethylphthalate	ND	0.34	mg/Kg wet							
4,6-Dinitro-2-methylphenol	ND	0.34	mg/Kg wet							
2,4-Dinitrophenol	ND	0.66	mg/Kg wet							L-04, R-05
2,4-Dinitrotoluene	ND	0.34	mg/Kg wet							
2,6-Dinitrotoluene	ND	0.34	mg/Kg wet							
Di-n-octylphthalate	ND	0.34	mg/Kg wet							
1,2-Diphenylhydrazine (as Azobenzene)	ND	0.34	mg/Kg wet							
Fluoranthene	ND	0.17	mg/Kg wet							
Fluorene	ND	0.17	mg/Kg wet							
Hexachlorobenzene	ND	0.34	mg/Kg wet							
Hexachlorobutadiene	ND	0.34	mg/Kg wet							
Hexachlorocyclopentadiene	ND	0.34	mg/Kg wet							
Hexachloroethane	ND	0.34	mg/Kg wet							
Indeno(1,2,3-cd)pyrene	ND	0.17	mg/Kg wet							
Isophorone	ND	0.34	mg/Kg wet							
1-Methylnaphthalene	ND	0.17	mg/Kg wet							
2-Methylnaphthalene	ND	0.17	mg/Kg wet							

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QUALITY CONTROL
Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B118238 - SW-846 3546										
Blank (B118238-BLK1)				Prepared & Analyzed: 04/01/15						
2-Methylphenol	ND	0.34	mg/Kg wet							
3/4-Methylphenol	ND	0.34	mg/Kg wet							
Naphthalene	ND	0.17	mg/Kg wet							
2-Nitroaniline	ND	0.34	mg/Kg wet							
3-Nitroaniline	ND	0.34	mg/Kg wet							
4-Nitroaniline	ND	0.34	mg/Kg wet							
Nitrobenzene	ND	0.34	mg/Kg wet							
2-Nitrophenol	ND	0.34	mg/Kg wet							
4-Nitrophenol	ND	0.66	mg/Kg wet							V-20
N-Nitrosodimethylamine	ND	0.34	mg/Kg wet							V-20
N-Nitrosodiphenylamine	ND	0.34	mg/Kg wet							
N-Nitrosodi-n-propylamine	ND	0.34	mg/Kg wet							
Pentachloronitrobenzene	ND	0.34	mg/Kg wet							V-16
Pentachlorophenol	ND	0.34	mg/Kg wet							
Phenanthrene	ND	0.17	mg/Kg wet							
Phenol	ND	0.34	mg/Kg wet							
Pyrene	ND	0.17	mg/Kg wet							
Pyridine	ND	0.34	mg/Kg wet							
1,2,4,5-Tetrachlorobenzene	ND	0.34	mg/Kg wet							
1,2,4-Trichlorobenzene	ND	0.34	mg/Kg wet							
2,4,5-Trichlorophenol	ND	0.34	mg/Kg wet							
2,4,6-Trichlorophenol	ND	0.34	mg/Kg wet							
Surrogate: 2-Fluorophenol	6.62		mg/Kg wet	6.67		99.3	30-130			
Surrogate: Phenol-d6	6.70		mg/Kg wet	6.67		100	30-130			
Surrogate: Nitrobenzene-d5	3.39		mg/Kg wet	3.33		102	30-130			
Surrogate: 2-Fluorobiphenyl	3.65		mg/Kg wet	3.33		110	30-130			
Surrogate: 2,4,6-Tribromophenol	6.16		mg/Kg wet	6.67		92.3	30-130			
Surrogate: p-Terphenyl-d14	3.66		mg/Kg wet	3.33		110	30-130			
LCS (B118238-BS1)				Prepared & Analyzed: 04/01/15						
Acenaphthene	1.46	0.17	mg/Kg wet	1.67		87.5	40-140			
Acenaphthylene	1.59	0.17	mg/Kg wet	1.67		95.2	40-140			
Acetophenone	1.51	0.34	mg/Kg wet	1.67		90.6	40-140			
Aniline	0.860	0.34	mg/Kg wet	1.67		51.6	10-140			†
Anthracene	1.61	0.17	mg/Kg wet	1.67		96.4	40-140			
Benzidine	1.39	0.66	mg/Kg wet	1.67		83.3	40-140			V-04, V-05
Benzo(a)anthracene	1.61	0.17	mg/Kg wet	1.67		96.6	40-140			
Benzo(a)pyrene	1.63	0.17	mg/Kg wet	1.67		97.9	40-140			
Benzo(b)fluoranthene	1.67	0.17	mg/Kg wet	1.67		100	40-140			
Benzo(g,h,i)perylene	1.74	0.17	mg/Kg wet	1.67		104	40-140			V-06
Benzo(k)fluoranthene	1.62	0.17	mg/Kg wet	1.67		97.4	40-140			
Benzoic Acid	0.278	1.0	mg/Kg wet	1.67		16.7	* 30-130			L-07A
Bis(2-chloroethoxy)methane	1.58	0.34	mg/Kg wet	1.67		94.8	40-140			
Bis(2-chloroethyl)ether	1.56	0.34	mg/Kg wet	1.67		93.6	40-140			
Bis(2-chloroisopropyl)ether	1.60	0.34	mg/Kg wet	1.67		95.8	40-140			
Bis(2-Ethylhexyl)phthalate	1.87	0.34	mg/Kg wet	1.67		112	40-140			
4-Bromophenylphenylether	1.67	0.34	mg/Kg wet	1.67		100	40-140			
Butylbenzylphthalate	1.75	0.34	mg/Kg wet	1.67		105	40-140			
Carbazole	1.58	0.17	mg/Kg wet	1.67		94.9	40-140			
4-Chloroaniline	0.804	0.66	mg/Kg wet	1.67		48.2	10-140			†
4-Chloro-3-methylphenol	1.52	0.66	mg/Kg wet	1.67		90.9	30-130			
2-Chloronaphthalene	1.42	0.34	mg/Kg wet	1.67		85.2	40-140			

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QUALITY CONTROL
Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B118238 - SW-846 3546										
LCS (B118238-BS1)				Prepared & Analyzed: 04/01/15						
2-Chlorophenol	1.41	0.34	mg/Kg wet	1.67		84.6	30-130			
4-Chlorophenylphenylether	1.68	0.34	mg/Kg wet	1.67		101	40-140			
Chrysene	1.69	0.17	mg/Kg wet	1.67		101	40-140			
Dibenz(a,h)anthracene	1.67	0.17	mg/Kg wet	1.67		100	40-140			
Dibenzofuran	1.63	0.34	mg/Kg wet	1.67		97.6	40-140			
Di-n-butylphthalate	1.68	0.34	mg/Kg wet	1.67		100	40-140			
1,2-Dichlorobenzene	1.33	0.34	mg/Kg wet	1.67		79.8	40-140			
1,3-Dichlorobenzene	1.25	0.34	mg/Kg wet	1.67		75.2	40-140			
1,4-Dichlorobenzene	1.30	0.34	mg/Kg wet	1.67		78.2	40-140			
3,3-Dichlorobenzidine	1.15	0.17	mg/Kg wet	1.67		68.8	20-140			†
2,4-Dichlorophenol	1.52	0.34	mg/Kg wet	1.67		90.9	30-130			
Diethylphthalate	1.64	0.34	mg/Kg wet	1.67		98.7	40-140			
2,4-Dimethylphenol	1.47	0.34	mg/Kg wet	1.67		88.4	30-130			
Dimethylphthalate	1.65	0.34	mg/Kg wet	1.67		98.8	40-140			
4,6-Dinitro-2-methylphenol	0.987	0.34	mg/Kg wet	1.67		59.2	30-130			
2,4-Dinitrophenol	0.234	0.66	mg/Kg wet	1.67		14.0 *	30-130			L-04, R-05
2,4-Dinitrotoluene	1.52	0.34	mg/Kg wet	1.67		91.1	40-140			
2,6-Dinitrotoluene	1.57	0.34	mg/Kg wet	1.67		94.4	40-140			
Di-n-octylphthalate	1.92	0.34	mg/Kg wet	1.67		115	40-140			
1,2-Diphenylhydrazine (as Azobenzene)	1.75	0.34	mg/Kg wet	1.67		105	40-140			
Fluoranthene	1.52	0.17	mg/Kg wet	1.67		91.5	40-140			
Fluorene	1.61	0.17	mg/Kg wet	1.67		96.6	40-140			
Hexachlorobenzene	1.57	0.34	mg/Kg wet	1.67		94.3	40-140			
Hexachlorobutadiene	1.55	0.34	mg/Kg wet	1.67		93.0	40-140			
Hexachlorocyclopentadiene	1.38	0.34	mg/Kg wet	1.67		82.8	40-140			
Hexachloroethane	1.36	0.34	mg/Kg wet	1.67		81.9	40-140			
Indeno(1,2,3-cd)pyrene	1.70	0.17	mg/Kg wet	1.67		102	40-140			
Isophorone	1.61	0.34	mg/Kg wet	1.67		96.6	40-140			
1-Methylnaphthalene	1.36	0.17	mg/Kg wet	1.67		81.6	40-140			
2-Methylnaphthalene	1.46	0.17	mg/Kg wet	1.67		87.4	40-140			
2-Methylphenol	1.36	0.34	mg/Kg wet	1.67		81.6	30-130			
3/4-Methylphenol	1.51	0.34	mg/Kg wet	1.67		90.5	30-130			
Naphthalene	1.46	0.17	mg/Kg wet	1.67		87.4	40-140			
2-Nitroaniline	1.67	0.34	mg/Kg wet	1.67		100	40-140			
3-Nitroaniline	1.25	0.34	mg/Kg wet	1.67		75.1	30-140			†
4-Nitroaniline	1.27	0.34	mg/Kg wet	1.67		76.1	40-140			
Nitrobenzene	1.58	0.34	mg/Kg wet	1.67		94.5	40-140			
2-Nitrophenol	1.42	0.34	mg/Kg wet	1.67		85.4	30-130			
4-Nitrophenol	1.87	0.66	mg/Kg wet	1.67		112	30-130			V-06
N-Nitrosodimethylamine	1.92	0.34	mg/Kg wet	1.67		115	40-140			
N-Nitrosodiphenylamine	2.12	0.34	mg/Kg wet	1.67		127	40-140			
N-Nitrosodi-n-propylamine	1.58	0.34	mg/Kg wet	1.67		94.7	40-140			
Pentachloronitrobenzene	1.61	0.34	mg/Kg wet	1.67		96.6	40-140			V-16
Pentachlorophenol	0.962	0.34	mg/Kg wet	1.67		57.7	30-130			
Phenanthrene	1.62	0.17	mg/Kg wet	1.67		97.5	40-140			
Phenol	1.68	0.34	mg/Kg wet	1.67		101	30-130			
Pyrene	1.69	0.17	mg/Kg wet	1.67		101	40-140			
Pyridine	0.930	0.34	mg/Kg wet	1.67		55.8	30-140			†
1,2,4,5-Tetrachlorobenzene	1.66	0.34	mg/Kg wet	1.67		99.4	40-140			
1,2,4-Trichlorobenzene	1.46	0.34	mg/Kg wet	1.67		87.9	40-140			
2,4,5-Trichlorophenol	1.68	0.34	mg/Kg wet	1.67		101	30-130			
2,4,6-Trichlorophenol	1.62	0.34	mg/Kg wet	1.67		97.0	30-130			

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QUALITY CONTROL
Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B118238 - SW-846 3546										
LCS (B118238-BS1)					Prepared & Analyzed: 04/01/15					
Surrogate: 2-Fluorophenol	6.63		mg/Kg wet	6.67		99.5	30-130			
Surrogate: Phenol-d6	6.91		mg/Kg wet	6.67		104	30-130			
Surrogate: Nitrobenzene-d5	3.43		mg/Kg wet	3.33		103	30-130			
Surrogate: 2-Fluorobiphenyl	3.92		mg/Kg wet	3.33		118	30-130			
Surrogate: 2,4,6-Tribromophenol	7.67		mg/Kg wet	6.67		115	30-130			
Surrogate: p-Terphenyl-d14	3.75		mg/Kg wet	3.33		113	30-130			
LCS Dup (B118238-BSD1)					Prepared & Analyzed: 04/01/15					
Acenaphthene	1.54	0.17	mg/Kg wet	1.67		92.7	40-140	5.79	30	
Acenaphthylene	1.67	0.17	mg/Kg wet	1.67		99.9	40-140	4.88	30	
Acetophenone	1.60	0.34	mg/Kg wet	1.67		96.1	40-140	5.89	30	
Aniline	1.03	0.34	mg/Kg wet	1.67		62.0	10-140	18.4	50	† ‡
Anthracene	1.68	0.17	mg/Kg wet	1.67		101	40-140	4.22	30	
Benzidine	1.36	0.66	mg/Kg wet	1.67		81.3	40-140	2.45	30	V-04, V-05
Benzo(a)anthracene	1.67	0.17	mg/Kg wet	1.67		100	40-140	3.90	30	
Benzo(a)pyrene	1.70	0.17	mg/Kg wet	1.67		102	40-140	4.10	30	
Benzo(b)fluoranthene	1.79	0.17	mg/Kg wet	1.67		107	40-140	6.91	30	
Benzo(g,h,i)perylene	1.76	0.17	mg/Kg wet	1.67		105	40-140	0.839	30	V-06
Benzo(k)fluoranthene	1.72	0.17	mg/Kg wet	1.67		103	40-140	5.96	30	
Benzoic Acid	0.524	1.0	mg/Kg wet	1.67		31.4	30-130	61.4 *	50	R-05 ‡
Bis(2-chloroethoxy)methane	1.67	0.34	mg/Kg wet	1.67		100	40-140	5.78	30	
Bis(2-chloroethyl)ether	1.65	0.34	mg/Kg wet	1.67		99.3	40-140	5.89	30	
Bis(2-chloroisopropyl)ether	1.71	0.34	mg/Kg wet	1.67		102	40-140	6.72	30	
Bis(2-Ethylhexyl)phthalate	1.92	0.34	mg/Kg wet	1.67		115	40-140	2.18	30	
4-Bromophenylphenylether	1.74	0.34	mg/Kg wet	1.67		105	40-140	4.08	30	
Butylbenzylphthalate	1.80	0.34	mg/Kg wet	1.67		108	40-140	2.72	30	
Carbazole	1.66	0.17	mg/Kg wet	1.67		99.3	40-140	4.55	30	
4-Chloroaniline	0.802	0.66	mg/Kg wet	1.67		48.1	10-140	0.249	30	†
4-Chloro-3-methylphenol	1.60	0.66	mg/Kg wet	1.67		95.8	30-130	5.19	30	
2-Chloronaphthalene	1.51	0.34	mg/Kg wet	1.67		90.6	40-140	6.17	30	
2-Chlorophenol	1.50	0.34	mg/Kg wet	1.67		89.8	30-130	5.90	30	
4-Chlorophenylphenylether	1.76	0.34	mg/Kg wet	1.67		105	40-140	4.48	30	
Chrysene	1.74	0.17	mg/Kg wet	1.67		105	40-140	3.17	30	
Dibenz(a,h)anthracene	1.68	0.17	mg/Kg wet	1.67		101	40-140	0.797	30	
Dibenzofuran	1.70	0.34	mg/Kg wet	1.67		102	40-140	4.35	30	
Di-n-butylphthalate	1.72	0.34	mg/Kg wet	1.67		103	40-140	2.55	30	
1,2-Dichlorobenzene	1.48	0.34	mg/Kg wet	1.67		88.7	40-140	10.5	30	
1,3-Dichlorobenzene	1.37	0.34	mg/Kg wet	1.67		82.5	40-140	9.16	30	
1,4-Dichlorobenzene	1.43	0.34	mg/Kg wet	1.67		85.6	40-140	8.99	30	
3,3-Dichlorobenzidine	1.22	0.17	mg/Kg wet	1.67		73.4	20-140	6.42	50	† ‡
2,4-Dichlorophenol	1.61	0.34	mg/Kg wet	1.67		96.4	30-130	5.81	30	
Diethylphthalate	1.72	0.34	mg/Kg wet	1.67		103	40-140	4.52	30	
2,4-Dimethylphenol	1.55	0.34	mg/Kg wet	1.67		93.1	30-130	5.25	30	
Dimethylphthalate	1.73	0.34	mg/Kg wet	1.67		104	40-140	4.76	30	
4,6-Dinitro-2-methylphenol	1.14	0.34	mg/Kg wet	1.67		68.3	30-130	14.3	30	
2,4-Dinitrophenol	0.324	0.66	mg/Kg wet	1.67		19.4 *	30-130	32.2 *	30	L-04, R-05
2,4-Dinitrotoluene	1.59	0.34	mg/Kg wet	1.67		95.3	40-140	4.46	30	
2,6-Dinitrotoluene	1.62	0.34	mg/Kg wet	1.67		97.0	40-140	2.76	30	
Di-n-octylphthalate	2.06	0.34	mg/Kg wet	1.67		123	40-140	6.98	30	
1,2-Diphenylhydrazine (as Azobenzene)	1.84	0.34	mg/Kg wet	1.67		110	40-140	4.69	30	
Fluoranthene	1.62	0.17	mg/Kg wet	1.67		97.5	40-140	6.35	30	
Fluorene	1.69	0.17	mg/Kg wet	1.67		101	40-140	4.67	30	

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QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes

Batch B118238 - SW-846 3546

LCS Dup (B118238-BSD1)

Prepared & Analyzed: 04/01/15

Hexachlorobenzene	1.68	0.34	mg/Kg wet	1.67		101	40-140	6.44	30	
Hexachlorobutadiene	1.72	0.34	mg/Kg wet	1.67		103	40-140	10.3	30	
Hexachlorocyclopentadiene	1.49	0.34	mg/Kg wet	1.67		89.6	40-140	7.89	30	
Hexachloroethane	1.51	0.34	mg/Kg wet	1.67		90.5	40-140	10.0	30	
Indeno(1,2,3-cd)pyrene	1.69	0.17	mg/Kg wet	1.67		101	40-140	0.766	30	
Isophorone	1.70	0.34	mg/Kg wet	1.67		102	40-140	5.73	30	
1-Methylnaphthalene	1.46	0.17	mg/Kg wet	1.67		87.6	40-140	7.14	30	
2-Methylnaphthalene	1.55	0.17	mg/Kg wet	1.67		93.2	40-140	6.40	30	
2-Methylphenol	1.42	0.34	mg/Kg wet	1.67		85.3	30-130	4.36	30	
3/4-Methylphenol	1.58	0.34	mg/Kg wet	1.67		94.5	30-130	4.35	30	
Naphthalene	1.57	0.17	mg/Kg wet	1.67		94.0	40-140	7.23	30	
2-Nitroaniline	1.70	0.34	mg/Kg wet	1.67		102	40-140	1.66	30	
3-Nitroaniline	1.23	0.34	mg/Kg wet	1.67		74.0	30-140	1.56	30	†
4-Nitroaniline	1.31	0.34	mg/Kg wet	1.67		78.8	40-140	3.51	30	
Nitrobenzene	1.66	0.34	mg/Kg wet	1.67		99.8	40-140	5.50	30	
2-Nitrophenol	1.49	0.34	mg/Kg wet	1.67		89.5	30-130	4.71	30	
4-Nitrophenol	1.92	0.66	mg/Kg wet	1.67		115	30-130	2.92	50	V-06 ‡
N-Nitrosodimethylamine	1.92	0.34	mg/Kg wet	1.67		115	40-140	0.156	30	
N-Nitrosodiphenylamine	2.21	0.34	mg/Kg wet	1.67		133	40-140	4.16	30	
N-Nitrosodi-n-propylamine	1.69	0.34	mg/Kg wet	1.67		102	40-140	6.99	30	
Pentachloronitrobenzene	1.73	0.34	mg/Kg wet	1.67		104	40-140	7.32	30	V-16
Pentachlorophenol	1.15	0.34	mg/Kg wet	1.67		68.9	30-130	17.7	30	
Phenanthrene	1.71	0.17	mg/Kg wet	1.67		102	40-140	4.94	30	
Phenol	1.69	0.34	mg/Kg wet	1.67		102	30-130	0.770	30	
Pyrene	1.74	0.17	mg/Kg wet	1.67		104	40-140	2.86	30	
Pyridine	1.02	0.34	mg/Kg wet	1.67		61.2	30-140	9.23	30	†
1,2,4,5-Tetrachlorobenzene	1.75	0.34	mg/Kg wet	1.67		105	40-140	5.48	30	
1,2,4-Trichlorobenzene	1.60	0.34	mg/Kg wet	1.67		96.2	40-140	9.04	30	
2,4,5-Trichlorophenol	1.75	0.34	mg/Kg wet	1.67		105	30-130	3.67	30	
2,4,6-Trichlorophenol	1.69	0.34	mg/Kg wet	1.67		101	30-130	4.32	30	
Surrogate: 2-Fluorophenol	6.84		mg/Kg wet	6.67		103	30-130			
Surrogate: Phenol-d6	7.04		mg/Kg wet	6.67		106	30-130			
Surrogate: Nitrobenzene-d5	3.52		mg/Kg wet	3.33		106	30-130			
Surrogate: 2-Fluorobiphenyl	3.96		mg/Kg wet	3.33		119	30-130			
Surrogate: 2,4,6-Tribromophenol	7.80		mg/Kg wet	6.67		117	30-130			
Surrogate: p-Terphenyl-d14	3.77		mg/Kg wet	3.33		113	30-130			

Matrix Spike (B118238-MS1)

Source: 15C1102-12

Prepared & Analyzed: 04/01/15

Acenaphthene	1.22	0.19	mg/Kg dry	1.82	0.160	58.4	40-140			
Acenaphthylene	1.34	0.19	mg/Kg dry	1.82	ND	73.5	40-140			
Acetophenone	1.28	0.37	mg/Kg dry	1.82	ND	70.0	40-140			
Aniline	0.635	0.37	mg/Kg dry	1.82	ND	34.8 *	40-140			MS-22
Anthracene	1.51	0.19	mg/Kg dry	1.82	0.314	65.8	40-140			
Benzidine	0.105	0.72	mg/Kg dry	1.82	ND	5.78 *	40-140			MS-09, V-04, V-05
Benzo(a)anthracene	2.00	0.19	mg/Kg dry	1.82	0.780	67.1	40-140			
Benzo(a)pyrene	1.97	0.19	mg/Kg dry	1.82	0.743	67.1	40-140			
Benzo(b)fluoranthene	2.16	0.19	mg/Kg dry	1.82	0.879	70.4	40-140			
Benzo(g,h,i)perylene	1.47	0.19	mg/Kg dry	1.82	0.410	58.2	40-140			V-06
Benzo(k)fluoranthene	1.76	0.19	mg/Kg dry	1.82	0.370	76.2	40-140			
Benzoic Acid	0.332	1.1	mg/Kg dry	1.82	ND	18.2 *	40-140			MS-09
Bis(2-chloroethoxy)methane	1.31	0.37	mg/Kg dry	1.82	ND	72.1	40-140			
Bis(2-chloroethyl)ether	1.26	0.37	mg/Kg dry	1.82	ND	69.0	40-140			

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QUALITY CONTROL
Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B118238 - SW-846 3546										
Matrix Spike (B118238-MS1)	Source: 15C1102-12			Prepared & Analyzed: 04/01/15						
Bis(2-chloroisopropyl)ether	1.36	0.37	mg/Kg dry	1.82	ND	74.9	40-140			
Bis(2-Ethylhexyl)phthalate	1.59	0.37	mg/Kg dry	1.82	ND	87.1	40-140			
4-Bromophenylphenylether	1.33	0.37	mg/Kg dry	1.82	ND	72.8	40-140			
Butylbenzylphthalate	1.46	0.37	mg/Kg dry	1.82	ND	80.1	40-140			
Carbazole	1.32	0.19	mg/Kg dry	1.82	0.118	66.1	40-140			
4-Chloroaniline	0.629	0.72	mg/Kg dry	1.82	ND	34.5	* 40-140			MS-22
4-Chloro-3-methylphenol	1.26	0.72	mg/Kg dry	1.82	ND	69.3	30-130			
2-Chloronaphthalene	1.22	0.37	mg/Kg dry	1.82	ND	66.9	40-140			
2-Chlorophenol	1.17	0.37	mg/Kg dry	1.82	ND	64.3	30-130			
4-Chlorophenylphenylether	1.38	0.37	mg/Kg dry	1.82	ND	75.9	40-140			
Chrysene	2.04	0.19	mg/Kg dry	1.82	0.743	71.0	40-140			
Dibenz(a,h)anthracene	1.16	0.19	mg/Kg dry	1.82	ND	63.6	40-140			
Dibenzofuran	1.36	0.37	mg/Kg dry	1.82	0.101	68.9	40-140			
Di-n-butylphthalate	1.34	0.37	mg/Kg dry	1.82	ND	73.8	40-140			
1,2-Dichlorobenzene	1.14	0.37	mg/Kg dry	1.82	ND	62.8	40-140			
1,3-Dichlorobenzene	1.09	0.37	mg/Kg dry	1.82	ND	59.8	40-140			
1,4-Dichlorobenzene	1.13	0.37	mg/Kg dry	1.82	ND	62.2	40-140			
3,3-Dichlorobenzidine	0.952	0.19	mg/Kg dry	1.82	ND	52.3	40-140			
2,4-Dichlorophenol	1.27	0.37	mg/Kg dry	1.82	ND	69.7	30-130			
Diethylphthalate	1.38	0.37	mg/Kg dry	1.82	ND	75.7	40-140			
2,4-Dimethylphenol	1.15	0.37	mg/Kg dry	1.82	ND	63.0	30-130			
Dimethylphthalate	1.38	0.37	mg/Kg dry	1.82	ND	75.8	40-140			
4,6-Dinitro-2-methylphenol	ND	0.37	mg/Kg dry	1.82	ND	*	30-130			MS-09
2,4-Dinitrophenol	0.120	0.72	mg/Kg dry	1.82	ND	6.60	* 30-130			MS-09
2,4-Dinitrotoluene	1.21	0.37	mg/Kg dry	1.82	ND	66.4	40-140			
2,6-Dinitrotoluene	1.25	0.37	mg/Kg dry	1.82	ND	68.4	40-140			
Di-n-octylphthalate	1.63	0.37	mg/Kg dry	1.82	ND	89.6	40-140			
1,2-Diphenylhydrazine (as Azobenzene)	1.39	0.37	mg/Kg dry	1.82	ND	76.5	40-140			
Fluoranthene	2.67	0.19	mg/Kg dry	1.82	1.52	63.1	40-140			
Fluorene	1.37	0.19	mg/Kg dry	1.82	0.176	65.7	40-140			
Hexachlorobenzene	1.27	0.37	mg/Kg dry	1.82	ND	69.5	40-140			
Hexachlorobutadiene	1.36	0.37	mg/Kg dry	1.82	ND	74.5	40-140			
Hexachlorocyclopentadiene	0.413	0.37	mg/Kg dry	1.82	ND	22.7	* 30-130			MS-09
Hexachloroethane	1.08	0.37	mg/Kg dry	1.82	ND	59.5	40-140			
Indeno(1,2,3-cd)pyrene	1.48	0.19	mg/Kg dry	1.82	0.448	56.8	40-140			
Isophorone	1.37	0.37	mg/Kg dry	1.82	ND	75.0	40-140			
1-Methylnaphthalene	1.19	0.19	mg/Kg dry	1.82	ND	65.5	40-140			
2-Methylnaphthalene	1.26	0.19	mg/Kg dry	1.82	ND	69.0	40-140			
2-Methylphenol	1.11	0.37	mg/Kg dry	1.82	ND	61.1	30-130			
3/4-Methylphenol	1.21	0.37	mg/Kg dry	1.82	ND	66.3	30-130			
Naphthalene	1.28	0.19	mg/Kg dry	1.82	0.125	63.6	40-140			
2-Nitroaniline	1.46	0.37	mg/Kg dry	1.82	ND	80.0	40-140			
3-Nitroaniline	1.09	0.37	mg/Kg dry	1.82	ND	59.7	40-140			
4-Nitroaniline	1.10	0.37	mg/Kg dry	1.82	ND	60.5	40-140			
Nitrobenzene	1.35	0.37	mg/Kg dry	1.82	ND	74.2	40-140			
2-Nitrophenol	1.08	0.37	mg/Kg dry	1.82	ND	59.3	30-130			
4-Nitrophenol	1.62	0.72	mg/Kg dry	1.82	ND	89.0	30-130			V-06
N-Nitrosodimethylamine	1.57	0.37	mg/Kg dry	1.82	ND	86.4	40-140			
N-Nitrosodiphenylamine	1.66	0.37	mg/Kg dry	1.82	ND	90.9	40-140			
N-Nitrosodi-n-propylamine	1.30	0.37	mg/Kg dry	1.82	ND	71.2	40-140			
Pentachloronitrobenzene	1.28	0.37	mg/Kg dry	1.82	ND	70.4	40-140			V-16
Pentachlorophenol	0.861	0.37	mg/Kg dry	1.82	ND	47.3	30-130			

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QUALITY CONTROL
Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B118238 - SW-846 3546										
Matrix Spike (B118238-MS1)	Source: 15C1102-12			Prepared & Analyzed: 04/01/15						
Phenanthrene	1.83	0.19	mg/Kg dry	1.82	1.21	34.4 *	40-140			MS-22
Phenol	1.31	0.37	mg/Kg dry	1.82	ND	71.9	30-130			
Pyrene	2.74	0.19	mg/Kg dry	1.82	1.39	74.1	40-140			
Pyridine	0.865	0.37	mg/Kg dry	1.82	ND	47.5	40-140			
1,2,4,5-Tetrachlorobenzene	1.35	0.37	mg/Kg dry	1.82	ND	74.1	40-140			
1,2,4-Trichlorobenzene	1.28	0.37	mg/Kg dry	1.82	ND	70.2	40-140			
2,4,5-Trichlorophenol	1.34	0.37	mg/Kg dry	1.82	ND	73.8	30-130			
2,4,6-Trichlorophenol	1.29	0.37	mg/Kg dry	1.82	ND	71.1	30-130			
Surrogate: 2-Fluorophenol	5.28		mg/Kg dry	7.29		72.5	30-130			
Surrogate: Phenol-d6	5.54		mg/Kg dry	7.29		76.1	30-130			
Surrogate: Nitrobenzene-d5	2.87		mg/Kg dry	3.64		78.9	30-130			
Surrogate: 2-Fluorobiphenyl	3.09		mg/Kg dry	3.64		84.9	30-130			
Surrogate: 2,4,6-Tribromophenol	6.04		mg/Kg dry	7.29		82.9	30-130			
Surrogate: p-Terphenyl-d14	3.02		mg/Kg dry	3.64		82.9	30-130			
Matrix Spike Dup (B118238-MSD1)	Source: 15C1102-12			Prepared & Analyzed: 04/01/15						
Acenaphthene	1.37	0.19	mg/Kg dry	1.82	0.160	66.4	40-140	11.2	30	
Acenaphthylene	1.46	0.19	mg/Kg dry	1.82	ND	80.0	40-140	8.55	30	
Acetophenone	1.37	0.37	mg/Kg dry	1.82	ND	75.1	40-140	7.06	30	
Aniline	0.755	0.37	mg/Kg dry	1.82	ND	41.4	40-140	17.3	30	
Anthracene	1.59	0.19	mg/Kg dry	1.82	0.314	70.2	40-140	5.23	30	
Benzidine	0.107	0.72	mg/Kg dry	1.82	ND	5.90 *	40-140		30	V-04, V-05, MS-09
Benzo(a)anthracene	2.22	0.19	mg/Kg dry	1.82	0.780	78.8	40-140	10.1	30	
Benzo(a)pyrene	2.16	0.19	mg/Kg dry	1.82	0.743	77.6	40-140	9.23	30	
Benzo(b)fluoranthene	2.43	0.19	mg/Kg dry	1.82	0.879	85.2	40-140	11.7	30	
Benzo(g,h,i)perylene	1.41	0.19	mg/Kg dry	1.82	0.410	55.0	40-140	4.02	30	V-06
Benzo(k)fluoranthene	1.90	0.19	mg/Kg dry	1.82	0.370	84.1	40-140	7.86	30	
Benzoic Acid	0.436	1.1	mg/Kg dry	1.82	ND	23.9 *	40-140	27.0	30	MS-09
Bis(2-chloroethoxy)methane	1.43	0.37	mg/Kg dry	1.82	ND	78.8	40-140	8.83	30	
Bis(2-chloroethyl)ether	1.38	0.37	mg/Kg dry	1.82	ND	75.7	40-140	9.21	30	
Bis(2-chloroisopropyl)ether	1.45	0.37	mg/Kg dry	1.82	ND	79.9	40-140	6.46	30	
Bis(2-Ethylhexyl)phthalate	1.77	0.37	mg/Kg dry	1.82	ND	97.4	40-140	11.2	30	
4-Bromophenylphenylether	1.43	0.37	mg/Kg dry	1.82	ND	78.7	40-140	7.79	30	
Butylbenzylphthalate	1.59	0.37	mg/Kg dry	1.82	ND	87.6	40-140	8.92	30	
Carbazole	1.48	0.19	mg/Kg dry	1.82	0.118	74.6	40-140	11.0	30	
4-Chloroaniline	0.776	0.72	mg/Kg dry	1.82	ND	42.6	40-140	21.0	30	
4-Chloro-3-methylphenol	1.38	0.72	mg/Kg dry	1.82	ND	76.0	30-130	9.11	30	
2-Chloronaphthalene	1.32	0.37	mg/Kg dry	1.82	ND	72.6	40-140	8.11	30	
2-Chlorophenol	1.27	0.37	mg/Kg dry	1.82	ND	69.9	30-130	8.29	30	
4-Chlorophenylphenylether	1.50	0.37	mg/Kg dry	1.82	ND	82.1	40-140	7.90	30	
Chrysene	2.32	0.19	mg/Kg dry	1.82	0.743	86.3	40-140	12.8	30	
Dibenz(a,h)anthracene	1.16	0.19	mg/Kg dry	1.82	ND	63.8	40-140	0.188	30	
Dibenzofuran	1.50	0.37	mg/Kg dry	1.82	0.101	76.9	40-140	10.2	30	
Di-n-butylphthalate	1.46	0.37	mg/Kg dry	1.82	ND	80.4	40-140	8.56	30	
1,2-Dichlorobenzene	1.22	0.37	mg/Kg dry	1.82	ND	66.7	40-140	6.11	30	
1,3-Dichlorobenzene	1.17	0.37	mg/Kg dry	1.82	ND	64.1	40-140	6.91	30	
1,4-Dichlorobenzene	1.20	0.37	mg/Kg dry	1.82	ND	65.7	40-140	5.60	30	
3,3-Dichlorobenzidine	1.04	0.19	mg/Kg dry	1.82	ND	56.9	40-140	8.43	30	
2,4-Dichlorophenol	1.38	0.37	mg/Kg dry	1.82	ND	75.5	30-130	8.01	30	
Diethylphthalate	1.50	0.37	mg/Kg dry	1.82	ND	82.2	40-140	8.18	30	
2,4-Dimethylphenol	1.24	0.37	mg/Kg dry	1.82	ND	68.0	30-130	7.72	30	
Dimethylphthalate	1.49	0.37	mg/Kg dry	1.82	ND	81.9	40-140	7.78	30	

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QUALITY CONTROL
Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B118238 - SW-846 3546										
Matrix Spike Dup (B118238-MSD1)	Source: 15C1102-12			Prepared & Analyzed: 04/01/15						
4,6-Dinitro-2-methylphenol	ND	0.37	mg/Kg dry	1.82	ND	*	30-130		30	MS-09
2,4-Dinitrophenol	0.0878	0.72	mg/Kg dry	1.82	ND	4.82	*	30-130		MS-09
2,4-Dinitrotoluene	1.32	0.37	mg/Kg dry	1.82	ND	72.4		40-140	8.67	30
2,6-Dinitrotoluene	1.33	0.37	mg/Kg dry	1.82	ND	73.3		40-140	6.83	30
Di-n-octylphthalate	1.73	0.37	mg/Kg dry	1.82	ND	95.2		40-140	6.02	30
1,2-Diphenylhydrazine (as Azobenzene)	1.50	0.37	mg/Kg dry	1.82	ND	82.6		40-140	7.57	30
Fluoranthene	2.86	0.19	mg/Kg dry	1.82	1.52	73.5		40-140	6.85	30
Fluorene	1.50	0.19	mg/Kg dry	1.82	0.176	72.9		40-140	9.12	30
Hexachlorobenzene	1.36	0.37	mg/Kg dry	1.82	ND	74.5		40-140	6.89	30
Hexachlorobutadiene	1.48	0.37	mg/Kg dry	1.82	ND	81.1		40-140	8.38	30
Hexachlorocyclopentadiene	0.420	0.37	mg/Kg dry	1.82	ND	23.1	*	30-130	1.84	30 MS-09
Hexachloroethane	1.12	0.37	mg/Kg dry	1.82	ND	61.7		40-140	3.66	30
Indeno(1,2,3-cd)pyrene	1.42	0.19	mg/Kg dry	1.82	0.448	53.2		40-140	4.52	30
Isophorone	1.48	0.37	mg/Kg dry	1.82	ND	81.0		40-140	7.67	30
1-Methylnaphthalene	1.30	0.19	mg/Kg dry	1.82	ND	71.2		40-140	8.22	30
2-Methylnaphthalene	1.38	0.19	mg/Kg dry	1.82	ND	75.8		40-140	9.28	30
2-Methylphenol	1.17	0.37	mg/Kg dry	1.82	ND	64.0		30-130	4.64	30
3/4-Methylphenol	1.32	0.37	mg/Kg dry	1.82	ND	72.6		30-130	9.02	30
Naphthalene	1.41	0.19	mg/Kg dry	1.82	0.125	70.6		40-140	9.44	30
2-Nitroaniline	1.56	0.37	mg/Kg dry	1.82	ND	85.9		40-140	7.11	30
3-Nitroaniline	1.20	0.37	mg/Kg dry	1.82	ND	66.0		40-140	9.93	30
4-Nitroaniline	1.18	0.37	mg/Kg dry	1.82	ND	65.0		40-140	7.08	30
Nitrobenzene	1.46	0.37	mg/Kg dry	1.82	ND	80.3		40-140	7.89	30
2-Nitrophenol	1.15	0.37	mg/Kg dry	1.82	ND	63.1		30-130	6.21	30
4-Nitrophenol	1.77	0.72	mg/Kg dry	1.82	ND	96.9		30-130	8.47	30 V-06
N-Nitrosodimethylamine	1.67	0.37	mg/Kg dry	1.82	ND	91.7		40-140	5.98	30
N-Nitrosodiphenylamine	1.80	0.37	mg/Kg dry	1.82	ND	98.7		40-140	8.23	30
N-Nitrosodi-n-propylamine	1.42	0.37	mg/Kg dry	1.82	ND	77.8		40-140	8.86	30
Pentachloronitrobenzene	1.38	0.37	mg/Kg dry	1.82	ND	75.9		40-140	7.55	30 V-16
Pentachlorophenol	0.912	0.37	mg/Kg dry	1.82	ND	50.1		30-130	5.75	30
Phenanthrene	2.25	0.19	mg/Kg dry	1.82	1.21	56.9		40-140	20.1	30
Phenol	1.44	0.37	mg/Kg dry	1.82	ND	78.8		30-130	9.21	30
Pyrene	2.99	0.19	mg/Kg dry	1.82	1.39	87.8		40-140	8.67	30
Pyridine	0.877	0.37	mg/Kg dry	1.82	ND	48.1		40-140	1.30	30
1,2,4,5-Tetrachlorobenzene	1.48	0.37	mg/Kg dry	1.82	ND	81.3		40-140	9.29	30
1,2,4-Trichlorobenzene	1.40	0.37	mg/Kg dry	1.82	ND	76.6		40-140	8.80	30
2,4,5-Trichlorophenol	1.48	0.37	mg/Kg dry	1.82	ND	81.1		30-130	9.42	30
2,4,6-Trichlorophenol	1.39	0.37	mg/Kg dry	1.82	ND	76.3		30-130	7.06	30
Surrogate: 2-Fluorophenol	5.75		mg/Kg dry	7.29		79.0		30-130		
Surrogate: Phenol-d6	5.98		mg/Kg dry	7.29		82.0		30-130		
Surrogate: Nitrobenzene-d5	3.14		mg/Kg dry	3.64		86.3		30-130		
Surrogate: 2-Fluorobiphenyl	3.39		mg/Kg dry	3.64		93.1		30-130		
Surrogate: 2,4,6-Tribromophenol	6.76		mg/Kg dry	7.29		92.8		30-130		
Surrogate: p-Terphenyl-d14	3.42		mg/Kg dry	3.64		93.8		30-130		

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QUALITY CONTROL
Organochloride Pesticides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes

Batch B118124 - SW-846 3546
Blank (B118124-BLK1)

Prepared & Analyzed: 03/31/15

alpha-Chlordane	ND	0.0050	mg/Kg wet							
alpha-Chlordane [2C]	ND	0.0050	mg/Kg wet							
gamma-Chlordane	ND	0.0050	mg/Kg wet							
gamma-Chlordane [2C]	ND	0.0050	mg/Kg wet							
Alachlor	ND	0.020	mg/Kg wet							
Alachlor [2C]	ND	0.020	mg/Kg wet							
Aldrin	ND	0.0050	mg/Kg wet							
Aldrin [2C]	ND	0.0050	mg/Kg wet							
alpha-BHC	ND	0.0050	mg/Kg wet							
alpha-BHC [2C]	ND	0.0050	mg/Kg wet							
beta-BHC	ND	0.0050	mg/Kg wet							
beta-BHC [2C]	ND	0.0050	mg/Kg wet							
delta-BHC	ND	0.0050	mg/Kg wet							
delta-BHC [2C]	ND	0.0050	mg/Kg wet							
gamma-BHC (Lindane)	ND	0.0020	mg/Kg wet							
gamma-BHC (Lindane) [2C]	ND	0.0020	mg/Kg wet							
Chlordane	ND	0.020	mg/Kg wet							
Chlordane [2C]	ND	0.020	mg/Kg wet							
4,4'-DDD	ND	0.0040	mg/Kg wet							
4,4'-DDD [2C]	ND	0.0040	mg/Kg wet							
4,4'-DDE	ND	0.0040	mg/Kg wet							
4,4'-DDE [2C]	ND	0.0040	mg/Kg wet							
4,4'-DDT	ND	0.0040	mg/Kg wet							
4,4'-DDT [2C]	ND	0.0040	mg/Kg wet							
Dieldrin	ND	0.0040	mg/Kg wet							
Dieldrin [2C]	ND	0.0040	mg/Kg wet							
Endosulfan I	ND	0.0050	mg/Kg wet							
Endosulfan I [2C]	ND	0.0050	mg/Kg wet							
Endosulfan II	ND	0.0080	mg/Kg wet							
Endosulfan II [2C]	ND	0.0080	mg/Kg wet							
Endosulfan Sulfate	ND	0.0080	mg/Kg wet							
Endosulfan Sulfate [2C]	ND	0.0080	mg/Kg wet							
Endrin	ND	0.0080	mg/Kg wet							
Endrin [2C]	ND	0.0080	mg/Kg wet							
Endrin Aldehyde	ND	0.0080	mg/Kg wet							
Endrin Aldehyde [2C]	ND	0.0080	mg/Kg wet							
Endrin Ketone	ND	0.0080	mg/Kg wet							
Endrin Ketone [2C]	ND	0.0080	mg/Kg wet							
Heptachlor	ND	0.0050	mg/Kg wet							
Heptachlor [2C]	ND	0.0050	mg/Kg wet							
Heptachlor Epoxide	ND	0.0050	mg/Kg wet							
Heptachlor Epoxide [2C]	ND	0.0050	mg/Kg wet							
Hexachlorobenzene	ND	0.0060	mg/Kg wet							
Hexachlorobenzene [2C]	ND	0.0060	mg/Kg wet							
Methoxychlor	ND	0.050	mg/Kg wet							
Methoxychlor [2C]	ND	0.050	mg/Kg wet							
Toxaphene	ND	0.10	mg/Kg wet							
Toxaphene [2C]	ND	0.10	mg/Kg wet							
Surrogate: Decachlorobiphenyl	0.191		mg/Kg wet	0.200		95.3	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.184		mg/Kg wet	0.200		91.8	30-150			
Surrogate: Tetrachloro-m-xylene	0.176		mg/Kg wet	0.200		87.9	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.174		mg/Kg wet	0.200		86.9	30-150			

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QUALITY CONTROL

Organochloride Pesticides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B118124 - SW-846 3546										
LCS (B118124-BS1)				Prepared & Analyzed: 03/31/15						
Alachlor	0.10	0.020	mg/Kg wet	0.100		101	40-140			
Alachlor [2C]	0.093	0.020	mg/Kg wet	0.100		93.2	40-140			
Aldrin	0.11	0.0050	mg/Kg wet	0.100		105	40-140			
Aldrin [2C]	0.10	0.0050	mg/Kg wet	0.100		105	40-140			
alpha-BHC	0.11	0.0050	mg/Kg wet	0.100		107	40-140			
alpha-BHC [2C]	0.10	0.0050	mg/Kg wet	0.100		101	40-140			
beta-BHC	0.099	0.0050	mg/Kg wet	0.100		99.3	40-140			
beta-BHC [2C]	0.097	0.0050	mg/Kg wet	0.100		96.8	40-140			
delta-BHC	0.10	0.0050	mg/Kg wet	0.100		101	40-140			
delta-BHC [2C]	0.098	0.0050	mg/Kg wet	0.100		97.9	40-140			
gamma-BHC (Lindane)	0.10	0.0020	mg/Kg wet	0.100		103	40-140			
gamma-BHC (Lindane) [2C]	0.10	0.0020	mg/Kg wet	0.100		103	40-140			
4,4'-DDD	0.11	0.0040	mg/Kg wet	0.100		109	40-140			
4,4'-DDD [2C]	0.11	0.0040	mg/Kg wet	0.100		107	40-140			
4,4'-DDE	0.11	0.0040	mg/Kg wet	0.100		110	40-140			
4,4'-DDE [2C]	0.11	0.0040	mg/Kg wet	0.100		108	40-140			
4,4'-DDT	0.11	0.0040	mg/Kg wet	0.100		111	40-140			
4,4'-DDT [2C]	0.11	0.0040	mg/Kg wet	0.100		107	40-140			
Dieldrin	0.10	0.0040	mg/Kg wet	0.100		99.8	40-140			
Dieldrin [2C]	0.10	0.0040	mg/Kg wet	0.100		102	40-140			
Endosulfan I	0.10	0.0050	mg/Kg wet	0.100		103	40-140			
Endosulfan I [2C]	0.10	0.0050	mg/Kg wet	0.100		99.7	40-140			
Endosulfan II	0.10	0.0080	mg/Kg wet	0.100		105	40-140			
Endosulfan II [2C]	0.10	0.0080	mg/Kg wet	0.100		101	40-140			
Endosulfan Sulfate	0.11	0.0080	mg/Kg wet	0.100		105	40-140			
Endosulfan Sulfate [2C]	0.10	0.0080	mg/Kg wet	0.100		102	40-140			
Endrin	0.11	0.0080	mg/Kg wet	0.100		109	40-140			
Endrin [2C]	0.10	0.0080	mg/Kg wet	0.100		105	40-140			
Endrin Aldehyde	0.095	0.0080	mg/Kg wet	0.100		95.0	40-140			
Endrin Aldehyde [2C]	0.090	0.0080	mg/Kg wet	0.100		89.6	40-140			
Endrin Ketone	0.11	0.0080	mg/Kg wet	0.100		105	40-140			
Endrin Ketone [2C]	0.099	0.0080	mg/Kg wet	0.100		99.3	40-140			
Heptachlor	0.10	0.0050	mg/Kg wet	0.100		103	40-140			
Heptachlor [2C]	0.099	0.0050	mg/Kg wet	0.100		99.4	40-140			
Heptachlor Epoxide	0.10	0.0050	mg/Kg wet	0.100		103	40-140			
Heptachlor Epoxide [2C]	0.099	0.0050	mg/Kg wet	0.100		99.0	40-140			
Hexachlorobenzene	0.11	0.0060	mg/Kg wet	0.100		106	40-140			
Hexachlorobenzene [2C]	0.10	0.0060	mg/Kg wet	0.100		102	40-140			
Methoxychlor	0.11	0.050	mg/Kg wet	0.100		110	40-140			
Methoxychlor [2C]	0.11	0.050	mg/Kg wet	0.100		106	40-140			
Surrogate: Decachlorobiphenyl	0.196		mg/Kg wet	0.200		98.0	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.185		mg/Kg wet	0.200		92.5	30-150			
Surrogate: Tetrachloro-m-xylene	0.188		mg/Kg wet	0.200		94.0	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.186		mg/Kg wet	0.200		93.2	30-150			

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QUALITY CONTROL
Organochloride Pesticides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B118124 - SW-846 3546										
LCS Dup (B118124-BSD1)				Prepared & Analyzed: 03/31/15						
Alachlor	0.10	0.020	mg/Kg wet	0.100		104	40-140	2.62	30	
Alachlor [2C]	0.093	0.020	mg/Kg wet	0.100		93.0	40-140	0.214	30	
Aldrin	0.10	0.0050	mg/Kg wet	0.100		105	40-140	0.466	30	
Aldrin [2C]	0.11	0.0050	mg/Kg wet	0.100		105	40-140	0.381	30	
alpha-BHC	0.11	0.0050	mg/Kg wet	0.100		108	40-140	0.440	30	
alpha-BHC [2C]	0.10	0.0050	mg/Kg wet	0.100		101	40-140	0.0129	30	
beta-BHC	0.099	0.0050	mg/Kg wet	0.100		98.7	40-140	0.592	30	
beta-BHC [2C]	0.097	0.0050	mg/Kg wet	0.100		96.8	40-140	0.0145	30	
delta-BHC	0.10	0.0050	mg/Kg wet	0.100		99.6	40-140	0.942	30	
delta-BHC [2C]	0.097	0.0050	mg/Kg wet	0.100		97.2	40-140	0.746	30	
gamma-BHC (Lindane)	0.10	0.0020	mg/Kg wet	0.100		104	40-140	0.893	30	
gamma-BHC (Lindane) [2C]	0.10	0.0020	mg/Kg wet	0.100		104	40-140	0.584	30	
4,4'-DDD	0.11	0.0040	mg/Kg wet	0.100		107	40-140	1.39	30	
4,4'-DDD [2C]	0.11	0.0040	mg/Kg wet	0.100		107	40-140	0.0300	30	
4,4'-DDE	0.11	0.0040	mg/Kg wet	0.100		109	40-140	0.649	30	
4,4'-DDE [2C]	0.11	0.0040	mg/Kg wet	0.100		108	40-140	0.555	30	
4,4'-DDT	0.11	0.0040	mg/Kg wet	0.100		106	40-140	4.71	30	
4,4'-DDT [2C]	0.10	0.0040	mg/Kg wet	0.100		104	40-140	2.27	30	
Dieldrin	0.099	0.0040	mg/Kg wet	0.100		99.4	40-140	0.410	30	
Dieldrin [2C]	0.10	0.0040	mg/Kg wet	0.100		104	40-140	1.14	30	
Endosulfan I	0.10	0.0050	mg/Kg wet	0.100		102	40-140	0.540	30	
Endosulfan I [2C]	0.10	0.0050	mg/Kg wet	0.100		101	40-140	1.08	30	
Endosulfan II	0.10	0.0080	mg/Kg wet	0.100		104	40-140	0.909	30	
Endosulfan II [2C]	0.10	0.0080	mg/Kg wet	0.100		102	40-140	0.830	30	
Endosulfan Sulfate	0.10	0.0080	mg/Kg wet	0.100		103	40-140	1.72	30	
Endosulfan Sulfate [2C]	0.10	0.0080	mg/Kg wet	0.100		102	40-140	0.00982	30	
Endrin	0.11	0.0080	mg/Kg wet	0.100		107	40-140	1.70	30	
Endrin [2C]	0.11	0.0080	mg/Kg wet	0.100		105	40-140	0.256	30	
Endrin Aldehyde	0.095	0.0080	mg/Kg wet	0.100		95.2	40-140	0.116	30	
Endrin Aldehyde [2C]	0.091	0.0080	mg/Kg wet	0.100		91.4	40-140	2.02	30	
Endrin Ketone	0.10	0.0080	mg/Kg wet	0.100		103	40-140	2.52	30	
Endrin Ketone [2C]	0.098	0.0080	mg/Kg wet	0.100		98.3	40-140	0.941	30	
Heptachlor	0.10	0.0050	mg/Kg wet	0.100		101	40-140	1.12	30	
Heptachlor [2C]	0.099	0.0050	mg/Kg wet	0.100		99.5	40-140	0.0925	30	
Heptachlor Epoxide	0.10	0.0050	mg/Kg wet	0.100		103	40-140	0.0300	30	
Heptachlor Epoxide [2C]	0.10	0.0050	mg/Kg wet	0.100		100	40-140	1.33	30	
Hexachlorobenzene	0.11	0.0060	mg/Kg wet	0.100		106	40-140	0.0710	30	
Hexachlorobenzene [2C]	0.10	0.0060	mg/Kg wet	0.100		102	40-140	0.458	30	
Methoxychlor	0.10	0.050	mg/Kg wet	0.100		104	40-140	5.12	30	
Methoxychlor [2C]	0.10	0.050	mg/Kg wet	0.100		104	40-140	2.43	30	
Surrogate: Decachlorobiphenyl	0.189		mg/Kg wet	0.200		94.7	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.181		mg/Kg wet	0.200		90.5	30-150			
Surrogate: Tetrachloro-m-xylene	0.185		mg/Kg wet	0.200		92.5	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.182		mg/Kg wet	0.200		90.8	30-150			

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QUALITY CONTROL
Polychlorinated Biphenyls By GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B118123 - SW-846 3546										
Blank (B118123-BLK1)				Prepared & Analyzed: 03/31/15						
Aroclor-1016	ND	0.020	mg/Kg wet							
Aroclor-1016 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1221	ND	0.020	mg/Kg wet							
Aroclor-1221 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1232	ND	0.020	mg/Kg wet							
Aroclor-1232 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1242	ND	0.020	mg/Kg wet							
Aroclor-1242 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1248	ND	0.020	mg/Kg wet							
Aroclor-1248 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1254	ND	0.020	mg/Kg wet							
Aroclor-1254 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1260	ND	0.020	mg/Kg wet							
Aroclor-1260 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1262	ND	0.020	mg/Kg wet							
Aroclor-1262 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1268	ND	0.020	mg/Kg wet							
Aroclor-1268 [2C]	ND	0.020	mg/Kg wet							
Surrogate: Decachlorobiphenyl	0.200		mg/Kg wet	0.200		100	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.194		mg/Kg wet	0.200		97.0	30-150			
Surrogate: Tetrachloro-m-xylene	0.197		mg/Kg wet	0.200		98.4	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.189		mg/Kg wet	0.200		94.3	30-150			
LCS (B118123-BS1)				Prepared & Analyzed: 03/31/15						
Aroclor-1016	0.20	0.10	mg/Kg wet	0.200		98.2	40-140			
Aroclor-1016 [2C]	0.21	0.10	mg/Kg wet	0.200		105	40-140			
Aroclor-1260	0.20	0.10	mg/Kg wet	0.200		99.0	40-140			
Aroclor-1260 [2C]	0.21	0.10	mg/Kg wet	0.200		103	40-140			
Surrogate: Decachlorobiphenyl	0.192		mg/Kg wet	0.200		96.2	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.192		mg/Kg wet	0.200		96.1	30-150			
Surrogate: Tetrachloro-m-xylene	0.185		mg/Kg wet	0.200		92.3	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.185		mg/Kg wet	0.200		92.5	30-150			
LCS Dup (B118123-BSD1)				Prepared & Analyzed: 03/31/15						
Aroclor-1016	0.21	0.10	mg/Kg wet	0.200		104	40-140	5.80	30	
Aroclor-1016 [2C]	0.22	0.10	mg/Kg wet	0.200		108	40-140	2.92	30	
Aroclor-1260	0.21	0.10	mg/Kg wet	0.200		103	40-140	3.74	30	
Aroclor-1260 [2C]	0.21	0.10	mg/Kg wet	0.200		106	40-140	2.15	30	
Surrogate: Decachlorobiphenyl	0.193		mg/Kg wet	0.200		96.3	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.193		mg/Kg wet	0.200		96.4	30-150			
Surrogate: Tetrachloro-m-xylene	0.198		mg/Kg wet	0.200		98.9	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.198		mg/Kg wet	0.200		99.1	30-150			

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QUALITY CONTROL
Polychlorinated Biphenyls By GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes

Batch B118123 - SW-846 3546

Matrix Spike (B118123-MS1)		Source: 15C1102-02			Prepared: 03/31/15 Analyzed: 04/01/15					
Aroclor-1016	0.42	0.12	mg/Kg dry	0.236	ND	179	*	40-140		MS-21
Aroclor-1016 [2C]	0.68	0.12	mg/Kg dry	0.236	ND	287	*	40-140		MS-21
Aroclor-1260	0.57	0.12	mg/Kg dry	0.236	0.17	171	*	40-140		MS-21
Aroclor-1260 [2C]	0.49	0.12	mg/Kg dry	0.236	0.14	146	*	40-140		MS-21
Surrogate: Decachlorobiphenyl	0.181		mg/Kg dry	0.236		76.9		30-150		
Surrogate: Decachlorobiphenyl [2C]	0.197		mg/Kg dry	0.236		83.4		30-150		
Surrogate: Tetrachloro-m-xylene	0.198		mg/Kg dry	0.236		84.2		30-150		
Surrogate: Tetrachloro-m-xylene [2C]	0.196		mg/Kg dry	0.236		83.0		30-150		

Matrix Spike Dup (B118123-MSD1)		Source: 15C1102-02			Prepared: 03/31/15 Analyzed: 04/01/15							
Aroclor-1016	0.33	0.12	mg/Kg dry	0.236	ND	142	*	40-140	23.2	30	MS-21	
Aroclor-1016 [2C]	0.38	0.12	mg/Kg dry	0.236	ND	163	*	40-140	55.2	*	30	MS-21
Aroclor-1260	0.47	0.12	mg/Kg dry	0.236	0.17	128		40-140	19.4	30	MS-21	
Aroclor-1260 [2C]	0.45	0.12	mg/Kg dry	0.236	0.14	129		40-140	8.64	30	MS-21	
Surrogate: Decachlorobiphenyl	0.179		mg/Kg dry	0.236		76.1		30-150				
Surrogate: Decachlorobiphenyl [2C]	0.196		mg/Kg dry	0.236		83.3		30-150				
Surrogate: Tetrachloro-m-xylene	0.195		mg/Kg dry	0.236		82.9		30-150				
Surrogate: Tetrachloro-m-xylene [2C]	0.193		mg/Kg dry	0.236		81.9		30-150				

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QUALITY CONTROL

Herbicides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B117934 - SW-846 8151										
Blank (B117934-BLK1)										
Prepared: 03/27/15 Analyzed: 03/31/15										
2,4-D	ND	24	µg/kg wet							
2,4-D [2C]	ND	24	µg/kg wet							
2,4-DB	ND	24	µg/kg wet							
2,4-DB [2C]	ND	24	µg/kg wet							
2,4,5-TP (Silvex)	ND	2.4	µg/kg wet							
2,4,5-TP (Silvex) [2C]	ND	2.4	µg/kg wet							
2,4,5-T	ND	2.4	µg/kg wet							
2,4,5-T [2C]	ND	2.4	µg/kg wet							
Dalapon	ND	60	µg/kg wet							
Dalapon [2C]	ND	60	µg/kg wet							
Dicamba	ND	2.4	µg/kg wet							
Dicamba [2C]	ND	2.4	µg/kg wet							
Dichloroprop	ND	24	µg/kg wet							
Dichloroprop [2C]	ND	24	µg/kg wet							
Dinoseb	ND	12	µg/kg wet							
Dinoseb [2C]	ND	12	µg/kg wet							
MCPA	ND	2400	µg/kg wet							
MCPA [2C]	ND	2400	µg/kg wet							
MCPP	ND	2400	µg/kg wet							
MCPP [2C]	ND	2400	µg/kg wet							
Surrogate: 2,4-Dichlorophenylacetic acid	70.6		µg/kg wet	95.2		74.1	30-150			
Surrogate: 2,4-Dichlorophenylacetic acid [2C]	65.5		µg/kg wet	95.2		68.8	30-150			
LCS (B117934-BS1)										
Prepared: 03/27/15 Analyzed: 03/31/15										
2,4-D	103	25	µg/kg wet	124		83.1	40-140			
2,4-D [2C]	90.1	25	µg/kg wet	124		72.8	40-140			
2,4-DB	111	25	µg/kg wet	124		90.0	40-140			
2,4-DB [2C]	106	25	µg/kg wet	124		85.8	40-140			
2,4,5-TP (Silvex)	9.68	2.5	µg/kg wet	12.4		78.2	40-140			
2,4,5-TP (Silvex) [2C]	10.2	2.5	µg/kg wet	12.4		82.6	40-140			
2,4,5-T	10.7	2.5	µg/kg wet	12.4		86.1	40-140			
2,4,5-T [2C]	10.5	2.5	µg/kg wet	12.4		85.0	40-140			
Dalapon	167	62	µg/kg wet	309		53.9	40-140			V-06
Dalapon [2C]	143	62	µg/kg wet	309		46.1	40-140			
Dicamba	10.5	2.5	µg/kg wet	12.4		84.5	40-140			
Dicamba [2C]	10.8	2.5	µg/kg wet	12.4		87.0	40-140			
Dichloroprop	122	25	µg/kg wet	124		98.5	40-140			
Dichloroprop [2C]	118	25	µg/kg wet	124		95.7	40-140			
Dinoseb	15.1	12	µg/kg wet	61.9		24.5	0-42.4			
Dinoseb [2C]	15.7	12	µg/kg wet	61.9		25.3	0-41.1			
MCPA	9700	2500	µg/kg wet	12400		78.4	40-140			
MCPA [2C]	9580	2500	µg/kg wet	12400		77.4	40-140			
MCPP	10200	2500	µg/kg wet	12400		82.5	40-140			
MCPP [2C]	9490	2500	µg/kg wet	12400		76.7	40-140			
Surrogate: 2,4-Dichlorophenylacetic acid	84.2		µg/kg wet	99.0		85.0	30-150			
Surrogate: 2,4-Dichlorophenylacetic acid [2C]	77.1		µg/kg wet	99.0		77.9	30-150			

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QUALITY CONTROL

Herbicides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B117934 - SW-846 8151										
LCS Dup (B117934-BSD1)										
Prepared: 03/27/15 Analyzed: 03/31/15										
2,4-D	111	25	µg/kg wet	124		89.6	40-140	7.52	30	
2,4-D [2C]	94.1	25	µg/kg wet	124		76.0	40-140	4.33	30	
2,4-DB	124	25	µg/kg wet	124		99.9	40-140	10.4	30	
2,4-DB [2C]	113	25	µg/kg wet	124		91.4	40-140	6.27	30	
2,4,5-TP (Silvex)	10.3	2.5	µg/kg wet	12.4		83.0	40-140	6.02	30	
2,4,5-TP (Silvex) [2C]	11.0	2.5	µg/kg wet	12.4		88.6	40-140	7.04	30	
2,4,5-T	11.5	2.5	µg/kg wet	12.4		93.0	40-140	7.74	30	
2,4,5-T [2C]	11.3	2.5	µg/kg wet	12.4		91.1	40-140	6.88	30	
Dalapon	160	62	µg/kg wet	309		51.8	40-140	4.05	30	V-06
Dalapon [2C]	138	62	µg/kg wet	309		44.7	40-140	3.02	30	
Dicamba	11.1	2.5	µg/kg wet	12.4		89.6	40-140	5.83	30	
Dicamba [2C]	11.1	2.5	µg/kg wet	12.4		89.7	40-140	3.05	30	
Dichloroprop	132	25	µg/kg wet	124		106	40-140	7.76	30	
Dichloroprop [2C]	127	25	µg/kg wet	124		103	40-140	6.97	30	
Dinoseb	16.3	12	µg/kg wet	61.9		26.4	0-42.4	7.50	30	
Dinoseb [2C]	17.1	12	µg/kg wet	61.9		27.6	0-41.1	8.43	30	
MCPA	10400	2500	µg/kg wet	12400		84.4	40-140	7.41	30	
MCPA [2C]	10300	2500	µg/kg wet	12400		83.0	40-140	7.01	30	
MCPP	10900	2500	µg/kg wet	12400		87.8	40-140	6.17	30	
MCPP [2C]	10100	2500	µg/kg wet	12400		81.8	40-140	6.54	30	
Surrogate: 2,4-Dichlorophenylacetic acid	88.5		µg/kg wet	99.0		89.4	30-150			
Surrogate: 2,4-Dichlorophenylacetic acid [2C]	80.5		µg/kg wet	99.0		81.3	30-150			
Matrix Spike (B117934-MS1)										
Source: 15C1102-12 Prepared: 03/27/15 Analyzed: 04/01/15										
2,4-D	120	27	µg/kg dry	137	ND	88.1	30-150			
2,4-D [2C]	98.9	27	µg/kg dry	137	ND	72.4	30-150			
2,4-DB	127	27	µg/kg dry	137	ND	93.0	30-150			
2,4-DB [2C]	116	27	µg/kg dry	137	ND	85.0	30-150			
2,4,5-TP (Silvex)	10.5	2.7	µg/kg dry	13.7	ND	77.0	30-150			
2,4,5-TP (Silvex) [2C]	12.9	2.7	µg/kg dry	13.7	ND	94.5	30-150			
2,4,5-T	11.7	2.7	µg/kg dry	13.7	ND	85.7	30-150			
2,4,5-T [2C]	10.6	2.7	µg/kg dry	13.7	ND	77.6	30-150			
Dalapon	207	68	µg/kg dry	342	ND	60.5	30-150			
Dalapon [2C]	184	68	µg/kg dry	342	ND	53.9	30-150			
Dicamba	11.4	2.7	µg/kg dry	13.7	ND	83.3	30-150			
Dicamba [2C]	12.0	2.7	µg/kg dry	13.7	ND	87.9	30-150			
Dichloroprop	141	27	µg/kg dry	137	ND	103	30-150			
Dichloroprop [2C]	136	27	µg/kg dry	137	ND	99.7	30-150			
Dinoseb	15.6	14	µg/kg dry	68.3	ND	22.9	10-150			
Dinoseb [2C]	14.1	14	µg/kg dry	68.3	ND	20.6	10-150			
MCPA	11600	2700	µg/kg dry	13700	ND	84.9	30-150			
MCPA [2C]	11000	2700	µg/kg dry	13700	ND	80.4	30-150			
MCPP	11700	2700	µg/kg dry	13700	ND	85.4	30-150			
MCPP [2C]	11400	2700	µg/kg dry	13700	ND	83.7	30-150			
Surrogate: 2,4-Dichlorophenylacetic acid	93.5		µg/kg dry	109		85.5	30-150			
Surrogate: 2,4-Dichlorophenylacetic acid [2C]	105		µg/kg dry	109		96.4	30-150			

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QUALITY CONTROL
Herbicides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B117934 - SW-846 8151										
Matrix Spike Dup (B117934-MSD1)	Source: 15C1102-12			Prepared: 03/27/15 Analyzed: 04/01/15						
2,4-D	118	27	µg/kg dry	137	ND	86.1	30-150	2.33	30	
2,4-D [2C]	97.6	27	µg/kg dry	137	ND	71.5	30-150	1.28	30	
2,4-DB	106	27	µg/kg dry	137	ND	77.6	30-150	18.1	30	
2,4-DB [2C]	116	27	µg/kg dry	137	ND	84.8	30-150	0.326	30	
2,4,5-TP (Silvex)	10.4	2.7	µg/kg dry	13.7	ND	76.1	30-150	1.29	30	
2,4,5-TP (Silvex) [2C]	13.2	2.7	µg/kg dry	13.7	ND	96.3	30-150	1.89	30	
2,4,5-T	11.2	2.7	µg/kg dry	13.7	ND	81.8	30-150	4.60	30	
2,4,5-T [2C]	10.2	2.7	µg/kg dry	13.7	ND	74.9	30-150	3.46	30	
Dalapon	191	68	µg/kg dry	342	ND	56.0	30-150	7.72	30	
Dalapon [2C]	168	68	µg/kg dry	342	ND	49.3	30-150	8.77	30	
Dicamba	11.2	2.7	µg/kg dry	13.7	ND	82.3	30-150	1.20	30	
Dicamba [2C]	12.0	2.7	µg/kg dry	13.7	ND	87.7	30-150	0.191	30	
Dichloroprop	144	27	µg/kg dry	137	ND	105	30-150	1.66	30	
Dichloroprop [2C]	134	27	µg/kg dry	137	ND	97.9	30-150	1.83	30	
Dinoseb	15.3	14	µg/kg dry	68.3	ND	22.4	10-150	2.14	30	
Dinoseb [2C]	15.0	14	µg/kg dry	68.3	ND	21.9	10-150	6.13	30	
MCPA	11200	2700	µg/kg dry	13700	ND	82.0	30-150	3.54	30	
MCPA [2C]	10700	2700	µg/kg dry	13700	ND	78.5	30-150	2.43	30	
MCPP	11500	2700	µg/kg dry	13700	ND	83.9	30-150	1.87	30	
MCPP [2C]	11200	2700	µg/kg dry	13700	ND	81.6	30-150	2.48	30	
Surrogate: 2,4-Dichlorophenylacetic acid	107		µg/kg dry	109		97.8	30-150			
Surrogate: 2,4-Dichlorophenylacetic acid [2C]	108		µg/kg dry	109		99.2	30-150			

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QUALITY CONTROL

Petroleum Hydrocarbons Analyses - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B117942 - SW-846 5035/5030B										
Blank (B117942-BLK1)				Prepared: 03/27/15 Analyzed: 03/28/15						
Gasoline Range Organics (GRO)	ND	1.0	mg/Kg wet							
Surrogate: 1-Chloro-3-fluorobenzene	0.0153		mg/Kg wet	0.0150		102	70-130			
LCS (B117942-BS1)				Prepared: 03/27/15 Analyzed: 03/28/15						
Gasoline Range Organics (GRO)	0.228	0.010	mg/Kg wet	0.250		91.2	80-120			
Surrogate: 1-Chloro-3-fluorobenzene	0.0160		mg/Kg wet	0.0150		107	70-130			
LCS Dup (B117942-BSD1)				Prepared: 03/27/15 Analyzed: 03/28/15						
Gasoline Range Organics (GRO)	0.217	0.010	mg/Kg wet	0.250		86.7	80-120	4.97	30	
Surrogate: 1-Chloro-3-fluorobenzene	0.0152		mg/Kg wet	0.0150		101	70-130			
Batch B118237 - SW-846 3546										
Blank (B118237-BLK1)				Prepared & Analyzed: 04/01/15						
Diesel Range Organics	ND	8.3	mg/Kg wet							
Surrogate: o-Terphenyl	3.02		mg/Kg wet	3.33		90.6	40-140			
LCS (B118237-BS1)				Prepared & Analyzed: 04/01/15						
Diesel Range Organics	26.7	8.3	mg/Kg wet	33.3		80.0	40-140			
Surrogate: o-Terphenyl	3.09		mg/Kg wet	3.33		92.7	40-140			
LCS Dup (B118237-BSD1)				Prepared & Analyzed: 04/01/15						
Diesel Range Organics	25.4	8.3	mg/Kg wet	33.3		76.2	40-140	4.92		
Surrogate: o-Terphenyl	3.01		mg/Kg wet	3.33		90.3	40-140			

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QUALITY CONTROL

Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes

Batch B118098 - SW-846 3050B

Blank (B118098-BLK1)

Prepared: 03/30/15 Analyzed: 03/31/15

Aluminum	ND	2.5	mg/Kg wet							
Antimony	ND	2.5	mg/Kg wet							
Arsenic	ND	2.5	mg/Kg wet							
Barium	ND	2.5	mg/Kg wet							
Beryllium	ND	0.25	mg/Kg wet							
Cadmium	ND	0.25	mg/Kg wet							
Calcium	ND	7.5	mg/Kg wet							
Chromium	ND	0.50	mg/Kg wet							
Cobalt	ND	2.5	mg/Kg wet							
Copper	1.1	0.50	mg/Kg wet							B-07
Iron	ND	2.5	mg/Kg wet							
Lead	ND	0.75	mg/Kg wet							
Magnesium	ND	7.5	mg/Kg wet							
Manganese	ND	0.50	mg/Kg wet							
Nickel	ND	0.50	mg/Kg wet							
Potassium	ND	100	mg/Kg wet							
Selenium	ND	5.0	mg/Kg wet							
Silver	ND	0.50	mg/Kg wet							
Sodium	ND	100	mg/Kg wet							
Thallium	ND	2.5	mg/Kg wet							
Vanadium	ND	1.0	mg/Kg wet							
Zinc	ND	1.0	mg/Kg wet							

LCS (B118098-BS1)

Prepared: 03/30/15 Analyzed: 03/31/15

Aluminum	6370	5.1	mg/Kg wet	8100		78.7	51.2-148.1			
Antimony	88.7	5.1	mg/Kg wet	116		76.5	0-210.3			
Arsenic	108	5.1	mg/Kg wet	122		88.1	77.8-122.1			
Barium	149	5.1	mg/Kg wet	167		89.0	82-117.4			
Beryllium	53.7	0.51	mg/Kg wet	54.3		98.9	82.3-117.7			
Cadmium	82.0	0.51	mg/Kg wet	88.0		93.2	81.9-118.2			
Calcium	5140	15	mg/Kg wet	5920		86.9	81.9-118.2			
Chromium	94.3	1.0	mg/Kg wet	102		92.5	78.7-120.6			
Cobalt	93.0	5.1	mg/Kg wet	99.4		93.5	83-116.7			
Copper	72.1	1.0	mg/Kg wet	78.0		92.5	80.4-119.6			B
Iron	11200	5.1	mg/Kg wet	15100		74.2	46.8-153			
Lead	81.8	1.5	mg/Kg wet	94.5		86.6	82.4-117.8			
Magnesium	2600	15	mg/Kg wet	3020		86.0	75.5-124.2			
Manganese	376	1.0	mg/Kg wet	401		93.6	80.8-119.2			
Nickel	52.2	1.0	mg/Kg wet	56.3		92.7	82.2-117.8			
Potassium	2180	200	mg/Kg wet	2490		87.6	69.9-130.1			
Selenium	132	10	mg/Kg wet	157		84.2	77.1-122.3			
Silver	29.0	1.0	mg/Kg wet	34.2		84.7	74.3-125.4			
Sodium	276	200	mg/Kg wet	246		112	69.9-130.5			
Thallium	105	5.1	mg/Kg wet	116		90.4	78.2-121.6			
Vanadium	58.7	2.0	mg/Kg wet	67.1		87.4	64.8-135.2			
Zinc	176	2.0	mg/Kg wet	207		85.1	79.7-120.8			

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QUALITY CONTROL

Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B118098 - SW-846 3050B										
LCS Dup (B118098-BSD1)					Prepared: 03/30/15 Analyzed: 03/31/15					
Aluminum	6310	4.9	mg/Kg wet	8100		77.9	51.2-148.1	1.02	30	
Antimony	91.3	4.9	mg/Kg wet	116		78.7	0-210.3	2.86	30	
Arsenic	108	4.9	mg/Kg wet	122		88.7	77.8-122.1	0.663	30	
Barium	144	4.9	mg/Kg wet	167		86.4	82-117.4	3.01	30	
Beryllium	53.9	0.49	mg/Kg wet	54.3		99.3	82.3-117.7	0.356	30	
Cadmium	78.8	0.49	mg/Kg wet	88.0		89.6	81.9-118.2	3.99	30	
Calcium	5300	15	mg/Kg wet	5920		89.6	81.9-118.2	3.04	30	
Chromium	92.9	0.98	mg/Kg wet	102		91.1	78.7-120.6	1.51	30	
Cobalt	90.5	4.9	mg/Kg wet	99.4		91.0	83-116.7	2.74	30	
Copper	68.8	0.98	mg/Kg wet	78.0		88.2	80.4-119.6	4.72	30	B
Iron	11500	4.9	mg/Kg wet	15100		76.0	46.8-153	2.51	30	
Lead	80.8	1.5	mg/Kg wet	94.5		85.5	82.4-117.8	1.29	30	
Magnesium	2540	15	mg/Kg wet	3020		84.3	75.5-124.2	2.04	30	
Manganese	370	0.98	mg/Kg wet	401		92.4	80.8-119.2	1.36	30	
Nickel	49.7	0.98	mg/Kg wet	56.3		88.3	82.2-117.8	4.85	30	
Potassium	2130	200	mg/Kg wet	2490		85.5	69.9-130.1	2.36	30	
Selenium	131	9.8	mg/Kg wet	157		83.2	77.1-122.3	1.30	30	
Silver	29.4	0.98	mg/Kg wet	34.2		85.9	74.3-125.4	1.34	30	
Sodium	265	200	mg/Kg wet	246		108	69.9-130.5	4.23	30	
Thallium	102	4.9	mg/Kg wet	116		87.5	78.2-121.6	3.22	30	
Vanadium	58.7	2.0	mg/Kg wet	67.1		87.5	64.8-135.2	0.128	30	
Zinc	173	2.0	mg/Kg wet	207		83.5	79.7-120.8	1.88	30	
MRL Check (B118098-MRL1)					Prepared: 03/30/15 Analyzed: 03/31/15					
Lead	0.805	0.74	mg/Kg wet	0.743		108	80-120			
Batch B118144 - SW-846 7471										
Blank (B118144-BLK1)					Prepared: 03/31/15 Analyzed: 04/01/15					
Mercury	ND	0.025	mg/Kg wet							
LCS (B118144-BS1)					Prepared: 03/31/15 Analyzed: 04/01/15					
Mercury	4.74	0.38	mg/Kg wet	5.76		82.2	71.2-128.6			
LCS Dup (B118144-BSD1)					Prepared: 03/31/15 Analyzed: 04/01/15					
Mercury	4.94	0.38	mg/Kg wet	5.76		85.8	71.2-128.6	4.25	30	
Batch B118200 - SW-846 3050B										
Blank (B118200-BLK1)					Prepared: 03/31/15 Analyzed: 04/01/15					
Aluminum	ND	2.5	mg/Kg wet							
Antimony	ND	2.5	mg/Kg wet							
Arsenic	ND	2.5	mg/Kg wet							
Barium	ND	2.5	mg/Kg wet							
Beryllium	ND	0.25	mg/Kg wet							
Cadmium	ND	0.25	mg/Kg wet							
Calcium	ND	7.5	mg/Kg wet							
Chromium	ND	0.50	mg/Kg wet							
Cobalt	ND	2.5	mg/Kg wet							
Copper	0.53	0.50	mg/Kg wet							B-07
Iron	2.8	2.5	mg/Kg wet							B-07
Lead	ND	0.75	mg/Kg wet							
Magnesium	ND	7.5	mg/Kg wet							
Manganese	ND	0.50	mg/Kg wet							

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QUALITY CONTROL

Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes

Batch B118200 - SW-846 3050B

Blank (B118200-BLK1)

Prepared: 03/31/15 Analyzed: 04/01/15

Nickel	ND	0.50	mg/Kg wet							
Potassium	ND	100	mg/Kg wet							
Selenium	ND	5.0	mg/Kg wet							
Silver	ND	0.50	mg/Kg wet							
Sodium	ND	100	mg/Kg wet							
Thallium	ND	2.5	mg/Kg wet							
Vanadium	ND	1.0	mg/Kg wet							
Zinc	ND	1.0	mg/Kg wet							

LCS (B118200-BS1)

Prepared: 03/31/15 Analyzed: 04/01/15

Aluminum	6500	4.8	mg/Kg wet	8100		80.2	51.2-148.1			
Antimony	83.9	4.8	mg/Kg wet	116		72.4	0-210.3			
Arsenic	102	4.8	mg/Kg wet	122		83.3	77.8-122.1			
Barium	144	4.8	mg/Kg wet	167		86.3	82-117.4			
Beryllium	52.3	0.48	mg/Kg wet	54.3		96.2	82.3-117.7			
Cadmium	82.4	0.48	mg/Kg wet	88.0		93.6	81.9-118.2			
Calcium	5230	14	mg/Kg wet	5920		88.3	81.9-118.2			
Chromium	89.7	0.96	mg/Kg wet	102		87.9	78.7-120.6			
Cobalt	90.9	4.8	mg/Kg wet	99.4		91.4	83-116.7			
Copper	69.7	0.96	mg/Kg wet	78.0		89.3	80.4-119.6			B
Iron	11200	4.8	mg/Kg wet	15100		74.2	46.8-153			B
Lead	78.0	1.4	mg/Kg wet	94.5		82.5	82.4-117.8			
Magnesium	2480	14	mg/Kg wet	3020		82.3	75.5-124.2			
Manganese	374	0.96	mg/Kg wet	401		93.2	80.8-119.2			
Nickel	50.3	0.96	mg/Kg wet	56.3		89.3	82.2-117.8			
Potassium	2140	190	mg/Kg wet	2490		85.8	69.9-130.1			
Selenium	132	9.6	mg/Kg wet	157		84.1	77.1-122.3			
Silver	28.0	0.96	mg/Kg wet	34.2		81.9	74.3-125.4			
Sodium	216	190	mg/Kg wet	246		87.8	69.9-130.5			
Thallium	101	4.8	mg/Kg wet	116		86.7	78.2-121.6			
Vanadium	56.3	1.9	mg/Kg wet	67.1		83.9	64.8-135.2			
Zinc	167	1.9	mg/Kg wet	207		80.8	79.7-120.8			

LCS Dup (B118200-BSD1)

Prepared: 03/31/15 Analyzed: 04/01/15

Aluminum	6470	5.1	mg/Kg wet	8100		79.9	51.2-148.1	0.374	30	
Antimony	80.1	5.1	mg/Kg wet	116		69.1	0-210.3	4.65	30	
Arsenic	97.9	5.1	mg/Kg wet	122		80.2	77.8-122.1	3.82	30	
Barium	137	5.1	mg/Kg wet	167		82.2	82-117.4	4.88	30	
Beryllium	49.3	0.51	mg/Kg wet	54.3		90.8	82.3-117.7	5.82	30	
Cadmium	75.8	0.51	mg/Kg wet	88.0		86.1	81.9-118.2	8.37	30	
Calcium	4950	15	mg/Kg wet	5920		83.6	81.9-118.2	5.51	30	
Chromium	97.4	1.0	mg/Kg wet	102		95.4	78.7-120.6	8.19	30	
Cobalt	85.2	5.1	mg/Kg wet	99.4		85.7	83-116.7	6.40	30	
Copper	62.7	1.0	mg/Kg wet	78.0		80.3	* 80.4-119.6	10.6	30	B, L-07
Iron	11100	5.1	mg/Kg wet	15100		73.5	46.8-153	0.899	30	B
Lead	118	1.5	mg/Kg wet	94.5		125	* 82.4-117.8	41.0	* 30	L-07A
Magnesium	2490	15	mg/Kg wet	3020		82.4	75.5-124.2	0.193	30	
Manganese	349	1.0	mg/Kg wet	401		87.1	80.8-119.2	6.78	30	
Nickel	46.8	1.0	mg/Kg wet	56.3		83.1	82.2-117.8	7.18	30	
Potassium	2100	210	mg/Kg wet	2490		84.3	69.9-130.1	1.77	30	
Selenium	123	10	mg/Kg wet	157		78.1	77.1-122.3	7.48	30	
Silver	26.2	1.0	mg/Kg wet	34.2		76.6	74.3-125.4	6.72	30	
Sodium	205	210	mg/Kg wet	246		83.3	69.9-130.5	5.20	30	

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QUALITY CONTROL

Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B118200 - SW-846 3050B										
LCS Dup (B118200-BSD1)					Prepared: 03/31/15 Analyzed: 04/01/15					
Thallium	97.5	5.1	mg/Kg wet	116		84.0	78.2-121.6	3.09	30	
Vanadium	54.7	2.1	mg/Kg wet	67.1		81.6	64.8-135.2	2.87	30	
Zinc	160	2.1	mg/Kg wet	207		77.5	* 79.7-120.8	4.21	30	L-07
MRL Check (B118200-MRL1)					Prepared: 03/31/15 Analyzed: 04/01/15					
Lead	0.739	0.72	mg/Kg wet	0.716		103	80-120			

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QUALITY CONTROL

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B117915 - SW-846 9045C										
LCS (B117915-BS1)				Prepared & Analyzed: 03/27/15						
pH	6.04		pH Units	6.00		101	98.5-102			
Batch B118189 - SW-846 9014										
Blank (B118189-BLK1)				Prepared & Analyzed: 03/31/15						
Reactive Cyanide	ND	0.40	mg/Kg							
LCS (B118189-BS1)				Prepared & Analyzed: 03/31/15						
Reactive Cyanide	9.5	0.40	mg/Kg	10.0		95.4	81.3-113			
Batch B118305 - SW-846 9030A										
Blank (B118305-BLK1)				Prepared: 03/31/15 Analyzed: 04/01/15						
Reactive Sulfide	ND	2.0	mg/Kg							
LCS (B118305-BS1)				Prepared: 03/31/15 Analyzed: 04/01/15						
Reactive Sulfide	11	2.0	mg/Kg	14.8		75.7	24.3-135			
Batch B118332 - % Solids										
Duplicate (B118332-DUP1)		Source: 15C1102-01		Prepared & Analyzed: 04/01/15						
% Solids	84.6		% Wt		86.1			1.76	20	

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QUALITY CONTROL

TCLP - Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B118353 - SW-846 5030B										
Blank (B118353-BLK1)				Prepared: 04/01/15 Analyzed: 04/02/15						
Benzene	ND	0.010	mg/L							
2-Butanone (MEK)	ND	0.20	mg/L							
Carbon Tetrachloride	ND	0.050	mg/L							
Chlorobenzene	ND	0.010	mg/L							
Chloroform	ND	0.020	mg/L							
1,4-Dichlorobenzene	ND	0.010	mg/L							
1,2-Dichloroethane	ND	0.010	mg/L							
1,1-Dichloroethylene	ND	0.010	mg/L							
Tetrachloroethylene	ND	0.010	mg/L							
Trichloroethylene	ND	0.010	mg/L							
Vinyl Chloride	ND	0.020	mg/L							
Surrogate: 1,2-Dichloroethane-d4	0.0245		mg/L	0.0250		97.9	70-130			
Surrogate: Toluene-d8	0.0240		mg/L	0.0250		95.9	70-130			
Surrogate: 4-Bromofluorobenzene	0.0236		mg/L	0.0250		94.6	70-130			
LCS (B118353-BS1)				Prepared: 04/01/15 Analyzed: 04/02/15						
Benzene	0.00929	0.0010	mg/L	0.0100		92.9	70-130			
2-Butanone (MEK)	0.101	0.020	mg/L	0.100		101	40-160			†
Carbon Tetrachloride	0.00859	0.0050	mg/L	0.0100		85.9	70-130			
Chlorobenzene	0.00983	0.0010	mg/L	0.0100		98.3	70-130			
Chloroform	0.00904	0.0020	mg/L	0.0100		90.4	70-130			
1,4-Dichlorobenzene	0.00962	0.0010	mg/L	0.0100		96.2	70-130			
1,2-Dichloroethane	0.00849	0.0010	mg/L	0.0100		84.9	70-130			
1,1-Dichloroethylene	0.00927	0.0010	mg/L	0.0100		92.7	70-130			
Tetrachloroethylene	0.00947	0.0010	mg/L	0.0100		94.7	70-130			
Trichloroethylene	0.00895	0.0010	mg/L	0.0100		89.5	70-130			
Vinyl Chloride	0.00937	0.0020	mg/L	0.0100		93.7	40-160			†
Surrogate: 1,2-Dichloroethane-d4	0.0247		mg/L	0.0250		98.8	70-130			
Surrogate: Toluene-d8	0.0243		mg/L	0.0250		97.2	70-130			
Surrogate: 4-Bromofluorobenzene	0.0245		mg/L	0.0250		98.0	70-130			
LCS Dup (B118353-BSD1)				Prepared: 04/01/15 Analyzed: 04/02/15						
Benzene	0.00910	0.0010	mg/L	0.0100		91.0	70-130	2.07	25	
2-Butanone (MEK)	0.0998	0.020	mg/L	0.100		99.8	40-160	1.06	25	†
Carbon Tetrachloride	0.00835	0.0050	mg/L	0.0100		83.5	70-130	2.83	25	
Chlorobenzene	0.00965	0.0010	mg/L	0.0100		96.5	70-130	1.85	25	
Chloroform	0.00900	0.0020	mg/L	0.0100		90.0	70-130	0.443	25	
1,4-Dichlorobenzene	0.00935	0.0010	mg/L	0.0100		93.5	70-130	2.85	25	
1,2-Dichloroethane	0.00822	0.0010	mg/L	0.0100		82.2	70-130	3.23	25	
1,1-Dichloroethylene	0.00881	0.0010	mg/L	0.0100		88.1	70-130	5.09	25	
Tetrachloroethylene	0.00869	0.0010	mg/L	0.0100		86.9	70-130	8.59	25	
Trichloroethylene	0.00878	0.0010	mg/L	0.0100		87.8	70-130	1.92	25	
Vinyl Chloride	0.00871	0.0020	mg/L	0.0100		87.1	40-160	7.30	25	†
Surrogate: 1,2-Dichloroethane-d4	0.0245		mg/L	0.0250		98.0	70-130			
Surrogate: Toluene-d8	0.0239		mg/L	0.0250		95.5	70-130			
Surrogate: 4-Bromofluorobenzene	0.0238		mg/L	0.0250		95.1	70-130			

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QUALITY CONTROL

TCLP - Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B118251 - SW-846 3510C										
Blank (B118251-BLK1)				Prepared: 04/01/15 Analyzed: 04/02/15						
2,4-Dinitrotoluene	ND	0.050	mg/L							
Hexachlorobenzene	ND	0.050	mg/L							
Hexachlorobutadiene	ND	0.050	mg/L							
Hexachloroethane	ND	0.050	mg/L							
2-Methylphenol	ND	0.050	mg/L							
3/4-Methylphenol	ND	0.050	mg/L							
Nitrobenzene	ND	0.050	mg/L							
Pentachlorophenol	ND	0.050	mg/L							
Pyridine	ND	0.025	mg/L							
2,4,5-Trichlorophenol	ND	0.050	mg/L							
2,4,6-Trichlorophenol	ND	0.050	mg/L							
Surrogate: 2-Fluorophenol	0.533		mg/L	1.00		53.3	15-110			
Surrogate: Phenol-d6	0.384		mg/L	1.00		38.4	15-110			
Surrogate: Nitrobenzene-d5	0.372		mg/L	0.500		74.4	30-130			
Surrogate: 2-Fluorobiphenyl	0.513		mg/L	0.500		103	30-130			
Surrogate: 2,4,6-Tribromophenol	1.39		mg/L	1.00		139 *	15-110			S-07
Surrogate: p-Terphenyl-d14	0.464		mg/L	0.500		92.8	30-130			
LCS (B118251-BS1)				Prepared: 04/01/15 Analyzed: 04/02/15						
2,4-Dinitrotoluene	0.330	0.050	mg/L	0.250		132	40-140			
Hexachlorobenzene	0.303	0.050	mg/L	0.250		121	40-140			
Hexachlorobutadiene	0.269	0.050	mg/L	0.250		108	40-140			
Hexachloroethane	0.221	0.050	mg/L	0.250		88.4	40-140			
2-Methylphenol	0.227	0.050	mg/L	0.250		90.9	30-130			
3/4-Methylphenol	0.219	0.050	mg/L	0.250		87.5	30-130			
Nitrobenzene	0.212	0.050	mg/L	0.250		84.7	40-140			
Pentachlorophenol	0.297	0.050	mg/L	0.250		119	30-130			
Pyridine	0.132	0.025	mg/L	0.250		52.8	10-140			†
2,4,5-Trichlorophenol	0.322	0.050	mg/L	0.250		129	30-130			
2,4,6-Trichlorophenol	0.317	0.050	mg/L	0.250		127	30-130			
Surrogate: 2-Fluorophenol	0.689		mg/L	1.00		68.9	15-110			
Surrogate: Phenol-d6	0.509		mg/L	1.00		50.9	15-110			
Surrogate: Nitrobenzene-d5	0.422		mg/L	0.500		84.5	30-130			
Surrogate: 2-Fluorobiphenyl	0.590		mg/L	0.500		118	30-130			
Surrogate: 2,4,6-Tribromophenol	1.54		mg/L	1.00		154 *	15-110			S-07
Surrogate: p-Terphenyl-d14	0.543		mg/L	0.500		109	30-130			

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QUALITY CONTROL

TCLP - Organochloride Pesticides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes

Batch B118246 - SW-846 3510C

Blank (B118246-BLK1)

Prepared: 04/01/15 Analyzed: 04/02/15

gamma-BHC (Lindane)	ND	0.030	µg/L							
gamma-BHC (Lindane) [2C]	ND	0.030	µg/L							
Chlordane	ND	0.20	µg/L							
Chlordane [2C]	ND	0.20	µg/L							
Endrin	ND	0.080	µg/L							
Endrin [2C]	ND	0.080	µg/L							
Heptachlor	ND	0.050	µg/L							
Heptachlor [2C]	ND	0.050	µg/L							
Heptachlor Epoxide	ND	0.050	µg/L							
Heptachlor Epoxide [2C]	ND	0.050	µg/L							
Methoxychlor	ND	0.50	µg/L							
Methoxychlor [2C]	ND	0.50	µg/L							
Toxaphene	ND	1.0	µg/L							
Toxaphene [2C]	ND	1.0	µg/L							
Surrogate: Decachlorobiphenyl	2.40		µg/L	2.00		120	30-150			
Surrogate: Decachlorobiphenyl [2C]	2.08		µg/L	2.00		104	30-150			
Surrogate: Tetrachloro-m-xylene	2.38		µg/L	2.00		119	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	2.12		µg/L	2.00		106	30-150			

LCS (B118246-BS1)

Prepared: 04/01/15 Analyzed: 04/02/15

gamma-BHC (Lindane)	1.1	0.030	µg/L	1.00		107	40-140			
gamma-BHC (Lindane) [2C]	0.87	0.030	µg/L	1.00		86.9	40-140			
Endrin	1.1	0.080	µg/L	1.00		106	40-140			
Endrin [2C]	0.96	0.080	µg/L	1.00		95.8	40-140			
Heptachlor	1.0	0.050	µg/L	1.00		101	40-140			
Heptachlor [2C]	0.93	0.050	µg/L	1.00		93.0	40-140			
Heptachlor Epoxide	1.0	0.050	µg/L	1.00		103	40-140			
Heptachlor Epoxide [2C]	0.94	0.050	µg/L	1.00		93.9	40-140			
Methoxychlor	1.1	0.50	µg/L	1.00		108	40-140			
Methoxychlor [2C]	0.94	0.50	µg/L	1.00		93.5	40-140			
Surrogate: Decachlorobiphenyl	1.92		µg/L	2.00		95.9	30-150			
Surrogate: Decachlorobiphenyl [2C]	1.77		µg/L	2.00		88.6	30-150			
Surrogate: Tetrachloro-m-xylene	1.89		µg/L	2.00		94.7	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	1.73		µg/L	2.00		86.3	30-150			

Matrix Spike (B118246-MS1)

Source: 15C1102-17

Prepared: 04/01/15 Analyzed: 04/02/15

gamma-BHC (Lindane)	0.95	0.030	µg/L	1.00	ND	94.9	0-200			
gamma-BHC (Lindane) [2C]	0.86	0.030	µg/L	1.00	ND	85.7	0-200			
Heptachlor	0.95	0.050	µg/L	1.00	ND	94.8	0-200			
Heptachlor [2C]	0.90	0.050	µg/L	1.00	ND	90.4	0-200			
Heptachlor Epoxide	0.95	0.050	µg/L	1.00	ND	94.9	0-200			
Heptachlor Epoxide [2C]	0.91	0.050	µg/L	1.00	ND	90.9	0-200			
Methoxychlor	1.0	0.50	µg/L	1.00	ND	99.6	0-200			
Methoxychlor [2C]	0.85	0.50	µg/L	1.00	ND	85.1	0-200			
Surrogate: Decachlorobiphenyl	3.44		µg/L	4.00		86.1	30-150			
Surrogate: Decachlorobiphenyl [2C]	3.20		µg/L	4.00		80.0	30-150			
Surrogate: Tetrachloro-m-xylene	3.36		µg/L	4.00		83.9	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	2.96		µg/L	4.00		73.9	30-150			

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QUALITY CONTROL

TCLP - Polychlorinated Biphenyls By GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes

Batch B118248 - SW-846 3510C

Blank (B118248-BLK1)

Prepared: 04/01/15 Analyzed: 04/02/15

Aroclor-1016	ND	0.20	µg/L							
Aroclor-1016 [2C]	ND	0.20	µg/L							
Aroclor-1221	ND	0.20	µg/L							
Aroclor-1221 [2C]	ND	0.20	µg/L							
Aroclor-1232	ND	0.20	µg/L							
Aroclor-1232 [2C]	ND	0.20	µg/L							
Aroclor-1242	ND	0.20	µg/L							
Aroclor-1242 [2C]	ND	0.20	µg/L							
Aroclor-1248	ND	0.20	µg/L							
Aroclor-1248 [2C]	ND	0.20	µg/L							
Aroclor-1254	ND	0.20	µg/L							
Aroclor-1254 [2C]	ND	0.20	µg/L							
Aroclor-1260	ND	0.20	µg/L							
Aroclor-1260 [2C]	ND	0.20	µg/L							
Aroclor-1262	ND	0.20	µg/L							
Aroclor-1262 [2C]	ND	0.20	µg/L							
Aroclor-1268	ND	0.20	µg/L							
Aroclor-1268 [2C]	ND	0.20	µg/L							
Surrogate: Decachlorobiphenyl	2.50		µg/L	2.00		125	30-150			
Surrogate: Decachlorobiphenyl [2C]	2.41		µg/L	2.00		120	30-150			
Surrogate: Tetrachloro-m-xylene	2.35		µg/L	2.00		118	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	2.29		µg/L	2.00		115	30-150			

LCS (B118248-BS1)

Prepared: 04/01/15 Analyzed: 04/02/15

Aroclor-1016	0.49	0.20	µg/L	0.500		97.7	40-140			
Aroclor-1016 [2C]	0.51	0.20	µg/L	0.500		101	40-140			
Aroclor-1260	0.46	0.20	µg/L	0.500		92.9	40-140			
Aroclor-1260 [2C]	0.44	0.20	µg/L	0.500		88.2	40-140			
Surrogate: Decachlorobiphenyl	1.47		µg/L	2.00		73.7	30-150			
Surrogate: Decachlorobiphenyl [2C]	1.41		µg/L	2.00		70.4	30-150			
Surrogate: Tetrachloro-m-xylene	1.65		µg/L	2.00		82.7	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	1.64		µg/L	2.00		82.0	30-150			

Matrix Spike (B118248-MS1)

Source: 15C1102-18

Prepared: 04/01/15 Analyzed: 04/02/15

Aroclor-1016	0.43	0.20	µg/L	0.500	ND	85.8	40-140			
Aroclor-1016 [2C]	0.43	0.20	µg/L	0.500	ND	86.0	40-140			
Aroclor-1260	0.38	0.20	µg/L	0.500	ND	76.6	40-140			
Aroclor-1260 [2C]	0.37	0.20	µg/L	0.500	ND	74.6	40-140			
Surrogate: Decachlorobiphenyl	3.75		µg/L	4.00		93.7	30-150			
Surrogate: Decachlorobiphenyl [2C]	3.62		µg/L	4.00		90.4	30-150			
Surrogate: Tetrachloro-m-xylene	3.41		µg/L	4.00		85.3	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	3.34		µg/L	4.00		83.5	30-150			

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QUALITY CONTROL

TCLP - Herbicides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes

Batch B118354 - SW-846 3510C

Blank (B118354-BLK1)

Prepared: 04/02/15 Analyzed: 04/03/15

2,4-D	ND	0.050	mg/L							
2,4-D [2C]	ND	0.050	mg/L							
2,4,5-TP (Silvex)	ND	0.0050	mg/L							
2,4,5-TP (Silvex) [2C]	ND	0.0050	mg/L							
Surrogate: 2,4-Dichlorophenylacetic acid	0.218		mg/L	0.200		109	30-150			
Surrogate: 2,4-Dichlorophenylacetic acid [2C]	0.194		mg/L	0.200		97.0	30-150			

LCS (B118354-BS1)

Prepared: 04/02/15 Analyzed: 04/03/15

2,4-D	0.254	0.050	mg/L	0.250		102	40-140			
2,4-D [2C]	0.210	0.050	mg/L	0.250		83.8	40-140			
2,4,5-TP (Silvex)	0.0249	0.0050	mg/L	0.0250		99.5	40-140			
2,4,5-TP (Silvex) [2C]	0.0248	0.0050	mg/L	0.0250		99.0	40-140			
Surrogate: 2,4-Dichlorophenylacetic acid	0.204		mg/L	0.200		102	30-150			
Surrogate: 2,4-Dichlorophenylacetic acid [2C]	0.194		mg/L	0.200		97.1	30-150			

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QUALITY CONTROL
TCLP - Metals Analyses - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B118171 - SW-846 7470A Prep										
Blank (B118171-BLK1)				Prepared & Analyzed: 03/31/15						
Mercury	ND	0.00010	mg/L							
LCS (B118171-BS1)				Prepared & Analyzed: 03/31/15						
Mercury	0.00203	0.00010	mg/L	0.00200		102	80-120			
LCS Dup (B118171-BSD1)				Prepared & Analyzed: 03/31/15						
Mercury	0.00203	0.00010	mg/L	0.00200		101	80-120	0.323	20	
Matrix Spike (B118171-MS1)				Source: 15C1102-17		Prepared & Analyzed: 03/31/15				
Mercury	0.00204	0.00010	mg/L	0.00200	0.0000458	99.9	75-125			
Batch B118180 - SW-846 3010A										
Blank (B118180-BLK1)				Prepared & Analyzed: 03/31/15						
Arsenic	ND	0.010	mg/L							
Barium	ND	0.050	mg/L							
Cadmium	ND	0.0040	mg/L							
Chromium	ND	0.010	mg/L							
Lead	ND	0.010	mg/L							
Selenium	ND	0.050	mg/L							
Silver	ND	0.0050	mg/L							
LCS (B118180-BS1)				Prepared & Analyzed: 03/31/15						
Arsenic	0.529	0.010	mg/L	0.500		106	80-120			
Barium	0.501	0.050	mg/L	0.500		100	80-120			
Cadmium	0.512	0.0040	mg/L	0.500		102	80-120			
Chromium	0.492	0.010	mg/L	0.500		98.4	80-120			
Lead	0.477	0.010	mg/L	0.500		95.4	80-120			
Selenium	0.555	0.050	mg/L	0.500		111	80-120			
Silver	0.479	0.0050	mg/L	0.500		95.8	80-120			
LCS Dup (B118180-BSD1)				Prepared & Analyzed: 03/31/15						
Arsenic	0.521	0.010	mg/L	0.500		104	80-120	1.67	20	
Barium	0.500	0.050	mg/L	0.500		100	80-120	0.132	20	
Cadmium	0.512	0.0040	mg/L	0.500		102	80-120	0.00150	20	
Chromium	0.491	0.010	mg/L	0.500		98.3	80-120	0.0992	20	
Lead	0.474	0.010	mg/L	0.500		94.8	80-120	0.646	20	
Selenium	0.549	0.050	mg/L	0.500		110	80-120	1.07	20	
Silver	0.477	0.0050	mg/L	0.500		95.4	80-120	0.355	20	

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BREAKDOWN REPORT

Lab Sample ID: S008149-PEM1 **Analyzed:** 03/31/2015

Column Number: 1

Analyte	% Breakdown
4,4'-DDT [1]	1.79
Endrin [1]	11.04

Column Number: 2

Analyte	% Breakdown
4,4'-DDT [2]	1.60
Endrin [2]	10.60

BREAKDOWN REPORT

Lab Sample ID: S008149-PEM2 **Analyzed:** 03/31/2015

Column Number: 1

Analyte	% Breakdown
4,4'-DDT [1]	1.71
Endrin [1]	9.72

Column Number: 2

Analyte	% Breakdown
4,4'-DDT [2]	1.58
Endrin [2]	9.52

BREAKDOWN REPORT

Lab Sample ID: S008149-PEM3 **Analyzed:** 04/01/2015

Column Number: 1

Analyte	% Breakdown
4,4'-DDT [1]	3.02
Endrin [1]	13.96

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BREAKDOWN REPORT

Lab Sample ID: S008149-PEM3 Analyzed: 04/01/2015

Column Number: 2

Analyte	% Breakdown
4,4'-DDT [2]	2.61
Endrin [2]	10.87

BREAKDOWN REPORT

Lab Sample ID: S008149-PEM4 Analyzed: 04/01/2015

Column Number: 1

Analyte	% Breakdown
4,4'-DDT [1]	5.67
Endrin [1]	4.92

Column Number: 2

Analyte	% Breakdown
4,4'-DDT [2]	5.34
Endrin [2]	4.63

BREAKDOWN REPORT

Lab Sample ID: S008149-PEM5 Analyzed: 04/01/2015

Column Number: 1

Analyte	% Breakdown
4,4'-DDT [1]	6.13
Endrin [1]	6.52

Column Number: 2

Analyte	% Breakdown
4,4'-DDT [2]	5.88
Endrin [2]	6.30

BREAKDOWN REPORT

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BREAKDOWN REPORT

Lab Sample ID: S008149-PEM6 Analyzed: 04/01/2015

Column Number: 1

Analyte	% Breakdown
4,4'-DDT [1]	15.53
Endrin [1]	10.23

Column Number: 2

Analyte	% Breakdown
4,4'-DDT [2]	15.31
Endrin [2]	9.90

BREAKDOWN REPORT

Lab Sample ID: S008179-PEM1 Analyzed: 04/02/2015

Column Number: 1

Analyte	% Breakdown
4,4'-DDT [1]	1.99
Endrin [1]	4.26

Column Number: 2

Analyte	% Breakdown
4,4'-DDT [2]	2.76
Endrin [2]	4.40

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8081B

SB-01-COMP

Lab Sample ID: 15C1102-02 Date(s) Analyzed: 04/01/2015 04/01/2015

Instrument ID (1): ECD6A Instrument ID (2): ECD6B

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
4,4'-DDD	1	7.20	0.00	0.00	0.0071	
	2	7.78	0.00	0.00	0.0082	14.9
4,4'-DDT	1	7.40	0.00	0.00	0.016	
	2	8.02	0.00	0.00	0.038	83.6
Aroclor-1254	1	0.00	0.00	0.00	0.14	
	2	0.00	0.00	0.00	0.33	81.4
Aroclor-1260	1	0.00	0.00	0.00	0.17	
	2	0.00	0.00	0.00	0.14	18.2
Chlordane	1	0.00	0.00	0.00	0.53	
	2	0.00	0.00	0.00	0.55	4.1
Dieldrin	1	6.98	0.00	0.00	0.054	
	2	7.46	0.00	0.00	0.028	63.1

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8151A

SB-02-COMP

Lab Sample ID: 15C1102-04 Date(s) Analyzed: 04/01/2015 04/01/2015

Instrument ID (1): Instrument ID (2):

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
2,4-DB	1	15.26	0.00	0.00	73	
	2	16.99	0.00	0.00	44	50.1
Aroclor-1248	1	0.00	0.00	0.00	6.5	
	2	0.00	0.00	0.00	7.1	9.3
Aroclor-1254	1	0.00	0.00	0.00	4.2	
	2	0.00	0.00	0.00	4.9	15.4
Aroclor-1260	1	0.00	0.00	0.00	1.1	
	2	0.00	0.00	0.00	1.2	6.9

IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

SW-846 8081B

SB-04-COMP

Lab Sample ID: 15C1102-08 Date(s) Analyzed: 04/01/2015 04/01/2015
Instrument ID (1): ECD6A Instrument ID (2): ECD6B
GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Chlordane	1	0.00	0.00	0.00	4.7	
	2	0.00	0.00	0.00	5.1	8.4

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8081B

SB-05-COMP

Lab Sample ID: 15C1102-10 Date(s) Analyzed: 04/01/2015 04/01/2015

Instrument ID (1): ECD6A Instrument ID (2): ECD6B

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
4,4'-DDT	1	7.41	0.00	0.00	0.014	
	2	8.02	0.00	0.00	0.0090	44.8
Dieldrin	1	6.98	0.00	0.00	0.0063	
	2	7.46	0.00	0.00	0.0069	8.5

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8081B

SB-06-COMP

Lab Sample ID: 15C1102-12 Date(s) Analyzed: 04/01/2015 04/01/2015

Instrument ID (1): ECD6A Instrument ID (2): ECD6B

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
4,4'-DDD	1	7.21	0.00	0.00	0.012	
	2	7.78	0.00	0.00	0.0045	88.2
4,4'-DDE	1	6.77	0.00	0.00	0.013	
	2	7.33	0.00	0.00	0.012	6.5
4,4'-DDT	1	7.41	0.00	0.00	0.030	
	2	8.02	0.00	0.00	0.057	62.7
Aroclor-1260	1	0.00	0.00	0.00	0.52	
	2	0.00	0.00	0.00	0.51	2.7
Dieldrin	1	6.98	0.00	0.00	0.021	
	2	7.46	0.00	0.00	0.0091	78.7

**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES***SW-846 8082A***SB-07-COMP**Lab Sample ID: 15C1102-14 Date(s) Analyzed: 03/31/2015 03/31/2015

Instrument ID (1): Instrument ID (2):

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1260	1	0.00	0.00	0.00	0.14	
	2	0.00	0.00	0.00	0.15	7.6

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8081B

SED-01 (0-6")

Lab Sample ID: 15C1102-15 Date(s) Analyzed: 04/01/2015 04/01/2015
Instrument ID (1): ECD6A Instrument ID (2): ECD6B
GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
4,4'-DDT	1	7.41	0.00	0.00	0.0077	
	2	8.02	0.00	0.00	0.0064	18.1
Chlordane	1	0.00	0.00	0.00	0.035	
	2	0.00	0.00	0.00	0.048	32.2

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8081B

SED-02 (0-6")

Lab Sample ID: 15C1102-16 Date(s) Analyzed: 04/01/2015 04/01/2015
Instrument ID (1): ECD6A Instrument ID (2): ECD6B
GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
4,4'-DDT	1	7.41	0.00	0.00	0.011	
	2	8.02	0.00	0.00	0.014	24.0
Chlordane	1	0.00	0.00	0.00	0.047	
	2	0.00	0.00	0.00	0.051	7.1
MCPA	1	10.74	0.00	0.00	10000	
	2	12.25	0.00	0.00	15000	37.2

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8151A

LCS

Lab Sample ID: B117934-BS1 Date(s) Analyzed: 03/31/2015 03/31/2015

Instrument ID (1): Instrument ID (2):

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
2,4,5-T	1	14.14	0.00	0.00	10.7	
	2	16.23	0.00	0.00	10.5	2
2,4,5-TP (Silvex)	1	13.55	0.00	0.00	9.68	
	2	15.37	0.00	0.00	10.2	5
2,4-D	1	11.88	0.00	0.00	103	
	2	13.62	0.00	0.00	90.1	13
2,4-DB	1	15.27	0.00	0.00	111	
	2	16.98	0.00	0.00	106	5
Dalapon	1	3.98	0.00	0.00	167	
	2	4.25	0.00	0.00	143	16
Dicamba	1	10.01	0.00	0.00	10.5	
	2	11.39	0.00	0.00	10.8	3
Dichloroprop	1	11.42	0.00	0.00	122	
	2	12.93	0.00	0.00	118	3
Dinoseb	1	16.98	0.00	0.00	15.1	
	2	17.21	0.00	0.00	15.7	4
MCPA	1	10.74	0.00	0.00	9700	
	2	12.23	0.00	0.00	9580	1
MCPP	1	10.45	0.00	0.00	10200	
	2	11.73	0.00	0.00	9490	7

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8151A

LCS Dup

Lab Sample ID: B117934-BSD1 Date(s) Analyzed: 03/31/2015 03/31/2015

Instrument ID (1): Instrument ID (2):

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
2,4,5-T	1	14.14	0.00	0.00	11.5	
	2	16.22	0.00	0.00	11.3	2
2,4,5-TP (Silvex)	1	13.55	0.00	0.00	10.3	
	2	15.37	0.00	0.00	11.0	7
2,4-D	1	11.88	0.00	0.00	111	
	2	13.62	0.00	0.00	94.1	17
2,4-DB	1	15.27	0.00	0.00	124	
	2	16.98	0.00	0.00	113	9
Dalapon	1	3.99	0.00	0.00	160	
	2	4.25	0.00	0.00	138	15
Dicamba	1	10.01	0.00	0.00	11.1	
	2	11.39	0.00	0.00	11.1	0
Dichloroprop	1	11.42	0.00	0.00	132	
	2	12.93	0.00	0.00	127	4
Dinoseb	1	16.98	0.00	0.00	16.3	
	2	17.21	0.00	0.00	17.1	5
MCPA	1	10.74	0.00	0.00	10400	
	2	12.24	0.00	0.00	10300	1
MCPP	1	10.45	0.00	0.00	10900	
	2	11.73	0.00	0.00	10100	8

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8151A

Matrix Spike

Lab Sample ID: B117934-MS1 Date(s) Analyzed: 04/01/2015 04/01/2015

Instrument ID (1): Instrument ID (2):

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
2,4,5-T	1	14.13	0.00	0.00	11.7	
	2	16.23	0.00	0.00	10.6	10
2,4,5-TP (Silvex)	1	13.55	0.00	0.00	10.5	
	2	15.37	0.00	0.00	12.9	21
2,4-D	1	11.88	0.00	0.00	120	
	2	13.62	0.00	0.00	98.9	19
2,4-DB	1	15.27	0.00	0.00	127	
	2	16.98	0.00	0.00	116	9
Dalapon	1	3.98	0.00	0.00	207	
	2	4.25	0.00	0.00	184	12
Dicamba	1	10.01	0.00	0.00	11.4	
	2	11.39	0.00	0.00	12.0	5
Dichloroprop	1	11.42	0.00	0.00	141	
	2	12.93	0.00	0.00	136	4
Dinoseb	1	16.98	0.00	0.00	15.6	
	2	17.20	0.00	0.00	14.1	10
MCPA	1	10.74	0.00	0.00	11600	
	2	12.24	0.00	0.00	11000	5
MCPP	1	10.45	0.00	0.00	11700	
	2	11.73	0.00	0.00	11400	3

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8151A

Matrix Spike Dup

Lab Sample ID: B117934-MSD1 Date(s) Analyzed: 04/01/2015 04/01/2015

Instrument ID (1): Instrument ID (2):

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
2,4,5-T	1	14.13	0.00	0.00	11.2	
	2	16.23	0.00	0.00	10.2	9
2,4,5-TP (Silvex)	1	13.55	0.00	0.00	10.4	
	2	15.37	0.00	0.00	13.2	24
2,4-D	1	11.88	0.00	0.00	118	
	2	13.62	0.00	0.00	97.6	19
2,4-DB	1	15.27	0.00	0.00	106	
	2	16.98	0.00	0.00	116	9
Dalapon	1	3.98	0.00	0.00	191	
	2	4.25	0.00	0.00	168	13
Dicamba	1	10.01	0.00	0.00	11.2	
	2	11.39	0.00	0.00	12.0	7
Dichloroprop	1	11.42	0.00	0.00	144	
	2	12.93	0.00	0.00	134	7
Dinoseb	1	16.98	0.00	0.00	15.3	
	2	17.20	0.00	0.00	15.0	2
MCPA	1	10.74	0.00	0.00	11200	
	2	12.24	0.00	0.00	10700	5
MCPP	1	10.45	0.00	0.00	11500	
	2	11.73	0.00	0.00	11200	3

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS

Lab Sample ID: B118123-BS1 Date(s) Analyzed: 03/31/2015 03/31/2015

Instrument ID (1): Instrument ID (2):

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1016	1	0.00	0.00	0.00	0.20	
	2	0.00	0.00	0.00	0.21	7
Aroclor-1260	1	0.00	0.00	0.00	0.20	
	2	0.00	0.00	0.00	0.21	6

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS Dup

Lab Sample ID: B118123-BSD1 Date(s) Analyzed: 03/31/2015 03/31/2015

Instrument ID (1): Instrument ID (2):

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1016	1	0.00	0.00	0.00	0.21	
	2	0.00	0.00	0.00	0.22	6
Aroclor-1260	1	0.00	0.00	0.00	0.21	
	2	0.00	0.00	0.00	0.21	2

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

Matrix Spike

Lab Sample ID: B118123-MS1 Date(s) Analyzed: 04/01/2015 04/01/2015

Instrument ID (1): Instrument ID (2):

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1016	1	0.00	0.00	0.00	0.42	
	2	0.00	0.00	0.00	0.68	47
Aroclor-1260	1	0.00	0.00	0.00	0.57	
	2	0.00	0.00	0.00	0.49	15

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

Matrix Spike Dup

Lab Sample ID: B118123-MSD1 Date(s) Analyzed: 04/01/2015 04/01/2015
Instrument ID (1): _____ Instrument ID (2): _____
GC Column (1): _____ ID: _____ (mm) GC Column (2): _____ ID: _____ (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1016	1	0.00	0.00	0.00	0.33	
	2	0.00	0.00	0.00	0.38	13
Aroclor-1260	1	0.00	0.00	0.00	0.47	
	2	0.00	0.00	0.00	0.45	4

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8081B

LCS

Lab Sample ID: B118124-BS1 Date(s) Analyzed: 03/31/2015 03/31/2015
Instrument ID (1): ECD6 Instrument ID (2): ECD6
GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
4,4'-DDD	1	7.20	0.00	0.00	0.11	
	2	7.78	0.00	0.00	0.11	1
4,4'-DDE	1	6.78	0.00	0.00	0.11	
	2	7.33	0.00	0.00	0.11	0
4,4'-DDT	1	7.41	0.00	0.00	0.11	
	2	8.02	0.00	0.00	0.11	1
Alachlor	1	6.24	0.00	0.00	0.10	
	2	6.46	0.00	0.00	0.093	8
Aldrin	1	6.14	0.00	0.00	0.11	
	2	6.54	0.00	0.00	0.10	5
alpha-BHC	1	5.47	0.00	0.00	0.11	
	2	5.76	0.00	0.00	0.10	7
beta-BHC	1	5.71	0.00	0.00	0.099	
	2	6.05	0.00	0.00	0.097	2
delta-BHC	1	5.82	0.00	0.00	0.10	
	2	6.26	0.00	0.00	0.098	3
Dieldrin	1	6.98	0.00	0.00	0.10	
	2	7.46	0.00	0.00	0.10	0
Endosulfan I	1	6.81	0.00	0.00	0.10	
	2	7.25	0.00	0.00	0.10	3
Endosulfan II	1	7.31	0.00	0.00	0.10	
	2	7.86	0.00	0.00	0.10	5
Endosulfan Sulfate	1	7.95	0.00	0.00	0.11	
	2	8.31	0.00	0.00	0.10	5
Endrin	1	7.15	0.00	0.00	0.11	
	2	7.70	0.00	0.00	0.10	9
Endrin Aldehyde	1	7.63	0.00	0.00	0.095	
	2	8.12	0.00	0.00	0.090	5
Endrin Ketone	1	8.15	0.00	0.00	0.11	
	2	8.65	0.00	0.00	0.099	6
gamma-BHC (Lindane)	1	5.66	0.00	0.00	0.10	

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8081B

LCS

Lab Sample ID: B118124-BS1 Date(s) Analyzed: 03/31/2015 03/31/2015

Instrument ID (1): ECD6 Instrument ID (2): ECD6

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
	2	6.00	0.00	0.00	0.10	3
Heptachlor	1	5.95	0.00	0.00	0.10	
	2	6.31	0.00	0.00	0.099	4
Heptachlor Epoxide	1	6.54	0.00	0.00	0.10	
	2	6.96	0.00	0.00	0.099	4
Hexachlorobenzene	1	5.37	0.00	0.00	0.11	
	2	5.67	0.00	0.00	0.10	6
Methoxychlor	1	7.79	0.00	0.00	0.11	
	2	8.49	0.00	0.00	0.11	0

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8081B

LCS Dup

Lab Sample ID: B118124-BSD1 Date(s) Analyzed: 03/31/2015 03/31/2015
Instrument ID (1): ECD6 Instrument ID (2): ECD6
GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
4,4'-DDD	1	7.20	0.00	0.00	0.11	
	2	7.78	0.00	0.00	0.11	3
4,4'-DDE	1	6.78	0.00	0.00	0.11	
	2	7.33	0.00	0.00	0.11	1
4,4'-DDT	1	7.41	0.00	0.00	0.11	
	2	8.02	0.00	0.00	0.10	6
Alachlor	1	6.24	0.00	0.00	0.10	
	2	6.46	0.00	0.00	0.093	11
Aldrin	1	6.14	0.00	0.00	0.10	
	2	6.54	0.00	0.00	0.11	5
alpha-BHC	1	5.47	0.00	0.00	0.11	
	2	5.76	0.00	0.00	0.10	8
beta-BHC	1	5.71	0.00	0.00	0.099	
	2	6.05	0.00	0.00	0.097	2
delta-BHC	1	5.82	0.00	0.00	0.10	
	2	6.26	0.00	0.00	0.097	3
Dieldrin	1	6.98	0.00	0.00	0.099	
	2	7.46	0.00	0.00	0.10	1
Endosulfan I	1	6.81	0.00	0.00	0.10	
	2	7.25	0.00	0.00	0.10	2
Endosulfan II	1	7.31	0.00	0.00	0.10	
	2	7.86	0.00	0.00	0.10	4
Endosulfan Sulfate	1	7.96	0.00	0.00	0.10	
	2	8.31	0.00	0.00	0.10	3
Endrin	1	7.15	0.00	0.00	0.11	
	2	7.70	0.00	0.00	0.11	3
Endrin Aldehyde	1	7.63	0.00	0.00	0.095	
	2	8.12	0.00	0.00	0.091	5
Endrin Ketone	1	8.15	0.00	0.00	0.10	
	2	8.65	0.00	0.00	0.098	5
gamma-BHC (Lindane)	1	5.66	0.00	0.00	0.10	

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8081B

LCS Dup

Lab Sample ID: B118124-BSD1 Date(s) Analyzed: 03/31/2015 03/31/2015

Instrument ID (1): ECD6 Instrument ID (2): ECD6

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
	2	6.00	0.00	0.00	0.10	4
Heptachlor	1	5.95	0.00	0.00	0.10	
	2	6.31	0.00	0.00	0.099	2
Heptachlor Epoxide	1	6.54	0.00	0.00	0.10	
	2	6.96	0.00	0.00	0.10	3
Hexachlorobenzene	1	5.37	0.00	0.00	0.11	
	2	5.67	0.00	0.00	0.10	6
Methoxychlor	1	7.79	0.00	0.00	0.10	
	2	8.49	0.00	0.00	0.10	4

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8081B

LCS

Lab Sample ID: B118246-BS1 Date(s) Analyzed: 04/02/2015 04/02/2015

Instrument ID (1): ECD 2A Instrument ID (2): ECD 2A

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Endrin	1	7.06	0.00	0.00	1.1	
	2	7.71	0.00	0.00	0.96	10
gamma-BHC (Lindane)	1	5.59	0.00	0.00	1.1	
	2	6.01	0.00	0.00	0.87	21
Heptachlor	1	5.88	0.00	0.00	1.0	
	2	6.31	0.00	0.00	0.93	8
Heptachlor Epoxide	1	6.46	0.00	0.00	1.0	
	2	6.96	0.00	0.00	0.94	9
Methoxychlor	1	7.70	0.00	0.00	1.1	
	2	8.49	0.00	0.00	0.94	14

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8081B

Matrix Spike

Lab Sample ID: B118246-MS1 Date(s) Analyzed: 04/02/2015 04/02/2015

Instrument ID (1): ECD 2A Instrument ID (2): ECD 2A

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
gamma-BHC (Lindane)	1	5.59	0.00	0.00	0.95	
	2	6.01	0.00	0.00	0.86	10
Heptachlor	1	5.88	0.00	0.00	0.95	
	2	6.31	0.00	0.00	0.90	5
Heptachlor Epoxide	1	6.46	0.00	0.00	0.95	
	2	6.96	0.00	0.00	0.91	4
Methoxychlor	1	7.70	0.00	0.00	1.0	
	2	8.49	0.00	0.00	0.85	16

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8151A

LCS

Lab Sample ID: B118354-BS1 Date(s) Analyzed: 04/03/2015 04/03/2015

Instrument ID (1): Instrument ID (2):

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
2,4,5-TP (Silvex)	1	13.34	0.00	0.00	0.0249	
	2	15.14	0.00	0.00	0.0248	0
2,4-D	1	11.68	0.00	0.00	0.254	
	2	13.41	0.00	0.00	0.210	19

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
	No results have been blank subtracted unless specified in the case narrative section.
B	Analyte is found in the associated blank as well as in the sample.
B-07	Data is not affected by elevated level in blank since sample result is >10x level found in the blank.
H-03	Sample received after recommended holding time was exceeded.
L-02	Laboratory fortified blank/laboratory control sample recovery and duplicate recoveries outside of control limits. Data validation is not affected since all results are "not detected" for associated samples in this batch and bias is on the high side.
L-04	Laboratory fortified blank/laboratory control sample recovery and duplicate recovery are outside of control limits. Reported value for this compound is likely to be biased on the low side.
L-07	Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.
L-07A	Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD outside of control limits. Reduced precision anticipated for any reported result for this compound.
MS-09	Matrix spike recovery and matrix spike duplicate recovery outside of control limits. Possibility of sample matrix effects that lead to a low bias for reported result or non-homogeneous sample aliquots cannot be eliminated.
MS-21	Matrix spike and/or spike duplicate recovery bias high due to contribution of other Aroclors present in the source sample.
MS-22	Either matrix spike or MS duplicate is outside of control limits, but the other is within limits. RPD between the two MS/MSD results is within method specified criteria.
P-01	Result was confirmed using a dissimilar column. Relative percent difference between the two results was >40%. In accordance with the method, the higher result was reported.
PR-03	Sample preserved in the laboratory, not in the field as required by the method.
PR-15	According to the NY ELAP program, all voa results less than 0.2mg/Kg are estimated and biased low if not collected according to SW-846 5035-L/5035A-L.
R-05	Laboratory fortified blank duplicate RPD is outside of control limits. Reduced precision is anticipated for any reported value for this compound.
RL-11	Elevated reporting limit due to high concentration of target compounds.
RL-12	Elevated reporting limit due to matrix interference.
S-01	The surrogate recovery for this sample is not available due to sample dilution below the surrogate reporting limit required from high analyte concentration and/or matrix interferences.
S-02	The surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic compounds present in the sample extract.
S-03	Surrogate recovery outside of control limits due to suspected sample matrix interference.
S-07	One associated surrogate standard recovery is outside of control limits but the other(s) is/are within limits. All recoveries are > 10%.
V-04	Initial calibration did not meet method specifications. Compound was calibrated using a response factor where %RSD is outside of method specified criteria.
V-05	Continuing calibration did not meet method specifications and was biased on the low side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the low side.
V-06	Continuing calibration did not meet method specifications and was biased on the high side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the high side.
V-16	Response factor is less than method specified minimum acceptable value. Reduced precision and accuracy may be associated with reported result.
V-20	Continuing calibration did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 1030 in Soil	
Ignitability	NY,NH,CT,NC,ME,VA,NJ
SW-846 6010C in Soil	
Aluminum	CT,NH,NY,ME,VA,NC,NJ
Antimony	CT,NH,NY,NC,ME,VA,NJ
Arsenic	CT,NH,NY,ME,NC,VA,NJ
Barium	CT,NH,NY,ME,NC,VA,NJ
Beryllium	CT,NH,NY,ME,NC,VA,NJ
Cadmium	CT,NH,NY,ME,NC,VA,NJ
Calcium	CT,NH,NY,ME,NC,VA,NJ
Chromium	CT,NH,NY,ME,NC,VA,NJ
Cobalt	CT,NH,NY,ME,NC,VA,NJ
Copper	CT,NH,NY,ME,NC,VA,NJ
Iron	CT,NH,NY,ME,NC,VA,NJ
Lead	CT,NH,NY,AIHA,ME,NC,VA,NJ
Magnesium	CT,NH,NY,ME,NC,VA,NJ
Manganese	CT,NH,NY,ME,NC,VA,NJ
Nickel	CT,NH,NY,ME,NC,VA,NJ
Potassium	CT,NH,NY,ME,NC,VA,NJ
Selenium	CT,NH,NY,ME,NC,VA,NJ
Silver	CT,NH,NY,ME,NC,VA,NJ
Sodium	CT,NH,NY,ME,NC,VA,NJ
Thallium	CT,NH,NY,ME,NC,VA,NJ
Vanadium	CT,NH,NY,ME,NC,VA,NJ
Zinc	CT,NH,NY,ME,NC,VA,NJ
SW-846 6010C in Water	
Arsenic	NY,CT,NC,ME,NH,VA,NJ
Barium	NY,CT,ME,NC,NH,VA,NJ
Cadmium	NY,CT,ME,NC,NH,VA,NJ
Chromium	NY,CT,ME,NC,NH,VA,NJ
Lead	NY,CT,ME,NC,NH,VA,NJ
Selenium	CT,ME,NC,NH,NY,VA,NJ
Silver	CT,ME,NC,NH,NY,VA,NJ
SW-846 7470A in Water	
Mercury	CT,ME,NC,NH,NY,VA,NJ
SW-846 7471B in Soil	
Mercury	CT,NH,NY,NC,ME,VA,NJ
SW-846 8015C in Soil	
Gasoline Range Organics (GRO)	NY,VA,NH,NJ
Diesel Range Organics	NY,VA,NH,NJ
SW-846 8081B in Soil	
Alachlor	NC
Alachlor [2C]	NC
Aldrin	CT,NH,NY,ME,NC,VA,NJ
Aldrin [2C]	CT,NH,NY,ME,NC,VA,NJ
alpha-BHC	CT,NH,NY,ME,NC,VA,NJ

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8081B in Soil</i>	
alpha-BHC [2C]	CT,NH,NY,ME,NC,VA,NJ
beta-BHC	CT,NH,NY,ME,NC,VA,NJ
beta-BHC [2C]	CT,NH,NY,ME,NC,VA,NJ
delta-BHC	CT,NH,NY,ME,NC,VA,NJ
delta-BHC [2C]	CT,NH,NY,ME,NC,VA,NJ
gamma-BHC (Lindane)	CT,NH,NY,ME,NC,VA,NJ
gamma-BHC (Lindane) [2C]	CT,NH,NY,ME,NC,VA,NJ
Chlordane	CT,NH,NY,ME,NC,VA,NJ
Chlordane [2C]	CT,NH,NY,ME,NC,VA,NJ
4,4'-DDD	CT,NH,NY,ME,NC,VA,NJ
4,4'-DDD [2C]	CT,NH,NY,ME,NC,VA,NJ
4,4'-DDE	CT,NH,NY,ME,NC,VA,NJ
4,4'-DDE [2C]	CT,NH,NY,ME,NC,VA,NJ
4,4'-DDT	CT,NH,NY,ME,NC,VA,NJ
4,4'-DDT [2C]	CT,NH,NY,ME,NC,VA,NJ
Dieldrin	CT,NH,NY,ME,NC,VA,NJ
Dieldrin [2C]	CT,NH,NY,ME,NC,VA,NJ
Endosulfan I	CT,NH,NY,ME,NC,VA,NJ
Endosulfan I [2C]	CT,NH,NY,ME,NC,VA,NJ
Endosulfan II	CT,NH,NY,ME,NC,VA,NJ
Endosulfan II [2C]	CT,NH,NY,ME,NC,VA,NJ
Endosulfan Sulfate	CT,NH,NY,ME,NC,VA,NJ
Endosulfan Sulfate [2C]	CT,NH,NY,ME,NC,VA,NJ
Endrin	CT,NH,NY,ME,NC,VA,NJ
Endrin [2C]	CT,NH,NY,ME,NC,VA,NJ
Endrin Aldehyde	CT,NH,NY,ME,NC,VA,NJ
Endrin Aldehyde [2C]	CT,NH,NY,ME,NC,VA,NJ
Endrin Ketone	NC
Endrin Ketone [2C]	NC
Heptachlor	CT,NH,NY,ME,NC,VA,NJ
Heptachlor [2C]	CT,NH,NY,ME,NC,VA,NJ
Heptachlor Epoxide	CT,NH,NY,ME,NC,VA,NJ
Heptachlor Epoxide [2C]	CT,NH,NY,ME,NC,VA,NJ
Hexachlorobenzene	NC
Hexachlorobenzene [2C]	NC
Methoxychlor	CT,NH,NY,ME,NC,VA,NJ
Methoxychlor [2C]	CT,NH,NY,ME,NC,VA,NJ
Toxaphene	CT,NH,NY,ME,NC,VA,NJ
Toxaphene [2C]	CT,NH,NY,ME,NC,VA,NJ
<i>SW-846 8081B in Water</i>	
Alachlor	NC
Alachlor	NC
Alachlor [2C]	NC
Alachlor [2C]	NC
Aldrin	CT,ME,NC,NH,NY,VA,NJ
Aldrin	CT,NH,NY,ME,NC,VA,NJ

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8081B in Water</i>	
Aldrin [2C]	CT,NH,NY,ME,NC,VA,NJ
Aldrin [2C]	CT,ME,NC,NH,NY,VA,NJ
alpha-BHC	CT,ME,NC,NH,NY,VA,NJ
alpha-BHC	CT,NH,NY,ME,NC,VA,NJ
alpha-BHC [2C]	CT,ME,NC,NH,NY,VA,NJ
alpha-BHC [2C]	CT,NH,NY,ME,NC,VA,NJ
beta-BHC	CT,NH,NY,ME,NC,VA,NJ
beta-BHC	CT,ME,NC,NH,NY,VA,NJ
beta-BHC [2C]	CT,ME,NC,NH,NY,VA,NJ
beta-BHC [2C]	CT,NH,NY,ME,NC,VA,NJ
delta-BHC	CT,NH,NY,ME,NC,VA,NJ
delta-BHC	CT,ME,NC,NH,NY,VA,NJ
delta-BHC [2C]	CT,NH,NY,ME,NC,VA,NJ
delta-BHC [2C]	CT,ME,NC,NH,NY,VA,NJ
gamma-BHC (Lindane)	CT,ME,NC,NH,NY,VA,NJ
gamma-BHC (Lindane)	CT,NH,NY,ME,NC,VA,NJ
gamma-BHC (Lindane) [2C]	CT,NH,NY,ME,NC,VA,NJ
gamma-BHC (Lindane) [2C]	CT,ME,NC,NH,NY,VA,NJ
Chlordane	CT,ME,NC,NH,NY,VA,NJ
Chlordane	CT,NH,NY,ME,NC,VA,NJ
Chlordane [2C]	CT,ME,NC,NH,NY,VA,NJ
Chlordane [2C]	CT,NH,NY,ME,NC,VA,NJ
4,4'-DDD	CT,ME,NC,NH,NY,VA,NJ
4,4'-DDD	CT,NH,NY,ME,NC,VA,NJ
4,4'-DDD [2C]	CT,ME,NC,NH,NY,VA,NJ
4,4'-DDD [2C]	CT,NH,NY,ME,NC,VA,NJ
4,4'-DDE	CT,NH,NY,ME,NC,VA,NJ
4,4'-DDE	CT,ME,NC,NH,NY,VA,NJ
4,4'-DDE [2C]	CT,NH,NY,ME,NC,VA,NJ
4,4'-DDE [2C]	CT,ME,NC,NH,NY,VA,NJ
4,4'-DDT	CT,ME,NC,NH,NY,VA,NJ
4,4'-DDT	CT,NH,NY,ME,NC,VA,NJ
4,4'-DDT [2C]	CT,NH,NY,ME,NC,VA,NJ
4,4'-DDT [2C]	CT,ME,NC,NH,NY,VA,NJ
Dieldrin	CT,NH,NY,ME,NC,VA,NJ
Dieldrin	CT,ME,NC,NH,NY,VA,NJ
Dieldrin [2C]	CT,ME,NC,NH,NY,VA,NJ
Dieldrin [2C]	CT,NH,NY,ME,NC,VA,NJ
Endosulfan I	CT,NH,NY,ME,NC,VA,NJ
Endosulfan I	CT,ME,NC,NH,NY,VA,NJ
Endosulfan I [2C]	CT,ME,NC,NH,NY,VA,NJ
Endosulfan I [2C]	CT,NH,NY,ME,NC,VA,NJ
Endosulfan II	CT,ME,NC,NH,NY,VA,NJ
Endosulfan II	CT,NH,NY,ME,NC,VA,NJ
Endosulfan II [2C]	CT,ME,NC,NH,NY,VA,NJ
Endosulfan II [2C]	CT,NH,NY,ME,NC,VA,NJ
Endosulfan Sulfate	CT,ME,NC,NH,NY,VA,NJ

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8081B in Water	
Endosulfan Sulfate	CT,NH,NY,ME,NC,VA,NJ
Endosulfan Sulfate [2C]	CT,NH,NY,ME,NC,VA,NJ
Endosulfan Sulfate [2C]	CT,ME,NC,NH,NY,VA,NJ
Endrin	CT,ME,NC,NH,NY,VA,NJ
Endrin	CT,NH,NY,ME,NC,VA,NJ
Endrin [2C]	CT,ME,NC,NH,NY,VA,NJ
Endrin [2C]	CT,NH,NY,ME,NC,VA,NJ
Endrin Aldehyde	CT,NH,NY,ME,NC,VA,NJ
Endrin Aldehyde	CT,ME,NC,NH,NY,VA,NJ
Endrin Aldehyde [2C]	CT,ME,NC,NH,NY,VA,NJ
Endrin Aldehyde [2C]	CT,NH,NY,ME,NC,VA,NJ
Endrin Ketone	NC
Endrin Ketone	NC
Endrin Ketone [2C]	NC
Endrin Ketone [2C]	NC
Heptachlor	CT,NH,NY,ME,NC,VA,NJ
Heptachlor	CT,ME,NC,NH,NY,VA,NJ
Heptachlor [2C]	CT,ME,NC,NH,NY,VA,NJ
Heptachlor [2C]	CT,NH,NY,ME,NC,VA,NJ
Heptachlor Epoxide	CT,ME,NC,NH,NY,VA,NJ
Heptachlor Epoxide	CT,NH,NY,ME,NC,VA,NJ
Heptachlor Epoxide [2C]	CT,NH,NY,ME,NC,VA,NJ
Heptachlor Epoxide [2C]	CT,ME,NC,NH,NY,VA,NJ
Hexachlorobenzene	NC
Hexachlorobenzene	NC
Hexachlorobenzene [2C]	NC
Hexachlorobenzene [2C]	NC
Methoxychlor	CT,ME,NC,NH,NY,VA,NJ
Methoxychlor	CT,NH,NY,ME,NC,VA,NJ
Methoxychlor [2C]	CT,NH,NY,ME,NC,VA,NJ
Methoxychlor [2C]	CT,ME,NC,NH,NY,VA,NJ
Toxaphene	CT,NH,NY,ME,NC,VA,NJ
Toxaphene	CT,ME,NC,NH,NY,VA,NJ
Toxaphene [2C]	CT,NH,NY,ME,NC,VA,NJ
Toxaphene [2C]	CT,ME,NC,NH,NY,VA,NJ
SW-846 8082A in Soil	
Aroclor-1016	CT,NH,NY,NC,ME,VA,NJ
Aroclor-1016 [2C]	CT,NH,NY,NC,ME,VA,NJ
Aroclor-1221	CT,NH,NY,NC,ME,VA,NJ
Aroclor-1221 [2C]	CT,NH,NY,NC,ME,VA,NJ
Aroclor-1232	CT,NH,NY,NC,ME,VA,NJ
Aroclor-1232 [2C]	CT,NH,NY,NC,ME,VA,NJ
Aroclor-1242	CT,NH,NY,NC,ME,VA,NJ
Aroclor-1242 [2C]	CT,NH,NY,NC,ME,VA,NJ
Aroclor-1248	CT,NH,NY,NC,ME,VA,NJ
Aroclor-1248 [2C]	CT,NH,NY,NC,ME,VA,NJ

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8082A in Soil	
Aroclor-1254	CT,NH,NY,NC,ME,VA,NJ
Aroclor-1254 [2C]	CT,NH,NY,NC,ME,VA,NJ
Aroclor-1260	CT,NH,NY,NC,ME,VA,NJ
Aroclor-1260 [2C]	CT,NH,NY,NC,ME,VA,NJ
Aroclor-1262	NC
Aroclor-1262 [2C]	NC
Aroclor-1268	NC
Aroclor-1268 [2C]	NC
SW-846 8082A in Water	
Aroclor-1016	CT,NY,ME,NC,NH,VA,NJ
Aroclor-1016 [2C]	CT,NY,ME,NC,NH,VA,NJ
Aroclor-1221	CT,NY,ME,NC,NH,VA,NJ
Aroclor-1221 [2C]	CT,NY,ME,NC,NH,VA,NJ
Aroclor-1232	CT,NY,ME,NC,NH,VA,NJ
Aroclor-1232 [2C]	CT,NY,ME,NC,NH,VA,NJ
Aroclor-1242	CT,NY,ME,NC,NH,VA,NJ
Aroclor-1242 [2C]	CT,NY,ME,NC,NH,VA,NJ
Aroclor-1248	CT,NY,ME,NC,NH,VA,NJ
Aroclor-1248 [2C]	CT,NY,ME,NC,NH,VA,NJ
Aroclor-1254	CT,NY,ME,NC,NH,VA,NJ
Aroclor-1254 [2C]	CT,NY,ME,NC,NH,VA,NJ
Aroclor-1260	CT,NY,ME,NC,NH,VA,NJ
Aroclor-1260 [2C]	CT,NY,ME,NC,NH,VA,NJ
SW-846 8151A in Soil	
2,4-D	NY,ME,NC,NH,VA,CT,NJ
2,4-D [2C]	NY,ME,NC,NH,VA,CT,NJ
2,4-DB	NY,ME,NC,NH,VA,CT,NJ
2,4-DB [2C]	NY,ME,NC,NH,VA,CT,NJ
2,4,5-TP (Silvex)	NY,ME,NC,NH,VA,CT,NJ
2,4,5-TP (Silvex) [2C]	NY,ME,NC,NH,VA,CT,NJ
2,4,5-T	NY,ME,NC,NH,VA,CT,NJ
2,4,5-T [2C]	NY,ME,NC,NH,VA,CT,NJ
Dalapon	NY,ME,NC,NH,VA,CT,NJ
Dalapon [2C]	NY,ME,NC,NH,VA,CT,NJ
Dicamba	NY,ME,NC,NH,VA,CT,NJ
Dicamba [2C]	NY,ME,NC,NH,VA,CT,NJ
Dichloroprop	NY,ME,NC,NH,VA,CT,NJ
Dichloroprop [2C]	NY,ME,NC,NH,VA,CT,NJ
Dinoseb	NY,ME,NC,NH,VA,CT,NJ
Dinoseb [2C]	NY,ME,NC,NH,VA,CT,NJ
MCPA	NY,ME,NC,NH,VA,CT,NJ
MCPA [2C]	NY,ME,NC,NH,VA,CT,NJ
MCPP	NY,ME,NC,NH,VA,CT,NJ
MCPP [2C]	NY,ME,NC,NH,VA,CT,NJ
SW-846 8260C in Soil	
Acetone	ME,NY,VA,NJ

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8260C in Soil</i>	
Acetone	CT,NH,NY,ME,VA,NJ
Acrylonitrile	CT,NH,NY,ME,VA,NJ
Benzene	CT,NH,NY,ME,VA,NJ
Benzene	ME,NY,CT,NC,VA,NJ
Bromobenzene	ME,NY,VA,NJ
Bromobenzene	NH,NY,ME,VA,NJ
Bromochloromethane	ME,NY,VA,NJ
Bromochloromethane	NH,NY,ME,VA,NJ
Bromodichloromethane	ME,NY,VA,NJ
Bromodichloromethane	CT,NH,NY,ME,VA,NJ
Bromoform	CT,NH,NY,ME,VA,NJ
Bromoform	ME,NY,VA,NJ
Bromomethane	CT,NH,NY,ME,VA,NJ
Bromomethane	ME,NY,VA,NJ
2-Butanone (MEK)	ME,NY,CT,NC,VA,NJ
2-Butanone (MEK)	CT,NH,NY,ME,VA,NJ
n-Butylbenzene	ME,NY,VA,NJ
n-Butylbenzene	CT,NH,NY,ME,VA,NJ
sec-Butylbenzene	CT,NH,NY,ME,VA,NJ
sec-Butylbenzene	ME,NY,VA,NJ
tert-Butylbenzene	CT,NH,NY,ME,VA,NJ
tert-Butylbenzene	ME,NY,VA,NJ
Carbon Disulfide	CT,NH,NY,ME,VA,NJ
Carbon Disulfide	ME,VA
Carbon Tetrachloride	ME,NY,CT,NC,VA,NJ
Carbon Tetrachloride	CT,NH,NY,ME,VA,NJ
Chlorobenzene	CT,NH,NY,ME,VA,NJ
Chlorobenzene	ME,NY,CT,NC,VA,NJ
Chlorodibromomethane	CT,NH,NY,ME,VA,NJ
Chlorodibromomethane	ME,NY,VA,NJ
Chloroethane	ME,NY,VA,NJ
Chloroethane	CT,NH,NY,ME,VA,NJ
Chloroform	ME,NY,CT,NC,VA,NJ
Chloroform	CT,NH,NY,ME,VA,NJ
Chloromethane	ME,NY,VA,NJ
Chloromethane	CT,NH,NY,ME,VA,NJ
2-Chlorotoluene	ME,NY,VA,NJ
2-Chlorotoluene	CT,NH,NY,ME,VA,NJ
4-Chlorotoluene	CT,NH,NY,ME,VA,NJ
4-Chlorotoluene	ME,NY,VA,NJ
Dibromomethane	NH,NY,ME,VA,NJ
Dibromomethane	ME,NY,VA,NJ
1,2-Dichlorobenzene	CT,NH,NY,ME,VA,NJ
1,2-Dichlorobenzene	ME,NY,VA,NJ
1,3-Dichlorobenzene	ME,NY,VA,NJ
1,3-Dichlorobenzene	CT,NH,NY,ME,VA,NJ
1,4-Dichlorobenzene	ME,NY,CT,NC,VA,NJ

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8260C in Soil</i>	
1,4-Dichlorobenzene	CT,NH,NY,ME,VA,NJ
Dichlorodifluoromethane (Freon 12)	ME,NY,VA,NJ
Dichlorodifluoromethane (Freon 12)	NH,NY,ME,VA,NJ
1,1-Dichloroethane	CT,NH,NY,ME,VA,NJ
1,1-Dichloroethane	ME,NY,VA,NJ
1,2-Dichloroethane	CT,NH,NY,ME,VA,NJ
1,2-Dichloroethane	ME,NY,CT,NC,VA,NJ
1,1-Dichloroethylene	ME,NY,CT,NC,VA,NJ
1,1-Dichloroethylene	CT,NH,NY,ME,VA,NJ
cis-1,2-Dichloroethylene	ME,NY,VA,NJ
cis-1,2-Dichloroethylene	CT,NH,NY,ME,VA,NJ
trans-1,2-Dichloroethylene	CT,NH,NY,ME,VA,NJ
trans-1,2-Dichloroethylene	ME,NY,VA,NJ
1,2-Dichloropropane	CT,NH,NY,ME,VA,NJ
1,2-Dichloropropane	ME,NY,VA,NJ
1,3-Dichloropropane	NH,NY,ME,VA,NJ
1,3-Dichloropropane	ME,NY,VA,NJ
2,2-Dichloropropane	ME,NY,VA,NJ
2,2-Dichloropropane	NH,NY,ME,VA,NJ
1,1-Dichloropropene	ME,NY,VA,NJ
1,1-Dichloropropene	NH,NY,ME,VA,NJ
cis-1,3-Dichloropropene	ME,NY,VA,NJ
cis-1,3-Dichloropropene	CT,NH,NY,ME,VA,NJ
trans-1,3-Dichloropropene	CT,NH,NY,ME,VA,NJ
trans-1,3-Dichloropropene	ME,NY,VA,NJ
1,4-Dioxane	NJ
Ethylbenzene	ME,NY,VA,NJ
Ethylbenzene	CT,NH,NY,ME,VA,NJ
Hexachlorobutadiene	ME,NY,VA,NJ
Hexachlorobutadiene	NH,NY,ME,VA,NJ
Isopropylbenzene (Cumene)	CT,NH,NY,ME,VA,NJ
Isopropylbenzene (Cumene)	ME,NY,VA,NJ
p-Isopropyltoluene (p-Cymene)	NY,NJ
p-Isopropyltoluene (p-Cymene)	NH,NY,NJ
Methyl tert-Butyl Ether (MTBE)	NY,VA,NJ
Methyl tert-Butyl Ether (MTBE)	NY,VA,NJ
Methylene Chloride	CT,NH,NY,ME,VA,NJ
Methylene Chloride	ME,NY,VA,NJ
4-Methyl-2-pentanone (MIBK)	NY,VA,NJ
4-Methyl-2-pentanone (MIBK)	CT,NH,NY,VA,NJ
Naphthalene	ME,NY,VA,NJ
Naphthalene	NH,NY,ME,VA,NJ
n-Propylbenzene	NH,NY,NJ
n-Propylbenzene	NY,NJ
Styrene	CT,NH,NY,ME,VA,NJ
Styrene	ME,NY,VA,NJ
1,1,1,2-Tetrachloroethane	CT,NH,NY,ME,VA,NJ

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8260C in Soil</i>	
1,1,1,2-Tetrachloroethane	ME,NY,VA,NJ
Tetrachloroethylene	CT,NH,NY,ME,VA,NJ
Tetrachloroethylene	ME,NY,CT,NC,VA,NJ
Toluene	ME,NY,VA,NJ
Toluene	CT,NH,NY,ME,VA,NJ
1,2,3-Trichlorobenzene	ME
1,2,4-Trichlorobenzene	NH,NY,ME,VA,NJ
1,2,4-Trichlorobenzene	ME,NY,VA,NJ
1,3,5-Trichlorobenzene	ME
1,1,1-Trichloroethane	ME,NY,VA,NJ
1,1,1-Trichloroethane	CT,NH,NY,ME,VA,NJ
1,1,2-Trichloroethane	CT,NH,NY,ME,VA,NJ
1,1,2-Trichloroethane	ME,NY,VA,NJ
Trichloroethylene	ME,NY,CT,NC,VA,NJ
Trichloroethylene	CT,NH,NY,ME,VA,NJ
Trichlorofluoromethane (Freon 11)	CT,NH,NY,ME,VA,NJ
Trichlorofluoromethane (Freon 11)	NY,VA,NJ
1,2,3-Trichloropropane	ME,NY,VA,NJ
1,2,3-Trichloropropane	NH,NY,ME,VA,NJ
1,2,4-Trimethylbenzene	ME,NY,VA,NJ
1,2,4-Trimethylbenzene	CT,NH,NY,ME,VA,NJ
1,3,5-Trimethylbenzene	ME,NY,VA,NJ
1,3,5-Trimethylbenzene	CT,NH,NY,ME,VA,NJ
Vinyl Chloride	ME,NY,CT,NC,VA,NJ
Vinyl Chloride	CT,NH,NY,ME,VA,NJ
m+p Xylene	ME,VA
m+p Xylene	CT,NH,NY,ME,VA
o-Xylene	CT,NH,NY,ME,VA
o-Xylene	ME,VA
<i>SW-846 8270D in Soil</i>	
Acenaphthene	CT,NY,NH,ME,NC,VA,NJ
Acenaphthylene	CT,NY,NH,ME,NC,VA,NJ
Acetophenone	NY,NH,ME,NC,VA,NJ
Aniline	NY,NH,ME,NC,VA,NJ
Anthracene	CT,NY,NH,ME,NC,VA,NJ
Benzidine	CT,NY,NH,ME,NC,VA,NJ
Benzo(a)anthracene	CT,NY,NH,ME,NC,VA,NJ
Benzo(a)pyrene	CT,NY,NH,ME,NC,VA,NJ
Benzo(b)fluoranthene	CT,NY,NH,ME,NC,VA,NJ
Benzo(g,h,i)perylene	CT,NY,NH,ME,NC,VA,NJ
Benzo(k)fluoranthene	CT,NY,NH,ME,NC,VA,NJ
Benzoic Acid	NY,NH,ME,NC,VA,NJ
Bis(2-chloroethoxy)methane	CT,NY,NH,ME,NC,VA,NJ
Bis(2-chloroethyl)ether	CT,NY,NH,ME,NC,VA,NJ
Bis(2-chloroisopropyl)ether	CT,NY,NH,ME,NC,VA,NJ
Bis(2-Ethylhexyl)phthalate	CT,NY,NH,ME,NC,VA,NJ

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8270D in Soil</i>	
4-Bromophenylphenylether	CT,NY,NH,ME,NC,VA,NJ
Butylbenzylphthalate	CT,NY,NH,ME,NC,VA,NJ
Carbazole	NC
4-Chloroaniline	CT,NY,NH,ME,NC,VA,NJ
4-Chloro-3-methylphenol	CT,NY,NH,ME,NC,VA,NJ
2-Chloronaphthalene	CT,NY,NH,NC,VA,NJ
2-Chlorophenol	CT,NY,NH,ME,NC,VA,NJ
4-Chlorophenylphenylether	CT,NY,NH,ME,NC,VA,NJ
Chrysene	CT,NY,NH,ME,NC,VA,NJ
Dibenz(a,h)anthracene	CT,NY,NH,ME,NC,VA,NJ
Dibenzofuran	CT,NY,NH,ME,NC,VA,NJ
Di-n-butylphthalate	CT,NY,NH,ME,NC,VA,NJ
1,2-Dichlorobenzene	NY,NH,ME,NC,VA,NJ
1,3-Dichlorobenzene	NY,NH,ME,NC,VA,NJ
1,4-Dichlorobenzene	NY,NH,ME,NC,VA,NJ
3,3-Dichlorobenzidine	CT,NY,NH,ME,NC,VA,NJ
2,4-Dichlorophenol	CT,NY,NH,ME,NC,VA,NJ
Diethylphthalate	CT,NY,NH,ME,NC,VA,NJ
2,4-Dimethylphenol	CT,NY,NH,ME,NC,VA,NJ
Dimethylphthalate	CT,NY,NH,ME,NC,VA,NJ
4,6-Dinitro-2-methylphenol	CT,NY,NH,ME,NC,VA,NJ
2,4-Dinitrophenol	CT,NY,NH,ME,NC,VA,NJ
2,4-Dinitrotoluene	CT,NY,NH,ME,NC,VA,NJ
2,6-Dinitrotoluene	CT,NY,NH,ME,NC,VA,NJ
Di-n-octylphthalate	CT,NY,NH,ME,NC,VA,NJ
1,2-Diphenylhydrazine (as Azobenzene)	NY,NH,ME,NC,VA,NJ
Fluoranthene	CT,NY,NH,ME,NC,VA,NJ
Fluorene	NY,NH,ME,NC,VA,NJ
Hexachlorobenzene	CT,NY,NH,ME,NC,VA,NJ
Hexachlorobutadiene	CT,NY,NH,ME,NC,VA,NJ
Hexachlorocyclopentadiene	CT,NY,NH,ME,NC,VA,NJ
Hexachloroethane	CT,NY,NH,ME,NC,VA,NJ
Indeno(1,2,3-cd)pyrene	CT,NY,NH,ME,NC,VA,NJ
Isophorone	CT,NY,NH,ME,NC,VA,NJ
1-Methylnaphthalene	NC
2-Methylnaphthalene	CT,NY,NH,ME,NC,VA,NJ
2-Methylphenol	CT,NY,NH,ME,NC,VA,NJ
3/4-Methylphenol	CT,NY,NH,ME,NC,VA,NJ
Naphthalene	CT,NY,NH,ME,NC,VA,NJ
2-Nitroaniline	CT,NY,NH,ME,NC,VA,NJ
3-Nitroaniline	CT,NY,NH,ME,NC,VA,NJ
4-Nitroaniline	CT,NY,NH,ME,NC,VA,NJ
Nitrobenzene	CT,NY,NH,ME,NC,VA,NJ
2-Nitrophenol	CT,NY,NH,ME,NC,VA,NJ
4-Nitrophenol	CT,NY,NH,ME,NC,VA,NJ
N-Nitrosodimethylamine	CT,NY,NH,ME,NC,VA,NJ
N-Nitrosodiphenylamine	CT,NY,NH,ME,NC,VA,NJ

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8270D in Soil</i>	
N-Nitrosodi-n-propylamine	CT,NY,NH,ME,NC,VA,NJ
Pentachloronitrobenzene	NC
Pentachlorophenol	CT,NY,NH,ME,NC,VA,NJ
Phenanthrene	CT,NY,NH,ME,NC,VA,NJ
Phenol	CT,NY,NH,ME,NC,VA,NJ
Pyrene	CT,NY,NH,ME,NC,VA,NJ
Pyridine	CT,NY,NH,ME,NC,VA,NJ
1,2,4,5-Tetrachlorobenzene	NC
1,2,4-Trichlorobenzene	CT,NY,NH,ME,NC,VA,NJ
2,4,5-Trichlorophenol	CT,NY,NH,ME,NC,VA,NJ
2,4,6-Trichlorophenol	CT,NY,NH,ME,NC,VA,NJ
2-Fluorophenol	NC
<i>SW-846 8270D in Water</i>	
Acenaphthene	ME,NC,NH,NY,VA,NJ
Acenaphthylene	ME,NC,NH,NY,VA,NJ
Acetophenone	ME,NC,NH
Aniline	ME,NC,NH,NY,VA,NJ
Anthracene	ME,NC,NH,NY,VA,NJ
Benzo(a)anthracene	ME,NC,NH,NY,VA,NJ
Benzo(a)pyrene	ME,NC,NH,NY,VA,NJ
Benzo(b)fluoranthene	ME,NC,NH,NY,VA,NJ
Benzo(g,h,i)perylene	ME,NC,NH,NY,VA,NJ
Benzo(k)fluoranthene	ME,NC,NH,NY,VA,NJ
Bis(2-chloroethoxy)methane	ME,NC,NH,NY,VA,NJ
Bis(2-chloroethyl)ether	ME,NC,NH,NY,VA,NJ
Bis(2-chloroisopropyl)ether	ME,NC,NH,NY,VA,NJ
Bis(2-Ethylhexyl)phthalate	ME,NC,NH,NY,VA,NJ
4-Bromophenylphenylether	ME,NC,NH,NY,VA,NJ
Butylbenzylphthalate	ME,NC,NH,NY,VA,NJ
4-Chloroaniline	ME,NC,NH,NY,VA,NJ
2-Chloronaphthalene	NC,NY,VA,NJ
2-Chlorophenol	ME,NC,NH,NY,VA,NJ
Chrysene	ME,NC,NH,NY,VA,NJ
Dibenz(a,h)anthracene	ME,NC,NH,NY,VA,NJ
Dibenzofuran	ME,NC,NH,NY,VA,NJ
Di-n-butylphthalate	ME,NC,NH,NY,VA,NJ
1,2-Dichlorobenzene	ME,NC,NH,NY,VA,NJ
1,3-Dichlorobenzene	ME,NC,NH,NY,VA,NJ
1,4-Dichlorobenzene	ME,NC,NH,NY,VA,NJ
3,3-Dichlorobenzidine	ME,NC,NH,NY,VA,NJ
2,4-Dichlorophenol	ME,NC,NH,NY,VA,NJ
Diethylphthalate	ME,NC,NH,NY,VA,NJ
2,4-Dimethylphenol	ME,NC,NH,NY,VA,NJ
Dimethylphthalate	ME,NC,NH,NY,VA,NJ
2,4-Dinitrophenol	ME,NC,NH,NY,VA,NJ
2,4-Dinitrotoluene	ME,NC,NH,CT,NY,VA,NJ

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8270D in Water</i>	
2,6-Dinitrotoluene	ME,NC,NH,NY,VA,NJ
Di-n-octylphthalate	ME,NC,NH,NY,VA,NJ
1,2-Diphenylhydrazine (as Azobenzene)	ME,NC,NH
Fluoranthene	ME,NC,NH,NY,VA,NJ
Fluorene	ME,NC,NH,NY,VA,NJ
Hexachlorobenzene	ME,NC,NH,CT,NY,VA,NJ
Hexachlorobutadiene	ME,NC,NH,CT,NY,VA,NJ
Hexachloroethane	ME,NC,NH,CT,NY,VA,NJ
Indeno(1,2,3-cd)pyrene	ME,NC,NH,NY,VA,NJ
Isophorone	ME,NC,NH,NY,VA,NJ
2-Methylnaphthalene	ME,NC,NH,NY,VA,NJ
2-Methylphenol	ME,NC,NH,CT
3/4-Methylphenol	ME,NC,NH,CT
Naphthalene	ME,NC,NH,NY,VA,NJ
Nitrobenzene	ME,NC,NH,CT,NY,VA,NJ
2-Nitrophenol	ME,NC,NH,NY,VA,NJ
4-Nitrophenol	ME,NC,NH,NY,VA,NJ
Pentachlorophenol	ME,NC,NH,CT,NY,VA,NJ
Phenanthrene	ME,NC,NH,NY,VA,NJ
Phenol	ME,NC,NH,NY,VA,NJ
Pyrene	ME,NC,NH,NY,VA,NJ
Pyridine	ME,NC,NH,CT,NY,VA,NJ
1,2,4-Trichlorobenzene	ME,NC,NH,NY,VA,NJ
2,4,5-Trichlorophenol	ME,NC,NH,CT,NY,VA,NJ
2,4,6-Trichlorophenol	ME,NC,NH,CT,NY,VA,NJ
2-Fluorophenol	NC

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC	100033	02/1/2016
MA	Massachusetts DEP	M-MA100	06/30/2015
CT	Connecticut Department of Public Health	PH-0567	09/30/2015
NY	New York State Department of Health	10899 NELAP	04/1/2016
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2016
RI	Rhode Island Department of Health	LAO00112	12/30/2015
NC	North Carolina Div. of Water Quality	652	12/31/2015
NJ	New Jersey DEP	MA007 NELAP	06/30/2015
FL	Florida Department of Health	E871027 NELAP	06/30/2015
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2015
WA	State of Washington Department of Ecology	C2065	02/23/2016
ME	State of Maine	2011028	06/9/2015
VA	Commonwealth of Virginia	460217	12/14/2015
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2015



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Fax: 413-525-6405
Email: info@contestlabs.com
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CHAIN OF CUSTODY RECORD

39 Spruce Street
East longmeadow, MA 01028

Page 2 of 2

Company Name: Uro Engineers Inc.
Address: 703 Corimex Street
Brooklyn NY 11211
Attention: Steve Frank
Project Location: Motiva Site - Bushwick Inlet Park
Sampled By: Eva Jakubowska
Project Proposal Provided? (for billing purposes)
☐ Yes ☐ No proposal date

DATA DELIVERY (check all that apply)
☐ FAX ☒ EMAIL ☐ WEBSITE
Fax #
Email: franks@uro.com
Format: ☒ PDF ☒ EXCEL ☐ GIS
☐ OTHER

Con-Test Lab ID (laboratory use only)	Client Sample ID / Description	Collection		Composite	Grab	Matrix Code	Conc Data
		Beginning Date/Time	Ending Date/Time				
11	SB-06-4.5-5.0'	3/24/15	1400		X	S	U
12	SB-06-comp	"	1405	X		S	U
13	SB-07-4.5-5.0'	3/25/15	1230		X	S	U
14	SB-07-comp	"	1235	X		S	U
15	SEP-01(0-6")	3/24/15	1300	X ²⁰²		O	
16	SEP-02(0-6")	"	1320	X ⁸⁰²		O	
17	WC-01	3/25/15	1130	X		S	
18	WC-02	"	1125	X		S	

Comments: WC-01 (SB-01 through SB-05)
WC-02 (SB-06 & SB-07)

Relinquished by: (signature) [Signature] Date/Time: 3/26/15
Received by: (signature) [Signature] Date/Time: 3/26/15
Inquiry by: (signature) [Signature] Date/Time: 3/26/15
Signed by: (signature) [Signature] Date/Time: 3/26/15
TURNAROUND TIME STARTS AT 9:00 A.M. THE DAY AFTER SAMPLE RECEIPT UNLESS THERE ARE QUESTIONS ON YOUR CHAIN. IF THIS FORM IS NOT FILLED OUT COMPLETELY OR INCORRECT, TURNAROUND TIME WILL NOT START UNTIL ALL QUESTIONS ARE ANSWERED BY OUR CLIENT.

Turnaround [†]
☐ 7-Day
☐ 10-Day
☒ Other 5 day
RUSH [†]
☐ 24-Hr ☐ 48-Hr
☐ 72-Hr ☐ 14-Day
[†] Require lab approval

Detection Limit Requirements
Massachusetts:
Connecticut:
Other:

# of Containers	** Preservation	*** Container Code	ANALYSIS REQUESTED									
10			TCL VOCs	TCL SVOCs	Trace Metals	Pesticides	Herbicides	PCBs	TPH DEP/Geo	Full TCLP Ind. PCBs	ECOA Characteristic	
11			X	X	X	X	X	X	X	X	X	
12			X	X	X	X	X	X	X	X	X	
13			X	X	X	X	X	X	X	X	X	
14			X	X	X	X	X	X	X	X	X	
15			X	X	X	X	X	X	X	X	X	
16			X	X	X	X	X	X	X	X	X	
17			X	X	X	X	X	X	X	X	X	
18			X	X	X	X	X	X	X	X	X	

- **** Cont. Code:
A=amber glass
G=glass
P=plastic
ST=sterile
V=vial
S=summary can
T=tiedlar bag
O=Other
- *** Preservation
I=Ice
H=HCL
M=Methanol
N=Nitric Acid
S=Sulfuric Acid
B=Sodium bisulfate
X=Na hydroxide
T=Na thiosulfate
O=Other
- *Matrix Code:
GW=groundwater
WW=wastewater
DW=drinking water
A=air
S=soil/solid
SL=sludge
O=other sediment

Is your project MCP or RCP ?
☐ MCP Form Required
☐ RCP Form Required
☐ MA State DW Form Required PWSID #

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Accredited
NELAC & AIHA-LAP, LLC

WBE/DBE Certified

39 Spruce St.
East Longmeadow, MA. 01028
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F: 413-525-6405
www.contestlabs.com



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Sample Receipt Checklist

CLIENT NAME: Lira Engineers RECEIVED BY: JDL DATE: 3/26/15

- 1) Was the chain(s) of custody relinquished and signed? Yes No No CoC Included
- 2) Does the chain agree with the samples? Yes No
If not, explain:
- 3) Are all the samples in good condition? Yes No
If not, explain:

4) How were the samples received:

On Ice ☒ Direct from Sampling ☐ Ambient ☐ In Cooler(s) ☒

Were the samples received in Temperature Compliance of (2-6°C)? Yes No N/A

Temperature °C by Temp blank _____ Temperature °C by Temp gun 3.9

5) Are there Dissolved samples for the lab to filter? Yes No

Who was notified _____ Date _____ Time _____

6) Are there any RUSH or SHORT HOLDING TIME samples? Yes No

Who was notified _____ Date _____ Time _____

7) Location where samples are stored:

19

Permission to subcontract samples? Yes No
(Walk-in clients only) if not already approved
Client Signature: _____

8) Do all samples have the proper Acid pH: Yes No N/A

9) Do all samples have the proper Base pH: Yes No N/A

10) Was the PC notified of any discrepancies with the CoC vs the samples: Yes No N/A

Containers received at Con-Test

	# of containers		# of containers
1 Liter Amber		<u>8 oz amber/clear jar</u>	<u>9</u>
500 mL Amber		4 oz amber/clear jar	
250 mL Amber (8oz amber)		<u>2 oz amber/clear jar</u>	<u>9</u>
1 Liter Plastic		Plastic Bag / Ziploc	
500 mL Plastic		SOC Kit	
250 mL plastic		Non-ConTest Container	
40 mL Vial - type listed below		Perchlorate Kit	
Colisure / bacteria bottle		Flashpoint bottle	
Dissolved Oxygen bottle		Other glass jar <u>16 oz</u>	<u>2</u>
Encore		Other	

Laboratory Comments:

40 mL vials: # HCl _____ # Methanol _____

Doc# 277 # Bisulfate _____ # DI Water _____

Rev. 4 August 2013 # Thiosulfate _____ Unpreserved _____

Time and Date Frozen:

Login Sample Receipt Checklist**(Rejection Criteria Listing - Using Sample Acceptance Policy)****Any False statement will be brought to the attention of Client**

Question	Answer (True/False)	Comment
	T/F/NA	
1) The cooler's custody seal, if present, is intact.	NA	
2) The cooler or samples do not appear to have been compromised or tampered with.	T	
3) Samples were received on ice.	T	
4) Cooler Temperature is acceptable.	T	
5) Cooler Temperature is recorded.	T	
6) COC is filled out in ink and legible.	T	
7) COC is filled out with all pertinent information.	T	
8) Field Sampler's name present on COC.	T	
9) There are no discrepancies between the sample IDs on the container and the COC.	T	
10) Samples are received within Holding Time.	T	
11) Sample containers have legible labels.	T	
12) Containers are not broken or leaking.	T	
13) Air Cassettes are not broken/open.	NA	
14) Sample collection date/times are provided.	T	
15) Appropriate sample containers are used.	T	
16) Proper collection media used.	T	
17) No headspace sample bottles are completely filled.	T	
18) There is sufficient volume for all requested analyses, including any requested MS/MSDs.	T	
19) Trip blanks provided if applicable.	NA	
20) VOA sample vials do not have head space or bubble is <6mm (1/4") in diameter.	NA	
21) Samples do not require splitting or compositing.	T	

Doc #277 Rev. 4 August 2013

Who notified of False statements?

Log-In Technician Initials: JDL

Date/Time:

Date/Time: 3/26/15 1825

April 6, 2015

Steve Frank
LiRo Engineers, Inc.
690 Delaware Avenue
Buffalo, NY 14209-2202

Project Location: Motiva Site - Bushwick Inlet Park
Client Job Number:
Project Number: 13-110-0265-57
Laboratory Work Order Number: 15C1208

Enclosed are results of analyses for samples received by the laboratory on March 30, 2015. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "James Georgantas", with a long, sweeping horizontal line extending to the right.

James M. Georgantas
Project Manager

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

LiRo Engineers, Inc.
690 Delaware Avenue
Buffalo, NY 14209-2202
ATTN: Steve Frank

REPORT DATE: 4/6/2015

PURCHASE ORDER NUMBER: 13-110-0265-57

PROJECT NUMBER: 13-110-0265-57

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 15C1208

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: Motiva Site - Bushwick Inlet Park

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
MW-01	15C1208-01	Ground Water		SW-846 6010C	
				SW-846 7470A	
				SW-846 8081B	
				SW-846 8082A	
				SW-846 8151A	
				SW-846 8260C	
				SW-846 8270D	
MW-02	15C1208-02	Ground Water		EPA 1664B	
				EPA 420.1	
				EPA 624	
				SM 21-22 4500 NO3 F	
				SM19-22 4500-N Org	
				B,C-NH3 C	
				SM21-22 2540B	
				SM21-22 2540D	
				SM21-22 4500 CL B	
				SM21-22 4500 H B	
				SM21-22 5210B	
				SW-846 1010	
				SW-846 6010C	
				SW-846 7196A	
				SW-846 7470A	
				SW-846 8081B	
				SW-846 8082A	
				SW-846 8151A	
				SW-846 8260C	
				SW-846 8270D	

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

For metals analysis, 2 aliquots were received for sample 15C1208-02. Container G looks clean and container H has sediment.

For method 8151, samples were derivatized on 04/03/15.

For method 8151, sample analysis bracketed by LCS to monitor esterification. All recoveries in the bracketing LCS met method criteria.

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332
SM21-22 4500 H B

Qualifications:

H-05

Holding time was exceeded. pH analysis should be performed immediately at time of sampling. Nominal 15 minute holding time was exceeded.

Analyte & Samples(s) Qualified:

pH

15C1208-02[MW-02]

SM21-22 5210B

Qualifications:

W-16

Blank result was >0.2mg/L.

Analyte & Samples(s) Qualified:

Carbonaceous BOD

15C1208-02[MW-02], B118112-BLK1, B118112-BS1

SW-846 7196A

Qualifications:

MS-07A

Matrix spike and spike duplicate recovery is outside of control limits. Analysis is in control based on laboratory fortified blank recovery. Possibility of matrix effects that lead to low bias or non-homogeneous sample aliquot cannot be eliminated.

Analyte & Samples(s) Qualified:

Hexavalent Chromium

15C1208-02[MW-02], B118114-MS1, B118114-MSD1

SW-846 8151A

Qualifications:

S-02

The surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic compounds present in the sample extract.

Analyte & Samples(s) Qualified:

2,4-Dichlorophenylacetic acid [2C]

15C1208-01[MW-01]

V-06

Continuing calibration did not meet method specifications and was biased on the high side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the high side.

Analyte & Samples(s) Qualified:

Dalapon

B118465-BS1, B118465-BSD1

MCPA [2C]

B118465-BS1, B118465-BSD1

MCPP [2C]

B118465-BS1, B118465-BSD1

SW-846 8260C

Qualifications:

L-02

Laboratory fortified blank/laboratory control sample recovery and duplicate recoveries outside of control limits. Data validation is not affected since all results are "not detected" for associated samples in this batch and bias is on the high side.

Analyte & Samples(s) Qualified:

Acetone

B118540-BS1, B118540-BSD1

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L-07

Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.

Analyte & Samples(s) Qualified:

1,4-Dioxane

B118540-BS1

2-Butanone (MEK)

B118540-BS1

trans-1,4-Dichloro-2-butene

B118540-BS1

V-05

Continuing calibration did not meet method specifications and was biased on the low side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the low side.

Analyte & Samples(s) Qualified:

Bromochloromethane

15C1208-01[MW-01], 15C1208-02[MW-02], B118540-BLK1, B118540-BS1, B118540-BSD1

Dichlorodifluoromethane (Freon 12)

15C1208-01[MW-01], 15C1208-02[MW-02], B118540-BLK1, B118540-BS1, B118540-BSD1

tert-Butyl Alcohol (TBA)

15C1208-01[MW-01], 15C1208-02[MW-02], B118540-BLK1, B118540-BS1, B118540-BSD1

V-20

Continuing calibration did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

Analyte & Samples(s) Qualified:

2-Butanone (MEK)

B118540-BS1, B118540-BSD1

2-Hexanone (MBK)

B118540-BS1, B118540-BSD1

Acetone

B118540-BS1, B118540-BSD1

trans-1,4-Dichloro-2-butene

B118540-BS1, B118540-BSD1

SW-846 8270D

Qualifications:

L-04

Laboratory fortified blank/laboratory control sample recovery and duplicate recovery are outside of control limits. Reported value for this compound is likely to be biased on the low side.

Analyte & Samples(s) Qualified:

Benzoic Acid

15C1208-01[MW-01], 15C1208-02[MW-02], B118345-BLK1, B118345-BS1, B118345-BSD1

L-07

Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.

Analyte & Samples(s) Qualified:

N-Nitrosodiphenylamine

B118345-BS1

L-07A

Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD outside of control limits. Reduced precision anticipated for any reported result for this compound.

Analyte & Samples(s) Qualified:

Benzidine

B118345-BS1

R-05

Laboratory fortified blank duplicate RPD is outside of control limits. Reduced precision is anticipated for any reported value for this compound.

Analyte & Samples(s) Qualified:

Benzidine

15C1208-01[MW-01], 15C1208-02[MW-02], B118345-BLK1, B118345-BSD1

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S-07

One associated surrogate standard recovery is outside of control limits but the other(s) is/are within limits. All recoveries are > 10%.

Analyte & Samples(s) Qualified:**2,4,6-Tribromophenol**

15C1208-01[MW-01], 15C1208-02[MW-02], B118345-BLK1, B118345-BS1, B118345-BSD1

p-Terphenyl-d14

15C1208-01[MW-01], B118345-BLK1, B118345-BS1

V-04

Initial calibration did not meet method specifications. Compound was calibrated using a response factor where %RSD is outside of method specified criteria.

Analyte & Samples(s) Qualified:**Benzidine**

15C1208-01[MW-01], 15C1208-02[MW-02], B118345-BLK1, B118345-BS1, B118345-BSD1

V-05

Continuing calibration did not meet method specifications and was biased on the low side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the low side.

Analyte & Samples(s) Qualified:**Benzidine**

15C1208-01[MW-01], 15C1208-02[MW-02], B118345-BLK1, B118345-BS1, B118345-BSD1

V-06

Continuing calibration did not meet method specifications and was biased on the high side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the high side.

Analyte & Samples(s) Qualified:**4-Nitrophenol**

B118345-BS1, B118345-BSD1

N-Nitrosodimethylamine

B118345-BS1, B118345-BSD1

V-16

Response factor is less than method specified minimum acceptable value. Reduced precision and accuracy may be associated with reported result.

Analyte & Samples(s) Qualified:**Pentachloronitrobenzene**

15C1208-01[MW-01], 15C1208-02[MW-02], B118345-BLK1, B118345-BS1, B118345-BSD1

V-20

Continuing calibration did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

Analyte & Samples(s) Qualified:**4-Nitrophenol**

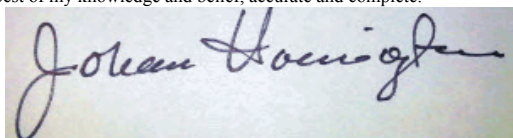
15C1208-01[MW-01], 15C1208-02[MW-02], B118345-BLK1

N-Nitrosodimethylamine

15C1208-01[MW-01], 15C1208-02[MW-02], B118345-BLK1

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Johanna K. Harrington

Manager, Laboratory Reporting

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Motiva Site - Bushwick Inlet Park

Sample Description:

Work Order: 15C1208

Date Received: 3/30/2015

Field Sample #: MW-01

Sampled: 3/30/2015 10:30

Sample ID: 15C1208-01

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	50	µg/L	1		SW-846 8260C	4/3/15	4/3/15 23:53	EEH
Acrylonitrile	ND	5.0	µg/L	1		SW-846 8260C	4/3/15	4/3/15 23:53	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.50	µg/L	1		SW-846 8260C	4/3/15	4/3/15 23:53	EEH
Benzene	ND	1.0	µg/L	1		SW-846 8260C	4/3/15	4/3/15 23:53	EEH
Bromobenzene	ND	1.0	µg/L	1		SW-846 8260C	4/3/15	4/3/15 23:53	EEH
Bromochloromethane	ND	2.0	µg/L	1	V-05	SW-846 8260C	4/3/15	4/3/15 23:53	EEH
Bromodichloromethane	ND	0.50	µg/L	1		SW-846 8260C	4/3/15	4/3/15 23:53	EEH
Bromoform	ND	1.0	µg/L	1		SW-846 8260C	4/3/15	4/3/15 23:53	EEH
Bromomethane	ND	2.0	µg/L	1		SW-846 8260C	4/3/15	4/3/15 23:53	EEH
2-Butanone (MEK)	ND	20	µg/L	1		SW-846 8260C	4/3/15	4/3/15 23:53	EEH
tert-Butyl Alcohol (TBA)	ND	20	µg/L	1	V-05	SW-846 8260C	4/3/15	4/3/15 23:53	EEH
n-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	4/3/15	4/3/15 23:53	EEH
sec-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	4/3/15	4/3/15 23:53	EEH
tert-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	4/3/15	4/3/15 23:53	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	1.0	µg/L	1		SW-846 8260C	4/3/15	4/3/15 23:53	EEH
Carbon Disulfide	ND	4.0	µg/L	1		SW-846 8260C	4/3/15	4/3/15 23:53	EEH
Carbon Tetrachloride	ND	5.0	µg/L	1		SW-846 8260C	4/3/15	4/3/15 23:53	EEH
Chlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	4/3/15	4/3/15 23:53	EEH
Chlorodibromomethane	ND	2.0	µg/L	1		SW-846 8260C	4/3/15	4/3/15 23:53	EEH
Chloroethane	ND	2.0	µg/L	1		SW-846 8260C	4/3/15	4/3/15 23:53	EEH
Chloroform	ND	2.0	µg/L	1		SW-846 8260C	4/3/15	4/3/15 23:53	EEH
Chloromethane	ND	2.0	µg/L	1		SW-846 8260C	4/3/15	4/3/15 23:53	EEH
2-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	4/3/15	4/3/15 23:53	EEH
4-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	4/3/15	4/3/15 23:53	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	µg/L	1		SW-846 8260C	4/3/15	4/3/15 23:53	EEH
1,2-Dibromoethane (EDB)	ND	2.0	µg/L	1		SW-846 8260C	4/3/15	4/3/15 23:53	EEH
Dibromomethane	ND	1.0	µg/L	1		SW-846 8260C	4/3/15	4/3/15 23:53	EEH
1,2-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	4/3/15	4/3/15 23:53	EEH
1,3-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	4/3/15	4/3/15 23:53	EEH
1,4-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	4/3/15	4/3/15 23:53	EEH
trans-1,4-Dichloro-2-butene	ND	2.0	µg/L	1		SW-846 8260C	4/3/15	4/3/15 23:53	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	µg/L	1	V-05	SW-846 8260C	4/3/15	4/3/15 23:53	EEH
1,1-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	4/3/15	4/3/15 23:53	EEH
1,2-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	4/3/15	4/3/15 23:53	EEH
1,1-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	4/3/15	4/3/15 23:53	EEH
cis-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	4/3/15	4/3/15 23:53	EEH
trans-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	4/3/15	4/3/15 23:53	EEH
1,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260C	4/3/15	4/3/15 23:53	EEH
1,3-Dichloropropane	ND	0.50	µg/L	1		SW-846 8260C	4/3/15	4/3/15 23:53	EEH
2,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260C	4/3/15	4/3/15 23:53	EEH
1,1-Dichloropropene	ND	2.0	µg/L	1		SW-846 8260C	4/3/15	4/3/15 23:53	EEH
cis-1,3-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260C	4/3/15	4/3/15 23:53	EEH
trans-1,3-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260C	4/3/15	4/3/15 23:53	EEH
Diethyl Ether	ND	2.0	µg/L	1		SW-846 8260C	4/3/15	4/3/15 23:53	EEH

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Motiva Site - Bushwick Inlet Park

Sample Description:

Work Order: 15C1208

Date Received: 3/30/2015

Field Sample #: MW-01

Sampled: 3/30/2015 10:30

Sample ID: 15C1208-01

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.50	µg/L	1		SW-846 8260C	4/3/15	4/3/15 23:53	EEH
1,4-Dioxane	ND	50	µg/L	1		SW-846 8260C	4/3/15	4/3/15 23:53	EEH
Ethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	4/3/15	4/3/15 23:53	EEH
Hexachlorobutadiene	ND	0.50	µg/L	1		SW-846 8260C	4/3/15	4/3/15 23:53	EEH
2-Hexanone (MBK)	ND	10	µg/L	1		SW-846 8260C	4/3/15	4/3/15 23:53	EEH
Isopropylbenzene (Cumene)	ND	1.0	µg/L	1		SW-846 8260C	4/3/15	4/3/15 23:53	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	µg/L	1		SW-846 8260C	4/3/15	4/3/15 23:53	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L	1		SW-846 8260C	4/3/15	4/3/15 23:53	EEH
Methylene Chloride	ND	5.0	µg/L	1		SW-846 8260C	4/3/15	4/3/15 23:53	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	µg/L	1		SW-846 8260C	4/3/15	4/3/15 23:53	EEH
Naphthalene	ND	2.0	µg/L	1		SW-846 8260C	4/3/15	4/3/15 23:53	EEH
n-Propylbenzene	ND	1.0	µg/L	1		SW-846 8260C	4/3/15	4/3/15 23:53	EEH
Styrene	ND	1.0	µg/L	1		SW-846 8260C	4/3/15	4/3/15 23:53	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	µg/L	1		SW-846 8260C	4/3/15	4/3/15 23:53	EEH
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1		SW-846 8260C	4/3/15	4/3/15 23:53	EEH
Tetrachloroethylene	ND	1.0	µg/L	1		SW-846 8260C	4/3/15	4/3/15 23:53	EEH
Tetrahydrofuran	ND	10	µg/L	1		SW-846 8260C	4/3/15	4/3/15 23:53	EEH
Toluene	ND	1.0	µg/L	1		SW-846 8260C	4/3/15	4/3/15 23:53	EEH
1,2,3-Trichlorobenzene	ND	5.0	µg/L	1		SW-846 8260C	4/3/15	4/3/15 23:53	EEH
1,2,4-Trichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	4/3/15	4/3/15 23:53	EEH
1,3,5-Trichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	4/3/15	4/3/15 23:53	EEH
1,1,1-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	4/3/15	4/3/15 23:53	EEH
1,1,2-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	4/3/15	4/3/15 23:53	EEH
Trichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	4/3/15	4/3/15 23:53	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	µg/L	1		SW-846 8260C	4/3/15	4/3/15 23:53	EEH
1,2,3-Trichloropropane	ND	2.0	µg/L	1		SW-846 8260C	4/3/15	4/3/15 23:53	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	µg/L	1		SW-846 8260C	4/3/15	4/3/15 23:53	EEH
1,2,4-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	4/3/15	4/3/15 23:53	EEH
1,3,5-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	4/3/15	4/3/15 23:53	EEH
Vinyl Chloride	ND	2.0	µg/L	1		SW-846 8260C	4/3/15	4/3/15 23:53	EEH
m+p Xylene	ND	2.0	µg/L	1		SW-846 8260C	4/3/15	4/3/15 23:53	EEH
o-Xylene	ND	1.0	µg/L	1		SW-846 8260C	4/3/15	4/3/15 23:53	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	100	70-130	4/3/15 23:53
Toluene-d8	96.8	70-130	4/3/15 23:53
4-Bromofluorobenzene	95.8	70-130	4/3/15 23:53

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Motiva Site - Bushwick Inlet Park

Sample Description:

Work Order: 15C1208

Date Received: 3/30/2015

Field Sample #: MW-01

Sampled: 3/30/2015 10:30

Sample ID: 15C1208-01

Sample Matrix: Ground Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	5.0	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:23	CMR
Acenaphthylene	ND	5.0	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:23	CMR
Acetophenone	ND	10	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:23	CMR
Aniline	ND	5.0	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:23	CMR
Anthracene	ND	5.0	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:23	CMR
Benzidine	ND	20	µg/L	1	R-05, V-04, V-05	SW-846 8270D	4/2/15	4/2/15 17:23	CMR
Benzo(a)anthracene	ND	5.0	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:23	CMR
Benzo(a)pyrene	ND	5.0	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:23	CMR
Benzo(b)fluoranthene	ND	5.0	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:23	CMR
Benzo(g,h,i)perylene	ND	5.0	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:23	CMR
Benzo(k)fluoranthene	ND	5.0	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:23	CMR
Benzoic Acid	ND	10	µg/L	1	L-04	SW-846 8270D	4/2/15	4/2/15 17:23	CMR
Bis(2-chloroethoxy)methane	ND	10	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:23	CMR
Bis(2-chloroethyl)ether	ND	10	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:23	CMR
Bis(2-chloroisopropyl)ether	ND	10	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:23	CMR
Bis(2-Ethylhexyl)phthalate	ND	10	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:23	CMR
4-Bromophenylphenylether	ND	10	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:23	CMR
Butylbenzylphthalate	ND	10	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:23	CMR
Carbazole	ND	10	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:23	CMR
4-Chloroaniline	ND	10	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:23	CMR
4-Chloro-3-methylphenol	ND	10	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:23	CMR
2-Chloronaphthalene	ND	10	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:23	CMR
2-Chlorophenol	ND	10	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:23	CMR
4-Chlorophenylphenylether	ND	10	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:23	CMR
Chrysene	ND	5.0	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:23	CMR
Dibenz(a,h)anthracene	ND	5.0	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:23	CMR
Dibenzofuran	ND	5.0	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:23	CMR
Di-n-butylphthalate	ND	10	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:23	CMR
1,2-Dichlorobenzene	ND	5.0	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:23	CMR
1,3-Dichlorobenzene	ND	5.0	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:23	CMR
1,4-Dichlorobenzene	ND	5.0	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:23	CMR
3,3-Dichlorobenzidine	ND	10	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:23	CMR
2,4-Dichlorophenol	ND	10	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:23	CMR
Diethylphthalate	ND	10	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:23	CMR
2,4-Dimethylphenol	ND	10	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:23	CMR
Dimethylphthalate	ND	10	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:23	CMR
4,6-Dinitro-2-methylphenol	ND	10	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:23	CMR
2,4-Dinitrophenol	ND	10	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:23	CMR
2,4-Dinitrotoluene	ND	10	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:23	CMR
2,6-Dinitrotoluene	ND	10	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:23	CMR
Di-n-octylphthalate	ND	10	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:23	CMR
1,2-Diphenylhydrazine (as Azobenzene)	ND	10	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:23	CMR
Fluoranthene	ND	5.0	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:23	CMR
Fluorene	ND	5.0	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:23	CMR

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Motiva Site - Bushwick Inlet Park

Sample Description:

Work Order: 15C1208

Date Received: 3/30/2015

Field Sample #: MW-01

Sampled: 3/30/2015 10:30

Sample ID: 15C1208-01

Sample Matrix: Ground Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	10	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:23	CMR
Hexachlorobutadiene	ND	10	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:23	CMR
Hexachlorocyclopentadiene	ND	10	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:23	CMR
Hexachloroethane	ND	10	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:23	CMR
Indeno(1,2,3-cd)pyrene	ND	5.0	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:23	CMR
Isophorone	ND	10	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:23	CMR
1-Methylnaphthalene	ND	5.0	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:23	CMR
2-Methylnaphthalene	ND	5.0	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:23	CMR
2-Methylphenol	ND	10	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:23	CMR
3/4-Methylphenol	ND	10	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:23	CMR
Naphthalene	ND	5.0	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:23	CMR
2-Nitroaniline	ND	10	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:23	CMR
3-Nitroaniline	ND	10	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:23	CMR
4-Nitroaniline	ND	10	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:23	CMR
Nitrobenzene	ND	10	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:23	CMR
2-Nitrophenol	ND	10	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:23	CMR
4-Nitrophenol	ND	10	µg/L	1	V-20	SW-846 8270D	4/2/15	4/2/15 17:23	CMR
N-Nitrosodimethylamine	ND	10	µg/L	1	V-20	SW-846 8270D	4/2/15	4/2/15 17:23	CMR
N-Nitrosodiphenylamine	ND	10	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:23	CMR
N-Nitrosodi-n-propylamine	ND	10	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:23	CMR
Pentachloronitrobenzene	ND	10	µg/L	1	V-16	SW-846 8270D	4/2/15	4/2/15 17:23	CMR
Pentachlorophenol	ND	10	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:23	CMR
Phenanthrene	ND	5.0	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:23	CMR
Phenol	ND	10	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:23	CMR
Pyrene	ND	5.0	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:23	CMR
Pyridine	ND	5.0	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:23	CMR
1,2,4,5-Tetrachlorobenzene	ND	10	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:23	CMR
1,2,4-Trichlorobenzene	ND	5.0	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:23	CMR
2,4,5-Trichlorophenol	ND	10	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:23	CMR
2,4,6-Trichlorophenol	ND	10	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:23	CMR
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
2-Fluorophenol	76.8		15-110				4/2/15 17:23		
Phenol-d6	59.1		15-110				4/2/15 17:23		
Nitrobenzene-d5	117		30-130				4/2/15 17:23		
2-Fluorobiphenyl	116		30-130				4/2/15 17:23		
2,4,6-Tribromophenol	129	*	15-110		S-07		4/2/15 17:23		
p-Terphenyl-d14	143	*	30-130		S-07		4/2/15 17:23		

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Motiva Site - Bushwick Inlet Park

Sample Description:

Work Order: 15C1208

Date Received: 3/30/2015

Field Sample #: MW-01

Sampled: 3/30/2015 10:30

Sample ID: 15C1208-01

Sample Matrix: Ground Water

Organochloride Pesticides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Alachlor [1]	ND	0.20	µg/L	1		SW-846 8081B	4/3/15	4/4/15 14:24	PJG
Aldrin [1]	ND	0.050	µg/L	1		SW-846 8081B	4/3/15	4/4/15 14:24	PJG
alpha-BHC [1]	ND	0.050	µg/L	1		SW-846 8081B	4/3/15	4/4/15 14:24	PJG
beta-BHC [1]	ND	0.050	µg/L	1		SW-846 8081B	4/3/15	4/4/15 14:24	PJG
delta-BHC [1]	ND	0.050	µg/L	1		SW-846 8081B	4/3/15	4/4/15 14:24	PJG
gamma-BHC (Lindane) [1]	ND	0.030	µg/L	1		SW-846 8081B	4/3/15	4/4/15 14:24	PJG
Chlordane [1]	ND	0.20	µg/L	1		SW-846 8081B	4/3/15	4/4/15 14:24	PJG
4,4'-DDD [1]	ND	0.040	µg/L	1		SW-846 8081B	4/3/15	4/4/15 14:24	PJG
4,4'-DDE [1]	ND	0.040	µg/L	1		SW-846 8081B	4/3/15	4/4/15 14:24	PJG
4,4'-DDT [1]	ND	0.040	µg/L	1		SW-846 8081B	4/3/15	4/4/15 14:24	PJG
Dieldrin [1]	ND	0.0020	µg/L	1		SW-846 8081B	4/3/15	4/4/15 14:24	PJG
Endosulfan I [1]	ND	0.050	µg/L	1		SW-846 8081B	4/3/15	4/4/15 14:24	PJG
Endosulfan II [1]	ND	0.080	µg/L	1		SW-846 8081B	4/3/15	4/4/15 14:24	PJG
Endosulfan sulfate [1]	ND	0.080	µg/L	1		SW-846 8081B	4/3/15	4/4/15 14:24	PJG
Endrin [1]	ND	0.080	µg/L	1		SW-846 8081B	4/3/15	4/4/15 14:24	PJG
Endrin aldehyde [1]	ND	0.080	µg/L	1		SW-846 8081B	4/3/15	4/4/15 14:24	PJG
Endrin ketone [1]	ND	0.080	µg/L	1		SW-846 8081B	4/3/15	4/4/15 14:24	PJG
Heptachlor [1]	ND	0.050	µg/L	1		SW-846 8081B	4/3/15	4/4/15 14:24	PJG
Heptachlor epoxide [1]	ND	0.050	µg/L	1		SW-846 8081B	4/3/15	4/4/15 14:24	PJG
Hexachlorobenzene [1]	ND	0.050	µg/L	1		SW-846 8081B	4/3/15	4/4/15 14:24	PJG
Methoxychlor [1]	ND	0.50	µg/L	1		SW-846 8081B	4/3/15	4/4/15 14:24	PJG
Toxaphene [1]	ND	1.0	µg/L	1		SW-846 8081B	4/3/15	4/4/15 14:24	PJG
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
Decachlorobiphenyl [1]	75.3	30-150							
Decachlorobiphenyl [2]	70.1	30-150							
Tetrachloro-m-xylene [1]	94.2	30-150							
Tetrachloro-m-xylene [2]	84.1	30-150							

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Project Location: Motiva Site - Bushwick Inlet Park

Sample Description:

Work Order: 15C1208

Date Received: 3/30/2015

Field Sample #: MW-01

Sampled: 3/30/2015 10:30

Sample ID: 15C1208-01

Sample Matrix: Ground Water

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.20	µg/L	1		SW-846 8082A	4/3/15	4/4/15 11:55	KAL
Aroclor-1221 [1]	ND	0.20	µg/L	1		SW-846 8082A	4/3/15	4/4/15 11:55	KAL
Aroclor-1232 [1]	ND	0.20	µg/L	1		SW-846 8082A	4/3/15	4/4/15 11:55	KAL
Aroclor-1242 [1]	ND	0.20	µg/L	1		SW-846 8082A	4/3/15	4/4/15 11:55	KAL
Aroclor-1248 [1]	ND	0.20	µg/L	1		SW-846 8082A	4/3/15	4/4/15 11:55	KAL
Aroclor-1254 [1]	ND	0.20	µg/L	1		SW-846 8082A	4/3/15	4/4/15 11:55	KAL
Aroclor-1260 [1]	ND	0.20	µg/L	1		SW-846 8082A	4/3/15	4/4/15 11:55	KAL
Aroclor-1262 [1]	ND	0.20	µg/L	1		SW-846 8082A	4/3/15	4/4/15 11:55	KAL
Aroclor-1268 [1]	ND	0.20	µg/L	1		SW-846 8082A	4/3/15	4/4/15 11:55	KAL
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
Decachlorobiphenyl [1]	80.1	30-150						4/4/15 11:55	
Decachlorobiphenyl [2]	78.2	30-150						4/4/15 11:55	
Tetrachloro-m-xylene [1]	94.8	30-150						4/4/15 11:55	
Tetrachloro-m-xylene [2]	93.8	30-150						4/4/15 11:55	

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Project Location: Motiva Site - Bushwick Inlet Park

Sample Description:

Work Order: 15C1208

Date Received: 3/30/2015

Field Sample #: MW-01

Sampled: 3/30/2015 10:30

Sample ID: 15C1208-01

Sample Matrix: Ground Water

Herbicides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2,4-D [1]	ND	0.50	µg/L	1		SW-846 8151A	4/3/15	4/4/15 16:43	PJG
2,4-DB [1]	ND	0.50	µg/L	1		SW-846 8151A	4/3/15	4/4/15 16:43	PJG
2,4,5-TP (Silvex) [1]	ND	0.050	µg/L	1		SW-846 8151A	4/3/15	4/4/15 16:43	PJG
2,4,5-T [1]	ND	0.10	µg/L	1		SW-846 8151A	4/3/15	4/4/15 16:43	PJG
Dalapon [2]	ND	1.2	µg/L	1		SW-846 8151A	4/3/15	4/4/15 16:43	PJG
Dicamba [1]	ND	0.050	µg/L	1		SW-846 8151A	4/3/15	4/4/15 16:43	PJG
Dichloroprop [1]	ND	0.50	µg/L	1		SW-846 8151A	4/3/15	4/4/15 16:43	PJG
Dinoseb [1]	ND	0.25	µg/L	1		SW-846 8151A	4/3/15	4/4/15 16:43	PJG
MCPA [1]	ND	50	µg/L	1		SW-846 8151A	4/3/15	4/4/15 16:43	PJG
MCPD [1]	ND	50	µg/L	1		SW-846 8151A	4/3/15	4/4/15 16:43	PJG
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
2,4-Dichlorophenylacetic acid [1]	96.2		30-150				4/4/15 16:43		
2,4-Dichlorophenylacetic acid [2]	157 *		30-150		S-02		4/4/15 16:43		

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Project Location: Motiva Site - Bushwick Inlet Park

Sample Description:

Work Order: 15C1208

Date Received: 3/30/2015

Field Sample #: MW-01

Sampled: 3/30/2015 10:30

Sample ID: 15C1208-01

Sample Matrix: Ground Water

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aluminum	0.81	0.050	mg/L	1		SW-846 6010C	3/31/15	4/1/15 18:00	MJH
Antimony	ND	0.050	mg/L	1		SW-846 6010C	3/31/15	4/1/15 18:00	MJH
Arsenic	0.019	0.010	mg/L	1		SW-846 6010C	3/31/15	4/1/15 18:00	MJH
Barium	0.14	0.050	mg/L	1		SW-846 6010C	3/31/15	4/1/15 18:00	MJH
Beryllium	ND	0.0040	mg/L	1		SW-846 6010C	3/31/15	4/1/15 18:00	MJH
Cadmium	ND	0.0040	mg/L	1		SW-846 6010C	3/31/15	4/1/15 18:00	MJH
Calcium	74	0.15	mg/L	1		SW-846 6010C	3/31/15	4/1/15 18:00	MJH
Chromium	ND	0.010	mg/L	1		SW-846 6010C	3/31/15	4/1/15 18:00	MJH
Cobalt	ND	0.050	mg/L	1		SW-846 6010C	3/31/15	4/1/15 18:00	MJH
Copper	0.033	0.010	mg/L	1		SW-846 6010C	3/31/15	4/1/15 18:00	MJH
Iron	8.6	0.050	mg/L	1		SW-846 6010C	3/31/15	4/1/15 18:00	MJH
Lead	0.043	0.010	mg/L	1		SW-846 6010C	3/31/15	4/1/15 18:00	MJH
Magnesium	30	0.15	mg/L	1		SW-846 6010C	3/31/15	4/1/15 18:00	MJH
Manganese	0.84	0.010	mg/L	1		SW-846 6010C	3/31/15	4/1/15 18:00	MJH
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	4/1/15	4/2/15 11:10	SCB
Nickel	ND	0.010	mg/L	1		SW-846 6010C	3/31/15	4/1/15 18:00	MJH
Potassium	24	2.0	mg/L	1		SW-846 6010C	3/31/15	4/1/15 18:00	MJH
Selenium	ND	0.050	mg/L	1		SW-846 6010C	3/31/15	4/1/15 18:00	MJH
Silver	ND	0.0050	mg/L	1		SW-846 6010C	3/31/15	4/1/15 18:00	MJH
Sodium	480	2.0	mg/L	1		SW-846 6010C	3/31/15	4/1/15 18:00	MJH
Thallium	ND	0.050	mg/L	1		SW-846 6010C	3/31/15	4/1/15 18:00	MJH
Vanadium	0.014	0.010	mg/L	1		SW-846 6010C	3/31/15	4/1/15 18:00	MJH
Zinc	0.070	0.020	mg/L	1		SW-846 6010C	3/31/15	4/1/15 18:00	MJH

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Project Location: Motiva Site - Bushwick Inlet Park

Sample Description:

Work Order: 15C1208

Date Received: 3/30/2015

Field Sample #: MW-02

Sampled: 3/30/2015 12:00

Sample ID: 15C1208-02

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	50	µg/L	1		SW-846 8260C	4/3/15	4/4/15 0:19	EEH
Acrylonitrile	ND	5.0	µg/L	1		SW-846 8260C	4/3/15	4/4/15 0:19	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.50	µg/L	1		SW-846 8260C	4/3/15	4/4/15 0:19	EEH
Benzene	ND	1.0	µg/L	1		SW-846 8260C	4/3/15	4/4/15 0:19	EEH
Bromobenzene	ND	1.0	µg/L	1		SW-846 8260C	4/3/15	4/4/15 0:19	EEH
Bromochloromethane	ND	2.0	µg/L	1	V-05	SW-846 8260C	4/3/15	4/4/15 0:19	EEH
Bromodichloromethane	ND	0.50	µg/L	1		SW-846 8260C	4/3/15	4/4/15 0:19	EEH
Bromoform	ND	1.0	µg/L	1		SW-846 8260C	4/3/15	4/4/15 0:19	EEH
Bromomethane	ND	2.0	µg/L	1		SW-846 8260C	4/3/15	4/4/15 0:19	EEH
2-Butanone (MEK)	ND	20	µg/L	1		SW-846 8260C	4/3/15	4/4/15 0:19	EEH
tert-Butyl Alcohol (TBA)	ND	20	µg/L	1	V-05	SW-846 8260C	4/3/15	4/4/15 0:19	EEH
n-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	4/3/15	4/4/15 0:19	EEH
sec-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	4/3/15	4/4/15 0:19	EEH
tert-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	4/3/15	4/4/15 0:19	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	1.0	µg/L	1		SW-846 8260C	4/3/15	4/4/15 0:19	EEH
Carbon Disulfide	ND	4.0	µg/L	1		SW-846 8260C	4/3/15	4/4/15 0:19	EEH
Carbon Tetrachloride	ND	5.0	µg/L	1		SW-846 8260C	4/3/15	4/4/15 0:19	EEH
Chlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	4/3/15	4/4/15 0:19	EEH
Chlorodibromomethane	ND	2.0	µg/L	1		SW-846 8260C	4/3/15	4/4/15 0:19	EEH
Chloroethane	ND	2.0	µg/L	1		SW-846 8260C	4/3/15	4/4/15 0:19	EEH
Chloroform	ND	2.0	µg/L	1		SW-846 8260C	4/3/15	4/4/15 0:19	EEH
Chloromethane	ND	2.0	µg/L	1		SW-846 8260C	4/3/15	4/4/15 0:19	EEH
2-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	4/3/15	4/4/15 0:19	EEH
4-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	4/3/15	4/4/15 0:19	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	µg/L	1		SW-846 8260C	4/3/15	4/4/15 0:19	EEH
1,2-Dibromoethane (EDB)	ND	2.0	µg/L	1		SW-846 8260C	4/3/15	4/4/15 0:19	EEH
Dibromomethane	ND	1.0	µg/L	1		SW-846 8260C	4/3/15	4/4/15 0:19	EEH
1,2-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	4/3/15	4/4/15 0:19	EEH
1,3-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	4/3/15	4/4/15 0:19	EEH
1,4-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	4/3/15	4/4/15 0:19	EEH
trans-1,4-Dichloro-2-butene	ND	2.0	µg/L	1		SW-846 8260C	4/3/15	4/4/15 0:19	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	µg/L	1	V-05	SW-846 8260C	4/3/15	4/4/15 0:19	EEH
1,1-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	4/3/15	4/4/15 0:19	EEH
1,2-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	4/3/15	4/4/15 0:19	EEH
1,1-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	4/3/15	4/4/15 0:19	EEH
cis-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	4/3/15	4/4/15 0:19	EEH
trans-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	4/3/15	4/4/15 0:19	EEH
1,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260C	4/3/15	4/4/15 0:19	EEH
1,3-Dichloropropane	ND	0.50	µg/L	1		SW-846 8260C	4/3/15	4/4/15 0:19	EEH
2,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260C	4/3/15	4/4/15 0:19	EEH
1,1-Dichloropropene	ND	2.0	µg/L	1		SW-846 8260C	4/3/15	4/4/15 0:19	EEH
cis-1,3-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260C	4/3/15	4/4/15 0:19	EEH
trans-1,3-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260C	4/3/15	4/4/15 0:19	EEH
Diethyl Ether	ND	2.0	µg/L	1		SW-846 8260C	4/3/15	4/4/15 0:19	EEH

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Project Location: Motiva Site - Bushwick Inlet Park

Sample Description:

Work Order: 15C1208

Date Received: 3/30/2015

Field Sample #: MW-02

Sampled: 3/30/2015 12:00

Sample ID: 15C1208-02

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.50	µg/L	1		SW-846 8260C	4/3/15	4/4/15 0:19	EEH
1,4-Dioxane	ND	50	µg/L	1		SW-846 8260C	4/3/15	4/4/15 0:19	EEH
Ethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	4/3/15	4/4/15 0:19	EEH
Hexachlorobutadiene	ND	0.50	µg/L	1		SW-846 8260C	4/3/15	4/4/15 0:19	EEH
2-Hexanone (MBK)	ND	10	µg/L	1		SW-846 8260C	4/3/15	4/4/15 0:19	EEH
Isopropylbenzene (Cumene)	ND	1.0	µg/L	1		SW-846 8260C	4/3/15	4/4/15 0:19	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	µg/L	1		SW-846 8260C	4/3/15	4/4/15 0:19	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L	1		SW-846 8260C	4/3/15	4/4/15 0:19	EEH
Methylene Chloride	ND	5.0	µg/L	1		SW-846 8260C	4/3/15	4/4/15 0:19	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	µg/L	1		SW-846 8260C	4/3/15	4/4/15 0:19	EEH
Naphthalene	ND	2.0	µg/L	1		SW-846 8260C	4/3/15	4/4/15 0:19	EEH
n-Propylbenzene	ND	1.0	µg/L	1		SW-846 8260C	4/3/15	4/4/15 0:19	EEH
Styrene	ND	1.0	µg/L	1		SW-846 8260C	4/3/15	4/4/15 0:19	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	µg/L	1		SW-846 8260C	4/3/15	4/4/15 0:19	EEH
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1		SW-846 8260C	4/3/15	4/4/15 0:19	EEH
Tetrachloroethylene	ND	1.0	µg/L	1		SW-846 8260C	4/3/15	4/4/15 0:19	EEH
Tetrahydrofuran	ND	10	µg/L	1		SW-846 8260C	4/3/15	4/4/15 0:19	EEH
Toluene	ND	1.0	µg/L	1		SW-846 8260C	4/3/15	4/4/15 0:19	EEH
1,2,3-Trichlorobenzene	ND	5.0	µg/L	1		SW-846 8260C	4/3/15	4/4/15 0:19	EEH
1,2,4-Trichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	4/3/15	4/4/15 0:19	EEH
1,3,5-Trichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	4/3/15	4/4/15 0:19	EEH
1,1,1-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	4/3/15	4/4/15 0:19	EEH
1,1,2-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	4/3/15	4/4/15 0:19	EEH
Trichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	4/3/15	4/4/15 0:19	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	µg/L	1		SW-846 8260C	4/3/15	4/4/15 0:19	EEH
1,2,3-Trichloropropane	ND	2.0	µg/L	1		SW-846 8260C	4/3/15	4/4/15 0:19	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	µg/L	1		SW-846 8260C	4/3/15	4/4/15 0:19	EEH
1,2,4-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	4/3/15	4/4/15 0:19	EEH
1,3,5-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	4/3/15	4/4/15 0:19	EEH
Vinyl Chloride	ND	2.0	µg/L	1		SW-846 8260C	4/3/15	4/4/15 0:19	EEH
m+p Xylene	ND	2.0	µg/L	1		SW-846 8260C	4/3/15	4/4/15 0:19	EEH
o-Xylene	ND	1.0	µg/L	1		SW-846 8260C	4/3/15	4/4/15 0:19	EEH
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
1,2-Dichloroethane-d4	101	70-130							
Toluene-d8	96.0	70-130							
4-Bromofluorobenzene	97.2	70-130							

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Project Location: Motiva Site - Bushwick Inlet Park

Sample Description:

Work Order: 15C1208

Date Received: 3/30/2015

Field Sample #: MW-02

Sampled: 3/30/2015 12:00

Sample ID: 15C1208-02

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Benzene	ND	1.0	µg/L	1		EPA 624	4/3/15	4/4/15 0:19	EEH
Bromodichloromethane	ND	2.0	µg/L	1		EPA 624	4/3/15	4/4/15 0:19	EEH
Bromoform	ND	2.0	µg/L	1		EPA 624	4/3/15	4/4/15 0:19	EEH
Bromomethane	ND	2.0	µg/L	1		EPA 624	4/3/15	4/4/15 0:19	EEH
Carbon Tetrachloride	ND	2.0	µg/L	1		EPA 624	4/3/15	4/4/15 0:19	EEH
Chlorobenzene	ND	2.0	µg/L	1		EPA 624	4/3/15	4/4/15 0:19	EEH
Chlorodibromomethane	ND	2.0	µg/L	1		EPA 624	4/3/15	4/4/15 0:19	EEH
Chloroethane	ND	2.0	µg/L	1		EPA 624	4/3/15	4/4/15 0:19	EEH
2-Chloroethyl Vinyl Ether	ND	10	µg/L	1		EPA 624	4/3/15	4/4/15 0:19	EEH
Chloroform	ND	2.0	µg/L	1		EPA 624	4/3/15	4/4/15 0:19	EEH
Chloromethane	ND	2.0	µg/L	1		EPA 624	4/3/15	4/4/15 0:19	EEH
1,2-Dichlorobenzene	ND	2.0	µg/L	1		EPA 624	4/3/15	4/4/15 0:19	EEH
1,3-Dichlorobenzene	ND	2.0	µg/L	1		EPA 624	4/3/15	4/4/15 0:19	EEH
1,4-Dichlorobenzene	ND	2.0	µg/L	1		EPA 624	4/3/15	4/4/15 0:19	EEH
1,2-Dichloroethane	ND	2.0	µg/L	1		EPA 624	4/3/15	4/4/15 0:19	EEH
1,1-Dichloroethane	ND	2.0	µg/L	1		EPA 624	4/3/15	4/4/15 0:19	EEH
1,1-Dichloroethylene	ND	2.0	µg/L	1		EPA 624	4/3/15	4/4/15 0:19	EEH
trans-1,2-Dichloroethylene	ND	2.0	µg/L	1		EPA 624	4/3/15	4/4/15 0:19	EEH
1,2-Dichloropropane	ND	2.0	µg/L	1		EPA 624	4/3/15	4/4/15 0:19	EEH
cis-1,3-Dichloropropene	ND	2.0	µg/L	1		EPA 624	4/3/15	4/4/15 0:19	EEH
trans-1,3-Dichloropropene	ND	2.0	µg/L	1		EPA 624	4/3/15	4/4/15 0:19	EEH
Ethylbenzene	ND	2.0	µg/L	1		EPA 624	4/3/15	4/4/15 0:19	EEH
Methyl tert-Butyl Ether (MTBE)	ND	2.0	µg/L	1		EPA 624	4/3/15	4/4/15 0:19	EEH
Methylene Chloride	ND	5.0	µg/L	1		EPA 624	4/3/15	4/4/15 0:19	EEH
1,1,2,2-Tetrachloroethane	ND	2.0	µg/L	1		EPA 624	4/3/15	4/4/15 0:19	EEH
Tetrachloroethylene	ND	2.0	µg/L	1		EPA 624	4/3/15	4/4/15 0:19	EEH
Toluene	ND	1.0	µg/L	1		EPA 624	4/3/15	4/4/15 0:19	EEH
1,1,1-Trichloroethane	ND	2.0	µg/L	1		EPA 624	4/3/15	4/4/15 0:19	EEH
1,1,2-Trichloroethane	ND	2.0	µg/L	1		EPA 624	4/3/15	4/4/15 0:19	EEH
Trichloroethylene	ND	2.0	µg/L	1		EPA 624	4/3/15	4/4/15 0:19	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	µg/L	1		EPA 624	4/3/15	4/4/15 0:19	EEH
Vinyl Chloride	ND	2.0	µg/L	1		EPA 624	4/3/15	4/4/15 0:19	EEH
m+p Xylene	ND	2.0	µg/L	1		EPA 624	4/3/15	4/4/15 0:19	EEH
o-Xylene	ND	2.0	µg/L	1		EPA 624	4/3/15	4/4/15 0:19	EEH
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
1,2-Dichloroethane-d4	101	70-130						4/4/15 0:19	
Toluene-d8	96.0	70-130						4/4/15 0:19	
4-Bromofluorobenzene	97.2	70-130						4/4/15 0:19	

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Project Location: Motiva Site - Bushwick Inlet Park

Sample Description:

Work Order: 15C1208

Date Received: 3/30/2015

Field Sample #: MW-02

Sampled: 3/30/2015 12:00

Sample ID: 15C1208-02

Sample Matrix: Ground Water

Semivolatiles Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	5.0	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:46	CMR
Acenaphthylene	ND	5.0	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:46	CMR
Acetophenone	ND	10	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:46	CMR
Aniline	ND	5.0	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:46	CMR
Anthracene	ND	5.0	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:46	CMR
Benzidine	ND	20	µg/L	1	R-05, V-04, V-05	SW-846 8270D	4/2/15	4/2/15 17:46	CMR
Benzo(a)anthracene	ND	5.0	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:46	CMR
Benzo(a)pyrene	ND	5.0	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:46	CMR
Benzo(b)fluoranthene	ND	5.0	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:46	CMR
Benzo(g,h,i)perylene	ND	5.0	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:46	CMR
Benzo(k)fluoranthene	ND	5.0	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:46	CMR
Benzoic Acid	ND	10	µg/L	1	L-04	SW-846 8270D	4/2/15	4/2/15 17:46	CMR
Bis(2-chloroethoxy)methane	ND	10	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:46	CMR
Bis(2-chloroethyl)ether	ND	10	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:46	CMR
Bis(2-chloroisopropyl)ether	ND	10	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:46	CMR
Bis(2-Ethylhexyl)phthalate	ND	10	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:46	CMR
4-Bromophenylphenylether	ND	10	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:46	CMR
Butylbenzylphthalate	ND	10	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:46	CMR
Carbazole	ND	10	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:46	CMR
4-Chloroaniline	ND	10	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:46	CMR
4-Chloro-3-methylphenol	ND	10	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:46	CMR
2-Chloronaphthalene	ND	10	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:46	CMR
2-Chlorophenol	ND	10	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:46	CMR
4-Chlorophenylphenylether	ND	10	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:46	CMR
Chrysene	ND	5.0	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:46	CMR
Dibenz(a,h)anthracene	ND	5.0	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:46	CMR
Dibenzofuran	ND	5.0	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:46	CMR
Di-n-butylphthalate	ND	10	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:46	CMR
1,2-Dichlorobenzene	ND	5.0	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:46	CMR
1,3-Dichlorobenzene	ND	5.0	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:46	CMR
1,4-Dichlorobenzene	ND	5.0	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:46	CMR
3,3-Dichlorobenzidine	ND	10	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:46	CMR
2,4-Dichlorophenol	ND	10	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:46	CMR
Diethylphthalate	ND	10	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:46	CMR
2,4-Dimethylphenol	ND	10	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:46	CMR
Dimethylphthalate	ND	10	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:46	CMR
4,6-Dinitro-2-methylphenol	ND	10	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:46	CMR
2,4-Dinitrophenol	ND	10	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:46	CMR
2,4-Dinitrotoluene	ND	10	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:46	CMR
2,6-Dinitrotoluene	ND	10	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:46	CMR
Di-n-octylphthalate	ND	10	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:46	CMR
1,2-Diphenylhydrazine (as Azobenzene)	ND	10	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:46	CMR
Fluoranthene	ND	5.0	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:46	CMR
Fluorene	ND	5.0	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:46	CMR

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Project Location: Motiva Site - Bushwick Inlet Park

Sample Description:

Work Order: 15C1208

Date Received: 3/30/2015

Field Sample #: MW-02

Sampled: 3/30/2015 12:00

Sample ID: 15C1208-02

Sample Matrix: Ground Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	10	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:46	CMR
Hexachlorobutadiene	ND	10	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:46	CMR
Hexachlorocyclopentadiene	ND	10	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:46	CMR
Hexachloroethane	ND	10	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:46	CMR
Indeno(1,2,3-cd)pyrene	ND	5.0	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:46	CMR
Isophorone	ND	10	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:46	CMR
1-Methylnaphthalene	ND	5.0	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:46	CMR
2-Methylnaphthalene	ND	5.0	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:46	CMR
2-Methylphenol	ND	10	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:46	CMR
3/4-Methylphenol	ND	10	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:46	CMR
Naphthalene	ND	5.0	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:46	CMR
2-Nitroaniline	ND	10	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:46	CMR
3-Nitroaniline	ND	10	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:46	CMR
4-Nitroaniline	ND	10	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:46	CMR
Nitrobenzene	ND	10	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:46	CMR
2-Nitrophenol	ND	10	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:46	CMR
4-Nitrophenol	ND	10	µg/L	1	V-20	SW-846 8270D	4/2/15	4/2/15 17:46	CMR
N-Nitrosodimethylamine	ND	10	µg/L	1	V-20	SW-846 8270D	4/2/15	4/2/15 17:46	CMR
N-Nitrosodiphenylamine	ND	10	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:46	CMR
N-Nitrosodi-n-propylamine	ND	10	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:46	CMR
Pentachloronitrobenzene	ND	10	µg/L	1	V-16	SW-846 8270D	4/2/15	4/2/15 17:46	CMR
Pentachlorophenol	ND	10	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:46	CMR
Phenanthrene	ND	5.0	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:46	CMR
Phenol	ND	10	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:46	CMR
Pyrene	ND	5.0	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:46	CMR
Pyridine	ND	5.0	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:46	CMR
1,2,4,5-Tetrachlorobenzene	ND	10	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:46	CMR
1,2,4-Trichlorobenzene	ND	5.0	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:46	CMR
2,4,5-Trichlorophenol	ND	10	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:46	CMR
2,4,6-Trichlorophenol	ND	10	µg/L	1		SW-846 8270D	4/2/15	4/2/15 17:46	CMR
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
2-Fluorophenol	48.2	15-110							
Phenol-d6	31.0	15-110							
Nitrobenzene-d5	107	30-130							
2-Fluorobiphenyl	107	30-130							
2,4,6-Tribromophenol	116	*	15-110	S-07					
p-Terphenyl-d14	129		30-130						

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Project Location: Motiva Site - Bushwick Inlet Park

Sample Description:

Work Order: 15C1208

Date Received: 3/30/2015

Field Sample #: MW-02

Sampled: 3/30/2015 12:00

Sample ID: 15C1208-02

Sample Matrix: Ground Water

Organochloride Pesticides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Alachlor [1]	ND	0.20	µg/L	1		SW-846 8081B	4/3/15	4/4/15 14:47	PJG
Aldrin [1]	ND	0.050	µg/L	1		SW-846 8081B	4/3/15	4/4/15 14:47	PJG
alpha-BHC [1]	ND	0.050	µg/L	1		SW-846 8081B	4/3/15	4/4/15 14:47	PJG
beta-BHC [1]	ND	0.050	µg/L	1		SW-846 8081B	4/3/15	4/4/15 14:47	PJG
delta-BHC [1]	ND	0.050	µg/L	1		SW-846 8081B	4/3/15	4/4/15 14:47	PJG
gamma-BHC (Lindane) [1]	ND	0.030	µg/L	1		SW-846 8081B	4/3/15	4/4/15 14:47	PJG
Chlordane [1]	ND	0.20	µg/L	1		SW-846 8081B	4/3/15	4/4/15 14:47	PJG
4,4'-DDD [1]	ND	0.040	µg/L	1		SW-846 8081B	4/3/15	4/4/15 14:47	PJG
4,4'-DDE [1]	ND	0.040	µg/L	1		SW-846 8081B	4/3/15	4/4/15 14:47	PJG
4,4'-DDT [1]	ND	0.040	µg/L	1		SW-846 8081B	4/3/15	4/4/15 14:47	PJG
Dieldrin [1]	ND	0.0020	µg/L	1		SW-846 8081B	4/3/15	4/4/15 14:47	PJG
Endosulfan I [1]	ND	0.050	µg/L	1		SW-846 8081B	4/3/15	4/4/15 14:47	PJG
Endosulfan II [1]	ND	0.080	µg/L	1		SW-846 8081B	4/3/15	4/4/15 14:47	PJG
Endosulfan sulfate [1]	ND	0.080	µg/L	1		SW-846 8081B	4/3/15	4/4/15 14:47	PJG
Endrin [1]	ND	0.080	µg/L	1		SW-846 8081B	4/3/15	4/4/15 14:47	PJG
Endrin aldehyde [1]	ND	0.080	µg/L	1		SW-846 8081B	4/3/15	4/4/15 14:47	PJG
Endrin ketone [1]	ND	0.080	µg/L	1		SW-846 8081B	4/3/15	4/4/15 14:47	PJG
Heptachlor [1]	ND	0.050	µg/L	1		SW-846 8081B	4/3/15	4/4/15 14:47	PJG
Heptachlor epoxide [1]	ND	0.050	µg/L	1		SW-846 8081B	4/3/15	4/4/15 14:47	PJG
Hexachlorobenzene [1]	ND	0.050	µg/L	1		SW-846 8081B	4/3/15	4/4/15 14:47	PJG
Methoxychlor [1]	ND	0.50	µg/L	1		SW-846 8081B	4/3/15	4/4/15 14:47	PJG
Toxaphene [1]	ND	1.0	µg/L	1		SW-846 8081B	4/3/15	4/4/15 14:47	PJG
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
Decachlorobiphenyl [1]	70.5	30-150							
Decachlorobiphenyl [2]	66.4	30-150							
Tetrachloro-m-xylene [1]	86.6	30-150							
Tetrachloro-m-xylene [2]	78.6	30-150							

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Project Location: Motiva Site - Bushwick Inlet Park

Sample Description:

Work Order: 15C1208

Date Received: 3/30/2015

Field Sample #: MW-02

Sampled: 3/30/2015 12:00

Sample ID: 15C1208-02

Sample Matrix: Ground Water

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.20	µg/L	1		SW-846 8082A	4/3/15	4/4/15 12:07	KAL
Aroclor-1221 [1]	ND	0.20	µg/L	1		SW-846 8082A	4/3/15	4/4/15 12:07	KAL
Aroclor-1232 [1]	ND	0.20	µg/L	1		SW-846 8082A	4/3/15	4/4/15 12:07	KAL
Aroclor-1242 [1]	ND	0.20	µg/L	1		SW-846 8082A	4/3/15	4/4/15 12:07	KAL
Aroclor-1248 [1]	ND	0.20	µg/L	1		SW-846 8082A	4/3/15	4/4/15 12:07	KAL
Aroclor-1254 [1]	ND	0.20	µg/L	1		SW-846 8082A	4/3/15	4/4/15 12:07	KAL
Aroclor-1260 [1]	ND	0.20	µg/L	1		SW-846 8082A	4/3/15	4/4/15 12:07	KAL
Aroclor-1262 [1]	ND	0.20	µg/L	1		SW-846 8082A	4/3/15	4/4/15 12:07	KAL
Aroclor-1268 [1]	ND	0.20	µg/L	1		SW-846 8082A	4/3/15	4/4/15 12:07	KAL
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
Decachlorobiphenyl [1]	69.8	30-150						4/4/15 12:07	
Decachlorobiphenyl [2]	67.8	30-150						4/4/15 12:07	
Tetrachloro-m-xylene [1]	84.0	30-150						4/4/15 12:07	
Tetrachloro-m-xylene [2]	83.8	30-150						4/4/15 12:07	

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Project Location: Motiva Site - Bushwick Inlet Park

Sample Description:

Work Order: 15C1208

Date Received: 3/30/2015

Field Sample #: MW-02

Sampled: 3/30/2015 12:00

Sample ID: 15C1208-02

Sample Matrix: Ground Water

Herbicides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2,4-D [1]	ND	0.50	µg/L	1		SW-846 8151A	4/3/15	4/4/15 17:22	PJG
2,4-DB [1]	ND	0.50	µg/L	1		SW-846 8151A	4/3/15	4/4/15 17:22	PJG
2,4,5-TP (Silvex) [1]	ND	0.050	µg/L	1		SW-846 8151A	4/3/15	4/4/15 17:22	PJG
2,4,5-T [1]	ND	0.10	µg/L	1		SW-846 8151A	4/3/15	4/4/15 17:22	PJG
Dalapon [2]	ND	1.2	µg/L	1		SW-846 8151A	4/3/15	4/4/15 17:22	PJG
Dicamba [1]	ND	0.050	µg/L	1		SW-846 8151A	4/3/15	4/4/15 17:22	PJG
Dichloroprop [1]	ND	0.50	µg/L	1		SW-846 8151A	4/3/15	4/4/15 17:22	PJG
Dinoseb [1]	ND	0.25	µg/L	1		SW-846 8151A	4/3/15	4/4/15 17:22	PJG
MCPA [1]	ND	50	µg/L	1		SW-846 8151A	4/3/15	4/4/15 17:22	PJG
MCPP [1]	ND	50	µg/L	1		SW-846 8151A	4/3/15	4/4/15 17:22	PJG
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
2,4-Dichlorophenylacetic acid [1]	126	30-150							
2,4-Dichlorophenylacetic acid [2]	112	30-150							

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Motiva Site - Bushwick Inlet Park

Sample Description:

Work Order: 15C1208

Date Received: 3/30/2015

Field Sample #: MW-02

Sampled: 3/30/2015 12:00

Sample ID: 15C1208-02

Sample Matrix: Ground Water

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aluminum	6.1	0.050	mg/L	1		SW-846 6010C	3/31/15	4/1/15 18:05	MJH
Antimony	ND	0.050	mg/L	1		SW-846 6010C	3/31/15	4/1/15 18:05	MJH
Arsenic	0.016	0.010	mg/L	1		SW-846 6010C	3/31/15	4/1/15 18:05	MJH
Barium	0.14	0.050	mg/L	1		SW-846 6010C	3/31/15	4/1/15 18:05	MJH
Beryllium	ND	0.0040	mg/L	1		SW-846 6010C	3/31/15	4/1/15 18:05	MJH
Cadmium	ND	0.0040	mg/L	1		SW-846 6010C	3/31/15	4/1/15 18:05	MJH
Calcium	55	0.15	mg/L	1		SW-846 6010C	3/31/15	4/1/15 18:05	MJH
Chromium	0.014	0.010	mg/L	1		SW-846 6010C	3/31/15	4/1/15 18:05	MJH
Cobalt	ND	0.050	mg/L	1		SW-846 6010C	3/31/15	4/1/15 18:05	MJH
Copper	0.051	0.010	mg/L	1		SW-846 6010C	3/31/15	4/1/15 18:05	MJH
Iron	33	0.050	mg/L	1		SW-846 6010C	3/31/15	4/1/15 18:05	MJH
Lead	0.10	0.010	mg/L	1		SW-846 6010C	3/31/15	4/1/15 18:05	MJH
Magnesium	28	0.15	mg/L	1		SW-846 6010C	3/31/15	4/1/15 18:05	MJH
Manganese	3.4	0.010	mg/L	1		SW-846 6010C	3/31/15	4/1/15 18:05	MJH
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	3/31/15	4/1/15 9:06	SCB
Nickel	0.021	0.010	mg/L	1		SW-846 6010C	3/31/15	4/1/15 18:05	MJH
Potassium	15	2.0	mg/L	1		SW-846 6010C	3/31/15	4/1/15 18:05	MJH
Selenium	ND	0.050	mg/L	1		SW-846 6010C	3/31/15	4/1/15 18:05	MJH
Silver	ND	0.0050	mg/L	1		SW-846 6010C	3/31/15	4/1/15 18:05	MJH
Sodium	250	2.0	mg/L	1		SW-846 6010C	3/31/15	4/1/15 18:05	MJH
Thallium	ND	0.050	mg/L	1		SW-846 6010C	3/31/15	4/1/15 18:05	MJH
Vanadium	0.031	0.010	mg/L	1		SW-846 6010C	3/31/15	4/1/15 18:05	MJH
Zinc	0.24	0.020	mg/L	1		SW-846 6010C	3/31/15	4/1/15 18:05	MJH

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Project Location: Motiva Site - Bushwick Inlet Park

Sample Description:

Work Order: 15C1208

Date Received: 3/30/2015

Field Sample #: MW-02

Sampled: 3/30/2015 12:00

Sample ID: 15C1208-02

Sample Matrix: Ground Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Carbonaceous BOD	ND	4.0	mg/L	1	W-16	SM21-22 5210B	3/31/15	3/31/15 18:00	DJM
Chloride	290	10	mg/L	10		SM21-22 4500 CL B	4/3/15	4/3/15 13:15	ABH
Flashpoint	> 212 °F		°F	1		SW-846 1010	3/31/15	3/31/15 21:45	DJM
Hexavalent Chromium	ND	0.0040	mg/L	1	MS-07A	SW-846 7196A	3/30/15	3/30/15 23:45	DJM
Nitrate/Nitrite as N	ND	0.050	mg/L	1		SM 21-22 4500 NO3 F	3/31/15	3/31/15 15:38	AG
pH @19.5°C	6.8		pH Units	1	H-05	SM21-22 4500 H B	3/31/15	3/31/15 8:30	LL
Phenol	ND	0.050	mg/L	1		EPA 420.1	4/2/15	4/3/15 13:30	LL
Total Kjeldahl Nitrogen	7.8	1.0	mg/L	1		SM19-22 4500-N Org B,C-NH3 C	4/2/15	4/3/15 13:30	VAK
Total Nitrogen	7.8	0.050	mg/L	1		SM19-22 4500-N Org B,C-NH3 C	4/6/15	4/6/15 8:45	LL
Total Solids	1100	10	mg/L	1		SM21-22 2540B	4/3/15	4/3/15 12:50	VAK
Total Suspended Solids	160	10	mg/L	1		SM21-22 2540D	4/1/15	4/1/15 15:35	ABH
Oil & Grease (HEM)	ND	1.4	mg/L	1		EPA 1664B	4/3/15	4/3/15 13:30	LL

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Sample Extraction Data				
EPA 1664B				
Lab Number [Field ID]	Batch	Initial [mL]		Date
15C1208-02 [MW-02]	B118457	1000		04/03/15
EPA 420.1				
Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
15C1208-02 [MW-02]	B118349	50.0	50.0	04/02/15
Prep Method: SW-846 5030B-EPA 624				
Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
15C1208-02 [MW-02]	B118482	5	5.00	04/03/15
Prep Method: SM 4500 NO3-F-SM 21-22 4500 NO3 F				
Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
15C1208-02 [MW-02]	B118317	25.0	25.0	03/31/15
SM19-22 4500-N Org B,C-NH3 C				
Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
15C1208-02 [MW-02]	B118382	25.0	25.0	04/02/15
SM19-22 4500-N Org B,C-NH3 C				
Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
15C1208-02 [MW-02]	B118588	50.0	50.0	04/06/15
SM21-22 2540B				
Lab Number [Field ID]	Batch	Initial [mL]		Date
15C1208-02 [MW-02]	B118512	50.0		04/03/15
SM21-22 2540D				
Lab Number [Field ID]	Batch	Initial [mL]		Date
15C1208-02 [MW-02]	B118283	50.0		04/01/15
SM21-22 4500 CL B				
Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
15C1208-02 [MW-02]	B118488	100	100	04/03/15

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Sample Extraction Data

SM21-22 4500 H B

Lab Number [Field ID]	Batch	Initial [mL]	Date	
15C1208-02 [MW-02]	B118137	50.0	03/31/15	

SM21-22 5210B

Lab Number [Field ID]	Batch	Initial [mL]	Date	
15C1208-02 [MW-02]	B118112	150	03/31/15	

SW-846 1010

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
15C1208-02 [MW-02]	B118235	50.0	50.0	03/31/15

Prep Method: SW-846 3005A-SW-846 6010C

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
15C1208-01 [MW-01]	B118202	50.0	50.0	03/31/15
15C1208-02 [MW-02]	B118202	50.0	50.0	03/31/15

SW-846 7196A

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
15C1208-02 [MW-02]	B118114	50.0	50.0	03/30/15

Prep Method: SW-846 7470A Prep-SW-846 7470A

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
15C1208-02 [MW-02]	B118146	6.00	6.00	03/31/15

Prep Method: SW-846 7470A Prep-SW-846 7470A

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
15C1208-01 [MW-01]	B118256	6.00	6.00	04/01/15

Prep Method: SW-846 3510C-SW-846 8081B

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
15C1208-01 [MW-01]	B118448	1000	10.0	04/03/15
15C1208-02 [MW-02]	B118448	1000	10.0	04/03/15

Prep Method: SW-846 3510C-SW-846 8082A

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
15C1208-01 [MW-01]	B118447	1000	10.0	04/03/15
15C1208-02 [MW-02]	B118447	1000	10.0	04/03/15

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Sample Extraction Data

Prep Method: SW-846 3510C-SW-846 8151A

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
15C1208-01 [MW-01]	B118465	1000	5.00	04/03/15
15C1208-02 [MW-02]	B118465	1000	5.00	04/03/15

Prep Method: SW-846 5030B-SW-846 8260C

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
15C1208-01 [MW-01]	B118540	5	5.00	04/03/15
15C1208-02 [MW-02]	B118540	5	5.00	04/03/15

Prep Method: SW-846 3510C-SW-846 8270D

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
15C1208-01 [MW-01]	B118345	1000	1.00	04/02/15
15C1208-02 [MW-02]	B118345	1000	1.00	04/02/15

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B118540 - SW-846 5030B										
Blank (B118540-BLK1)				Prepared & Analyzed: 04/03/15						
Acetone	ND	50	µg/L							
Acrylonitrile	ND	5.0	µg/L							
tert-Amyl Methyl Ether (TAME)	ND	0.50	µg/L							
Benzene	ND	1.0	µg/L							
Bromobenzene	ND	1.0	µg/L							
Bromochloromethane	ND	2.0	µg/L							V-05
Bromodichloromethane	ND	0.50	µg/L							
Bromoform	ND	1.0	µg/L							
Bromomethane	ND	2.0	µg/L							
2-Butanone (MEK)	ND	20	µg/L							
tert-Butyl Alcohol (TBA)	ND	20	µg/L							V-05
n-Butylbenzene	ND	1.0	µg/L							
sec-Butylbenzene	ND	1.0	µg/L							
tert-Butylbenzene	ND	1.0	µg/L							
tert-Butyl Ethyl Ether (TBEE)	ND	1.0	µg/L							
Carbon Disulfide	ND	4.0	µg/L							
Carbon Tetrachloride	ND	5.0	µg/L							
Chlorobenzene	ND	1.0	µg/L							
Chlorodibromomethane	ND	2.0	µg/L							
Chloroethane	ND	2.0	µg/L							
Chloroform	ND	2.0	µg/L							
Chloromethane	ND	2.0	µg/L							
2-Chlorotoluene	ND	1.0	µg/L							
4-Chlorotoluene	ND	1.0	µg/L							
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	µg/L							
1,2-Dibromoethane (EDB)	ND	2.0	µg/L							
Dibromomethane	ND	1.0	µg/L							
1,2-Dichlorobenzene	ND	1.0	µg/L							
1,3-Dichlorobenzene	ND	1.0	µg/L							
1,4-Dichlorobenzene	ND	1.0	µg/L							
trans-1,4-Dichloro-2-butene	ND	2.0	µg/L							
Dichlorodifluoromethane (Freon 12)	ND	2.0	µg/L							V-05
1,1-Dichloroethane	ND	1.0	µg/L							
1,2-Dichloroethane	ND	1.0	µg/L							
1,1-Dichloroethylene	ND	1.0	µg/L							
cis-1,2-Dichloroethylene	ND	1.0	µg/L							
trans-1,2-Dichloroethylene	ND	1.0	µg/L							
1,2-Dichloropropane	ND	1.0	µg/L							
1,3-Dichloropropane	ND	0.50	µg/L							
2,2-Dichloropropane	ND	1.0	µg/L							
1,1-Dichloropropene	ND	2.0	µg/L							
cis-1,3-Dichloropropene	ND	0.50	µg/L							
trans-1,3-Dichloropropene	ND	0.50	µg/L							
Diethyl Ether	ND	2.0	µg/L							
Diisopropyl Ether (DIPE)	ND	0.50	µg/L							
1,4-Dioxane	ND	50	µg/L							
Ethylbenzene	ND	1.0	µg/L							
Hexachlorobutadiene	ND	0.50	µg/L							
2-Hexanone (MBK)	ND	10	µg/L							
Isopropylbenzene (Cumene)	ND	1.0	µg/L							
p-Isopropyltoluene (p-Cymene)	ND	1.0	µg/L							
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L							

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B118540 - SW-846 5030B										
Blank (B118540-BLK1)										
Prepared & Analyzed: 04/03/15										
Methylene Chloride	ND	5.0	µg/L							
4-Methyl-2-pentanone (MIBK)	ND	10	µg/L							
Naphthalene	ND	2.0	µg/L							
n-Propylbenzene	ND	1.0	µg/L							
Styrene	ND	1.0	µg/L							
1,1,1,2-Tetrachloroethane	ND	1.0	µg/L							
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L							
Tetrachloroethylene	ND	1.0	µg/L							
Tetrahydrofuran	ND	10	µg/L							
Toluene	ND	1.0	µg/L							
1,2,3-Trichlorobenzene	ND	5.0	µg/L							
1,2,4-Trichlorobenzene	ND	1.0	µg/L							
1,3,5-Trichlorobenzene	ND	1.0	µg/L							
1,1,1-Trichloroethane	ND	1.0	µg/L							
1,1,2-Trichloroethane	ND	1.0	µg/L							
Trichloroethylene	ND	1.0	µg/L							
Trichlorofluoromethane (Freon 11)	ND	2.0	µg/L							
1,2,3-Trichloropropane	ND	2.0	µg/L							
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	µg/L							
1,2,4-Trimethylbenzene	ND	1.0	µg/L							
1,3,5-Trimethylbenzene	ND	1.0	µg/L							
Vinyl Chloride	ND	2.0	µg/L							
m+p Xylene	ND	2.0	µg/L							
o-Xylene	ND	1.0	µg/L							
Surrogate: 1,2-Dichloroethane-d4	24.3		µg/L	25.0		97.2	70-130			
Surrogate: Toluene-d8	23.9		µg/L	25.0		95.8	70-130			
Surrogate: 4-Bromofluorobenzene	23.9		µg/L	25.0		95.8	70-130			
LCS (B118540-BS1)										
Prepared & Analyzed: 04/03/15										
Acetone	231	50	µg/L	100		231	* 70-160			L-02, V-20 †
Acrylonitrile	11.7	5.0	µg/L	10.0		117	70-130			
tert-Amyl Methyl Ether (TAME)	10.1	0.50	µg/L	10.0		101	70-130			
Benzene	9.56	1.0	µg/L	10.0		95.6	70-130			
Bromobenzene	9.14	1.0	µg/L	10.0		91.4	70-130			
Bromochloromethane	7.28	2.0	µg/L	10.0		72.8	70-130			V-05
Bromodichloromethane	9.49	0.50	µg/L	10.0		94.9	70-130			
Bromoform	10.4	1.0	µg/L	10.0		104	70-130			
Bromomethane	6.44	2.0	µg/L	10.0		64.4	40-160			†
2-Butanone (MEK)	170	20	µg/L	100		170	* 40-160			L-07, V-20 †
tert-Butyl Alcohol (TBA)	65.3	20	µg/L	100		65.3	40-160			V-05 †
n-Butylbenzene	10.5	1.0	µg/L	10.0		105	70-130			
sec-Butylbenzene	10.2	1.0	µg/L	10.0		102	70-130			
tert-Butylbenzene	9.93	1.0	µg/L	10.0		99.3	70-130			
tert-Butyl Ethyl Ether (TBEE)	9.77	1.0	µg/L	10.0		97.7	70-130			
Carbon Disulfide	7.76	4.0	µg/L	10.0		77.6	70-130			
Carbon Tetrachloride	8.83	5.0	µg/L	10.0		88.3	70-130			
Chlorobenzene	10.0	1.0	µg/L	10.0		100	70-130			
Chlorodibromomethane	8.64	2.0	µg/L	10.0		86.4	70-130			
Chloroethane	9.40	2.0	µg/L	10.0		94.0	70-130			
Chloroform	9.29	2.0	µg/L	10.0		92.9	70-130			
Chloromethane	6.52	2.0	µg/L	10.0		65.2	40-160			†
2-Chlorotoluene	9.64	1.0	µg/L	10.0		96.4	70-130			

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B118540 - SW-846 5030B										
LCS (B118540-BS1)				Prepared & Analyzed: 04/03/15						
4-Chlorotoluene	9.71	1.0	µg/L	10.0		97.1	70-130			
1,2-Dibromo-3-chloropropane (DBCP)	10.3	5.0	µg/L	10.0		103	70-130			
1,2-Dibromoethane (EDB)	9.52	2.0	µg/L	10.0		95.2	70-130			
Dibromomethane	9.93	1.0	µg/L	10.0		99.3	70-130			
1,2-Dichlorobenzene	9.79	1.0	µg/L	10.0		97.9	70-130			
1,3-Dichlorobenzene	10.2	1.0	µg/L	10.0		102	70-130			
1,4-Dichlorobenzene	9.68	1.0	µg/L	10.0		96.8	70-130			
trans-1,4-Dichloro-2-butene	13.4	2.0	µg/L	10.0		134 *	70-130			L-07, V-20
Dichlorodifluoromethane (Freon 12)	5.00	2.0	µg/L	10.0		50.0	40-160			V-05 †
1,1-Dichloroethane	9.50	1.0	µg/L	10.0		95.0	70-130			
1,2-Dichloroethane	8.42	1.0	µg/L	10.0		84.2	70-130			
1,1-Dichloroethylene	9.25	1.0	µg/L	10.0		92.5	70-130			
cis-1,2-Dichloroethylene	9.26	1.0	µg/L	10.0		92.6	70-130			
trans-1,2-Dichloroethylene	9.79	1.0	µg/L	10.0		97.9	70-130			
1,2-Dichloropropane	9.24	1.0	µg/L	10.0		92.4	70-130			
1,3-Dichloropropane	9.43	0.50	µg/L	10.0		94.3	70-130			
2,2-Dichloropropane	9.13	1.0	µg/L	10.0		91.3	40-130			†
1,1-Dichloropropene	10.3	2.0	µg/L	10.0		103	70-130			
cis-1,3-Dichloropropene	8.73	0.50	µg/L	10.0		87.3	70-130			
trans-1,3-Dichloropropene	10.1	0.50	µg/L	10.0		101	70-130			
Diethyl Ether	11.3	2.0	µg/L	10.0		113	70-130			
Diisopropyl Ether (DIPE)	8.98	0.50	µg/L	10.0		89.8	70-130			
1,4-Dioxane	139	50	µg/L	100		139 *	40-130			L-07 †
Ethylbenzene	9.51	1.0	µg/L	10.0		95.1	70-130			
Hexachlorobutadiene	9.63	0.50	µg/L	10.0		96.3	70-130			
2-Hexanone (MBK)	149	10	µg/L	100		149	70-160			V-20 †
Isopropylbenzene (Cumene)	9.36	1.0	µg/L	10.0		93.6	70-130			
p-Isopropyltoluene (p-Cymene)	10.1	1.0	µg/L	10.0		101	70-130			
Methyl tert-Butyl Ether (MTBE)	10.7	1.0	µg/L	10.0		107	70-130			
Methylene Chloride	9.63	5.0	µg/L	10.0		96.3	70-130			
4-Methyl-2-pentanone (MIBK)	111	10	µg/L	100		111	70-160			†
Naphthalene	12.2	2.0	µg/L	10.0		122	40-130			†
n-Propylbenzene	9.98	1.0	µg/L	10.0		99.8	70-130			
Styrene	10.3	1.0	µg/L	10.0		103	70-130			
1,1,1,2-Tetrachloroethane	9.69	1.0	µg/L	10.0		96.9	70-130			
1,1,2,2-Tetrachloroethane	11.8	0.50	µg/L	10.0		118	70-130			
Tetrachloroethylene	9.40	1.0	µg/L	10.0		94.0	70-130			
Tetrahydrofuran	12.7	10	µg/L	10.0		127	70-130			
Toluene	8.93	1.0	µg/L	10.0		89.3	70-130			
1,2,3-Trichlorobenzene	10.4	5.0	µg/L	10.0		104	70-130			
1,2,4-Trichlorobenzene	10.5	1.0	µg/L	10.0		105	70-130			
1,3,5-Trichlorobenzene	10.4	1.0	µg/L	10.0		104	70-130			
1,1,1-Trichloroethane	9.30	1.0	µg/L	10.0		93.0	70-130			
1,1,2-Trichloroethane	9.85	1.0	µg/L	10.0		98.5	70-130			
Trichloroethylene	9.25	1.0	µg/L	10.0		92.5	70-130			
Trichlorofluoromethane (Freon 11)	9.89	2.0	µg/L	10.0		98.9	70-130			
1,2,3-Trichloropropane	11.4	2.0	µg/L	10.0		114	70-130			
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	9.53	1.0	µg/L	10.0		95.3	70-130			
1,2,4-Trimethylbenzene	10.1	1.0	µg/L	10.0		101	70-130			
1,3,5-Trimethylbenzene	9.99	1.0	µg/L	10.0		99.9	70-130			
Vinyl Chloride	8.81	2.0	µg/L	10.0		88.1	40-160			†

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QUALITY CONTROL
Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B118540 - SW-846 5030B										
LCS (B118540-BS1)				Prepared & Analyzed: 04/03/15						
m+p Xylene	18.6	2.0	µg/L	20.0		93.2	70-130			
o-Xylene	9.43	1.0	µg/L	10.0		94.3	70-130			
Surrogate: 1,2-Dichloroethane-d4	24.9		µg/L	25.0		99.7	70-130			
Surrogate: Toluene-d8	23.5		µg/L	25.0		94.2	70-130			
Surrogate: 4-Bromofluorobenzene	24.4		µg/L	25.0		97.8	70-130			
LCS Dup (B118540-BS1)				Prepared & Analyzed: 04/03/15						
Acetone	209	50	µg/L	100		209 *	70-160	10.0	25	L-02, V-20 †
Acrylonitrile	10.8	5.0	µg/L	10.0		108	70-130	7.74	25	
tert-Amyl Methyl Ether (TAME)	10.0	0.50	µg/L	10.0		100	70-130	0.695	25	
Benzene	9.54	1.0	µg/L	10.0		95.4	70-130	0.209	25	
Bromobenzene	9.20	1.0	µg/L	10.0		92.0	70-130	0.654	25	
Bromochloromethane	7.53	2.0	µg/L	10.0		75.3	70-130	3.38	25	V-05
Bromodichloromethane	9.72	0.50	µg/L	10.0		97.2	70-130	2.39	25	
Bromoform	10.2	1.0	µg/L	10.0		102	70-130	1.64	25	
Bromomethane	6.86	2.0	µg/L	10.0		68.6	40-160	6.32	25	†
2-Butanone (MEK)	153	20	µg/L	100		153	40-160	10.2	25	V-20 †
tert-Butyl Alcohol (TBA)	55.3	20	µg/L	100		55.3	40-160	16.5	25	V-05 †
n-Butylbenzene	10.5	1.0	µg/L	10.0		105	70-130	0.380	25	
sec-Butylbenzene	9.92	1.0	µg/L	10.0		99.2	70-130	2.39	25	
tert-Butylbenzene	9.89	1.0	µg/L	10.0		98.9	70-130	0.404	25	
tert-Butyl Ethyl Ether (TBEE)	9.80	1.0	µg/L	10.0		98.0	70-130	0.307	25	
Carbon Disulfide	7.50	4.0	µg/L	10.0		75.0	70-130	3.41	25	
Carbon Tetrachloride	8.93	5.0	µg/L	10.0		89.3	70-130	1.13	25	
Chlorobenzene	9.76	1.0	µg/L	10.0		97.6	70-130	2.73	25	
Chlorodibromomethane	8.74	2.0	µg/L	10.0		87.4	70-130	1.15	25	
Chloroethane	9.19	2.0	µg/L	10.0		91.9	70-130	2.26	25	
Chloroform	9.29	2.0	µg/L	10.0		92.9	70-130	0.00	25	
Chloromethane	6.93	2.0	µg/L	10.0		69.3	40-160	6.10	25	†
2-Chlorotoluene	9.55	1.0	µg/L	10.0		95.5	70-130	0.938	25	
4-Chlorotoluene	9.51	1.0	µg/L	10.0		95.1	70-130	2.08	25	
1,2-Dibromo-3-chloropropane (DBCP)	9.11	5.0	µg/L	10.0		91.1	70-130	12.1	25	
1,2-Dibromoethane (EDB)	9.51	2.0	µg/L	10.0		95.1	70-130	0.105	25	
Dibromomethane	9.71	1.0	µg/L	10.0		97.1	70-130	2.24	25	
1,2-Dichlorobenzene	9.84	1.0	µg/L	10.0		98.4	70-130	0.509	25	
1,3-Dichlorobenzene	9.84	1.0	µg/L	10.0		98.4	70-130	3.10	25	
1,4-Dichlorobenzene	9.53	1.0	µg/L	10.0		95.3	70-130	1.56	25	
trans-1,4-Dichloro-2-butene	12.4	2.0	µg/L	10.0		124	70-130	7.05	25	V-20
Dichlorodifluoromethane (Freon 12)	4.83	2.0	µg/L	10.0		48.3	40-160	3.46	25	V-05 †
1,1-Dichloroethane	9.40	1.0	µg/L	10.0		94.0	70-130	1.06	25	
1,2-Dichloroethane	8.58	1.0	µg/L	10.0		85.8	70-130	1.88	25	
1,1-Dichloroethylene	9.16	1.0	µg/L	10.0		91.6	70-130	0.978	25	
cis-1,2-Dichloroethylene	9.35	1.0	µg/L	10.0		93.5	70-130	0.967	25	
trans-1,2-Dichloroethylene	9.73	1.0	µg/L	10.0		97.3	70-130	0.615	25	
1,2-Dichloropropane	9.09	1.0	µg/L	10.0		90.9	70-130	1.64	25	
1,3-Dichloropropane	9.29	0.50	µg/L	10.0		92.9	70-130	1.50	25	
2,2-Dichloropropane	8.79	1.0	µg/L	10.0		87.9	40-130	3.79	25	†
1,1-Dichloropropene	10.2	2.0	µg/L	10.0		102	70-130	0.878	25	
cis-1,3-Dichloropropene	8.60	0.50	µg/L	10.0		86.0	70-130	1.50	25	
trans-1,3-Dichloropropene	10.2	0.50	µg/L	10.0		102	70-130	0.295	25	
Diethyl Ether	11.2	2.0	µg/L	10.0		112	70-130	1.07	25	
Diisopropyl Ether (DIPE)	8.85	0.50	µg/L	10.0		88.5	70-130	1.46	25	

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B118540 - SW-846 5030B										
LCS Dup (B118540-BSD1)				Prepared & Analyzed: 04/03/15						
1,4-Dioxane	107	50	µg/L	100		107	40-130	26.6	50	† ‡
Ethylbenzene	9.48	1.0	µg/L	10.0		94.8	70-130	0.316	25	
Hexachlorobutadiene	9.52	0.50	µg/L	10.0		95.2	70-130	1.15	25	
2-Hexanone (MBK)	141	10	µg/L	100		141	70-160	5.35	25	V-20 †
Isopropylbenzene (Cumene)	9.40	1.0	µg/L	10.0		94.0	70-130	0.426	25	
p-Isopropyltoluene (p-Cymene)	10.2	1.0	µg/L	10.0		102	70-130	0.791	25	
Methyl tert-Butyl Ether (MTBE)	10.6	1.0	µg/L	10.0		106	70-130	1.22	25	
Methylene Chloride	9.74	5.0	µg/L	10.0		97.4	70-130	1.14	25	
4-Methyl-2-pentanone (MIBK)	105	10	µg/L	100		105	70-160	5.84	25	†
Naphthalene	11.1	2.0	µg/L	10.0		111	40-130	9.34	25	†
n-Propylbenzene	9.82	1.0	µg/L	10.0		98.2	70-130	1.62	25	
Styrene	10.3	1.0	µg/L	10.0		103	70-130	0.0970	25	
1,1,1,2-Tetrachloroethane	9.61	1.0	µg/L	10.0		96.1	70-130	0.829	25	
1,1,2,2-Tetrachloroethane	11.2	0.50	µg/L	10.0		112	70-130	4.78	25	
Tetrachloroethylene	9.05	1.0	µg/L	10.0		90.5	70-130	3.79	25	
Tetrahydrofuran	11.5	10	µg/L	10.0		115	70-130	10.5	25	
Toluene	8.94	1.0	µg/L	10.0		89.4	70-130	0.112	25	
1,2,3-Trichlorobenzene	9.38	5.0	µg/L	10.0		93.8	70-130	10.2	25	
1,2,4-Trichlorobenzene	9.99	1.0	µg/L	10.0		99.9	70-130	4.69	25	
1,3,5-Trichlorobenzene	10.0	1.0	µg/L	10.0		100	70-130	3.82	25	
1,1,1-Trichloroethane	9.20	1.0	µg/L	10.0		92.0	70-130	1.08	25	
1,1,2-Trichloroethane	9.83	1.0	µg/L	10.0		98.3	70-130	0.203	25	
Trichloroethylene	8.96	1.0	µg/L	10.0		89.6	70-130	3.19	25	
Trichlorofluoromethane (Freon 11)	9.69	2.0	µg/L	10.0		96.9	70-130	2.04	25	
1,2,3-Trichloropropane	10.8	2.0	µg/L	10.0		108	70-130	4.77	25	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	9.37	1.0	µg/L	10.0		93.7	70-130	1.69	25	
1,2,4-Trimethylbenzene	10.1	1.0	µg/L	10.0		101	70-130	0.495	25	
1,3,5-Trimethylbenzene	9.70	1.0	µg/L	10.0		97.0	70-130	2.95	25	
Vinyl Chloride	8.95	2.0	µg/L	10.0		89.5	40-160	1.58	25	†
m+p Xylene	18.5	2.0	µg/L	20.0		92.6	70-130	0.753	25	
o-Xylene	9.36	1.0	µg/L	10.0		93.6	70-130	0.745	25	
Surrogate: 1,2-Dichloroethane-d4	25.0		µg/L	25.0		100	70-130			
Surrogate: Toluene-d8	24.0		µg/L	25.0		96.2	70-130			
Surrogate: 4-Bromofluorobenzene	24.5		µg/L	25.0		97.9	70-130			

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes

Batch B118482 - SW-846 5030B

Blank (B118482-BLK1)

Prepared & Analyzed: 04/03/15

Benzene	ND	1.0	µg/L							
Bromodichloromethane	ND	2.0	µg/L							
Bromoform	ND	2.0	µg/L							
Bromomethane	ND	2.0	µg/L							
Carbon Tetrachloride	ND	2.0	µg/L							
Chlorobenzene	ND	2.0	µg/L							
Chlorodibromomethane	ND	2.0	µg/L							
Chloroethane	ND	2.0	µg/L							
2-Chloroethyl Vinyl Ether	ND	10	µg/L							
Chloroform	ND	2.0	µg/L							
Chloromethane	ND	2.0	µg/L							
1,2-Dichlorobenzene	ND	2.0	µg/L							
1,3-Dichlorobenzene	ND	2.0	µg/L							
1,4-Dichlorobenzene	ND	2.0	µg/L							
1,2-Dichloroethane	ND	2.0	µg/L							
1,1-Dichloroethane	ND	2.0	µg/L							
1,1-Dichloroethylene	ND	2.0	µg/L							
trans-1,2-Dichloroethylene	ND	2.0	µg/L							
1,2-Dichloropropane	ND	2.0	µg/L							
cis-1,3-Dichloropropene	ND	2.0	µg/L							
trans-1,3-Dichloropropene	ND	2.0	µg/L							
Ethylbenzene	ND	2.0	µg/L							
Methyl tert-Butyl Ether (MTBE)	ND	2.0	µg/L							
Methylene Chloride	ND	5.0	µg/L							
1,1,2,2-Tetrachloroethane	ND	2.0	µg/L							
Tetrachloroethylene	ND	2.0	µg/L							
Toluene	ND	1.0	µg/L							
1,1,1-Trichloroethane	ND	2.0	µg/L							
1,1,2-Trichloroethane	ND	2.0	µg/L							
Trichloroethylene	ND	2.0	µg/L							
Trichlorofluoromethane (Freon 11)	ND	2.0	µg/L							
Vinyl Chloride	ND	2.0	µg/L							
m+p Xylene	ND	2.0	µg/L							
o-Xylene	ND	2.0	µg/L							
Surrogate: 1,2-Dichloroethane-d4	24.3		µg/L	25.0		97.2	70-130			
Surrogate: Toluene-d8	23.9		µg/L	25.0		95.8	70-130			
Surrogate: 4-Bromofluorobenzene	23.9		µg/L	25.0		95.8	70-130			

LCS (B118482-BS1)

Prepared & Analyzed: 04/03/15

Benzene	9.12	1.0	µg/L	10.0		91.2	37-151			
Bromodichloromethane	8.82	2.0	µg/L	10.0		88.2	35-155			
Bromoform	10.4	2.0	µg/L	10.0		104	45-169			
Bromomethane	9.29	2.0	µg/L	10.0		92.9	20-242			
Carbon Tetrachloride	8.75	2.0	µg/L	10.0		87.5	70-140			
Chlorobenzene	9.49	2.0	µg/L	10.0		94.9	37-160			
Chlorodibromomethane	8.55	2.0	µg/L	10.0		85.5	53-149			
Chloroethane	8.71	2.0	µg/L	10.0		87.1	70-130			
2-Chloroethyl Vinyl Ether	124	10	µg/L	100		124	10-305			
Chloroform	8.72	2.0	µg/L	10.0		87.2	51-138			
Chloromethane	8.02	2.0	µg/L	10.0		80.2	20-273			
1,2-Dichlorobenzene	9.59	2.0	µg/L	10.0		95.9	18-190			
1,3-Dichlorobenzene	9.60	2.0	µg/L	10.0		96.0	59-156			

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B118482 - SW-846 5030B										
LCS (B118482-BS1)				Prepared & Analyzed: 04/03/15						
1,4-Dichlorobenzene	9.23	2.0	µg/L	10.0		92.3	18-190			
1,2-Dichloroethane	8.27	2.0	µg/L	10.0		82.7	49-155			
1,1-Dichloroethane	8.94	2.0	µg/L	10.0		89.4	59-155			
1,1-Dichloroethylene	8.30	2.0	µg/L	10.0		83.0	20-234			
trans-1,2-Dichloroethylene	8.80	2.0	µg/L	10.0		88.0	54-156			
1,2-Dichloropropane	9.12	2.0	µg/L	10.0		91.2	20-210			
cis-1,3-Dichloropropene	9.02	2.0	µg/L	10.0		90.2	20-227			
trans-1,3-Dichloropropene	9.84	2.0	µg/L	10.0		98.4	17-183			
Ethylbenzene	9.14	2.0	µg/L	10.0		91.4	37-162			
Methyl tert-Butyl Ether (MTBE)	10.6	2.0	µg/L	10.0		106	70-130			
Methylene Chloride	8.62	5.0	µg/L	10.0		86.2	50-221			
1,1,2,2-Tetrachloroethane	11.6	2.0	µg/L	10.0		116	46-157			
Tetrachloroethylene	8.82	2.0	µg/L	10.0		88.2	64-148			
Toluene	8.51	1.0	µg/L	10.0		85.1	47-150			
1,1,1-Trichloroethane	8.92	2.0	µg/L	10.0		89.2	52-162			
1,1,2-Trichloroethane	9.59	2.0	µg/L	10.0		95.9	52-150			
Trichloroethylene	9.12	2.0	µg/L	10.0		91.2	71-157			
Trichlorofluoromethane (Freon 11)	8.84	2.0	µg/L	10.0		88.4	17-181			
Vinyl Chloride	8.23	2.0	µg/L	10.0		82.3	20-251			
m+p Xylene	17.8	2.0	µg/L	20.0		89.2	70-130			
o-Xylene	8.94	2.0	µg/L	10.0		89.4	70-130			
Surrogate: 1,2-Dichloroethane-d4	25.3		µg/L	25.0		101	70-130			
Surrogate: Toluene-d8	23.7		µg/L	25.0		95.0	70-130			
Surrogate: 4-Bromofluorobenzene	24.5		µg/L	25.0		97.9	70-130			

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QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes

Batch B118345 - SW-846 3510C

Blank (B118345-BLK1)

Prepared & Analyzed: 04/02/15

Acenaphthene	ND	5.0	µg/L							
Acenaphthylene	ND	5.0	µg/L							
Acetophenone	ND	10	µg/L							
Aniline	ND	5.0	µg/L							
Anthracene	ND	5.0	µg/L							
Benzidine	ND	20	µg/L							R-05, V-04, V-05
Benzo(a)anthracene	ND	5.0	µg/L							
Benzo(a)pyrene	ND	5.0	µg/L							
Benzo(b)fluoranthene	ND	5.0	µg/L							
Benzo(g,h,i)perylene	ND	5.0	µg/L							
Benzo(k)fluoranthene	ND	5.0	µg/L							
Benzoic Acid	ND	10	µg/L							L-04
Bis(2-chloroethoxy)methane	ND	10	µg/L							
Bis(2-chloroethyl)ether	ND	10	µg/L							
Bis(2-chloroisopropyl)ether	ND	10	µg/L							
Bis(2-Ethylhexyl)phthalate	ND	10	µg/L							
4-Bromophenylphenylether	ND	10	µg/L							
Butylbenzylphthalate	ND	10	µg/L							
Carbazole	ND	10	µg/L							
4-Chloroaniline	ND	10	µg/L							
4-Chloro-3-methylphenol	ND	10	µg/L							
2-Chloronaphthalene	ND	10	µg/L							
2-Chlorophenol	ND	10	µg/L							
4-Chlorophenylphenylether	ND	10	µg/L							
Chrysene	ND	5.0	µg/L							
Dibenz(a,h)anthracene	ND	5.0	µg/L							
Dibenzofuran	ND	5.0	µg/L							
Di-n-butylphthalate	ND	10	µg/L							
1,2-Dichlorobenzene	ND	5.0	µg/L							
1,3-Dichlorobenzene	ND	5.0	µg/L							
1,4-Dichlorobenzene	ND	5.0	µg/L							
3,3-Dichlorobenzidine	ND	10	µg/L							
2,4-Dichlorophenol	ND	10	µg/L							
Diethylphthalate	ND	10	µg/L							
2,4-Dimethylphenol	ND	10	µg/L							
Dimethylphthalate	ND	10	µg/L							
4,6-Dinitro-2-methylphenol	ND	10	µg/L							
2,4-Dinitrophenol	ND	10	µg/L							
2,4-Dinitrotoluene	ND	10	µg/L							
2,6-Dinitrotoluene	ND	10	µg/L							
Di-n-octylphthalate	ND	10	µg/L							
1,2-Diphenylhydrazine (as Azobenzene)	ND	10	µg/L							
Fluoranthene	ND	5.0	µg/L							
Fluorene	ND	5.0	µg/L							
Hexachlorobenzene	ND	10	µg/L							
Hexachlorobutadiene	ND	10	µg/L							
Hexachlorocyclopentadiene	ND	10	µg/L							
Hexachloroethane	ND	10	µg/L							
Indeno(1,2,3-cd)pyrene	ND	5.0	µg/L							
Isophorone	ND	10	µg/L							
1-Methylnaphthalene	ND	5.0	µg/L							
2-Methylnaphthalene	ND	5.0	µg/L							

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QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B118345 - SW-846 3510C										
Blank (B118345-BLK1)				Prepared & Analyzed: 04/02/15						
2-Methylphenol	ND	10	µg/L							
3/4-Methylphenol	ND	10	µg/L							
Naphthalene	ND	5.0	µg/L							
2-Nitroaniline	ND	10	µg/L							
3-Nitroaniline	ND	10	µg/L							
4-Nitroaniline	ND	10	µg/L							
Nitrobenzene	ND	10	µg/L							
2-Nitrophenol	ND	10	µg/L							
4-Nitrophenol	ND	10	µg/L							V-20
N-Nitrosodimethylamine	ND	10	µg/L							V-20
N-Nitrosodiphenylamine	ND	10	µg/L							
N-Nitrosodi-n-propylamine	ND	10	µg/L							
Pentachloronitrobenzene	ND	10	µg/L							V-16
Pentachlorophenol	ND	10	µg/L							
Phenanthrene	ND	5.0	µg/L							
Phenol	ND	10	µg/L							
Pyrene	ND	5.0	µg/L							
Pyridine	ND	5.0	µg/L							
1,2,4,5-Tetrachlorobenzene	ND	10	µg/L							
1,2,4-Trichlorobenzene	ND	5.0	µg/L							
2,4,5-Trichlorophenol	ND	10	µg/L							
2,4,6-Trichlorophenol	ND	10	µg/L							
Surrogate: 2-Fluorophenol	102		µg/L	200		51.0	15-110			
Surrogate: Phenol-d6	67.2		µg/L	200		33.6	15-110			
Surrogate: Nitrobenzene-d5	114		µg/L	100		114	30-130			
Surrogate: 2-Fluorobiphenyl	112		µg/L	100		112	30-130			
Surrogate: 2,4,6-Tribromophenol	255		µg/L	200		128	* 15-110			S-07
Surrogate: p-Terphenyl-d14	144		µg/L	100		144	* 30-130			S-07
LCS (B118345-BS1)				Prepared & Analyzed: 04/02/15						
Acenaphthene	101	5.0	µg/L	100		101	40-140			
Acenaphthylene	110	5.0	µg/L	100		110	40-140			
Acetophenone	114	10	µg/L	100		114	40-140			
Aniline	88.1	5.0	µg/L	100		88.1	40-140			
Anthracene	113	5.0	µg/L	100		113	40-140			
Benzidine	173	20	µg/L	100		173	* 40-140			L-07A, V-04, V-05
Benzo(a)anthracene	107	5.0	µg/L	100		107	40-140			
Benzo(a)pyrene	108	5.0	µg/L	100		108	40-140			
Benzo(b)fluoranthene	114	5.0	µg/L	100		114	40-140			
Benzo(g,h,i)perylene	97.7	5.0	µg/L	100		97.7	40-140			
Benzo(k)fluoranthene	109	5.0	µg/L	100		109	40-140			
Benzoic Acid	8.31	10	µg/L	100		8.31	* 10-130			L-04 †
Bis(2-chloroethoxy)methane	111	10	µg/L	100		111	40-140			
Bis(2-chloroethyl)ether	109	10	µg/L	100		109	40-140			
Bis(2-chloroisopropyl)ether	117	10	µg/L	100		117	40-140			
Bis(2-Ethylhexyl)phthalate	129	10	µg/L	100		129	40-140			
4-Bromophenylphenylether	114	10	µg/L	100		114	40-140			
Butylbenzylphthalate	136	10	µg/L	100		136	40-140			
Carbazole	110	10	µg/L	100		110	40-140			
4-Chloroaniline	110	10	µg/L	100		110	40-140			
4-Chloro-3-methylphenol	108	10	µg/L	100		108	30-130			
2-Chloronaphthalene	93.4	10	µg/L	100		93.4	40-140			

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QUALITY CONTROL
Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B118345 - SW-846 3510C										
LCS (B118345-BS1)				Prepared & Analyzed: 04/02/15						
2-Chlorophenol	88.5	10	µg/L	100		88.5	30-130			
4-Chlorophenylphenylether	119	10	µg/L	100		119	40-140			
Chrysene	117	5.0	µg/L	100		117	40-140			
Dibenz(a,h)anthracene	98.4	5.0	µg/L	100		98.4	40-140			
Dibenzofuran	116	5.0	µg/L	100		116	40-140			
Di-n-butylphthalate	114	10	µg/L	100		114	40-140			
1,2-Dichlorobenzene	98.1	5.0	µg/L	100		98.1	40-140			
1,3-Dichlorobenzene	92.5	5.0	µg/L	100		92.5	40-140			
1,4-Dichlorobenzene	96.1	5.0	µg/L	100		96.1	40-140			
3,3-Dichlorobenzidine	117	10	µg/L	100		117	40-140			
2,4-Dichlorophenol	105	10	µg/L	100		105	30-130			
Diethylphthalate	118	10	µg/L	100		118	40-140			
2,4-Dimethylphenol	99.2	10	µg/L	100		99.2	30-130			
Dimethylphthalate	114	10	µg/L	100		114	40-140			
4,6-Dinitro-2-methylphenol	98.5	10	µg/L	100		98.5	30-130			
2,4-Dinitrophenol	87.5	10	µg/L	100		87.5	30-130			
2,4-Dinitrotoluene	116	10	µg/L	100		116	40-140			
2,6-Dinitrotoluene	108	10	µg/L	100		108	40-140			
Di-n-octylphthalate	122	10	µg/L	100		122	40-140			
1,2-Diphenylhydrazine (as Azobenzene)	121	10	µg/L	100		121	40-140			
Fluoranthene	103	5.0	µg/L	100		103	40-140			
Fluorene	117	5.0	µg/L	100		117	40-140			
Hexachlorobenzene	109	10	µg/L	100		109	40-140			
Hexachlorobutadiene	110	10	µg/L	100		110	40-140			
Hexachlorocyclopentadiene	61.1	10	µg/L	100		61.1	30-140			†
Hexachloroethane	101	10	µg/L	100		101	40-140			
Indeno(1,2,3-cd)pyrene	92.5	5.0	µg/L	100		92.5	40-140			
Isophorone	118	10	µg/L	100		118	40-140			
1-Methylnaphthalene	101	5.0	µg/L	100		101	40-140			
2-Methylnaphthalene	106	5.0	µg/L	100		106	40-140			
2-Methylphenol	77.3	10	µg/L	100		77.3	30-130			
3/4-Methylphenol	77.2	10	µg/L	100		77.2	30-130			
Naphthalene	103	5.0	µg/L	100		103	40-140			
2-Nitroaniline	118	10	µg/L	100		118	40-140			
3-Nitroaniline	100	10	µg/L	100		100	40-140			
4-Nitroaniline	92.7	10	µg/L	100		92.7	40-140			
Nitrobenzene	112	10	µg/L	100		112	40-140			
2-Nitrophenol	98.0	10	µg/L	100		98.0	30-130			
4-Nitrophenol	66.9	10	µg/L	100		66.9	10-130			V-06 †
N-Nitrosodimethylamine	85.2	10	µg/L	100		85.2	40-140			V-06
N-Nitrosodiphenylamine	145	10	µg/L	100		145	* 40-140			L-07
N-Nitrosodi-n-propylamine	122	10	µg/L	100		122	40-140			
Pentachloronitrobenzene	118	10	µg/L	100		118	40-140			V-16
Pentachlorophenol	96.7	10	µg/L	100		96.7	30-130			
Phenanthrene	114	5.0	µg/L	100		114	40-140			
Phenol	42.6	10	µg/L	100		42.6	20-130			†
Pyrene	126	5.0	µg/L	100		126	40-140			
Pyridine	48.0	5.0	µg/L	100		48.0	10-140			†
1,2,4,5-Tetrachlorobenzene	108	10	µg/L	100		108	40-140			
1,2,4-Trichlorobenzene	102	5.0	µg/L	100		102	40-140			
2,4,5-Trichlorophenol	113	10	µg/L	100		113	30-130			
2,4,6-Trichlorophenol	109	10	µg/L	100		109	30-130			

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QUALITY CONTROL
Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B118345 - SW-846 3510C										
LCS (B118345-BS1)				Prepared & Analyzed: 04/02/15						
Surrogate: 2-Fluorophenol	109		µg/L	200		54.6	15-110			
Surrogate: Phenol-d6	74.8		µg/L	200		37.4	15-110			
Surrogate: Nitrobenzene-d5	119		µg/L	100		119	30-130			
Surrogate: 2-Fluorobiphenyl	124		µg/L	100		124	30-130			
Surrogate: 2,4,6-Tribromophenol	293		µg/L	200		147 *	15-110			S-07
Surrogate: p-Terphenyl-d14	133		µg/L	100		133 *	30-130			S-07
LCS Dup (B118345-BSD1)				Prepared & Analyzed: 04/02/15						
Acenaphthene	90.2	5.0	µg/L	100		90.2	40-140	11.6	20	
Acenaphthylene	97.4	5.0	µg/L	100		97.4	40-140	12.3	20	
Acetophenone	99.2	10	µg/L	100		99.2	40-140	14.2	20	
Aniline	85.8	5.0	µg/L	100		85.8	40-140	2.71	50	‡
Anthracene	99.2	5.0	µg/L	100		99.2	40-140	12.7	20	
Benzidine	134	20	µg/L	100		134	40-140	25.1 *	20	R-05, V-04, V-05
Benzo(a)anthracene	94.6	5.0	µg/L	100		94.6	40-140	12.7	20	
Benzo(a)pyrene	96.0	5.0	µg/L	100		96.0	40-140	11.8	20	
Benzo(b)fluoranthene	101	5.0	µg/L	100		101	40-140	12.1	20	
Benzo(g,h,i)perylene	87.5	5.0	µg/L	100		87.5	40-140	11.1	20	
Benzo(k)fluoranthene	96.2	5.0	µg/L	100		96.2	40-140	12.1	20	
Benzoic Acid	6.19	10	µg/L	100		6.19 *	10-130	29.2	50	L-04 † ‡
Bis(2-chloroethoxy)methane	98.1	10	µg/L	100		98.1	40-140	12.7	20	
Bis(2-chloroethyl)ether	98.6	10	µg/L	100		98.6	40-140	10.1	20	
Bis(2-chloroisopropyl)ether	100	10	µg/L	100		100	40-140	15.4	20	
Bis(2-Ethylhexyl)phthalate	114	10	µg/L	100		114	40-140	12.9	20	
4-Bromophenylphenylether	99.6	10	µg/L	100		99.6	40-140	13.5	20	
Butylbenzylphthalate	121	10	µg/L	100		121	40-140	12.1	20	
Carbazole	97.5	10	µg/L	100		97.5	40-140	12.2	20	
4-Chloroaniline	110	10	µg/L	100		110	40-140	0.128	20	
4-Chloro-3-methylphenol	97.3	10	µg/L	100		97.3	30-130	10.1	20	
2-Chloronaphthalene	84.5	10	µg/L	100		84.5	40-140	9.94	20	
2-Chlorophenol	79.8	10	µg/L	100		79.8	30-130	10.3	20	
4-Chlorophenylphenylether	105	10	µg/L	100		105	40-140	12.6	20	
Chrysene	103	5.0	µg/L	100		103	40-140	12.7	20	
Dibenz(a,h)anthracene	86.6	5.0	µg/L	100		86.6	40-140	12.7	20	
Dibenzofuran	101	5.0	µg/L	100		101	40-140	13.8	20	
Di-n-butylphthalate	100	10	µg/L	100		100	40-140	12.9	20	
1,2-Dichlorobenzene	85.7	5.0	µg/L	100		85.7	40-140	13.5	20	
1,3-Dichlorobenzene	81.7	5.0	µg/L	100		81.7	40-140	12.4	20	
1,4-Dichlorobenzene	83.3	5.0	µg/L	100		83.3	40-140	14.3	20	
3,3-Dichlorobenzidine	105	10	µg/L	100		105	40-140	10.9	20	
2,4-Dichlorophenol	94.5	10	µg/L	100		94.5	30-130	10.1	20	
Diethylphthalate	105	10	µg/L	100		105	40-140	11.8	20	
2,4-Dimethylphenol	88.8	10	µg/L	100		88.8	30-130	11.1	20	
Dimethylphthalate	101	10	µg/L	100		101	40-140	11.8	50	‡
4,6-Dinitro-2-methylphenol	85.0	10	µg/L	100		85.0	30-130	14.8	50	‡
2,4-Dinitrophenol	77.6	10	µg/L	100		77.6	30-130	11.9	50	‡
2,4-Dinitrotoluene	102	10	µg/L	100		102	40-140	13.0	20	
2,6-Dinitrotoluene	96.6	10	µg/L	100		96.6	40-140	11.3	20	
Di-n-octylphthalate	103	10	µg/L	100		103	40-140	16.3	20	
1,2-Diphenylhydrazine (as Azobenzene)	103	10	µg/L	100		103	40-140	16.1	20	
Fluoranthene	94.0	5.0	µg/L	100		94.0	40-140	8.94	20	
Fluorene	104	5.0	µg/L	100		104	40-140	11.9	20	

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QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B118345 - SW-846 3510C										
LCS Dup (B118345-BSD1)				Prepared & Analyzed: 04/02/15						
Hexachlorobenzene	96.1	10	µg/L	100		96.1	40-140	12.3	20	
Hexachlorobutadiene	97.0	10	µg/L	100		97.0	40-140	12.3	20	
Hexachlorocyclopentadiene	49.7	10	µg/L	100		49.7	30-140	20.7	50	† ‡
Hexachloroethane	86.8	10	µg/L	100		86.8	40-140	14.8	50	‡
Indeno(1,2,3-cd)pyrene	83.2	5.0	µg/L	100		83.2	40-140	10.7	50	‡
Isophorone	103	10	µg/L	100		103	40-140	13.1	20	
1-Methylnaphthalene	88.3	5.0	µg/L	100		88.3	40-140	13.0	20	
2-Methylnaphthalene	93.6	5.0	µg/L	100		93.6	40-140	12.8	20	
2-Methylphenol	70.9	10	µg/L	100		70.9	30-130	8.68	20	
3/4-Methylphenol	71.6	10	µg/L	100		71.6	30-130	7.62	20	
Naphthalene	90.9	5.0	µg/L	100		90.9	40-140	12.7	20	
2-Nitroaniline	104	10	µg/L	100		104	40-140	12.3	20	
3-Nitroaniline	99.8	10	µg/L	100		99.8	40-140	0.580	20	
4-Nitroaniline	88.7	10	µg/L	100		88.7	40-140	4.35	20	
Nitrobenzene	97.0	10	µg/L	100		97.0	40-140	13.9	20	
2-Nitrophenol	86.0	10	µg/L	100		86.0	30-130	13.0	20	
4-Nitrophenol	61.5	10	µg/L	100		61.5	10-130	8.41	50	V-06 † ‡
N-Nitrosodimethylamine	80.3	10	µg/L	100		80.3	40-140	5.99	20	V-06
N-Nitrosodiphenylamine	125	10	µg/L	100		125	40-140	15.1	20	
N-Nitrosodi-n-propylamine	104	10	µg/L	100		104	40-140	16.3	20	
Pentachloronitrobenzene	103	10	µg/L	100		103	40-140	13.3	20	V-16
Pentachlorophenol	81.9	10	µg/L	100		81.9	30-130	16.6	50	‡
Phenanthrene	99.3	5.0	µg/L	100		99.3	40-140	13.6	20	
Phenol	40.4	10	µg/L	100		40.4	20-130	5.35	20	†
Pyrene	118	5.0	µg/L	100		118	40-140	7.04	20	
Pyridine	43.0	5.0	µg/L	100		43.0	10-140	10.9	50	† ‡
1,2,4,5-Tetrachlorobenzene	94.2	10	µg/L	100		94.2	40-140	13.3	20	
1,2,4-Trichlorobenzene	90.1	5.0	µg/L	100		90.1	40-140	12.7	20	
2,4,5-Trichlorophenol	98.9	10	µg/L	100		98.9	30-130	12.9	20	
2,4,6-Trichlorophenol	96.1	10	µg/L	100		96.1	30-130	12.6	50	‡
Surrogate: 2-Fluorophenol	101		µg/L	200		50.3	15-110			
Surrogate: Phenol-d6	69.3		µg/L	200		34.6	15-110			
Surrogate: Nitrobenzene-d5	103		µg/L	100		103	30-130			
Surrogate: 2-Fluorobiphenyl	107		µg/L	100		107	30-130			
Surrogate: 2,4,6-Tribromophenol	253		µg/L	200		126 *	15-110			S-07
Surrogate: p-Terphenyl-d14	123		µg/L	100		123	30-130			

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QUALITY CONTROL

Organochloride Pesticides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes

Batch B118448 - SW-846 3510C

Blank (B118448-BLK1)

Prepared: 04/03/15 Analyzed: 04/04/15

alpha-Chlordane	ND	0.050	µg/L							
alpha-Chlordane [2C]	ND	0.050	µg/L							
gamma-Chlordane	ND	0.050	µg/L							
gamma-Chlordane [2C]	ND	0.050	µg/L							
Alachlor	ND	0.20	µg/L							
Alachlor [2C]	ND	0.20	µg/L							
Aldrin	ND	0.050	µg/L							
Aldrin [2C]	ND	0.050	µg/L							
alpha-BHC	ND	0.050	µg/L							
alpha-BHC [2C]	ND	0.050	µg/L							
beta-BHC	ND	0.050	µg/L							
beta-BHC [2C]	ND	0.050	µg/L							
delta-BHC	ND	0.050	µg/L							
delta-BHC [2C]	ND	0.050	µg/L							
gamma-BHC (Lindane)	ND	0.030	µg/L							
gamma-BHC (Lindane) [2C]	ND	0.030	µg/L							
Chlordane	ND	0.20	µg/L							
Chlordane [2C]	ND	0.20	µg/L							
4,4'-DDD	ND	0.040	µg/L							
4,4'-DDD [2C]	ND	0.040	µg/L							
4,4'-DDE	ND	0.040	µg/L							
4,4'-DDE [2C]	ND	0.040	µg/L							
4,4'-DDT	ND	0.040	µg/L							
4,4'-DDT [2C]	ND	0.040	µg/L							
Dieldrin	ND	0.0020	µg/L							
Dieldrin [2C]	ND	0.0020	µg/L							
Endosulfan I	ND	0.050	µg/L							
Endosulfan I [2C]	ND	0.050	µg/L							
Endosulfan II	ND	0.080	µg/L							
Endosulfan II [2C]	ND	0.080	µg/L							
Endosulfan Sulfate	ND	0.080	µg/L							
Endosulfan Sulfate [2C]	ND	0.080	µg/L							
Endrin	ND	0.080	µg/L							
Endrin [2C]	ND	0.080	µg/L							
Endrin Aldehyde	ND	0.080	µg/L							
Endrin Aldehyde [2C]	ND	0.080	µg/L							
Endrin Ketone	ND	0.080	µg/L							
Endrin Ketone [2C]	ND	0.080	µg/L							
Heptachlor	ND	0.050	µg/L							
Heptachlor [2C]	ND	0.050	µg/L							
Heptachlor Epoxide	ND	0.050	µg/L							
Heptachlor Epoxide [2C]	ND	0.050	µg/L							
Hexachlorobenzene	ND	0.050	µg/L							
Hexachlorobenzene [2C]	ND	0.050	µg/L							
Methoxychlor	ND	0.50	µg/L							
Methoxychlor [2C]	ND	0.50	µg/L							
Toxaphene	ND	1.0	µg/L							
Toxaphene [2C]	ND	1.0	µg/L							
Surrogate: Decachlorobiphenyl	1.80		µg/L	2.00		90.2	30-150			
Surrogate: Decachlorobiphenyl [2C]	1.54		µg/L	2.00		76.9	30-150			
Surrogate: Tetrachloro-m-xylene	1.78		µg/L	2.00		89.0	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	1.60		µg/L	2.00		80.1	30-150			

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QUALITY CONTROL

Organochloride Pesticides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B118448 - SW-846 3510C										
LCS (B118448-BS1)				Prepared: 04/03/15 Analyzed: 04/04/15						
Alachlor	1.0	0.20	µg/L	1.00		102	40-140			
Alachlor [2C]	1.1	0.20	µg/L	1.00		106	40-140			
Aldrin	1.1	0.050	µg/L	1.00		107	40-140			
Aldrin [2C]	0.97	0.050	µg/L	1.00		96.9	40-140			
alpha-BHC	1.1	0.050	µg/L	1.00		114	40-140			
alpha-BHC [2C]	0.98	0.050	µg/L	1.00		97.6	40-140			
beta-BHC	1.1	0.050	µg/L	1.00		106	40-140			
beta-BHC [2C]	0.97	0.050	µg/L	1.00		97.2	40-140			
delta-BHC	1.1	0.050	µg/L	1.00		110	40-140			
delta-BHC [2C]	1.1	0.050	µg/L	1.00		107	40-140			
gamma-BHC (Lindane)	1.1	0.030	µg/L	1.00		110	40-140			
gamma-BHC (Lindane) [2C]	1.0	0.030	µg/L	1.00		101	40-140			
4,4'-DDD	1.1	0.040	µg/L	1.00		114	40-140			
4,4'-DDD [2C]	1.1	0.040	µg/L	1.00		106	40-140			
4,4'-DDE	1.1	0.040	µg/L	1.00		111	40-140			
4,4'-DDE [2C]	0.99	0.040	µg/L	1.00		99.4	40-140			
4,4'-DDT	1.2	0.040	µg/L	1.00		117	40-140			
4,4'-DDT [2C]	1.0	0.040	µg/L	1.00		100	40-140			
Dieldrin	1.0	0.0020	µg/L	1.00		104	40-140			
Dieldrin [2C]	0.96	0.0020	µg/L	1.00		96.0	40-140			
Endosulfan I	1.0	0.050	µg/L	1.00		101	40-140			
Endosulfan I [2C]	0.99	0.050	µg/L	1.00		98.6	40-140			
Endosulfan II	1.1	0.080	µg/L	1.00		106	40-140			
Endosulfan II [2C]	1.1	0.080	µg/L	1.00		107	40-140			
Endosulfan Sulfate	1.1	0.080	µg/L	1.00		107	40-140			
Endosulfan Sulfate [2C]	1.0	0.080	µg/L	1.00		105	40-140			
Endrin	1.1	0.080	µg/L	1.00		106	40-140			
Endrin [2C]	1.0	0.080	µg/L	1.00		101	40-140			
Endrin Aldehyde	1.0	0.080	µg/L	1.00		105	40-140			
Endrin Aldehyde [2C]	1.0	0.080	µg/L	1.00		102	40-140			
Endrin Ketone	1.1	0.080	µg/L	1.00		107	40-140			
Endrin Ketone [2C]	1.1	0.080	µg/L	1.00		105	40-140			
Heptachlor	1.0	0.050	µg/L	1.00		103	40-140			
Heptachlor [2C]	1.0	0.050	µg/L	1.00		99.5	40-140			
Heptachlor Epoxide	1.0	0.050	µg/L	1.00		103	40-140			
Heptachlor Epoxide [2C]	0.99	0.050	µg/L	1.00		99.5	40-140			
Hexachlorobenzene	1.0	0.050	µg/L	1.00		104	40-140			
Hexachlorobenzene [2C]	0.95	0.050	µg/L	1.00		94.7	40-140			
Methoxychlor	1.1	0.50	µg/L	1.00		110	40-140			
Methoxychlor [2C]	1.0	0.50	µg/L	1.00		103	40-140			
Surrogate: Decachlorobiphenyl	1.87		µg/L	2.00		93.5	30-150			
Surrogate: Decachlorobiphenyl [2C]	1.65		µg/L	2.00		82.3	30-150			
Surrogate: Tetrachloro-m-xylene	1.86		µg/L	2.00		92.8	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	1.65		µg/L	2.00		82.7	30-150			

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QUALITY CONTROL

Organochloride Pesticides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B118448 - SW-846 3510C										
LCS Dup (B118448-BSD1)					Prepared: 04/03/15 Analyzed: 04/04/15					
Alachlor	1.0	0.20	µg/L	1.00		102	40-140	0.0353	20	
Alachlor [2C]	1.0	0.20	µg/L	1.00		104	40-140	1.82	20	
Aldrin	1.1	0.050	µg/L	1.00		111	40-140	3.42	20	
Aldrin [2C]	1.0	0.050	µg/L	1.00		99.6	40-140	2.81	20	
alpha-BHC	1.2	0.050	µg/L	1.00		118	40-140	3.02	20	
alpha-BHC [2C]	1.0	0.050	µg/L	1.00		100	40-140	2.47	20	
beta-BHC	1.1	0.050	µg/L	1.00		107	40-140	1.37	20	
beta-BHC [2C]	0.99	0.050	µg/L	1.00		99.5	40-140	2.30	20	
delta-BHC	1.1	0.050	µg/L	1.00		112	40-140	1.64	20	
delta-BHC [2C]	1.1	0.050	µg/L	1.00		108	40-140	0.435	20	
gamma-BHC (Lindane)	1.1	0.030	µg/L	1.00		113	40-140	2.92	20	
gamma-BHC (Lindane) [2C]	1.0	0.030	µg/L	1.00		104	40-140	2.36	20	
4,4'-DDD	1.2	0.040	µg/L	1.00		117	40-140	2.07	20	
4,4'-DDD [2C]	1.1	0.040	µg/L	1.00		106	40-140	0.653	20	
4,4'-DDE	1.1	0.040	µg/L	1.00		115	40-140	3.68	20	
4,4'-DDE [2C]	1.0	0.040	µg/L	1.00		101	40-140	1.95	20	
4,4'-DDT	1.2	0.040	µg/L	1.00		119	40-140	1.20	20	
4,4'-DDT [2C]	1.0	0.040	µg/L	1.00		101	40-140	0.547	20	
Dieldrin	1.1	0.0020	µg/L	1.00		107	40-140	2.62	20	
Dieldrin [2C]	0.97	0.0020	µg/L	1.00		96.9	40-140	0.894	20	
Endosulfan I	1.0	0.050	µg/L	1.00		104	40-140	2.77	20	
Endosulfan I [2C]	1.0	0.050	µg/L	1.00		99.7	40-140	1.02	20	
Endosulfan II	1.1	0.080	µg/L	1.00		108	40-140	1.74	20	
Endosulfan II [2C]	1.1	0.080	µg/L	1.00		107	40-140	0.160	20	
Endosulfan Sulfate	1.1	0.080	µg/L	1.00		108	40-140	0.440	20	
Endosulfan Sulfate [2C]	1.1	0.080	µg/L	1.00		106	40-140	0.965	20	
Endrin	1.1	0.080	µg/L	1.00		107	40-140	0.874	20	
Endrin [2C]	1.0	0.080	µg/L	1.00		101	40-140	0.0810	20	
Endrin Aldehyde	1.1	0.080	µg/L	1.00		109	40-140	4.03	20	
Endrin Aldehyde [2C]	1.1	0.080	µg/L	1.00		105	40-140	3.57	20	
Endrin Ketone	1.1	0.080	µg/L	1.00		110	40-140	2.16	20	
Endrin Ketone [2C]	1.1	0.080	µg/L	1.00		106	40-140	0.545	20	
Heptachlor	1.1	0.050	µg/L	1.00		105	40-140	2.14	20	
Heptachlor [2C]	1.0	0.050	µg/L	1.00		101	40-140	1.56	20	
Heptachlor Epoxide	1.1	0.050	µg/L	1.00		105	40-140	2.10	20	
Heptachlor Epoxide [2C]	1.0	0.050	µg/L	1.00		101	40-140	1.18	20	
Hexachlorobenzene	1.1	0.050	µg/L	1.00		107	40-140	2.86	20	
Hexachlorobenzene [2C]	0.97	0.050	µg/L	1.00		97.2	40-140	2.68	20	
Methoxychlor	1.1	0.50	µg/L	1.00		110	40-140	0.208	20	
Methoxychlor [2C]	1.0	0.50	µg/L	1.00		101	40-140	1.97	20	
Surrogate: Decachlorobiphenyl	1.94		µg/L	2.00		96.9	30-150			
Surrogate: Decachlorobiphenyl [2C]	1.67		µg/L	2.00		83.4	30-150			
Surrogate: Tetrachloro-m-xylene	1.92		µg/L	2.00		96.0	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	1.69		µg/L	2.00		84.7	30-150			

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QUALITY CONTROL

Polychlorinated Biphenyls By GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes

Batch B118447 - SW-846 3510C

Blank (B118447-BLK1)

Prepared: 04/03/15 Analyzed: 04/04/15

Aroclor-1016	ND	0.20	µg/L							
Aroclor-1016 [2C]	ND	0.20	µg/L							
Aroclor-1221	ND	0.20	µg/L							
Aroclor-1221 [2C]	ND	0.20	µg/L							
Aroclor-1232	ND	0.20	µg/L							
Aroclor-1232 [2C]	ND	0.20	µg/L							
Aroclor-1242	ND	0.20	µg/L							
Aroclor-1242 [2C]	ND	0.20	µg/L							
Aroclor-1248	ND	0.20	µg/L							
Aroclor-1248 [2C]	ND	0.20	µg/L							
Aroclor-1254	ND	0.20	µg/L							
Aroclor-1254 [2C]	ND	0.20	µg/L							
Aroclor-1260	ND	0.20	µg/L							
Aroclor-1260 [2C]	ND	0.20	µg/L							
Aroclor-1262	ND	0.20	µg/L							
Aroclor-1262 [2C]	ND	0.20	µg/L							
Aroclor-1268	ND	0.20	µg/L							
Aroclor-1268 [2C]	ND	0.20	µg/L							
Surrogate: Decachlorobiphenyl	1.85		µg/L	2.00		92.5	30-150			
Surrogate: Decachlorobiphenyl [2C]	1.80		µg/L	2.00		89.9	30-150			
Surrogate: Tetrachloro-m-xylene	1.80		µg/L	2.00		89.9	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	1.77		µg/L	2.00		88.6	30-150			

LCS (B118447-BS1)

Prepared: 04/03/15 Analyzed: 04/04/15

Aroclor-1016	0.53	0.20	µg/L	0.500		107	40-140			
Aroclor-1016 [2C]	0.58	0.20	µg/L	0.500		116	40-140			
Aroclor-1260	0.53	0.20	µg/L	0.500		105	40-140			
Aroclor-1260 [2C]	0.56	0.20	µg/L	0.500		111	40-140			
Surrogate: Decachlorobiphenyl	1.97		µg/L	2.00		98.6	30-150			
Surrogate: Decachlorobiphenyl [2C]	1.92		µg/L	2.00		95.8	30-150			
Surrogate: Tetrachloro-m-xylene	1.93		µg/L	2.00		96.7	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	1.90		µg/L	2.00		94.9	30-150			

LCS Dup (B118447-BSD1)

Prepared: 04/03/15 Analyzed: 04/04/15

Aroclor-1016	0.56	0.20	µg/L	0.500		112	40-140	4.85	20	
Aroclor-1016 [2C]	0.58	0.20	µg/L	0.500		116	40-140	0.105	20	
Aroclor-1260	0.52	0.20	µg/L	0.500		104	40-140	0.850	20	
Aroclor-1260 [2C]	0.56	0.20	µg/L	0.500		111	40-140	0.0808	20	
Surrogate: Decachlorobiphenyl	1.88		µg/L	2.00		93.8	30-150			
Surrogate: Decachlorobiphenyl [2C]	1.82		µg/L	2.00		91.0	30-150			
Surrogate: Tetrachloro-m-xylene	1.84		µg/L	2.00		92.2	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	1.81		µg/L	2.00		90.3	30-150			

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QUALITY CONTROL

Herbicides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B118465 - SW-846 3510C										
Blank (B118465-BLK1)										
Prepared: 04/03/15 Analyzed: 04/04/15										
2,4-D	ND	0.50	µg/L							
2,4-D [2C]	ND	0.50	µg/L							
2,4-DB	ND	0.50	µg/L							
2,4-DB [2C]	ND	0.50	µg/L							
2,4,5-TP (Silvex)	ND	0.050	µg/L							
2,4,5-TP (Silvex) [2C]	ND	0.050	µg/L							
2,4,5-T	ND	0.10	µg/L							
2,4,5-T [2C]	ND	0.10	µg/L							
Dalapon	ND	1.2	µg/L							
Dalapon [2C]	ND	1.2	µg/L							
Dicamba	ND	0.050	µg/L							
Dicamba [2C]	ND	0.050	µg/L							
Dichloroprop	ND	0.50	µg/L							
Dichloroprop [2C]	ND	0.50	µg/L							
Dinoseb	ND	0.25	µg/L							
Dinoseb [2C]	ND	0.25	µg/L							
MCPA	ND	50	µg/L							
MCPA [2C]	ND	50	µg/L							
MCPP	ND	50	µg/L							
MCPP [2C]	ND	50	µg/L							
Surrogate: 2,4-Dichlorophenylacetic acid	1.74		µg/L	2.00		87.1	30-150			
Surrogate: 2,4-Dichlorophenylacetic acid [2C]	1.76		µg/L	2.00		88.0	30-150			
LCS (B118465-BS1)										
Prepared: 04/03/15 Analyzed: 04/04/15										
2,4-D	2.61	0.50	µg/L	2.50		104	40-140			
2,4-D [2C]	2.25	0.50	µg/L	2.50		90.2	40-140			
2,4-DB	2.30	0.50	µg/L	2.50		92.0	40-140			
2,4-DB [2C]	2.47	0.50	µg/L	2.50		98.8	40-140			
2,4,5-TP (Silvex)	0.255	0.050	µg/L	0.250		102	40-140			
2,4,5-TP (Silvex) [2C]	0.259	0.050	µg/L	0.250		103	40-140			
2,4,5-T	0.248	0.10	µg/L	0.250		99.1	40-140			
2,4,5-T [2C]	0.247	0.10	µg/L	0.250		98.8	40-140			
Dalapon	4.04	1.2	µg/L	6.25		64.6	40-140			V-06
Dalapon [2C]	3.75	1.2	µg/L	6.25		60.0	40-140			
Dicamba	0.189	0.050	µg/L	0.250		75.5	40-140			
Dicamba [2C]	0.253	0.050	µg/L	0.250		101	40-140			
Dichloroprop	3.17	0.50	µg/L	2.50		127	40-140			
Dichloroprop [2C]	2.95	0.50	µg/L	2.50		118	40-140			
Dinoseb	0.431	0.25	µg/L	1.25		34.5	10-140			
Dinoseb [2C]	0.489	0.25	µg/L	1.25		39.2	10-140			
MCPA	244	50	µg/L	250		97.6	40-140			
MCPA [2C]	286	50	µg/L	250		114	40-140			V-06
MCPP	253	50	µg/L	250		101	40-140			
MCPP [2C]	331	50	µg/L	250		132	40-140			V-06
Surrogate: 2,4-Dichlorophenylacetic acid	2.09		µg/L	2.00		104	30-150			
Surrogate: 2,4-Dichlorophenylacetic acid [2C]	2.06		µg/L	2.00		103	30-150			

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QUALITY CONTROL
Herbicides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B118465 - SW-846 3510C										
LCS Dup (B118465-BSD1)				Prepared: 04/03/15 Analyzed: 04/04/15						
2,4-D	2.38	0.50	µg/L	2.50		95.4	40-140	8.84	20	
2,4-D [2C]	2.08	0.50	µg/L	2.50		83.4	40-140	7.81	20	
2,4-DB	1.94	0.50	µg/L	2.50		77.4	40-140	17.3	20	
2,4-DB [2C]	2.23	0.50	µg/L	2.50		89.1	40-140	10.3	20	
2,4,5-TP (Silvex)	0.237	0.050	µg/L	0.250		94.9	40-140	7.33	20	
2,4,5-TP (Silvex) [2C]	0.240	0.050	µg/L	0.250		96.1	40-140	7.42	20	
2,4,5-T	0.223	0.10	µg/L	0.250		89.3	40-140	10.4	20	
2,4,5-T [2C]	0.211	0.10	µg/L	0.250		84.3	40-140	15.9	20	
Dalapon	3.82	1.2	µg/L	6.25		61.1	40-140	5.50	20	V-06
Dalapon [2C]	3.54	1.2	µg/L	6.25		56.7	40-140	5.71	20	
Dicamba	0.183	0.050	µg/L	0.250		73.3	40-140	3.01	20	
Dicamba [2C]	0.265	0.050	µg/L	0.250		106	40-140	4.49	20	
Dichloroprop	2.85	0.50	µg/L	2.50		114	40-140	10.5	20	
Dichloroprop [2C]	2.75	0.50	µg/L	2.50		110	40-140	7.26	20	
Dinoseb	0.443	0.25	µg/L	1.25		35.4	10-140	2.69	20	
Dinoseb [2C]	0.506	0.25	µg/L	1.25		40.5	10-140	3.37	20	
MCPA	231	50	µg/L	250		92.5	40-140	5.36	20	
MCPA [2C]	273	50	µg/L	250		109	40-140	4.78	20	V-06
MCPP	233	50	µg/L	250		93.4	40-140	8.07	20	
MCPP [2C]	316	50	µg/L	250		127	40-140	4.42	20	V-06
Surrogate: 2,4-Dichlorophenylacetic acid	1.86		µg/L	2.00		92.8	30-150			
Surrogate: 2,4-Dichlorophenylacetic acid [2C]	1.88		µg/L	2.00		93.8	30-150			

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QUALITY CONTROL
Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B118146 - SW-846 7470A Prep										
Blank (B118146-BLK1)				Prepared: 03/31/15 Analyzed: 04/01/15						
Mercury	ND	0.00010	mg/L							
LCS (B118146-BS1)				Prepared: 03/31/15 Analyzed: 04/01/15						
Mercury	0.00187	0.00010	mg/L	0.00200		93.7	80-120			
LCS Dup (B118146-BSD1)				Prepared: 03/31/15 Analyzed: 04/01/15						
Mercury	0.00185	0.00010	mg/L	0.00200		92.6	80-120	1.16	20	
Duplicate (B118146-DUP1)				Source: 15C1208-02		Prepared: 03/31/15 Analyzed: 04/01/15				
Mercury	ND	0.00010	mg/L		ND			NC	20	
Matrix Spike (B118146-MS1)				Source: 15C1208-02		Prepared: 03/31/15 Analyzed: 04/01/15				
Mercury	0.00183	0.00010	mg/L	0.00200	ND	91.5	75-125			
Batch B118202 - SW-846 3005A										
Blank (B118202-BLK1)				Prepared: 03/31/15 Analyzed: 04/01/15						
Aluminum	ND	0.050	mg/L							
Antimony	ND	0.050	mg/L							
Arsenic	ND	0.010	mg/L							
Barium	ND	0.050	mg/L							
Beryllium	ND	0.0040	mg/L							
Cadmium	ND	0.0040	mg/L							
Calcium	ND	0.15	mg/L							
Chromium	ND	0.010	mg/L							
Cobalt	ND	0.050	mg/L							
Copper	ND	0.010	mg/L							
Iron	ND	0.050	mg/L							
Lead	ND	0.010	mg/L							
Magnesium	ND	0.15	mg/L							
Manganese	ND	0.010	mg/L							
Nickel	ND	0.010	mg/L							
Potassium	ND	2.0	mg/L							
Selenium	ND	0.050	mg/L							
Silver	ND	0.0050	mg/L							
Sodium	ND	2.0	mg/L							
Thallium	ND	0.050	mg/L							
Vanadium	ND	0.010	mg/L							
Zinc	ND	0.020	mg/L							
LCS (B118202-BS1)				Prepared: 03/31/15 Analyzed: 04/01/15						
Silver	0.426	0.0050	mg/L	0.500		85.1	80-120			

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QUALITY CONTROL

Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes

Batch B118202 - SW-846 3005A

LCS (B118202-BS2)

Prepared: 03/31/15 Analyzed: 04/01/15

Aluminum	2.02	0.050	mg/L	2.00		101	80-120			
Antimony	1.96	0.050	mg/L	2.00		97.9	80-120			
Arsenic	2.05	0.010	mg/L	2.00		102	80-120			
Barium	2.04	0.050	mg/L	2.00		102	80-120			
Beryllium	2.07	0.0040	mg/L	2.00		103	80-120			
Cadmium	2.07	0.0040	mg/L	2.00		103	80-120			
Calcium	1.99	0.15	mg/L	2.00		99.4	80-120			
Chromium	2.02	0.010	mg/L	2.00		101	80-120			
Cobalt	2.03	0.050	mg/L	2.00		101	80-120			
Copper	1.84	0.010	mg/L	2.00		91.8	80-120			
Iron	2.06	0.050	mg/L	2.00		103	80-120			
Lead	1.98	0.010	mg/L	2.00		99.2	80-120			
Magnesium	1.95	0.15	mg/L	2.00		97.5	80-120			
Manganese	2.02	0.010	mg/L	2.00		101	80-120			
Nickel	2.02	0.010	mg/L	2.00		101	80-120			
Potassium	19.3	2.0	mg/L	20.0		96.7	80-120			
Selenium	2.04	0.050	mg/L	2.00		102	80-120			
Sodium	1.92	2.0	mg/L	2.00		95.8	80-120			
Thallium	1.97	0.050	mg/L	2.00		98.6	80-120			
Vanadium	1.94	0.010	mg/L	2.00		97.1	80-120			
Zinc	2.03	0.020	mg/L	2.00		102	80-120			

LCS Dup (B118202-BSD1)

Prepared: 03/31/15 Analyzed: 04/01/15

Silver	0.494	0.0050	mg/L	0.500		98.8	80-120	14.9	20	

LCS Dup (B118202-BSD2)

Prepared: 03/31/15 Analyzed: 04/01/15

Aluminum	2.03	0.050	mg/L	2.00		102	80-120	0.558	20	
Antimony	2.05	0.050	mg/L	2.00		103	80-120	4.59	20	
Arsenic	2.04	0.010	mg/L	2.00		102	80-120	0.332	20	
Barium	2.05	0.050	mg/L	2.00		103	80-120	0.689	20	
Beryllium	2.07	0.0040	mg/L	2.00		104	80-120	0.222	20	
Cadmium	2.11	0.0040	mg/L	2.00		105	80-120	1.86	20	
Calcium	1.99	0.15	mg/L	2.00		99.5	80-120	0.0440	20	
Chromium	2.05	0.010	mg/L	2.00		103	80-120	1.46	20	
Cobalt	2.06	0.050	mg/L	2.00		103	80-120	1.49	20	
Copper	1.85	0.010	mg/L	2.00		92.6	80-120	0.904	20	
Iron	2.06	0.050	mg/L	2.00		103	80-120	0.228	20	
Lead	2.01	0.010	mg/L	2.00		100	80-120	1.19	20	
Magnesium	1.96	0.15	mg/L	2.00		97.8	80-120	0.326	20	
Manganese	2.03	0.010	mg/L	2.00		101	80-120	0.511	20	
Nickel	2.05	0.010	mg/L	2.00		102	80-120	1.47	20	
Potassium	19.5	2.0	mg/L	20.0		97.4	80-120	0.733	20	
Selenium	2.03	0.050	mg/L	2.00		102	80-120	0.436	20	
Sodium	1.93	2.0	mg/L	2.00		96.5	80-120	0.732	20	
Thallium	2.01	0.050	mg/L	2.00		100	80-120	1.83	20	
Vanadium	1.96	0.010	mg/L	2.00		98.0	80-120	0.947	20	
Zinc	2.07	0.020	mg/L	2.00		103	80-120	1.69	20	

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QUALITY CONTROL

Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B118256 - SW-846 7470A Prep										
Blank (B118256-BLK1)				Prepared: 04/01/15 Analyzed: 04/02/15						
Mercury	ND	0.00010	mg/L							
LCS (B118256-BS1)				Prepared: 04/01/15 Analyzed: 04/02/15						
Mercury	0.00170	0.00010	mg/L	0.00200		85.0	80-120			
LCS Dup (B118256-BSD1)				Prepared: 04/01/15 Analyzed: 04/02/15						
Mercury	0.00174	0.00010	mg/L	0.00200		87.2	80-120	2.59	20	
Duplicate (B118256-DUP1)				Source: 15C1208-01		Prepared: 04/01/15 Analyzed: 04/02/15				
Mercury	ND	0.00010	mg/L		ND			NC	20	
Matrix Spike (B118256-MS1)				Source: 15C1208-01		Prepared: 04/01/15 Analyzed: 04/02/15				
Mercury	0.00182	0.00010	mg/L	0.00200	ND	91.0	75-125			

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QUALITY CONTROL

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B118112 - SM21-22 5210B										
Blank (B118112-BLK1)				Prepared & Analyzed: 03/30/15						
Carbonaceous BOD	ND	2.0	mg/L							W-16
LCS (B118112-BS1)				Prepared & Analyzed: 03/30/15						
Carbonaceous BOD	180	2.0	mg/L	198		90.2	85-115			W-16
Batch B118114 - SW-846 7196A										
Blank (B118114-BLK1)				Prepared & Analyzed: 03/30/15						
Hexavalent Chromium	ND	0.0040	mg/L							
LCS (B118114-BS1)				Prepared & Analyzed: 03/30/15						
Hexavalent Chromium	0.11	0.0040	mg/L	0.100		106	80-120			
LCS Dup (B118114-BSD1)				Prepared & Analyzed: 03/30/15						
Hexavalent Chromium	0.11	0.0040	mg/L	0.100		105	80-120	1.17	20	
Duplicate (B118114-DUP1)				Source: 15C1208-02			Prepared & Analyzed: 03/30/15			
Hexavalent Chromium	ND	0.0040	mg/L		ND			NC	20	
Matrix Spike (B118114-MS1)				Source: 15C1208-02			Prepared & Analyzed: 03/30/15			
Hexavalent Chromium	0.068	0.0040	mg/L	0.100	ND	67.9 *	75-125			MS-07A
Matrix Spike Dup (B118114-MSD1)				Source: 15C1208-02			Prepared & Analyzed: 03/30/15			
Hexavalent Chromium	0.068	0.0040	mg/L	0.100	ND	67.9 *	75-125	0.00	20	MS-07A
Batch B118137 - SM21-22 4500 H B										
LCS (B118137-BS1)				Prepared & Analyzed: 03/31/15						
pH	6.02		pH Units	6.00		100	98.5-102			
Batch B118235 - SW-846 1010										
Blank (B118235-BLK1)				Prepared & Analyzed: 03/31/15						
Flashpoint	> 212 °F		°F							
LCS (B118235-BS1)				Prepared & Analyzed: 03/31/15						
Flashpoint	81		°F	81.0		99.5	98.8-101			
LCS Dup (B118235-BSD1)				Prepared & Analyzed: 03/31/15						
Flashpoint	81		°F	81.0		99.5	98.8-101	0.00	0.264	

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QUALITY CONTROL
Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B118283 - SM21-22 2540D										
Blank (B118283-BLK1)				Prepared & Analyzed: 04/01/15						
Total Suspended Solids	ND	2.5	mg/L							
LCS (B118283-BS1)				Prepared & Analyzed: 04/01/15						
Total Suspended Solids	202	10	mg/L	200		101	74.6-112			
Batch B118317 - SM 4500 NO3-F										
Blank (B118317-BLK1)				Prepared & Analyzed: 03/31/15						
Nitrate/Nitrite as N	ND	0.050	mg/L							
LCS (B118317-BS1)				Prepared & Analyzed: 03/31/15						
Nitrate/Nitrite as N	2.3		mg/L	2.38		95.4	90.6-110			
LCS Dup (B118317-BSD1)				Prepared & Analyzed: 03/31/15						
Nitrate/Nitrite as N	2.3		mg/L	2.38		95.4	90.6-110	0.00	4.18	
Batch B118349 - EPA 420.1										
Blank (B118349-BLK1)				Prepared: 04/02/15 Analyzed: 04/03/15						
Phenol	ND	0.050	mg/L							
LCS (B118349-BS1)				Prepared: 04/02/15 Analyzed: 04/03/15						
Phenol	0.51	0.050	mg/L	0.500		101	76.2-127			
LCS Dup (B118349-BSD1)				Prepared: 04/02/15 Analyzed: 04/03/15						
Phenol	0.52	0.050	mg/L	0.500		104	76.2-127	3.17	11.4	
Batch B118382 - SM19-22 4500-N Org B,C-NH3 C										
Blank (B118382-BLK1)				Prepared: 04/02/15 Analyzed: 04/03/15						
Total Kjeldahl Nitrogen	ND	1.0	mg/L							
LCS (B118382-BS1)				Prepared: 04/02/15 Analyzed: 04/03/15						
Total Kjeldahl Nitrogen	19	1.0	mg/L	20.0		95.2	82-110			
Batch B118457 - EPA 1664B										
Blank (B118457-BLK1)				Prepared & Analyzed: 04/03/15						
Oil & Grease (HEM)	ND	1.4	mg/L							

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QUALITY CONTROL

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B118457 - EPA 1664B										
LCS (B118457-BS1)				Prepared & Analyzed: 04/03/15						
Oil & Grease (HEM)	36		mg/L	40.0		88.8	78-114			
Batch B118488 - SM21-22 4500 CL B										
Blank (B118488-BLK1)				Prepared & Analyzed: 04/03/15						
Chloride	ND	1.0	mg/L							
LCS (B118488-BS1)				Prepared & Analyzed: 04/03/15						
Chloride	13	1.0	mg/L	11.8		109	87.1-113			
LCS Dup (B118488-BSD1)				Prepared & Analyzed: 04/03/15						
Chloride	12	1.0	mg/L	11.8		105	87.1-113	3.87	9.72	
Batch B118512 - SM21-22 2540B										
Blank (B118512-BLK1)				Prepared & Analyzed: 04/03/15						
Total Solids	ND	10	mg/L							
LCS (B118512-BS1)				Prepared & Analyzed: 04/03/15						
Total Solids	202	10	mg/L	200		101	66.4-127			
Duplicate (B118512-DUP1)				Prepared & Analyzed: 04/03/15						
Source: 15C1208-02										
Total Solids	1000	10	mg/L		1100			4.26	5	

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BREAKDOWN REPORT

Lab Sample ID: S008192-PEM1 Analyzed: 04/04/2015

Column Number:	1
Analyte	% Breakdown
4,4'-DDT [1]	2.52
Endrin [1]	3.41

Column Number:	2
Analyte	% Breakdown
4,4'-DDT [2]	3.62
Endrin [2]	3.68

BREAKDOWN REPORT

Lab Sample ID: S008192-PEM2 Analyzed: 04/04/2015

Column Number:	1
Analyte	% Breakdown
4,4'-DDT [1]	2.74
Endrin [1]	3.60

Column Number:	2
Analyte	% Breakdown
4,4'-DDT [2]	3.96
Endrin [2]	3.82

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS

Lab Sample ID: B118447-BS1 Date(s) Analyzed: 04/04/2015 04/04/2015

Instrument ID (1): Instrument ID (2):

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1016	1	0.00	0.00	0.00	0.53	
	2	0.00	0.00	0.00	0.58	8
Aroclor-1260	1	0.00	0.00	0.00	0.53	
	2	0.00	0.00	0.00	0.56	6

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**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**

SW-846 8082A

LCS Dup

Lab Sample ID: B118447-BSD1 Date(s) Analyzed: 04/04/2015 04/04/2015

Instrument ID (1): Instrument ID (2):

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1016	1	0.00	0.00	0.00	0.56	
	2	0.00	0.00	0.00	0.58	3
Aroclor-1260	1	0.00	0.00	0.00	0.52	
	2	0.00	0.00	0.00	0.56	7

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8081B

LCS

Lab Sample ID: B118448-BS1 Date(s) Analyzed: 04/04/2015 04/04/2015
Instrument ID (1): ECD6 Instrument ID (2): ECD6
GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
4,4'-DDD	1	7.12	0.00	0.00	1.1	
	2	7.79	0.00	0.00	1.1	4
4,4'-DDE	1	6.69	0.00	0.00	1.1	
	2	7.33	0.00	0.00	0.99	11
4,4'-DDT	1	7.32	0.00	0.00	1.2	
	2	8.02	0.00	0.00	1.0	16
Alachlor	1	6.16	0.00	0.00	1.0	
	2	6.46	0.00	0.00	1.1	8
Aldrin	1	6.06	0.00	0.00	1.1	
	2	6.54	0.00	0.00	0.97	10
alpha-BHC	1	5.40	0.00	0.00	1.1	
	2	5.77	0.00	0.00	0.98	15
beta-BHC	1	5.64	0.00	0.00	1.1	
	2	6.06	0.00	0.00	0.97	9
delta-BHC	1	5.75	0.00	0.00	1.1	
	2	6.27	0.00	0.00	1.1	0
Dieldrin	1	6.89	0.00	0.00	1.0	
	2	7.47	0.00	0.00	0.96	8
Endosulfan I	1	6.73	0.00	0.00	1.0	
	2	7.26	0.00	0.00	0.99	2
Endosulfan II	1	7.22	0.00	0.00	1.1	
	2	7.87	0.00	0.00	1.1	4
Endosulfan Sulfate	1	7.86	0.00	0.00	1.1	
	2	8.31	0.00	0.00	1.0	7
Endrin	1	7.06	0.00	0.00	1.1	
	2	7.70	0.00	0.00	1.0	6
Endrin Aldehyde	1	7.53	0.00	0.00	1.0	
	2	8.12	0.00	0.00	1.0	5
Endrin Ketone	1	8.06	0.00	0.00	1.1	
	2	8.65	0.00	0.00	1.1	3
gamma-BHC (Lindane)	1	5.59	0.00	0.00	1.1	

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8081B

LCS

Lab Sample ID: B118448-BS1 Date(s) Analyzed: 04/04/2015 04/04/2015

Instrument ID (1): ECD6 Instrument ID (2): ECD6

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
	2	6.01	0.00	0.00	1.0	10
Heptachlor	1	5.88	0.00	0.00	1.0	
	2	6.31	0.00	0.00	1.0	3
Heptachlor Epoxide	1	6.46	0.00	0.00	1.0	
	2	6.96	0.00	0.00	0.99	4
Hexachlorobenzene	1	5.30	0.00	0.00	1.0	
	2	5.67	0.00	0.00	0.95	9
Methoxychlor	1	7.70	0.00	0.00	1.1	
	2	8.49	0.00	0.00	1.0	10

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8081B

LCS Dup

Lab Sample ID: B118448-BSD1 Date(s) Analyzed: 04/04/2015 04/04/2015
Instrument ID (1): ECD6 Instrument ID (2): ECD6
GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
4,4'-DDD	1	7.12	0.00	0.00	1.2	
	2	7.79	0.00	0.00	1.1	6
4,4'-DDE	1	6.69	0.00	0.00	1.1	
	2	7.33	0.00	0.00	1.0	14
4,4'-DDT	1	7.32	0.00	0.00	1.2	
	2	8.02	0.00	0.00	1.0	17
Alachlor	1	6.16	0.00	0.00	1.0	
	2	6.46	0.00	0.00	1.0	2
Aldrin	1	6.06	0.00	0.00	1.1	
	2	6.54	0.00	0.00	1.0	10
alpha-BHC	1	5.40	0.00	0.00	1.2	
	2	5.77	0.00	0.00	1.0	17
beta-BHC	1	5.64	0.00	0.00	1.1	
	2	6.06	0.00	0.00	0.99	8
delta-BHC	1	5.75	0.00	0.00	1.1	
	2	6.26	0.00	0.00	1.1	2
Dieldrin	1	6.89	0.00	0.00	1.1	
	2	7.47	0.00	0.00	0.97	10
Endosulfan I	1	6.73	0.00	0.00	1.0	
	2	7.26	0.00	0.00	1.0	4
Endosulfan II	1	7.22	0.00	0.00	1.1	
	2	7.87	0.00	0.00	1.1	2
Endosulfan Sulfate	1	7.86	0.00	0.00	1.1	
	2	8.31	0.00	0.00	1.1	2
Endrin	1	7.06	0.00	0.00	1.1	
	2	7.70	0.00	0.00	1.0	7
Endrin Aldehyde	1	7.53	0.00	0.00	1.1	
	2	8.12	0.00	0.00	1.1	1
Endrin Ketone	1	8.06	0.00	0.00	1.1	
	2	8.65	0.00	0.00	1.1	0
gamma-BHC (Lindane)	1	5.59	0.00	0.00	1.1	

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8081B

LCS Dup

Lab Sample ID: B118448-BSD1 Date(s) Analyzed: 04/04/2015 04/04/2015

Instrument ID (1): ECD6 Instrument ID (2): ECD6

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
	2	6.01	0.00	0.00	1.0	12
Heptachlor	1	5.88	0.00	0.00	1.1	
	2	6.31	0.00	0.00	1.0	5
Heptachlor Epoxide	1	6.46	0.00	0.00	1.1	
	2	6.96	0.00	0.00	1.0	5
Hexachlorobenzene	1	5.30	0.00	0.00	1.1	
	2	5.67	0.00	0.00	0.97	10
Methoxychlor	1	7.70	0.00	0.00	1.1	
	2	8.49	0.00	0.00	1.0	10

IDENTIFICATION SUMMARY **FOR SINGLE COMPONENT ANALYTES** *SW-846 8151A*

LCS

Lab Sample ID: B118465-BS1 Date(s) Analyzed: 04/04/2015 04/04/2015

Instrument ID (1): _____ Instrument ID (2): _____

GC Column (1): _____ ID: _____ (mm) GC Column (2): _____ ID: _____ (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
2,4,5-T	1	13.92	0.00	0.00	0.248	
	2	15.99	0.00	0.00	0.247	0
2,4,5-TP (Silvex)	1	13.34	0.00	0.00	0.255	
	2	15.14	0.00	0.00	0.259	2
2,4-D	1	11.68	0.00	0.00	2.61	
	2	13.40	0.00	0.00	2.25	15
2,4-DB	1	15.04	0.00	0.00	2.30	
	2	16.88	0.00	0.00	2.47	7
Dalapon	1	3.88	0.00	0.00	4.04	
	2	4.15	0.00	0.00	3.75	7
Dicamba	1	9.84	0.00	0.00	0.189	
	2	11.19	0.00	0.00	0.253	29
Dichloroprop	1	11.23	0.00	0.00	3.17	
	2	12.72	0.00	0.00	2.95	7
Dinoseb	1	16.87	0.00	0.00	0.431	
	2	17.12	0.00	0.00	0.489	13
MCPA	1	10.56	0.00	0.00	244	
	2	12.04	0.00	0.00	286	16
MCP	1	10.28	0.00	0.00	253	
	2	11.54	0.00	0.00	331	27

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES *SW-846 8151A*

LCS Dup

Lab Sample ID: B118465-BSD1 Date(s) Analyzed: 04/04/2015 04/04/2015

Instrument ID (1): Instrument ID (2):

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
2,4,5-T	1	13.92	0.00	0.00	0.223	
	2	15.99	0.00	0.00	0.211	6
2,4,5-TP (Silvex)	1	13.34	0.00	0.00	0.237	
	2	15.14	0.00	0.00	0.240	1
2,4-D	1	11.68	0.00	0.00	2.38	
	2	13.40	0.00	0.00	2.08	14
2,4-DB	1	15.04	0.00	0.00	1.94	
	2	16.88	0.00	0.00	2.23	14
Dalapon	1	3.88	0.00	0.00	3.82	
	2	4.14	0.00	0.00	3.54	8
Dicamba	1	9.84	0.00	0.00	0.183	
	2	11.19	0.00	0.00	0.265	37
Dichloroprop	1	11.23	0.00	0.00	2.85	
	2	12.72	0.00	0.00	2.75	4
Dinoseb	1	16.88	0.00	0.00	0.443	
	2	17.12	0.00	0.00	0.506	13
MCPA	1	10.56	0.00	0.00	231	
	2	12.03	0.00	0.00	273	17
MCP	1	10.27	0.00	0.00	233	
	2	11.53	0.00	0.00	316	30

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
	No results have been blank subtracted unless specified in the case narrative section.
H-05	Holding time was exceeded. pH analysis should be performed immediately at time of sampling. Nominal 15 minute holding time was exceeded.
L-02	Laboratory fortified blank/laboratory control sample recovery and duplicate recoveries outside of control limits. Data validation is not affected since all results are "not detected" for associated samples in this batch and bias is on the high side.
L-04	Laboratory fortified blank/laboratory control sample recovery and duplicate recovery are outside of control limits. Reported value for this compound is likely to be biased on the low side.
L-07	Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.
L-07A	Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD outside of control limits. Reduced precision anticipated for any reported result for this compound.
MS-07A	Matrix spike and spike duplicate recovery is outside of control limits. Analysis is in control based on laboratory fortified blank recovery. Possibility of matrix effects that lead to low bias or non-homogeneous sample aliquot cannot be eliminated.
R-05	Laboratory fortified blank duplicate RPD is outside of control limits. Reduced precision is anticipated for any reported value for this compound.
S-02	The surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic compounds present in the sample extract.
S-07	One associated surrogate standard recovery is outside of control limits but the other(s) is/are within limits. All recoveries are > 10%.
V-04	Initial calibration did not meet method specifications. Compound was calibrated using a response factor where %RSD is outside of method specified criteria.
V-05	Continuing calibration did not meet method specifications and was biased on the low side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the low side.
V-06	Continuing calibration did not meet method specifications and was biased on the high side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the high side.
V-16	Response factor is less than method specified minimum acceptable value. Reduced precision and accuracy may be associated with reported result.
V-20	Continuing calibration did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.
W-16	Blank result was >0.2mg/L.

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>EPA 1664B in Water</i>	
Oil & Grease (HEM)	CT,MA,NH,NY,RI,NC,ME,VA,NJ
<i>EPA 420.1 in Water</i>	
Phenol	CT,MA,NH,NY,RI,NC,ME,VA,NJ
<i>EPA 624 in Water</i>	
Acrylonitrile	CT,MA,NH,NY,RI,NC,ME,VA,NJ
Benzene	CT,MA,NH,NY,RI,NC,ME,VA,NJ
Bromodichloromethane	CT,MA,NH,NY,RI,NC,ME,VA,NJ
Bromoform	CT,MA,NH,NY,RI,NC,ME,VA,NJ
Bromomethane	CT,MA,NH,NY,RI,NC,ME,VA,NJ
Carbon Tetrachloride	CT,MA,NH,NY,RI,NC,ME,VA,NJ
Chlorobenzene	CT,MA,NH,NY,RI,NC,ME,VA,NJ
Chlorodibromomethane	CT,MA,NH,NY,RI,NC,ME,VA,NJ
Chloroethane	CT,MA,NH,NY,RI,NC,ME,VA,NJ
2-Chloroethyl Vinyl Ether	CT,MA,NH,NY,RI,NC,ME,VA,NJ
Chloroform	CT,MA,NH,NY,RI,NC,ME,VA,NJ
Chloromethane	CT,MA,NH,NY,RI,NC,ME,VA,NJ
1,2-Dichlorobenzene	CT,MA,NH,NY,RI,NC,ME,VA,NJ
1,3-Dichlorobenzene	CT,MA,NH,NY,RI,NC,ME,VA,NJ
1,4-Dichlorobenzene	CT,MA,NH,NY,RI,NC,ME,VA,NJ
1,2-Dichloroethane	CT,MA,NH,NY,RI,NC,ME,VA,NJ
1,1-Dichloroethane	CT,MA,NH,NY,RI,NC,ME,VA,NJ
1,1-Dichloroethylene	CT,MA,NH,NY,RI,NC,ME,VA,NJ
trans-1,2-Dichloroethylene	CT,MA,NH,NY,RI,NC,ME,VA,NJ
1,2-Dichloropropane	CT,MA,NH,NY,RI,NC,ME,VA,NJ
cis-1,3-Dichloropropene	CT,MA,NH,NY,RI,NC,ME,VA,NJ
trans-1,3-Dichloropropene	CT,MA,NH,NY,RI,NC,ME,VA,NJ
Ethylbenzene	CT,MA,NH,NY,RI,NC,ME,VA,NJ
Methyl tert-Butyl Ether (MTBE)	NC
Methylene Chloride	CT,MA,NH,NY,RI,NC,ME,VA,NJ
Naphthalene	NC
1,1,2,2-Tetrachloroethane	CT,MA,NH,NY,RI,NC,ME,VA,NJ
Tetrachloroethylene	CT,MA,NH,NY,RI,NC,ME,VA,NJ
Toluene	CT,MA,NH,NY,RI,NC,ME,VA,NJ
1,2,4-Trichlorobenzene	NC
1,1,1-Trichloroethane	CT,MA,NH,NY,RI,NC,ME,VA,NJ
1,1,2-Trichloroethane	CT,MA,NH,NY,RI,NC,ME,VA,NJ
Trichloroethylene	CT,MA,NH,NY,RI,NC,ME,VA,NJ
Trichlorofluoromethane (Freon 11)	CT,MA,NH,NY,RI,NC,ME,VA,NJ
Vinyl Chloride	CT,MA,NH,NY,RI,NC,ME,VA,NJ
m+p Xylene	CT,MA,NH,NY,RI,NC,VA,NJ
o-Xylene	CT,MA,NH,NY,RI,NC,VA,NJ
<i>SM 21-22 4500 NO3 F in Water</i>	
Nitrate/Nitrite as N	CT,MA,NH,NY,RI,NC,ME,VA,NJ
<i>SM19-22 4500-N Org B,C-NH3 C in Water</i>	
Total Kjeldahl Nitrogen	CT,MA,NH,NY,RI,NC,ME,VA,NJ

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SM21-22 2540B in Water	
Total Solids	NY,CT,RI,NH,NC,ME,VA,NJ
SM21-22 2540D in Water	
Total Suspended Solids	CT,MA,NH,NY,RI,NC,ME,VA,NJ
SM21-22 4500 CL B in Water	
Chloride	NH,CT,MA,NY,RI,NC,ME,VA,NJ
SM21-22 4500 H B in Water	
pH	CT,MA,RI
SM21-22 5210B in Water	
Carbonaceous BOD	NY,CT,RI,NH,ME,VA,NC,NJ
SW-846 6010C in Water	
Aluminum	CT,NH,NY,ME,VA,NC,NJ
Antimony	CT,NH,NY,ME,NC,VA,NJ
Arsenic	CT,NH,NY,ME,NC,VA,RI
Barium	CT,NH,NY,ME,NC,VA,NJ
Beryllium	CT,NH,NY,ME,NC,VA,NJ
Cadmium	CT,NH,NY,ME,NC,VA,NJ
Calcium	CT,NH,NY,ME,NC,VA,NJ
Chromium	CT,NH,NY,ME,NC,VA,NJ
Cobalt	CT,NH,NY,ME,NC,VA,NJ
Copper	CT,NH,NY,ME,NC,VA,NJ
Iron	CT,NH,NY,ME,NC,VA,NJ
Lead	CT,NH,NY,NC,ME,VA,NJ
Magnesium	CT,NH,NY,ME,NC,VA,NJ
Manganese	CT,NH,NY,ME,NC,VA,NJ
Nickel	CT,NH,NY,ME,NC,VA,NJ
Potassium	CT,NH,NY,ME,NC,VA,NJ
Selenium	CT,NH,NY,ME,NC,VA,NJ
Silver	CT,NH,NY,ME,NC,VA,NJ
Sodium	CT,NH,NY,ME,NC,VA,NJ
Thallium	CT,NH,NY,NC,VA,NJ
Vanadium	CT,NH,NY,ME,NC,VA,NJ
Zinc	CT,NH,NY,ME,NC,VA,NJ
SW-846 7196A in Water	
Hexavalent Chromium	CT,NH,NY,NC,ME,VA,NJ
SW-846 7470A in Water	
Mercury	CT,NH,NY,NC,ME,VA,NJ
SW-846 8081B in Water	
Alachlor	NC
Alachlor [2C]	NC
Aldrin	CT,NH,NY,ME,NC,VA,NJ
Aldrin [2C]	CT,NH,NY,ME,NC,VA,NJ
alpha-BHC	CT,NH,NY,ME,NC,VA,NJ
alpha-BHC [2C]	CT,NH,NY,ME,NC,VA,NJ
beta-BHC	CT,NH,NY,ME,NC,VA,NJ

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8081B in Water</i>	
beta-BHC [2C]	CT,NH,NY,ME,NC,VA,NJ
delta-BHC	CT,NH,NY,ME,NC,VA,NJ
delta-BHC [2C]	CT,NH,NY,ME,NC,VA,NJ
gamma-BHC (Lindane)	CT,NH,NY,ME,NC,VA,NJ
gamma-BHC (Lindane) [2C]	CT,NH,NY,ME,NC,VA,NJ
Chlordane	CT,NH,NY,ME,NC,VA,NJ
Chlordane [2C]	CT,NH,NY,ME,NC,VA,NJ
4,4'-DDD	CT,NH,NY,ME,NC,VA,NJ
4,4'-DDD [2C]	CT,NH,NY,ME,NC,VA,NJ
4,4'-DDE	CT,NH,NY,ME,NC,VA,NJ
4,4'-DDE [2C]	CT,NH,NY,ME,NC,VA,NJ
4,4'-DDT	CT,NH,NY,ME,NC,VA,NJ
4,4'-DDT [2C]	CT,NH,NY,ME,NC,VA,NJ
Dieldrin	CT,NH,NY,ME,NC,VA,NJ
Dieldrin [2C]	CT,NH,NY,ME,NC,VA,NJ
Endosulfan I	CT,NH,NY,ME,NC,VA,NJ
Endosulfan I [2C]	CT,NH,NY,ME,NC,VA,NJ
Endosulfan II	CT,NH,NY,ME,NC,VA,NJ
Endosulfan II [2C]	CT,NH,NY,ME,NC,VA,NJ
Endosulfan Sulfate	CT,NH,NY,ME,NC,VA,NJ
Endosulfan Sulfate [2C]	CT,NH,NY,ME,NC,VA,NJ
Endrin	CT,NH,NY,ME,NC,VA,NJ
Endrin [2C]	CT,NH,NY,ME,NC,VA,NJ
Endrin Aldehyde	CT,NH,NY,ME,NC,VA,NJ
Endrin Aldehyde [2C]	CT,NH,NY,ME,NC,VA,NJ
Endrin Ketone	NC
Endrin Ketone [2C]	NC
Heptachlor	CT,NH,NY,ME,NC,VA,NJ
Heptachlor [2C]	CT,NH,NY,ME,NC,VA,NJ
Heptachlor Epoxide	CT,NH,NY,ME,NC,VA,NJ
Heptachlor Epoxide [2C]	CT,NH,NY,ME,NC,VA,NJ
Hexachlorobenzene	NC
Hexachlorobenzene [2C]	NC
Methoxychlor	CT,NH,NY,ME,NC,VA,NJ
Methoxychlor [2C]	CT,NH,NY,ME,NC,VA,NJ
Toxaphene	CT,NH,NY,ME,NC,VA,NJ
Toxaphene [2C]	CT,NH,NY,ME,NC,VA,NJ
<i>SW-846 8082A in Water</i>	
Aroclor-1016	CT,NH,NY,NC,ME,VA,NJ
Aroclor-1016 [2C]	CT,NH,NY,NC,ME,VA,NJ
Aroclor-1221	CT,NH,NY,NC,ME,VA,NJ
Aroclor-1221 [2C]	CT,NH,NY,NC,ME,VA,NJ
Aroclor-1232	CT,NH,NY,NC,ME,VA,NJ
Aroclor-1232 [2C]	CT,NH,NY,NC,ME,VA,NJ
Aroclor-1242	CT,NH,NY,NC,ME,VA,NJ
Aroclor-1242 [2C]	CT,NH,NY,NC,ME,VA,NJ

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8082A in Water	
Aroclor-1248	CT,NH,NY,NC,ME,VA,NJ
Aroclor-1248 [2C]	CT,NH,NY,NC,ME,VA,NJ
Aroclor-1254	CT,NH,NY,NC,ME,VA,NJ
Aroclor-1254 [2C]	CT,NH,NY,NC,ME,VA,NJ
Aroclor-1260	CT,NH,NY,NC,ME,VA,NJ
Aroclor-1260 [2C]	CT,NH,NY,NC,ME,VA,NJ
Aroclor-1262	NC
Aroclor-1262 [2C]	NC
Aroclor-1268	NC
Aroclor-1268 [2C]	NC
SW-846 8151A in Water	
2,4-D	ME,NC,NH,CT,NY,VA,NJ
2,4-D [2C]	ME,NC,NH,CT,NY,VA,NJ
2,4-DB	ME,NC,NH,CT,NY,VA,NJ
2,4-DB [2C]	ME,NC,NH,CT,NY,VA,NJ
2,4,5-TP (Silvex)	ME,NC,NH,CT,NY,VA,NJ
2,4,5-TP (Silvex) [2C]	ME,NC,NH,CT,NY,VA,NJ
2,4,5-T	ME,NC,NH,CT,NY,VA,NJ
2,4,5-T [2C]	ME,NC,NH,CT,NY,VA,NJ
Dalapon	ME,NC,NH,CT,NY,VA,NJ
Dalapon [2C]	ME,NC,NH,CT,NY,VA,NJ
Dicamba	ME,NC,NH,CT,NY,VA,NJ
Dicamba [2C]	ME,NC,NH,CT,NY,VA,NJ
Dichloroprop	ME,NC,NH,CT,NY,VA,NJ
Dichloroprop [2C]	ME,NC,NH,CT,NY,VA,NJ
Dinoseb	ME,NC,NH,CT,NY,VA,NJ
Dinoseb [2C]	ME,NC,NH,CT,NY,VA,NJ
MCPA	NC,CT
MCPA [2C]	NC,CT
MCPP	NC,CT
MCPP [2C]	NC,CT
SW-846 8260C in Water	
Acetone	CT,NY,ME,NH,VA,NJ
Acrylonitrile	CT,NY,ME,NH,VA,NJ
tert-Amyl Methyl Ether (TAME)	NY,ME,NH,VA,NJ
Benzene	CT,NY,ME,NH,VA,NJ
Bromochloromethane	NY,ME,NH,VA,NJ
Bromodichloromethane	CT,NY,ME,NH,VA,NJ
Bromoform	CT,NY,ME,NH,VA,NJ
Bromomethane	CT,NY,ME,NH,VA,NJ
2-Butanone (MEK)	CT,NY,ME,NH,VA,NJ
tert-Butyl Alcohol (TBA)	NY,ME,NH,VA,NJ
n-Butylbenzene	NY,ME,VA,NJ
sec-Butylbenzene	NY,ME,VA,NJ
tert-Butylbenzene	NY,ME,VA,NJ
tert-Butyl Ethyl Ether (TBEE)	NY,ME,NH,VA,NJ

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8260C in Water</i>	
Carbon Disulfide	CT,NY,ME,NH,VA,NJ
Carbon Tetrachloride	CT,NY,ME,NH,VA,NJ
Chlorobenzene	CT,NY,ME,NH,VA,NJ
Chlorodibromomethane	CT,NY,ME,NH,VA,NJ
Chloroethane	CT,NY,ME,NH,VA,NJ
Chloroform	CT,NY,ME,NH,VA,NJ
Chloromethane	CT,NY,ME,NH,VA,NJ
2-Chlorotoluene	NY,ME,NH,VA,NJ
4-Chlorotoluene	NY,ME,NH,VA,NJ
Dibromomethane	NY,ME,NH,VA,NJ
1,2-Dichlorobenzene	CT,NY,ME,NH,VA,NJ
1,3-Dichlorobenzene	CT,NY,ME,NH,VA,NJ
1,4-Dichlorobenzene	CT,NY,ME,NH,VA,NJ
trans-1,4-Dichloro-2-butene	NY,ME,NH,VA,NJ
Dichlorodifluoromethane (Freon 12)	NY,ME,NH,VA,NJ
1,1-Dichloroethane	CT,NY,ME,NH,VA,NJ
1,2-Dichloroethane	CT,NY,ME,NH,VA,NJ
1,1-Dichloroethylene	CT,NY,ME,NH,VA,NJ
cis-1,2-Dichloroethylene	NY,ME,NJ
trans-1,2-Dichloroethylene	CT,NY,ME,NH,VA,NJ
1,2-Dichloropropane	CT,NY,ME,NH,VA,NJ
1,3-Dichloropropane	NY,ME,VA,NJ
2,2-Dichloropropane	NY,ME,NH,VA,NJ
1,1-Dichloropropene	NY,ME,NH,VA,NJ
cis-1,3-Dichloropropene	CT,NY,ME,NH,VA,NJ
trans-1,3-Dichloropropene	CT,NY,ME,NH,VA,NJ
Diisopropyl Ether (DIPE)	NY,ME,NH,VA,NJ
Ethylbenzene	CT,NY,ME,NH,VA,NJ
Hexachlorobutadiene	CT,NY,ME,NH,VA,NJ
2-Hexanone (MBK)	CT,NY,ME,NH,VA,NJ
Isopropylbenzene (Cumene)	NY,ME,VA,NJ
p-Isopropyltoluene (p-Cymene)	CT,NY,ME,NH,VA,NJ
Methyl tert-Butyl Ether (MTBE)	CT,NY,ME,NH,VA,NJ
Methylene Chloride	CT,NY,ME,NH,VA,NJ
4-Methyl-2-pentanone (MIBK)	CT,NY,ME,NH,VA,NJ
Naphthalene	NY,ME,NH,VA,NJ
n-Propylbenzene	CT,NY,ME,NH,VA,NJ
Styrene	CT,NY,ME,NH,VA,NJ
1,1,1,2-Tetrachloroethane	CT,NY,ME,NH,VA,NJ
1,1,2,2-Tetrachloroethane	CT,NY,ME,NH,VA,NJ
Tetrachloroethylene	CT,NY,ME,NH,VA,NJ
Toluene	CT,NY,ME,NH,VA,NJ
1,2,3-Trichlorobenzene	NY,ME,NH,VA,NJ
1,2,4-Trichlorobenzene	CT,NY,ME,NH,VA,NJ
1,3,5-Trichlorobenzene	ME
1,1,1-Trichloroethane	CT,NY,ME,NH,VA,NJ
1,1,2-Trichloroethane	CT,NY,ME,NH,VA,NJ

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8260C in Water	
Trichloroethylene	CT,NY,ME,NH,VA,NJ
Trichlorofluoromethane (Freon 11)	CT,NY,ME,NH,VA,NJ
1,2,3-Trichloropropane	NY,ME,NH,VA,NJ
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	NY,VA,NJ
1,2,4-Trimethylbenzene	NY,ME,VA,NJ
1,3,5-Trimethylbenzene	NY,ME,VA,NJ
Vinyl Chloride	CT,NY,ME,NH,VA,NJ
m+p Xylene	CT,NY,ME,NH,VA
o-Xylene	CT,NY,ME,NH,VA
SW-846 8270D in Water	
Acenaphthene	CT,NY,NC,ME,NH,VA,NJ
Acenaphthylene	CT,NY,NC,ME,NH,VA,NJ
Acetophenone	NC
Aniline	CT,NY,NC,ME,VA,NJ
Anthracene	CT,NY,NC,ME,NH,VA,NJ
Benzidine	CT,NY,NC,ME,NH,VA,NJ
Benzo(a)anthracene	CT,NY,NC,ME,NH,VA,NJ
Benzo(a)pyrene	CT,NY,NC,ME,NH,VA,NJ
Benzo(b)fluoranthene	CT,NY,NC,ME,NH,VA,NJ
Benzo(g,h,i)perylene	CT,NY,NC,ME,NH,VA,NJ
Benzo(k)fluoranthene	CT,NY,NC,ME,NH,VA,NJ
Benzoic Acid	NY,NC,ME,NH,VA,NJ
Bis(2-chloroethoxy)methane	CT,NY,NC,ME,NH,VA,NJ
Bis(2-chloroethyl)ether	CT,NY,NC,ME,NH,VA,NJ
Bis(2-chloroisopropyl)ether	CT,NY,NC,ME,NH,VA,NJ
Bis(2-Ethylhexyl)phthalate	CT,NY,NC,ME,NH,VA,NJ
4-Bromophenylphenylether	CT,NY,NC,ME,NH,VA,NJ
Butylbenzylphthalate	CT,NY,NC,ME,NH,VA,NJ
Carbazole	NC
4-Chloroaniline	CT,NY,NC,ME,NH,VA,NJ
4-Chloro-3-methylphenol	CT,NY,NC,ME,NH,VA,NJ
2-Chloronaphthalene	CT,NY,NC,ME,NH,VA,NJ
2-Chlorophenol	CT,NY,NC,ME,NH,VA,NJ
4-Chlorophenylphenylether	CT,NY,NC,ME,NH,VA,NJ
Chrysene	CT,NY,NC,ME,NH,VA,NJ
Dibenz(a,h)anthracene	CT,NY,NC,ME,NH,VA,NJ
Dibenzofuran	CT,NY,NC,ME,NH,VA,NJ
Di-n-butylphthalate	CT,NY,NC,ME,NH,VA,NJ
1,2-Dichlorobenzene	CT,NY,NC,ME,NH,VA,NJ
1,3-Dichlorobenzene	CT,NY,NC,ME,NH,VA,NJ
1,4-Dichlorobenzene	CT,NY,NC,ME,NH,VA,NJ
3,3-Dichlorobenzidine	CT,NY,NC,ME,NH,VA,NJ
2,4-Dichlorophenol	CT,NY,NC,ME,NH,VA,NJ
Diethylphthalate	CT,NY,NC,ME,NH,VA,NJ
2,4-Dimethylphenol	CT,NY,NC,ME,NH,VA,NJ
Dimethylphthalate	CT,NY,NC,ME,NH,VA,NJ

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8270D in Water</i>	
4,6-Dinitro-2-methylphenol	CT,NY,NC,ME,NH,VA,NJ
2,4-Dinitrophenol	CT,NY,NC,ME,NH,VA,NJ
2,4-Dinitrotoluene	CT,NY,NC,ME,NH,VA,NJ
2,6-Dinitrotoluene	CT,NY,NC,ME,NH,VA,NJ
Di-n-octylphthalate	CT,NY,NC,ME,NH,VA,NJ
1,2-Diphenylhydrazine (as Azobenzene)	NC
Fluoranthene	CT,NY,NC,ME,NH,VA,NJ
Fluorene	NY,NC,ME,NH,VA,NJ
Hexachlorobenzene	CT,NY,NC,ME,NH,VA,NJ
Hexachlorobutadiene	CT,NY,NC,ME,NH,VA,NJ
Hexachlorocyclopentadiene	CT,NY,NC,ME,NH,VA,NJ
Hexachloroethane	CT,NY,NC,ME,NH,VA,NJ
Indeno(1,2,3-cd)pyrene	CT,NY,NC,ME,NH,VA,NJ
Isophorone	CT,NY,NC,ME,NH,VA,NJ
1-Methylnaphthalene	NC
2-Methylnaphthalene	CT,NY,NC,ME,NH,VA,NJ
2-Methylphenol	CT,NY,NC,NH,VA,NJ
3/4-Methylphenol	CT,NY,NC,NH,VA,NJ
Naphthalene	CT,NY,NC,ME,NH,VA,NJ
2-Nitroaniline	CT,NY,NC,ME,NH,VA,NJ
3-Nitroaniline	CT,NY,NC,ME,NH,VA,NJ
4-Nitroaniline	CT,NY,NC,ME,NH,VA,NJ
Nitrobenzene	CT,NY,NC,ME,NH,VA,NJ
2-Nitrophenol	CT,NY,NC,ME,NH,VA,NJ
4-Nitrophenol	CT,NY,NC,ME,NH,VA,NJ
N-Nitrosodimethylamine	CT,NY,NC,ME,NH,VA,NJ
N-Nitrosodiphenylamine	CT,NY,NC,ME,NH,VA,NJ
N-Nitrosodi-n-propylamine	CT,NY,NC,ME,NH,VA,NJ
Pentachloronitrobenzene	NC
Pentachlorophenol	CT,NY,NC,ME,NH,VA,NJ
Phenanthrene	CT,NY,NC,ME,NH,VA,NJ
Phenol	CT,NY,NC,ME,NH,VA,NJ
Pyrene	CT,NY,NC,ME,NH,VA,NJ
Pyridine	CT,NY,NC,ME,NH,VA,NJ
1,2,4,5-Tetrachlorobenzene	NC
1,2,4-Trichlorobenzene	CT,NY,NC,ME,NH,VA,NJ
2,4,5-Trichlorophenol	CT,NY,NC,ME,NH,VA,NJ
2,4,6-Trichlorophenol	CT,NY,NC,ME,NH,VA,NJ
2-Fluorophenol	NC

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC	100033	02/1/2016
MA	Massachusetts DEP	M-MA100	06/30/2015
CT	Connecticut Department of Public Health	PH-0567	09/30/2015
NY	New York State Department of Health	10899 NELAP	04/1/2016
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2016
RI	Rhode Island Department of Health	LAO00112	12/30/2015
NC	North Carolina Div. of Water Quality	652	12/31/2015
NJ	New Jersey DEP	MA007 NELAP	06/30/2015
FL	Florida Department of Health	E871027 NELAP	06/30/2015
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2015
WA	State of Washington Department of Ecology	C2065	02/23/2016
ME	State of Maine	2011028	06/9/2015
VA	Commonwealth of Virginia	460217	12/14/2015
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2015

39 Spruce St.
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Page 1 of 2



Sample Receipt Checklist

CLIENT NAME: LiRo Engineers RECEIVED BY: KB DATE: 3/30/15

1) Was the chain(s) of custody relinquished and signed? ☒ Yes No No CoC Included

2) Does the chain agree with the samples?

If not, explain:

3) Are all the samples in good condition?

If not, explain:

4) How were the samples received:

On Ice ☒ Direct from Sampling ☐ Ambient ☐ In Cooler(s) ☒

Were the samples received in Temperature Compliance of (2-6°C)? ☒ Yes No N/A

Temperature °C by Temp blank _____ Temperature °C by Temp gun 5.1°

5) Are there Dissolved samples for the lab to filter?

Yes ☒ No

Who was notified _____ Date _____ Time _____

6) Are there any RUSH or SHORT HOLDING TIME samples?

Yes ☒ No

Who was notified Dave Date 3/30/15 Time 17:45

7) Location where samples are stored:

19

Permission to subcontract samples? Yes No
(Walk-in clients only) if not already approved
Client Signature: _____

8) Do all samples have the proper Acid pH: ☒ Yes No N/A

9) Do all samples have the proper Base pH: Yes No ☒ N/A

10) Was the PC notified of any discrepancies with the CoC vs the samples: Yes No ☒ N/A

Containers received at Con-Test

	# of containers		# of containers
1 Liter Amber	11	8 oz amber/clear jar	
500 mL Amber		4 oz amber/clear jar	
250 mL Amber (8oz amber)		2 oz amber/clear jar	
1 Liter Plastic	3	Plastic Bag / Ziploc	
500 mL Plastic	3	SOC Kit	
250 mL plastic	3	Non-ConTest Container	
40 mL Vial - type listed below	9	Perchlorate Kit	
Colisure / bacteria bottle		Flashpoint bottle	3
Dissolved Oxygen bottle		Other glass jar	
Encore		Other	

Laboratory Comments:

40 mL vials: # HCl 9 # Methanol _____

Time and Date Frozen:

Doc# 277 # Bisulfate _____ # DI Water _____

Rev. 4 August 2013 # Thiosulfate _____ Unpreserved _____

Login Sample Receipt Checklist

(Rejection Criteria Listing - Using Sample Acceptance Policy)

Any False statement will be brought to the attention of Client

Question	Any False Statement will be brought to the attention of client		Answer (True/False)	Comment
	T/F/NA			
1) The cooler's custody seal, if present, is intact.	NA			
2) The cooler or samples do not appear to have been compromised or tampered with.	T			
3) Samples were received on ice.	T			
4) Cooler Temperature is acceptable.	T			
5) Cooler Temperature is recorded.	T			
6) COC is filled out in ink and legible.	T			
7) COC is filled out with all pertinent information.	T			
8) Field Sampler's name present on COC.	T			
9) There are no discrepancies between the sample IDs on the container and the COC.	T			
10) Samples are received within Holding Time.	T			
11) Sample containers have legible labels.	T			
12) Containers are not broken or leaking.	T			
13) Air Cassettes are not broken/open.	NA			
14) Sample collection date/times are provided.	T			
15) Appropriate sample containers are used.	T			
16) Proper collection media used.	T			
17) No headspace sample bottles are completely filled.	F			
18) There is sufficient volume for all requested analyses, including any requested MS/MSDs.	T			
19) Trip blanks provided if applicable.	NA			
20) VOA sample vials do not have head space or bubble is <6mm (1/4") in diameter.	T			
21) Samples do not require splitting or compositing.	T			

Who notified of False statements?

Date/Time: 3/30/15

Doc #277 Rev. 4 August 2013

Log-In Technician Initials:

KB

Date/Time:

17:45

April 20, 2015

Steve Frank
LiRo Engineers, Inc.
690 Delaware Avenue
Buffalo, NY 14209-2202

Project Location: Motiva Site- Bushwick/NCET
Client Job Number:
Project Number: 13-110-0265
Laboratory Work Order Number: 15D0257

Enclosed are results of analyses for samples received by the laboratory on April 6, 2015. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "James Georgantas". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

James M. Georgantas
Project Manager

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

LiRo Engineers, Inc.
690 Delaware Avenue
Buffalo, NY 14209-2202
ATTN: Steve Frank

REPORT DATE: 4/20/2015

PURCHASE ORDER NUMBER: 13-110-0265

PROJECT NUMBER: 13-110-0265

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 15D0257

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: Motiva Site- Bushwick/NCET

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
SB-08 4.5-5.0'	15D0257-01	Soil		SM 2540G	
				SW-846 8260C	
SB-08 COMP	15D0257-02	Soil		SM 2540G	
				SW-846 6010C	
				SW-846 7471B	
				SW-846 8081B	
				SW-846 8082A	
				SW-846 8151A	
				SW-846 8270D	

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

For method 8151, samples were derivatized on 04/14/15.

For method 8151, sample analysis bracketed by LCS to monitor esterification. All recoveries in the bracketing LCS met method criteria.

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SW-846 6010C

Qualifications:

L-07

Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.

Analyte & Samples(s) Qualified:

Chromium

B118848-BSD1

MS-07

Matrix spike recovery is outside of control limits. Analysis is in control based on laboratory fortified blank recovery. Possibility of sample matrix effects that lead to low bias for reported result or non-homogeneous sample aliquot cannot be eliminated.

Analyte & Samples(s) Qualified:

Antimony

15D0257-02[SB-08 COMP], B118848-MS1

Lead

15D0257-02[SB-08 COMP], B118848-MS1

Zinc

15D0257-02[SB-08 COMP], B118848-MS1

MS-19

Sample to spike ratio is greater than or equal to 4:1. Spiked amount is not representative of the native amount in the sample. Appropriate or meaningful recoveries cannot be calculated.

Analyte & Samples(s) Qualified:

Aluminum

15D0257-02[SB-08 COMP], B118848-MS1

Calcium

15D0257-02[SB-08 COMP], B118848-MS1

Iron

15D0257-02[SB-08 COMP], B118848-MS1

Magnesium

15D0257-02[SB-08 COMP], B118848-MS1

SW-846 7471B

Qualifications:

L-07A

Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD outside of control limits. Reduced precision anticipated for any reported result for this compound.

Analyte & Samples(s) Qualified:

Mercury

15D0257-02[SB-08 COMP], B118849-BSD1, B118849-DUP1

MS-19

Sample to spike ratio is greater than or equal to 4:1. Spiked amount is not representative of the native amount in the sample. Appropriate or meaningful recoveries cannot be calculated.

Analyte & Samples(s) Qualified:

Mercury

15D0257-02[SB-08 COMP], B118849-MS1

SW-846 8081B

Qualifications:

O-27

Elevated reporting limit due to sample matrix interference. Multiple extract clean-up procedures were performed on this sample, but they did not sufficiently remove the interference to meet the requested reporting limit.

Analyte & Samples(s) Qualified:

15D0257-02[SB-08 COMP]

SW-846 8260C

Qualifications:

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L-02

Laboratory fortified blank/laboratory control sample recovery and duplicate recoveries outside of control limits. Data validation is not affected since all results are "not detected" for associated samples in this batch and bias is on the high side.

Analyte & Samples(s) Qualified:

tert-Butyl Alcohol (TBA)

B118813-BS1, B118813-BSD1

L-07

Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.

Analyte & Samples(s) Qualified:

1,4-Dioxane

B118813-BSD1

Tetrahydrofuran

B118813-BSD1

Trichlorofluoromethane (Freon 11)

B118813-BSD1

PR-03

Sample preserved in the laboratory, not in the field as required by the method.

Analyte & Samples(s) Qualified:

15D0257-01[SB-08 4.5-5.0']

PR-15

According to the NY ELAP program, all voa results less than 0.2mg/Kg are estimated and biased low if not collected according to SW-846 5035-L/5035A-L.

Analyte & Samples(s) Qualified:

15D0257-01[SB-08 4.5-5.0']

V-05

Continuing calibration did not meet method specifications and was biased on the low side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the low side.

Analyte & Samples(s) Qualified:

Naphthalene

15D0257-01[SB-08 4.5-5.0'], B118813-BLK1, B118813-BS1, B118813-BSD1

V-20

Continuing calibration did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

Analyte & Samples(s) Qualified:

1,4-Dioxane

B118813-BS1, B118813-BSD1

Acetone

B118813-BS1, B118813-BSD1

SW-846 8270D

Qualifications:

L-04

Laboratory fortified blank/laboratory control sample recovery and duplicate recovery are outside of control limits. Reported value for this compound is likely to be biased on the low side.

Analyte & Samples(s) Qualified:

2,4-Dinitrophenol

15D0257-02[SB-08 COMP], B118988-BLK1, B118988-BS1, B118988-BSD1

L-07

Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.

Analyte & Samples(s) Qualified:

Benzoic Acid

B118988-BSD1

N-Nitrosodiphenylamine

B118988-BS1

MS-09

Matrix spike recovery and matrix spike duplicate recovery outside of control limits. Possibility of sample matrix effects that lead to a low bias for reported result or non-homogeneous sample aliquots cannot be eliminated.

Analyte & Samples(s) Qualified:**2,4-Dinitrophenol**

15D0257-02[SB-08 COMP], B118988-MS1, B118988-MSD1

3,3-Dichlorobenzidine

15D0257-02[SB-08 COMP], B118988-MS1, B118988-MSD1

4,6-Dinitro-2-methylphenol

15D0257-02[SB-08 COMP], B118988-MS1, B118988-MSD1

4-Chloroaniline

15D0257-02[SB-08 COMP], B118988-MS1, B118988-MSD1

Aniline

15D0257-02[SB-08 COMP], B118988-MS1, B118988-MSD1

Benzidine

15D0257-02[SB-08 COMP], B118988-MS1, B118988-MSD1

Benzoic Acid

15D0257-02[SB-08 COMP], B118988-MS1, B118988-MSD1

MS-22

Either matrix spike or MS duplicate is outside of control limits, but the other is within limits. RPD between the two MS/MSD results is within method specified criteria.

Analyte & Samples(s) Qualified:**Fluoranthene**

B118988-MS1

Hexachlorocyclopentadiene

B118988-MSD1

Pyrene

B118988-MS1

MS-23

Either matrix spike or MS duplicate is outside of control limits, but the other is within limits. RPD between the two MS/MSD results is outside of the method specified criteria. Reduced precision anticipated for any reported result for this compound.

Analyte & Samples(s) Qualified:**Benzo(g,h,i)perylene**

B118988-MSD1

Dibenz(a,h)anthracene

B118988-MSD1

Indeno(1,2,3-cd)pyrene

B118988-MSD1

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R-05

Laboratory fortified blank duplicate RPD is outside of control limits. Reduced precision is anticipated for any reported value for this compound.

Analyte & Samples(s) Qualified:

2-Chlorophenol

15D0257-02[SB-08 COMP], B118988-BLK1, B118988-BS1, B118988-BSD1

2-Methylphenol

15D0257-02[SB-08 COMP], B118988-BLK1, B118988-BS1, B118988-BSD1

2-Nitrophenol

15D0257-02[SB-08 COMP], B118988-BLK1, B118988-BS1, B118988-BSD1

Acetophenone

15D0257-02[SB-08 COMP], B118988-BLK1, B118988-BS1, B118988-BSD1

Benzaldehyde

B118988-BLK1, B118988-BS1, B118988-BSD1

Biphenyl

B118988-BLK1, B118988-BS1, B118988-BSD1

Bis(2-chloroethoxy)methane

15D0257-02[SB-08 COMP], B118988-BLK1, B118988-BS1, B118988-BSD1, B118988-MS1, B118988-MSD1

Bis(2-chloroethyl)ether

15D0257-02[SB-08 COMP], B118988-BLK1, B118988-BS1, B118988-BSD1

Bis(2-chloroisopropyl)ether

15D0257-02[SB-08 COMP], B118988-BLK1, B118988-BS1, B118988-BSD1

Hexachlorobutadiene

15D0257-02[SB-08 COMP], B118988-BLK1, B118988-BS1, B118988-BSD1

Nitrobenzene

15D0257-02[SB-08 COMP], B118988-BLK1, B118988-BS1, B118988-BSD1

N-Nitrosodi-n-propylamine

15D0257-02[SB-08 COMP], B118988-BLK1, B118988-BS1, B118988-BSD1

Phenol

15D0257-02[SB-08 COMP], B118988-BLK1, B118988-BS1, B118988-BSD1

R-06

Matrix spike duplicate RPD is outside of control limits. Reduced precision is anticipated for reported result for this compound in this sample.

Analyte & Samples(s) Qualified:

Benzo(g,h,i)perylene

15D0257-02[SB-08 COMP], B118988-MS1

Dibenz(a,h)anthracene

15D0257-02[SB-08 COMP], B118988-MS1

Indeno(1,2,3-cd)pyrene

15D0257-02[SB-08 COMP], B118988-MS1

V-05

Continuing calibration did not meet method specifications and was biased on the low side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the low side.

Analyte & Samples(s) Qualified:

Benzidine

B118988-BS1, B118988-BSD1, B118988-MS1, B118988-MSD1

V-06

Continuing calibration did not meet method specifications and was biased on the high side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the high side.

Analyte & Samples(s) Qualified:

2,3,4,6-Tetrachlorophenol

B118988-BS1, B118988-BSD1

Atrazine

B118988-BS1, B118988-BSD1

Benzaldehyde

B118988-BS1, B118988-BSD1

V-16

Response factor is less than method specified minimum acceptable value. Reduced precision and accuracy may be associated with reported result.

Analyte & Samples(s) Qualified:

Pentachloronitrobenzene

15D0257-02[SB-08 COMP], B118988-BLK1, B118988-BS1, B118988-BSD1, B118988-MS1, B118988-MSD1

V-20

Continuing calibration did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

Analyte & Samples(s) Qualified:**Atrazine**

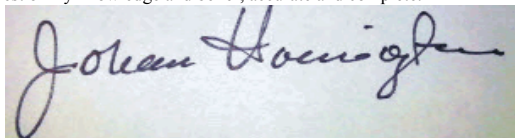
B118988-BLK1

Benzaldehyde

B118988-BLK1

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

A handwritten signature in black ink, appearing to read "Johanna K. Harrington". The signature is written in a cursive, flowing style.

Johanna K. Harrington

Manager, Laboratory Reporting

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Motiva Site- Bushwick/NCET

Sample Description:

Work Order: 15D0257

Date Received: 4/6/2015

Field Sample #: SB-08 4.5-5.0'

Sampled: 4/6/2015 09:40

Sample ID: 15D0257-01

Sample Matrix: Soil

Sample Flags: PR-03, PR-15

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.12	mg/Kg dry	1		SW-846 8260C	4/8/15	4/8/15 12:08	MFF
Acrylonitrile	ND	0.0072	mg/Kg dry	1		SW-846 8260C	4/8/15	4/8/15 12:08	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.0012	mg/Kg dry	1		SW-846 8260C	4/8/15	4/8/15 12:08	MFF
Benzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	4/8/15	4/8/15 12:08	MFF
Bromobenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	4/8/15	4/8/15 12:08	MFF
Bromochloromethane	ND	0.0024	mg/Kg dry	1		SW-846 8260C	4/8/15	4/8/15 12:08	MFF
Bromodichloromethane	ND	0.0024	mg/Kg dry	1		SW-846 8260C	4/8/15	4/8/15 12:08	MFF
Bromoform	ND	0.0024	mg/Kg dry	1		SW-846 8260C	4/8/15	4/8/15 12:08	MFF
Bromomethane	ND	0.012	mg/Kg dry	1		SW-846 8260C	4/8/15	4/8/15 12:08	MFF
2-Butanone (MEK)	ND	0.048	mg/Kg dry	1		SW-846 8260C	4/8/15	4/8/15 12:08	MFF
tert-Butyl Alcohol (TBA)	ND	0.048	mg/Kg dry	1		SW-846 8260C	4/8/15	4/8/15 12:08	MFF
n-Butylbenzene	0.046	0.0024	mg/Kg dry	1		SW-846 8260C	4/8/15	4/8/15 12:08	MFF
sec-Butylbenzene	0.012	0.0024	mg/Kg dry	1		SW-846 8260C	4/8/15	4/8/15 12:08	MFF
tert-Butylbenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	4/8/15	4/8/15 12:08	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.0012	mg/Kg dry	1		SW-846 8260C	4/8/15	4/8/15 12:08	MFF
Carbon Disulfide	ND	0.024	mg/Kg dry	1		SW-846 8260C	4/8/15	4/8/15 12:08	MFF
Carbon Tetrachloride	ND	0.0024	mg/Kg dry	1		SW-846 8260C	4/8/15	4/8/15 12:08	MFF
Chlorobenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	4/8/15	4/8/15 12:08	MFF
Chlorodibromomethane	ND	0.0012	mg/Kg dry	1		SW-846 8260C	4/8/15	4/8/15 12:08	MFF
Chloroethane	ND	0.024	mg/Kg dry	1		SW-846 8260C	4/8/15	4/8/15 12:08	MFF
Chloroform	ND	0.0048	mg/Kg dry	1		SW-846 8260C	4/8/15	4/8/15 12:08	MFF
Chloromethane	ND	0.012	mg/Kg dry	1		SW-846 8260C	4/8/15	4/8/15 12:08	MFF
2-Chlorotoluene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	4/8/15	4/8/15 12:08	MFF
4-Chlorotoluene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	4/8/15	4/8/15 12:08	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0024	mg/Kg dry	1		SW-846 8260C	4/8/15	4/8/15 12:08	MFF
1,2-Dibromoethane (EDB)	ND	0.0012	mg/Kg dry	1		SW-846 8260C	4/8/15	4/8/15 12:08	MFF
Dibromomethane	ND	0.0024	mg/Kg dry	1		SW-846 8260C	4/8/15	4/8/15 12:08	MFF
1,2-Dichlorobenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	4/8/15	4/8/15 12:08	MFF
1,3-Dichlorobenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	4/8/15	4/8/15 12:08	MFF
1,4-Dichlorobenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	4/8/15	4/8/15 12:08	MFF
trans-1,4-Dichloro-2-butene	ND	0.0048	mg/Kg dry	1		SW-846 8260C	4/8/15	4/8/15 12:08	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.024	mg/Kg dry	1		SW-846 8260C	4/8/15	4/8/15 12:08	MFF
1,1-Dichloroethane	ND	0.0024	mg/Kg dry	1		SW-846 8260C	4/8/15	4/8/15 12:08	MFF
1,2-Dichloroethane	ND	0.0024	mg/Kg dry	1		SW-846 8260C	4/8/15	4/8/15 12:08	MFF
1,1-Dichloroethylene	ND	0.0048	mg/Kg dry	1		SW-846 8260C	4/8/15	4/8/15 12:08	MFF
cis-1,2-Dichloroethylene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	4/8/15	4/8/15 12:08	MFF
trans-1,2-Dichloroethylene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	4/8/15	4/8/15 12:08	MFF
1,2-Dichloropropane	ND	0.0024	mg/Kg dry	1		SW-846 8260C	4/8/15	4/8/15 12:08	MFF
1,3-Dichloropropane	ND	0.0012	mg/Kg dry	1		SW-846 8260C	4/8/15	4/8/15 12:08	MFF
2,2-Dichloropropane	ND	0.0024	mg/Kg dry	1		SW-846 8260C	4/8/15	4/8/15 12:08	MFF
1,1-Dichloropropene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	4/8/15	4/8/15 12:08	MFF
cis-1,3-Dichloropropene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	4/8/15	4/8/15 12:08	MFF
trans-1,3-Dichloropropene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	4/8/15	4/8/15 12:08	MFF
Diethyl Ether	ND	0.024	mg/Kg dry	1		SW-846 8260C	4/8/15	4/8/15 12:08	MFF

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Motiva Site- Bushwick/NCET

Sample Description:

Work Order: 15D0257

Date Received: 4/6/2015

Field Sample #: SB-08 4.5-5.0'

Sampled: 4/6/2015 09:40

Sample ID: 15D0257-01

Sample Matrix: Soil

Sample Flags: PR-03, PR-15

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.0012	mg/Kg dry	1		SW-846 8260C	4/8/15	4/8/15 12:08	MFF
1,4-Dioxane	ND	0.12	mg/Kg dry	1		SW-846 8260C	4/8/15	4/8/15 12:08	MFF
Ethylbenzene	0.0026	0.0024	mg/Kg dry	1		SW-846 8260C	4/8/15	4/8/15 12:08	MFF
Hexachlorobutadiene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	4/8/15	4/8/15 12:08	MFF
Isopropylbenzene (Cumene)	0.0037	0.0024	mg/Kg dry	1		SW-846 8260C	4/8/15	4/8/15 12:08	MFF
p-Isopropyltoluene (p-Cymene)	0.013	0.0024	mg/Kg dry	1		SW-846 8260C	4/8/15	4/8/15 12:08	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0048	mg/Kg dry	1		SW-846 8260C	4/8/15	4/8/15 12:08	MFF
Methylene Chloride	ND	0.024	mg/Kg dry	1		SW-846 8260C	4/8/15	4/8/15 12:08	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.024	mg/Kg dry	1		SW-846 8260C	4/8/15	4/8/15 12:08	MFF
Naphthalene	ND	0.0048	mg/Kg dry	1	V-05	SW-846 8260C	4/8/15	4/8/15 12:08	MFF
n-Propylbenzene	0.011	0.0024	mg/Kg dry	1		SW-846 8260C	4/8/15	4/8/15 12:08	MFF
Styrene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	4/8/15	4/8/15 12:08	MFF
1,1,1,2-Tetrachloroethane	ND	0.0024	mg/Kg dry	1		SW-846 8260C	4/8/15	4/8/15 12:08	MFF
Tetrachloroethylene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	4/8/15	4/8/15 12:08	MFF
Tetrahydrofuran	ND	0.012	mg/Kg dry	1		SW-846 8260C	4/8/15	4/8/15 12:08	MFF
Toluene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	4/8/15	4/8/15 12:08	MFF
1,2,3-Trichlorobenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	4/8/15	4/8/15 12:08	MFF
1,2,4-Trichlorobenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	4/8/15	4/8/15 12:08	MFF
1,3,5-Trichlorobenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	4/8/15	4/8/15 12:08	MFF
1,1,1-Trichloroethane	ND	0.0048	mg/Kg dry	1		SW-846 8260C	4/8/15	4/8/15 12:08	MFF
1,1,2-Trichloroethane	ND	0.0024	mg/Kg dry	1		SW-846 8260C	4/8/15	4/8/15 12:08	MFF
Trichloroethylene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	4/8/15	4/8/15 12:08	MFF
Trichlorofluoromethane (Freon 11)	ND	0.012	mg/Kg dry	1		SW-846 8260C	4/8/15	4/8/15 12:08	MFF
1,2,3-Trichloropropane	ND	0.0024	mg/Kg dry	1		SW-846 8260C	4/8/15	4/8/15 12:08	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.012	mg/Kg dry	1		SW-846 8260C	4/8/15	4/8/15 12:08	MFF
1,2,4-Trimethylbenzene	0.050	0.0024	mg/Kg dry	1		SW-846 8260C	4/8/15	4/8/15 12:08	MFF
1,3,5-Trimethylbenzene	0.048	0.0024	mg/Kg dry	1		SW-846 8260C	4/8/15	4/8/15 12:08	MFF
Vinyl Chloride	ND	0.012	mg/Kg dry	1		SW-846 8260C	4/8/15	4/8/15 12:08	MFF
m+p Xylene	ND	0.0048	mg/Kg dry	1		SW-846 8260C	4/8/15	4/8/15 12:08	MFF
o-Xylene	0.012	0.0024	mg/Kg dry	1		SW-846 8260C	4/8/15	4/8/15 12:08	MFF
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
1,2-Dichloroethane-d4	109	70-130						4/8/15 12:08	
Toluene-d8	101	70-130						4/8/15 12:08	
4-Bromofluorobenzene	102	70-130						4/8/15 12:08	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Motiva Site- Bushwick/NCET

Sample Description:

Work Order: 15D0257

Date Received: 4/6/2015

Field Sample #: SB-08 4.5-5.0'

Sampled: 4/6/2015 09:40

Sample ID: 15D0257-01

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	89.1		% Wt	1		SM 2540G	4/11/15	4/13/15 9:13	MRL

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Motiva Site- Bushwick/NCET

Sample Description:

Work Order: 15D0257

Date Received: 4/6/2015

Field Sample #: SB-08 COMP

Sampled: 4/6/2015 09:45

Sample ID: 15D0257-02

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.38	mg/Kg dry	2		SW-846 8270D	4/10/15	4/13/15 11:21	BGL
Acenaphthylene	ND	0.38	mg/Kg dry	2		SW-846 8270D	4/10/15	4/13/15 11:21	BGL
Acetophenone	ND	0.76	mg/Kg dry	2	R-05	SW-846 8270D	4/10/15	4/13/15 11:21	BGL
Aniline	ND	0.76	mg/Kg dry	2	MS-09	SW-846 8270D	4/10/15	4/13/15 11:21	BGL
Anthracene	0.69	0.38	mg/Kg dry	2		SW-846 8270D	4/10/15	4/13/15 11:21	BGL
Benzidine	ND	1.5	mg/Kg dry	2	MS-09	SW-846 8270D	4/10/15	4/13/15 11:21	BGL
Benzo(a)anthracene	2.7	0.38	mg/Kg dry	2		SW-846 8270D	4/10/15	4/13/15 11:21	BGL
Benzo(a)pyrene	2.7	0.38	mg/Kg dry	2		SW-846 8270D	4/10/15	4/13/15 11:21	BGL
Benzo(b)fluoranthene	3.2	0.38	mg/Kg dry	2		SW-846 8270D	4/10/15	4/13/15 11:21	BGL
Benzo(g,h,i)perylene	1.8	0.38	mg/Kg dry	2	R-06	SW-846 8270D	4/10/15	4/13/15 11:21	BGL
Benzo(k)fluoranthene	1.3	0.38	mg/Kg dry	2		SW-846 8270D	4/10/15	4/13/15 11:21	BGL
Benzoic Acid	ND	2.2	mg/Kg dry	2	MS-09	SW-846 8270D	4/10/15	4/13/15 11:21	BGL
Bis(2-chloroethoxy)methane	ND	0.76	mg/Kg dry	2	R-05	SW-846 8270D	4/10/15	4/13/15 11:21	BGL
Bis(2-chloroethyl)ether	ND	0.76	mg/Kg dry	2	R-05	SW-846 8270D	4/10/15	4/13/15 11:21	BGL
Bis(2-chloroisopropyl)ether	ND	0.76	mg/Kg dry	2	R-05	SW-846 8270D	4/10/15	4/13/15 11:21	BGL
Bis(2-Ethylhexyl)phthalate	ND	0.76	mg/Kg dry	2		SW-846 8270D	4/10/15	4/13/15 11:21	BGL
4-Bromophenylphenylether	ND	0.76	mg/Kg dry	2		SW-846 8270D	4/10/15	4/13/15 11:21	BGL
Butylbenzylphthalate	ND	0.76	mg/Kg dry	2		SW-846 8270D	4/10/15	4/13/15 11:21	BGL
Carbazole	ND	0.38	mg/Kg dry	2		SW-846 8270D	4/10/15	4/13/15 11:21	BGL
4-Chloroaniline	ND	1.5	mg/Kg dry	2	MS-09	SW-846 8270D	4/10/15	4/13/15 11:21	BGL
4-Chloro-3-methylphenol	ND	1.5	mg/Kg dry	2		SW-846 8270D	4/10/15	4/13/15 11:21	BGL
2-Chloronaphthalene	ND	0.76	mg/Kg dry	2		SW-846 8270D	4/10/15	4/13/15 11:21	BGL
2-Chlorophenol	ND	0.76	mg/Kg dry	2	R-05	SW-846 8270D	4/10/15	4/13/15 11:21	BGL
4-Chlorophenylphenylether	ND	0.76	mg/Kg dry	2		SW-846 8270D	4/10/15	4/13/15 11:21	BGL
Chrysene	2.8	0.38	mg/Kg dry	2		SW-846 8270D	4/10/15	4/13/15 11:21	BGL
Dibenz(a,h)anthracene	0.39	0.38	mg/Kg dry	2	R-06	SW-846 8270D	4/10/15	4/13/15 11:21	BGL
Dibenzofuran	ND	0.76	mg/Kg dry	2		SW-846 8270D	4/10/15	4/13/15 11:21	BGL
Di-n-butylphthalate	ND	0.76	mg/Kg dry	2		SW-846 8270D	4/10/15	4/13/15 11:21	BGL
1,2-Dichlorobenzene	ND	0.76	mg/Kg dry	2		SW-846 8270D	4/10/15	4/13/15 11:21	BGL
1,3-Dichlorobenzene	ND	0.76	mg/Kg dry	2		SW-846 8270D	4/10/15	4/13/15 11:21	BGL
1,4-Dichlorobenzene	ND	0.76	mg/Kg dry	2		SW-846 8270D	4/10/15	4/13/15 11:21	BGL
3,3-Dichlorobenzidine	ND	0.38	mg/Kg dry	2	MS-09	SW-846 8270D	4/10/15	4/13/15 11:21	BGL
2,4-Dichlorophenol	ND	0.76	mg/Kg dry	2		SW-846 8270D	4/10/15	4/13/15 11:21	BGL
Diethylphthalate	ND	0.76	mg/Kg dry	2		SW-846 8270D	4/10/15	4/13/15 11:21	BGL
2,4-Dimethylphenol	ND	0.76	mg/Kg dry	2		SW-846 8270D	4/10/15	4/13/15 11:21	BGL
Dimethylphthalate	ND	0.76	mg/Kg dry	2		SW-846 8270D	4/10/15	4/13/15 11:21	BGL
4,6-Dinitro-2-methylphenol	ND	0.76	mg/Kg dry	2	MS-09	SW-846 8270D	4/10/15	4/13/15 11:21	BGL
2,4-Dinitrophenol	ND	1.5	mg/Kg dry	2	L-04, MS-09	SW-846 8270D	4/10/15	4/13/15 11:21	BGL
2,4-Dinitrotoluene	ND	0.76	mg/Kg dry	2		SW-846 8270D	4/10/15	4/13/15 11:21	BGL
2,6-Dinitrotoluene	ND	0.76	mg/Kg dry	2		SW-846 8270D	4/10/15	4/13/15 11:21	BGL
Di-n-octylphthalate	ND	0.76	mg/Kg dry	2		SW-846 8270D	4/10/15	4/13/15 11:21	BGL
1,2-Diphenylhydrazine (as Azobenzene)	ND	0.76	mg/Kg dry	2		SW-846 8270D	4/10/15	4/13/15 11:21	BGL
Fluoranthene	5.6	0.38	mg/Kg dry	2		SW-846 8270D	4/10/15	4/13/15 11:21	BGL
Fluorene	ND	0.38	mg/Kg dry	2		SW-846 8270D	4/10/15	4/13/15 11:21	BGL

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Project Location: Motiva Site- Bushwick/NCET

Sample Description:

Work Order: 15D0257

Date Received: 4/6/2015

Field Sample #: SB-08 COMP

Sampled: 4/6/2015 09:45

Sample ID: 15D0257-02

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	0.76	mg/Kg dry	2		SW-846 8270D	4/10/15	4/13/15 11:21	BGL
Hexachlorobutadiene	ND	0.76	mg/Kg dry	2	R-05	SW-846 8270D	4/10/15	4/13/15 11:21	BGL
Hexachlorocyclopentadiene	ND	0.76	mg/Kg dry	2		SW-846 8270D	4/10/15	4/13/15 11:21	BGL
Hexachloroethane	ND	0.76	mg/Kg dry	2		SW-846 8270D	4/10/15	4/13/15 11:21	BGL
Indeno(1,2,3-cd)pyrene	1.9	0.38	mg/Kg dry	2	R-06	SW-846 8270D	4/10/15	4/13/15 11:21	BGL
Isophorone	ND	0.76	mg/Kg dry	2		SW-846 8270D	4/10/15	4/13/15 11:21	BGL
1-Methylnaphthalene	ND	0.38	mg/Kg dry	2		SW-846 8270D	4/10/15	4/13/15 11:21	BGL
2-Methylnaphthalene	ND	0.38	mg/Kg dry	2		SW-846 8270D	4/10/15	4/13/15 11:21	BGL
2-Methylphenol	ND	0.76	mg/Kg dry	2	R-05	SW-846 8270D	4/10/15	4/13/15 11:21	BGL
3/4-Methylphenol	ND	0.76	mg/Kg dry	2		SW-846 8270D	4/10/15	4/13/15 11:21	BGL
Naphthalene	ND	0.38	mg/Kg dry	2		SW-846 8270D	4/10/15	4/13/15 11:21	BGL
2-Nitroaniline	ND	0.76	mg/Kg dry	2		SW-846 8270D	4/10/15	4/13/15 11:21	BGL
3-Nitroaniline	ND	0.76	mg/Kg dry	2		SW-846 8270D	4/10/15	4/13/15 11:21	BGL
4-Nitroaniline	ND	0.76	mg/Kg dry	2		SW-846 8270D	4/10/15	4/13/15 11:21	BGL
Nitrobenzene	ND	0.76	mg/Kg dry	2	R-05	SW-846 8270D	4/10/15	4/13/15 11:21	BGL
2-Nitrophenol	ND	0.76	mg/Kg dry	2	R-05	SW-846 8270D	4/10/15	4/13/15 11:21	BGL
4-Nitrophenol	ND	1.5	mg/Kg dry	2		SW-846 8270D	4/10/15	4/13/15 11:21	BGL
N-Nitrosodimethylamine	ND	0.76	mg/Kg dry	2		SW-846 8270D	4/10/15	4/13/15 11:21	BGL
N-Nitrosodiphenylamine	ND	0.76	mg/Kg dry	2		SW-846 8270D	4/10/15	4/13/15 11:21	BGL
N-Nitrosodi-n-propylamine	ND	0.76	mg/Kg dry	2	R-05	SW-846 8270D	4/10/15	4/13/15 11:21	BGL
Pentachloronitrobenzene	ND	0.76	mg/Kg dry	2	V-16	SW-846 8270D	4/10/15	4/13/15 11:21	BGL
Pentachlorophenol	ND	0.76	mg/Kg dry	2		SW-846 8270D	4/10/15	4/13/15 11:21	BGL
Phenanthrene	3.2	0.38	mg/Kg dry	2		SW-846 8270D	4/10/15	4/13/15 11:21	BGL
Phenol	ND	0.76	mg/Kg dry	2	R-05	SW-846 8270D	4/10/15	4/13/15 11:21	BGL
Pyrene	5.3	0.38	mg/Kg dry	2		SW-846 8270D	4/10/15	4/13/15 11:21	BGL
Pyridine	ND	0.76	mg/Kg dry	2		SW-846 8270D	4/10/15	4/13/15 11:21	BGL
1,2,4,5-Tetrachlorobenzene	ND	0.76	mg/Kg dry	2		SW-846 8270D	4/10/15	4/13/15 11:21	BGL
1,2,4-Trichlorobenzene	ND	0.76	mg/Kg dry	2		SW-846 8270D	4/10/15	4/13/15 11:21	BGL
2,4,5-Trichlorophenol	ND	0.76	mg/Kg dry	2		SW-846 8270D	4/10/15	4/13/15 11:21	BGL
2,4,6-Trichlorophenol	ND	0.76	mg/Kg dry	2		SW-846 8270D	4/10/15	4/13/15 11:21	BGL
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
2-Fluorophenol	60.4	30-130						4/13/15 11:21	
Phenol-d6	64.7	30-130						4/13/15 11:21	
Nitrobenzene-d5	68.1	30-130						4/13/15 11:21	
2-Fluorobiphenyl	69.5	30-130						4/13/15 11:21	
2,4,6-Tribromophenol	56.8	30-130						4/13/15 11:21	
p-Terphenyl-d14	78.3	30-130						4/13/15 11:21	

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Project Location: Motiva Site- Bushwick/NCET

Sample Description:

Work Order: 15D0257

Date Received: 4/6/2015

Field Sample #: SB-08 COMP

Sampled: 4/6/2015 09:45

Sample ID: 15D0257-02

Sample Matrix: Soil

Sample Flags: O-27

Organochloride Pesticides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Alachlor [1]	ND	0.45	mg/Kg dry	20		SW-846 8081B	4/10/15	4/13/15 23:00	PJG
Aldrin [1]	ND	0.11	mg/Kg dry	20		SW-846 8081B	4/10/15	4/13/15 23:00	PJG
alpha-BHC [1]	ND	0.11	mg/Kg dry	20		SW-846 8081B	4/10/15	4/13/15 23:00	PJG
beta-BHC [1]	ND	0.11	mg/Kg dry	20		SW-846 8081B	4/10/15	4/13/15 23:00	PJG
delta-BHC [1]	ND	0.11	mg/Kg dry	20		SW-846 8081B	4/10/15	4/13/15 23:00	PJG
gamma-BHC (Lindane) [1]	ND	0.045	mg/Kg dry	20		SW-846 8081B	4/10/15	4/13/15 23:00	PJG
Chlordane [1]	ND	0.45	mg/Kg dry	20		SW-846 8081B	4/10/15	4/13/15 23:00	PJG
4,4'-DDD [1]	ND	0.090	mg/Kg dry	20		SW-846 8081B	4/10/15	4/13/15 23:00	PJG
4,4'-DDE [1]	ND	0.090	mg/Kg dry	20		SW-846 8081B	4/10/15	4/13/15 23:00	PJG
4,4'-DDT [1]	ND	0.090	mg/Kg dry	20		SW-846 8081B	4/10/15	4/13/15 23:00	PJG
Dieldrin [1]	ND	0.090	mg/Kg dry	20		SW-846 8081B	4/10/15	4/13/15 23:00	PJG
Endosulfan I [1]	ND	0.11	mg/Kg dry	20		SW-846 8081B	4/10/15	4/13/15 23:00	PJG
Endosulfan II [1]	ND	0.18	mg/Kg dry	20		SW-846 8081B	4/10/15	4/13/15 23:00	PJG
Endosulfan sulfate [1]	ND	0.18	mg/Kg dry	20		SW-846 8081B	4/10/15	4/13/15 23:00	PJG
Endrin [1]	ND	0.18	mg/Kg dry	20		SW-846 8081B	4/10/15	4/13/15 23:00	PJG
Endrin aldehyde [1]	ND	0.18	mg/Kg dry	20		SW-846 8081B	4/10/15	4/13/15 23:00	PJG
Endrin ketone [1]	ND	0.18	mg/Kg dry	20		SW-846 8081B	4/10/15	4/13/15 23:00	PJG
Heptachlor [1]	ND	0.11	mg/Kg dry	20		SW-846 8081B	4/10/15	4/13/15 23:00	PJG
Heptachlor epoxide [1]	ND	0.11	mg/Kg dry	20		SW-846 8081B	4/10/15	4/13/15 23:00	PJG
Hexachlorobenzene [1]	ND	0.13	mg/Kg dry	20		SW-846 8081B	4/10/15	4/13/15 23:00	PJG
Methoxychlor [1]	ND	1.1	mg/Kg dry	20		SW-846 8081B	4/10/15	4/13/15 23:00	PJG
Toxaphene [1]	ND	2.2	mg/Kg dry	20		SW-846 8081B	4/10/15	4/13/15 23:00	PJG
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
Decachlorobiphenyl [1]	95.6	30-150							
Decachlorobiphenyl [2]	111	30-150							
Tetrachloro-m-xylene [1]	97.8	30-150							
Tetrachloro-m-xylene [2]	96.4	30-150							

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Project Location: Motiva Site- Bushwick/NCET

Sample Description:

Work Order: 15D0257

Date Received: 4/6/2015

Field Sample #: SB-08 COMP

Sampled: 4/6/2015 09:45

Sample ID: 15D0257-02

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	4/10/15	4/11/15 21:55	PJG
Aroclor-1221 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	4/10/15	4/11/15 21:55	PJG
Aroclor-1232 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	4/10/15	4/11/15 21:55	PJG
Aroclor-1242 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	4/10/15	4/11/15 21:55	PJG
Aroclor-1248 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	4/10/15	4/11/15 21:55	PJG
Aroclor-1254 [2]	0.43	0.11	mg/Kg dry	5		SW-846 8082A	4/10/15	4/11/15 21:55	PJG
Aroclor-1260 [2]	0.30	0.11	mg/Kg dry	5		SW-846 8082A	4/10/15	4/11/15 21:55	PJG
Aroclor-1262 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	4/10/15	4/11/15 21:55	PJG
Aroclor-1268 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	4/10/15	4/11/15 21:55	PJG
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
Decachlorobiphenyl [1]	88.5	30-150						4/11/15 21:55	
Decachlorobiphenyl [2]	98.9	30-150						4/11/15 21:55	
Tetrachloro-m-xylene [1]	96.1	30-150						4/11/15 21:55	
Tetrachloro-m-xylene [2]	98.3	30-150						4/11/15 21:55	

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Project Location: Motiva Site- Bushwick/NCET

Sample Description:

Work Order: 15D0257

Date Received: 4/6/2015

Field Sample #: SB-08 COMP

Sampled: 4/6/2015 09:45

Sample ID: 15D0257-02

Sample Matrix: Soil

Herbicides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2,4-D [1]	ND	28	µg/kg dry	1		SW-846 8151A	4/13/15	4/17/15 4:22	PJG
2,4-DB [1]	ND	28	µg/kg dry	1		SW-846 8151A	4/13/15	4/17/15 4:22	PJG
2,4,5-TP (Silvex) [1]	ND	2.8	µg/kg dry	1		SW-846 8151A	4/13/15	4/17/15 4:22	PJG
2,4,5-T [1]	ND	2.8	µg/kg dry	1		SW-846 8151A	4/13/15	4/17/15 4:22	PJG
Dalapon [1]	ND	69	µg/kg dry	1		SW-846 8151A	4/13/15	4/17/15 4:22	PJG
Dicamba [1]	ND	2.8	µg/kg dry	1		SW-846 8151A	4/13/15	4/17/15 4:22	PJG
Dichloroprop [1]	ND	28	µg/kg dry	1		SW-846 8151A	4/13/15	4/17/15 4:22	PJG
Dinoseb [1]	ND	14	µg/kg dry	1		SW-846 8151A	4/13/15	4/17/15 4:22	PJG
MCPA [1]	ND	2800	µg/kg dry	1		SW-846 8151A	4/13/15	4/17/15 4:22	PJG
MCPP [1]	ND	2800	µg/kg dry	1		SW-846 8151A	4/13/15	4/17/15 4:22	PJG
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
2,4-Dichlorophenylacetic acid [1]	94.3	30-150						4/17/15 4:22	
2,4-Dichlorophenylacetic acid [2]	95.3	30-150						4/17/15 4:22	

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Project Location: Motiva Site- Bushwick/NCET

Sample Description:

Work Order: 15D0257

Date Received: 4/6/2015

Field Sample #: SB-08 COMP

Sampled: 4/6/2015 09:45

Sample ID: 15D0257-02

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aluminum	6700	2.8	mg/Kg dry	1	MS-19	SW-846 6010C	4/8/15	4/10/15 11:26	MJH
Antimony	ND	2.8	mg/Kg dry	1	MS-07	SW-846 6010C	4/8/15	4/10/15 11:26	MJH
Arsenic	45	2.8	mg/Kg dry	1		SW-846 6010C	4/8/15	4/10/15 11:26	MJH
Barium	86	2.8	mg/Kg dry	1		SW-846 6010C	4/8/15	4/10/15 11:26	MJH
Beryllium	1.7	0.28	mg/Kg dry	1		SW-846 6010C	4/8/15	4/10/15 11:26	MJH
Cadmium	2.9	0.28	mg/Kg dry	1		SW-846 6010C	4/8/15	4/10/15 11:26	MJH
Calcium	9000	8.3	mg/Kg dry	1	MS-19	SW-846 6010C	4/8/15	4/10/15 11:26	MJH
Chromium	21	0.56	mg/Kg dry	1		SW-846 6010C	4/8/15	4/10/15 11:26	MJH
Cobalt	7.7	2.8	mg/Kg dry	1		SW-846 6010C	4/8/15	4/10/15 11:26	MJH
Copper	100	0.56	mg/Kg dry	1		SW-846 6010C	4/8/15	4/13/15 16:06	MJH
Iron	23000	2.8	mg/Kg dry	1	MS-19	SW-846 6010C	4/8/15	4/13/15 16:06	MJH
Lead	380	0.83	mg/Kg dry	1	MS-07	SW-846 6010C	4/8/15	4/13/15 16:06	MJH
Magnesium	6100	8.3	mg/Kg dry	1	MS-19	SW-846 6010C	4/8/15	4/13/15 16:06	MJH
Manganese	230	0.56	mg/Kg dry	1		SW-846 6010C	4/8/15	4/10/15 11:26	MJH
Mercury	1.8	0.28	mg/Kg dry	10	L-07A, MS-19	SW-846 7471B	4/8/15	4/9/15 12:14	SCB
Nickel	25	0.56	mg/Kg dry	1		SW-846 6010C	4/8/15	4/10/15 11:26	MJH
Potassium	1000	110	mg/Kg dry	1		SW-846 6010C	4/8/15	4/10/15 11:26	MJH
Selenium	ND	5.6	mg/Kg dry	1		SW-846 6010C	4/8/15	4/10/15 11:26	MJH
Silver	ND	0.56	mg/Kg dry	1		SW-846 6010C	4/8/15	4/10/15 11:26	MJH
Sodium	750	110	mg/Kg dry	1		SW-846 6010C	4/8/15	4/10/15 11:26	MJH
Thallium	ND	2.8	mg/Kg dry	1		SW-846 6010C	4/8/15	4/10/15 11:26	MJH
Vanadium	78	1.1	mg/Kg dry	1		SW-846 6010C	4/8/15	4/10/15 11:26	MJH
Zinc	530	1.1	mg/Kg dry	1	MS-07	SW-846 6010C	4/8/15	4/13/15 16:06	MJH

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Project Location: Motiva Site- Bushwick/NCET

Sample Description:

Work Order: 15D0257

Date Received: 4/6/2015

Field Sample #: SB-08 COMP

Sampled: 4/6/2015 09:45

Sample ID: 15D0257-02

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	89.1		% Wt	1		SM 2540G	4/11/15	4/13/15 9:13	MRL

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Sample Extraction Data

Prep Method: % Solids-SM 2540G

Lab Number [Field ID]	Batch	Date
15D0257-01 [SB-08 4.5-5.0']	B119076	04/11/15
15D0257-02 [SB-08 COMP]	B119076	04/11/15

Prep Method: SW-846 3050B-SW-846 6010C

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
15D0257-02 [SB-08 COMP]	B118848	1.01	50.0	04/08/15

Prep Method: SW-846 7471-SW-846 7471B

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
15D0257-02 [SB-08 COMP]	B118849	0.608	50.0	04/08/15

Prep Method: SW-846 3546-SW-846 8081B

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
15D0257-02 [SB-08 COMP]	B118990	10.0	10.0	04/10/15

Prep Method: SW-846 3546-SW-846 8082A

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
15D0257-02 [SB-08 COMP]	B118989	10.0	10.0	04/10/15

Prep Method: SW-846 8151-SW-846 8151A

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
15D0257-02 [SB-08 COMP]	B119107	20.4	5.00	04/13/15

Prep Method: SW-846 5035-SW-846 8260C

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
15D0257-01 [SB-08 4.5-5.0']	B118813	4.70	10.0	04/08/15

Prep Method: SW-846 3546-SW-846 8270D

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
15D0257-02 [SB-08 COMP]	B118988	30.0	1.00	04/10/15

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes

Batch B118813 - SW-846 5035

Blank (B118813-BLK1)

Prepared & Analyzed: 04/08/15

Acetone	ND	0.10	mg/Kg wet
Acrylonitrile	ND	0.0060	mg/Kg wet
tert-Amyl Methyl Ether (TAME)	ND	0.0010	mg/Kg wet
Benzene	ND	0.0020	mg/Kg wet
Bromobenzene	ND	0.0020	mg/Kg wet
Bromochloromethane	ND	0.0020	mg/Kg wet
Bromodichloromethane	ND	0.0020	mg/Kg wet
Bromoform	ND	0.0020	mg/Kg wet
Bromomethane	ND	0.010	mg/Kg wet
2-Butanone (MEK)	ND	0.040	mg/Kg wet
tert-Butyl Alcohol (TBA)	ND	0.040	mg/Kg wet
n-Butylbenzene	ND	0.0020	mg/Kg wet
sec-Butylbenzene	ND	0.0020	mg/Kg wet
tert-Butylbenzene	ND	0.0020	mg/Kg wet
tert-Butyl Ethyl Ether (TBEE)	ND	0.0010	mg/Kg wet
Carbon Disulfide	ND	0.020	mg/Kg wet
Carbon Tetrachloride	ND	0.0020	mg/Kg wet
Chlorobenzene	ND	0.0020	mg/Kg wet
Chlorodibromomethane	ND	0.0010	mg/Kg wet
Chloroethane	ND	0.020	mg/Kg wet
Chloroform	ND	0.0040	mg/Kg wet
Chloromethane	ND	0.010	mg/Kg wet
2-Chlorotoluene	ND	0.0020	mg/Kg wet
4-Chlorotoluene	ND	0.0020	mg/Kg wet
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0020	mg/Kg wet
1,2-Dibromoethane (EDB)	ND	0.0010	mg/Kg wet
Dibromomethane	ND	0.0020	mg/Kg wet
1,2-Dichlorobenzene	ND	0.0020	mg/Kg wet
1,3-Dichlorobenzene	ND	0.0020	mg/Kg wet
1,4-Dichlorobenzene	ND	0.0020	mg/Kg wet
trans-1,4-Dichloro-2-butene	ND	0.0040	mg/Kg wet
Dichlorodifluoromethane (Freon 12)	ND	0.020	mg/Kg wet
1,1-Dichloroethane	ND	0.0020	mg/Kg wet
1,2-Dichloroethane	ND	0.0020	mg/Kg wet
1,1-Dichloroethylene	ND	0.0040	mg/Kg wet
cis-1,2-Dichloroethylene	ND	0.0020	mg/Kg wet
trans-1,2-Dichloroethylene	ND	0.0020	mg/Kg wet
1,2-Dichloropropane	ND	0.0020	mg/Kg wet
1,3-Dichloropropane	ND	0.0010	mg/Kg wet
2,2-Dichloropropane	ND	0.0020	mg/Kg wet
1,1-Dichloropropene	ND	0.0020	mg/Kg wet
cis-1,3-Dichloropropene	ND	0.0010	mg/Kg wet
trans-1,3-Dichloropropene	ND	0.0010	mg/Kg wet
Diethyl Ether	ND	0.020	mg/Kg wet
Diisopropyl Ether (DIPE)	ND	0.0010	mg/Kg wet
1,4-Dioxane	ND	0.10	mg/Kg wet
Ethylbenzene	ND	0.0020	mg/Kg wet
Hexachlorobutadiene	ND	0.0020	mg/Kg wet
Isopropylbenzene (Cumene)	ND	0.0020	mg/Kg wet
p-Isopropyltoluene (p-Cymene)	ND	0.0020	mg/Kg wet
Methyl tert-Butyl Ether (MTBE)	ND	0.0040	mg/Kg wet
Methylene Chloride	ND	0.020	mg/Kg wet

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes

Batch B118813 - SW-846 5035

Blank (B118813-BLK1)

Prepared & Analyzed: 04/08/15

4-Methyl-2-pentanone (MIBK)	ND	0.020	mg/Kg wet							
Naphthalene	ND	0.0040	mg/Kg wet							V-05
n-Propylbenzene	ND	0.0020	mg/Kg wet							
Styrene	ND	0.0020	mg/Kg wet							
1,1,1,2-Tetrachloroethane	ND	0.0020	mg/Kg wet							
Tetrachloroethylene	ND	0.0020	mg/Kg wet							
Tetrahydrofuran	ND	0.010	mg/Kg wet							
Toluene	ND	0.0020	mg/Kg wet							
1,2,3-Trichlorobenzene	ND	0.0020	mg/Kg wet							
1,2,4-Trichlorobenzene	ND	0.0020	mg/Kg wet							
1,3,5-Trichlorobenzene	ND	0.0020	mg/Kg wet							
1,1,1-Trichloroethane	ND	0.0040	mg/Kg wet							
1,1,2-Trichloroethane	ND	0.0020	mg/Kg wet							
Trichloroethylene	ND	0.0020	mg/Kg wet							
Trichlorofluoromethane (Freon 11)	ND	0.010	mg/Kg wet							
1,2,3-Trichloropropane	ND	0.0020	mg/Kg wet							
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.010	mg/Kg wet							
1,2,4-Trimethylbenzene	ND	0.0020	mg/Kg wet							
1,3,5-Trimethylbenzene	ND	0.0020	mg/Kg wet							
Vinyl Chloride	ND	0.010	mg/Kg wet							
m+p Xylene	ND	0.0040	mg/Kg wet							
o-Xylene	ND	0.0020	mg/Kg wet							
Surrogate: 1,2-Dichloroethane-d4	0.0567		mg/Kg wet	0.0500		113	70-130			
Surrogate: Toluene-d8	0.0506		mg/Kg wet	0.0500		101	70-130			
Surrogate: 4-Bromofluorobenzene	0.0491		mg/Kg wet	0.0500		98.2	70-130			

LCS (B118813-BS1)

Prepared & Analyzed: 04/08/15

Acetone	0.278	0.10	mg/Kg wet	0.200		139	70-160			V-20	†
Acrylonitrile	0.0212	0.0060	mg/Kg wet	0.0200		106	70-130				
tert-Amyl Methyl Ether (TAME)	0.0182	0.0010	mg/Kg wet	0.0200		91.0	70-130				
Benzene	0.0212	0.0020	mg/Kg wet	0.0200		106	70-130				
Bromobenzene	0.0196	0.0020	mg/Kg wet	0.0200		98.0	70-130				
Bromochloromethane	0.0221	0.0020	mg/Kg wet	0.0200		110	70-130				
Bromodichloromethane	0.0230	0.0020	mg/Kg wet	0.0200		115	70-130				
Bromoform	0.0216	0.0020	mg/Kg wet	0.0200		108	70-130				
Bromomethane	0.0199	0.010	mg/Kg wet	0.0200		99.7	40-130				†
2-Butanone (MEK)	0.244	0.040	mg/Kg wet	0.200		122	70-160				†
tert-Butyl Alcohol (TBA)	0.307	0.040	mg/Kg wet	0.200		153	40-130			L-02	†
n-Butylbenzene	0.0213	0.0020	mg/Kg wet	0.0200		107	70-130				
sec-Butylbenzene	0.0204	0.0020	mg/Kg wet	0.0200		102	70-130				
tert-Butylbenzene	0.0207	0.0020	mg/Kg wet	0.0200		104	70-160				†
tert-Butyl Ethyl Ether (TBEE)	0.0202	0.0010	mg/Kg wet	0.0200		101	70-130				
Carbon Disulfide	0.0227	0.020	mg/Kg wet	0.0200		113	70-130				
Carbon Tetrachloride	0.0205	0.0020	mg/Kg wet	0.0200		103	70-130				
Chlorobenzene	0.0197	0.0020	mg/Kg wet	0.0200		98.7	70-130				
Chlorodibromomethane	0.0226	0.0010	mg/Kg wet	0.0200		113	70-130				
Chloroethane	0.0226	0.020	mg/Kg wet	0.0200		113	70-130				
Chloroform	0.0223	0.0040	mg/Kg wet	0.0200		112	70-130				
Chloromethane	0.0170	0.010	mg/Kg wet	0.0200		84.8	70-130				
2-Chlorotoluene	0.0208	0.0020	mg/Kg wet	0.0200		104	70-130				
4-Chlorotoluene	0.0214	0.0020	mg/Kg wet	0.0200		107	70-130				
1,2-Dibromo-3-chloropropane (DBCP)	0.0185	0.0020	mg/Kg wet	0.0200		92.5	70-130				

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QUALITY CONTROL
Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B118813 - SW-846 5035										
LCS (B118813-BS1)				Prepared & Analyzed: 04/08/15						
1,2-Dibromoethane (EDB)	0.0212	0.0010	mg/Kg wet	0.0200		106	70-130			
Dibromomethane	0.0203	0.0020	mg/Kg wet	0.0200		101	70-130			
1,2-Dichlorobenzene	0.0196	0.0020	mg/Kg wet	0.0200		97.8	70-130			
1,3-Dichlorobenzene	0.0201	0.0020	mg/Kg wet	0.0200		100	70-130			
1,4-Dichlorobenzene	0.0193	0.0020	mg/Kg wet	0.0200		96.5	70-130			
trans-1,4-Dichloro-2-butene	0.0211	0.0040	mg/Kg wet	0.0200		106	70-130			
Dichlorodifluoromethane (Freon 12)	0.0120	0.020	mg/Kg wet	0.0200		59.8	40-160			†
1,1-Dichloroethane	0.0214	0.0020	mg/Kg wet	0.0200		107	70-130			
1,2-Dichloroethane	0.0224	0.0020	mg/Kg wet	0.0200		112	70-130			
1,1-Dichloroethylene	0.0258	0.0040	mg/Kg wet	0.0200		129	70-130			
cis-1,2-Dichloroethylene	0.0206	0.0020	mg/Kg wet	0.0200		103	70-130			
trans-1,2-Dichloroethylene	0.0238	0.0020	mg/Kg wet	0.0200		119	70-130			
1,2-Dichloropropane	0.0192	0.0020	mg/Kg wet	0.0200		96.1	70-130			
1,3-Dichloropropane	0.0199	0.0010	mg/Kg wet	0.0200		99.4	70-130			
2,2-Dichloropropane	0.0193	0.0020	mg/Kg wet	0.0200		96.6	70-130			
1,1-Dichloropropene	0.0244	0.0020	mg/Kg wet	0.0200		122	70-130			
cis-1,3-Dichloropropene	0.0189	0.0010	mg/Kg wet	0.0200		94.6	70-130			
trans-1,3-Dichloropropene	0.0219	0.0010	mg/Kg wet	0.0200		109	70-130			
Diethyl Ether	0.0225	0.020	mg/Kg wet	0.0200		112	70-130			
Diisopropyl Ether (DIPE)	0.0221	0.0010	mg/Kg wet	0.0200		110	70-130			
1,4-Dioxane	0.305	0.10	mg/Kg wet	0.200		152	40-160		V-20	†
Ethylbenzene	0.0210	0.0020	mg/Kg wet	0.0200		105	70-130			
Hexachlorobutadiene	0.0214	0.0020	mg/Kg wet	0.0200		107	70-160			
Isopropylbenzene (Cumene)	0.0221	0.0020	mg/Kg wet	0.0200		110	70-130			
p-Isopropyltoluene (p-Cymene)	0.0212	0.0020	mg/Kg wet	0.0200		106	70-130			
Methyl tert-Butyl Ether (MTBE)	0.0203	0.0040	mg/Kg wet	0.0200		102	70-130			
Methylene Chloride	0.0209	0.020	mg/Kg wet	0.0200		105	40-160			†
4-Methyl-2-pentanone (MIBK)	0.242	0.020	mg/Kg wet	0.200		121	70-160			†
Naphthalene	0.0197	0.0040	mg/Kg wet	0.0200		98.3	40-130		V-05	†
n-Propylbenzene	0.0223	0.0020	mg/Kg wet	0.0200		112	70-130			
Styrene	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130			
1,1,1,2-Tetrachloroethane	0.0215	0.0020	mg/Kg wet	0.0200		108	70-130			
Tetrachloroethylene	0.0237	0.0020	mg/Kg wet	0.0200		119	70-130			
Tetrahydrofuran	0.0241	0.010	mg/Kg wet	0.0200		120	70-130			
Toluene	0.0215	0.0020	mg/Kg wet	0.0200		108	70-130			
1,2,3-Trichlorobenzene	0.0196	0.0020	mg/Kg wet	0.0200		98.0	70-130			
1,2,4-Trichlorobenzene	0.0197	0.0020	mg/Kg wet	0.0200		98.5	70-130			
1,3,5-Trichlorobenzene	0.0201	0.0020	mg/Kg wet	0.0200		101	70-130			
1,1,1-Trichloroethane	0.0224	0.0040	mg/Kg wet	0.0200		112	70-130			
1,1,2-Trichloroethane	0.0200	0.0020	mg/Kg wet	0.0200		99.9	70-130			
Trichloroethylene	0.0209	0.0020	mg/Kg wet	0.0200		104	70-130			
Trichlorofluoromethane (Freon 11)	0.0251	0.010	mg/Kg wet	0.0200		126	70-130			
1,2,3-Trichloropropane	0.0185	0.0020	mg/Kg wet	0.0200		92.3	70-130			
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.0237	0.010	mg/Kg wet	0.0200		119	70-130			
1,2,4-Trimethylbenzene	0.0206	0.0020	mg/Kg wet	0.0200		103	70-130			
1,3,5-Trimethylbenzene	0.0221	0.0020	mg/Kg wet	0.0200		111	70-130			
Vinyl Chloride	0.0176	0.010	mg/Kg wet	0.0200		87.8	40-130			†
m+p Xylene	0.0427	0.0040	mg/Kg wet	0.0400		107	70-130			
o-Xylene	0.0207	0.0020	mg/Kg wet	0.0200		103	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0540		mg/Kg wet	0.0500		108	70-130			
Surrogate: Toluene-d8	0.0513		mg/Kg wet	0.0500		103	70-130			

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QUALITY CONTROL
Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B118813 - SW-846 5035										
LCS (B118813-BS1)					Prepared & Analyzed: 04/08/15					
Surrogate: 4-Bromofluorobenzene	0.0500		mg/Kg wet	0.0500		100	70-130			
LCS Dup (B118813-BSD1)					Prepared & Analyzed: 04/08/15					
Acetone	0.302	0.10	mg/Kg wet	0.200		151	70-160	8.08	25	V-20 †
Acrylonitrile	0.0242	0.0060	mg/Kg wet	0.0200		121	70-130	13.3	25	
tert-Amyl Methyl Ether (TAME)	0.0194	0.0010	mg/Kg wet	0.0200		96.9	70-130	6.28	25	
Benzene	0.0219	0.0020	mg/Kg wet	0.0200		109	70-130	2.88	25	
Bromobenzene	0.0203	0.0020	mg/Kg wet	0.0200		102	70-130	3.71	25	
Bromochloromethane	0.0240	0.0020	mg/Kg wet	0.0200		120	70-130	8.16	25	
Bromodichloromethane	0.0238	0.0020	mg/Kg wet	0.0200		119	70-130	3.50	25	
Bromoform	0.0223	0.0020	mg/Kg wet	0.0200		112	70-130	3.28	25	
Bromomethane	0.0233	0.010	mg/Kg wet	0.0200		116	40-130	15.5	25	†
2-Butanone (MEK)	0.269	0.040	mg/Kg wet	0.200		134	70-160	9.80	25	†
tert-Butyl Alcohol (TBA)	0.346	0.040	mg/Kg wet	0.200		173	* 40-130	12.1	25	L-02 †
n-Butylbenzene	0.0215	0.0020	mg/Kg wet	0.0200		108	70-130	1.03	25	
sec-Butylbenzene	0.0209	0.0020	mg/Kg wet	0.0200		104	70-130	2.33	25	
tert-Butylbenzene	0.0210	0.0020	mg/Kg wet	0.0200		105	70-160	1.15	25	†
tert-Butyl Ethyl Ether (TBEE)	0.0213	0.0010	mg/Kg wet	0.0200		107	70-130	5.29	25	
Carbon Disulfide	0.0235	0.020	mg/Kg wet	0.0200		118	70-130	3.64	25	
Carbon Tetrachloride	0.0211	0.0020	mg/Kg wet	0.0200		106	70-130	2.69	25	
Chlorobenzene	0.0205	0.0020	mg/Kg wet	0.0200		102	70-130	3.78	25	
Chlorodibromomethane	0.0231	0.0010	mg/Kg wet	0.0200		116	70-130	2.10	25	
Chloroethane	0.0232	0.020	mg/Kg wet	0.0200		116	70-130	2.62	25	
Chloroform	0.0238	0.0040	mg/Kg wet	0.0200		119	70-130	6.34	25	
Chloromethane	0.0175	0.010	mg/Kg wet	0.0200		87.4	70-130	3.02	25	
2-Chlorotoluene	0.0215	0.0020	mg/Kg wet	0.0200		108	70-130	3.50	25	
4-Chlorotoluene	0.0222	0.0020	mg/Kg wet	0.0200		111	70-130	3.94	25	
1,2-Dibromo-3-chloropropane (DBCP)	0.0205	0.0020	mg/Kg wet	0.0200		102	70-130	10.1	25	
1,2-Dibromoethane (EDB)	0.0222	0.0010	mg/Kg wet	0.0200		111	70-130	4.80	25	
Dibromomethane	0.0218	0.0020	mg/Kg wet	0.0200		109	70-130	7.13	25	
1,2-Dichlorobenzene	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130	3.22	25	
1,3-Dichlorobenzene	0.0204	0.0020	mg/Kg wet	0.0200		102	70-130	1.29	25	
1,4-Dichlorobenzene	0.0199	0.0020	mg/Kg wet	0.0200		99.5	70-130	3.06	25	
trans-1,4-Dichloro-2-butene	0.0226	0.0040	mg/Kg wet	0.0200		113	70-130	6.69	25	
Dichlorodifluoromethane (Freon 12)	0.0122	0.020	mg/Kg wet	0.0200		61.2	40-160	2.31	25	†
1,1-Dichloroethane	0.0227	0.0020	mg/Kg wet	0.0200		114	70-130	6.08	25	
1,2-Dichloroethane	0.0236	0.0020	mg/Kg wet	0.0200		118	70-130	5.57	25	
1,1-Dichloroethylene	0.0260	0.0040	mg/Kg wet	0.0200		130	70-130	0.771	25	
cis-1,2-Dichloroethylene	0.0217	0.0020	mg/Kg wet	0.0200		109	70-130	5.20	25	
trans-1,2-Dichloroethylene	0.0249	0.0020	mg/Kg wet	0.0200		124	70-130	4.52	25	
1,2-Dichloropropane	0.0203	0.0020	mg/Kg wet	0.0200		101	70-130	5.27	25	
1,3-Dichloropropane	0.0208	0.0010	mg/Kg wet	0.0200		104	70-130	4.62	25	
2,2-Dichloropropane	0.0201	0.0020	mg/Kg wet	0.0200		100	70-130	3.96	25	
1,1-Dichloropropene	0.0253	0.0020	mg/Kg wet	0.0200		126	70-130	3.46	25	
cis-1,3-Dichloropropene	0.0197	0.0010	mg/Kg wet	0.0200		98.5	70-130	4.04	25	
trans-1,3-Dichloropropene	0.0224	0.0010	mg/Kg wet	0.0200		112	70-130	2.53	25	
Diethyl Ether	0.0239	0.020	mg/Kg wet	0.0200		120	70-130	6.12	25	
Diisopropyl Ether (DIPE)	0.0232	0.0010	mg/Kg wet	0.0200		116	70-130	5.04	25	
1,4-Dioxane	0.358	0.10	mg/Kg wet	0.200		179	* 40-160	16.2	50	L-07, V-20 † ‡
Ethylbenzene	0.0216	0.0020	mg/Kg wet	0.0200		108	70-130	3.10	25	
Hexachlorobutadiene	0.0219	0.0020	mg/Kg wet	0.0200		109	70-160	2.13	25	
Isopropylbenzene (Cumene)	0.0228	0.0020	mg/Kg wet	0.0200		114	70-130	3.30	25	

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B118813 - SW-846 5035										
LCS Dup (B118813-BSD1)				Prepared & Analyzed: 04/08/15						
p-Isopropyltoluene (p-Cymene)	0.0218	0.0020	mg/Kg wet	0.0200		109	70-130	2.79	25	
Methyl tert-Butyl Ether (MTBE)	0.0219	0.0040	mg/Kg wet	0.0200		110	70-130	7.48	25	
Methylene Chloride	0.0218	0.020	mg/Kg wet	0.0200		109	40-160	3.93	25	†
4-Methyl-2-pentanone (MIBK)	0.264	0.020	mg/Kg wet	0.200		132	70-160	8.76	25	†
Naphthalene	0.0219	0.0040	mg/Kg wet	0.0200		109	40-130	10.6	25	V-05 †
n-Propylbenzene	0.0227	0.0020	mg/Kg wet	0.0200		113	70-130	1.60	25	
Styrene	0.0214	0.0020	mg/Kg wet	0.0200		107	70-130	6.06	25	
1,1,1,2-Tetrachloroethane	0.0220	0.0020	mg/Kg wet	0.0200		110	70-130	2.21	25	
Tetrachloroethylene	0.0240	0.0020	mg/Kg wet	0.0200		120	70-130	1.26	25	
Tetrahydrofuran	0.0269	0.010	mg/Kg wet	0.0200		134 *	70-130	11.0	25	L-07
Toluene	0.0221	0.0020	mg/Kg wet	0.0200		111	70-130	2.75	25	
1,2,3-Trichlorobenzene	0.0205	0.0020	mg/Kg wet	0.0200		102	70-130	4.49	25	
1,2,4-Trichlorobenzene	0.0203	0.0020	mg/Kg wet	0.0200		102	70-130	3.20	25	
1,3,5-Trichlorobenzene	0.0207	0.0020	mg/Kg wet	0.0200		103	70-130	2.55	25	
1,1,1-Trichloroethane	0.0231	0.0040	mg/Kg wet	0.0200		116	70-130	3.25	25	
1,1,2-Trichloroethane	0.0214	0.0020	mg/Kg wet	0.0200		107	70-130	6.86	25	
Trichloroethylene	0.0219	0.0020	mg/Kg wet	0.0200		110	70-130	4.76	25	
Trichlorofluoromethane (Freon 11)	0.0268	0.010	mg/Kg wet	0.0200		134 *	70-130	6.40	25	L-07
1,2,3-Trichloropropane	0.0204	0.0020	mg/Kg wet	0.0200		102	70-130	10.1	25	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.0238	0.010	mg/Kg wet	0.0200		119	70-130	0.0842	25	
1,2,4-Trimethylbenzene	0.0209	0.0020	mg/Kg wet	0.0200		105	70-130	1.44	25	
1,3,5-Trimethylbenzene	0.0225	0.0020	mg/Kg wet	0.0200		112	70-130	1.43	25	
Vinyl Chloride	0.0181	0.010	mg/Kg wet	0.0200		90.5	40-130	3.03	25	†
m+p Xylene	0.0436	0.0040	mg/Kg wet	0.0400		109	70-130	2.13	25	
o-Xylene	0.0216	0.0020	mg/Kg wet	0.0200		108	70-130	4.36	25	
Surrogate: 1,2-Dichloroethane-d4	0.0555		mg/Kg wet	0.0500		111	70-130			
Surrogate: Toluene-d8	0.0510		mg/Kg wet	0.0500		102	70-130			
Surrogate: 4-Bromofluorobenzene	0.0506		mg/Kg wet	0.0500		101	70-130			

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QUALITY CONTROL
Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B118988 - SW-846 3546										
Blank (B118988-BLK1)				Prepared: 04/10/15 Analyzed: 04/13/15						
2,3,4,6-Tetrachlorophenol	ND	0.67	mg/Kg wet							
Benzaldehyde	ND	0.34	mg/Kg wet							R-05, V-20
Biphenyl	ND	0.67	mg/Kg wet							R-05
Caprolactam	ND	0.34	mg/Kg wet							
Acenaphthene	ND	0.17	mg/Kg wet							
Acenaphthylene	ND	0.17	mg/Kg wet							
Acetophenone	ND	0.34	mg/Kg wet							R-05
Aniline	ND	0.34	mg/Kg wet							
Anthracene	ND	0.17	mg/Kg wet							
Benzidine	ND	0.66	mg/Kg wet							
Benzo(a)anthracene	ND	0.17	mg/Kg wet							
Benzo(a)pyrene	ND	0.17	mg/Kg wet							
Benzo(b)fluoranthene	ND	0.17	mg/Kg wet							
Benzo(g,h,i)perylene	ND	0.17	mg/Kg wet							
Benzo(k)fluoranthene	ND	0.17	mg/Kg wet							
Benzoic Acid	ND	1.0	mg/Kg wet							
Bis(2-chloroethoxy)methane	ND	0.34	mg/Kg wet							R-05
Bis(2-chloroethyl)ether	ND	0.34	mg/Kg wet							R-05
Bis(2-chloroisopropyl)ether	ND	0.34	mg/Kg wet							R-05
Bis(2-Ethylhexyl)phthalate	ND	0.34	mg/Kg wet							
4-Bromophenylphenylether	ND	0.34	mg/Kg wet							
Butylbenzylphthalate	ND	0.34	mg/Kg wet							
Carbazole	ND	0.17	mg/Kg wet							
4-Chloroaniline	ND	0.66	mg/Kg wet							
4-Chloro-3-methylphenol	ND	0.66	mg/Kg wet							
2-Chloronaphthalene	ND	0.34	mg/Kg wet							
2-Chlorophenol	ND	0.34	mg/Kg wet							R-05
4-Chlorophenylphenylether	ND	0.34	mg/Kg wet							
Chrysene	ND	0.17	mg/Kg wet							
Dibenz(a,h)anthracene	ND	0.17	mg/Kg wet							
Dibenzofuran	ND	0.34	mg/Kg wet							
Di-n-butylphthalate	ND	0.34	mg/Kg wet							
1,2-Dichlorobenzene	ND	0.34	mg/Kg wet							
1,3-Dichlorobenzene	ND	0.34	mg/Kg wet							
1,4-Dichlorobenzene	ND	0.34	mg/Kg wet							
3,3-Dichlorobenzidine	ND	0.17	mg/Kg wet							
2,4-Dichlorophenol	ND	0.34	mg/Kg wet							
Diethylphthalate	ND	0.34	mg/Kg wet							
2,4-Dimethylphenol	ND	0.34	mg/Kg wet							
Dimethylphthalate	ND	0.34	mg/Kg wet							
4,6-Dinitro-2-methylphenol	ND	0.34	mg/Kg wet							
2,4-Dinitrophenol	ND	0.66	mg/Kg wet							L-04
2,4-Dinitrotoluene	ND	0.34	mg/Kg wet							
2,6-Dinitrotoluene	ND	0.34	mg/Kg wet							
Di-n-octylphthalate	ND	0.34	mg/Kg wet							
1,2-Diphenylhydrazine (as Azobenzene)	ND	0.34	mg/Kg wet							
Fluoranthene	ND	0.17	mg/Kg wet							
Fluorene	ND	0.17	mg/Kg wet							
Hexachlorobenzene	ND	0.34	mg/Kg wet							
Hexachlorobutadiene	ND	0.34	mg/Kg wet							R-05
Hexachlorocyclopentadiene	ND	0.34	mg/Kg wet							
Hexachloroethane	ND	0.34	mg/Kg wet							

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QUALITY CONTROL
Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B118988 - SW-846 3546										
Blank (B118988-BLK1)										
Prepared: 04/10/15 Analyzed: 04/13/15										
Indeno(1,2,3-cd)pyrene	ND	0.17	mg/Kg wet							
Isophorone	ND	0.34	mg/Kg wet							
1-Methylnaphthalene	ND	0.17	mg/Kg wet							
2-Methylnaphthalene	ND	0.17	mg/Kg wet							
2-Methylphenol	ND	0.34	mg/Kg wet							R-05
3/4-Methylphenol	ND	0.34	mg/Kg wet							
Naphthalene	ND	0.17	mg/Kg wet							
2-Nitroaniline	ND	0.34	mg/Kg wet							
3-Nitroaniline	ND	0.34	mg/Kg wet							
4-Nitroaniline	ND	0.34	mg/Kg wet							
Nitrobenzene	ND	0.34	mg/Kg wet							R-05
2-Nitrophenol	ND	0.34	mg/Kg wet							R-05
4-Nitrophenol	ND	0.66	mg/Kg wet							
N-Nitrosodimethylamine	ND	0.34	mg/Kg wet							
N-Nitrosodiphenylamine	ND	0.34	mg/Kg wet							
N-Nitrosodi-n-propylamine	ND	0.34	mg/Kg wet							R-05
Pentachloronitrobenzene	ND	0.34	mg/Kg wet							V-16
Pentachlorophenol	ND	0.34	mg/Kg wet							
Phenanthrene	ND	0.17	mg/Kg wet							
Phenol	ND	0.34	mg/Kg wet							R-05
Pyrene	ND	0.17	mg/Kg wet							
Pyridine	ND	0.34	mg/Kg wet							
1,2,4,5-Tetrachlorobenzene	ND	0.34	mg/Kg wet							
1,2,4-Trichlorobenzene	ND	0.34	mg/Kg wet							
2,4,5-Trichlorophenol	ND	0.34	mg/Kg wet							
2,4,6-Trichlorophenol	ND	0.34	mg/Kg wet							
Atrazine	ND	0.67	mg/Kg wet							V-20
Surrogate: 2-Fluorophenol	5.57		mg/Kg wet	6.67		83.6	30-130			
Surrogate: Phenol-d6	5.73		mg/Kg wet	6.67		86.0	30-130			
Surrogate: Nitrobenzene-d5	2.82		mg/Kg wet	3.33		84.7	30-130			
Surrogate: 2-Fluorobiphenyl	2.97		mg/Kg wet	3.33		89.2	30-130			
Surrogate: 2,4,6-Tribromophenol	6.57		mg/Kg wet	6.67		98.5	30-130			
Surrogate: p-Terphenyl-d14	4.02		mg/Kg wet	3.33		121	30-130			
LCS (B118988-BS1)										
Prepared: 04/10/15 Analyzed: 04/11/15										
2,3,4,6-Tetrachlorophenol	2.08	0.67	mg/Kg wet	1.67		125	40-140			V-06
Benzaldehyde	1.23	0.34	mg/Kg wet	1.67		73.7	40-140			R-05, V-06
Biphenyl	2.14	0.67	mg/Kg wet	1.67		128	40-140			R-05
Caprolactam	1.83	0.34	mg/Kg wet	1.67		110	40-140			
Acenaphthene	1.83	0.17	mg/Kg wet	1.67		110	40-140			
Acenaphthylene	1.81	0.17	mg/Kg wet	1.67		109	40-140			
Acetophenone	1.61	0.34	mg/Kg wet	1.67		96.7	40-140			R-05
Aniline	0.953	0.34	mg/Kg wet	1.67		57.2	10-140			†
Anthracene	1.87	0.17	mg/Kg wet	1.67		112	40-140			
Benztidine	0.986	0.66	mg/Kg wet	1.67		59.2	40-140			V-05
Benzo(a)anthracene	1.86	0.17	mg/Kg wet	1.67		112	40-140			
Benzo(a)pyrene	1.89	0.17	mg/Kg wet	1.67		114	40-140			
Benzo(b)fluoranthene	1.86	0.17	mg/Kg wet	1.67		112	40-140			
Benzo(g,h,i)perylene	1.49	0.17	mg/Kg wet	1.67		89.3	40-140			
Benzo(k)fluoranthene	1.90	0.17	mg/Kg wet	1.67		114	40-140			
Benzoic Acid	0.557	1.0	mg/Kg wet	1.67		33.4	30-130			
Bis(2-chloroethoxy)methane	1.84	0.34	mg/Kg wet	1.67		110	40-140			R-05

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QUALITY CONTROL
Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B118988 - SW-846 3546										
LCS (B118988-BS1)					Prepared: 04/10/15 Analyzed: 04/11/15					
Bis(2-chloroethyl)ether	1.62	0.34	mg/Kg wet	1.67		97.3	40-140			R-05
Bis(2-chloroisopropyl)ether	1.56	0.34	mg/Kg wet	1.67		93.7	40-140			R-05
Bis(2-Ethylhexyl)phthalate	1.95	0.34	mg/Kg wet	1.67		117	40-140			
4-Bromophenylphenylether	1.90	0.34	mg/Kg wet	1.67		114	40-140			
Butylbenzylphthalate	2.02	0.34	mg/Kg wet	1.67		121	40-140			
Carbazole	1.90	0.17	mg/Kg wet	1.67		114	40-140			
4-Chloroaniline	0.939	0.66	mg/Kg wet	1.67		56.3	10-140			†
4-Chloro-3-methylphenol	1.90	0.66	mg/Kg wet	1.67		114	30-130			
2-Chloronaphthalene	1.70	0.34	mg/Kg wet	1.67		102	40-140			
2-Chlorophenol	1.59	0.34	mg/Kg wet	1.67		95.5	30-130			R-05
4-Chlorophenylphenylether	1.89	0.34	mg/Kg wet	1.67		114	40-140			
Chrysene	1.94	0.17	mg/Kg wet	1.67		116	40-140			
Dibenz(a,h)anthracene	1.52	0.17	mg/Kg wet	1.67		91.0	40-140			
Dibenzofuran	1.88	0.34	mg/Kg wet	1.67		113	40-140			
Di-n-butylphthalate	1.97	0.34	mg/Kg wet	1.67		118	40-140			
1,2-Dichlorobenzene	1.36	0.34	mg/Kg wet	1.67		81.8	40-140			
1,3-Dichlorobenzene	1.26	0.34	mg/Kg wet	1.67		75.7	40-140			
1,4-Dichlorobenzene	1.30	0.34	mg/Kg wet	1.67		77.9	40-140			
3,3-Dichlorobenzidine	1.16	0.17	mg/Kg wet	1.67		69.7	20-140			†
2,4-Dichlorophenol	1.78	0.34	mg/Kg wet	1.67		107	30-130			
Diethylphthalate	1.93	0.34	mg/Kg wet	1.67		116	40-140			
2,4-Dimethylphenol	1.79	0.34	mg/Kg wet	1.67		107	30-130			
Dimethylphthalate	1.91	0.34	mg/Kg wet	1.67		115	40-140			
4,6-Dinitro-2-methylphenol	1.29	0.34	mg/Kg wet	1.67		77.4	30-130			
2,4-Dinitrophenol	0.486	0.66	mg/Kg wet	1.67		29.2	* 30-130			L-04
2,4-Dinitrotoluene	1.94	0.34	mg/Kg wet	1.67		116	40-140			
2,6-Dinitrotoluene	2.03	0.34	mg/Kg wet	1.67		122	40-140			
Di-n-octylphthalate	1.91	0.34	mg/Kg wet	1.67		115	40-140			
1,2-Diphenylhydrazine (as Azobenzene)	2.09	0.34	mg/Kg wet	1.67		125	40-140			
Fluoranthene	1.82	0.17	mg/Kg wet	1.67		109	40-140			
Fluorene	1.87	0.17	mg/Kg wet	1.67		112	40-140			
Hexachlorobenzene	1.91	0.34	mg/Kg wet	1.67		114	40-140			
Hexachlorobutadiene	1.48	0.34	mg/Kg wet	1.67		89.0	40-140			R-05
Hexachlorocyclopentadiene	1.37	0.34	mg/Kg wet	1.67		82.3	40-140			
Hexachloroethane	1.31	0.34	mg/Kg wet	1.67		78.8	40-140			
Indeno(1,2,3-cd)pyrene	1.53	0.17	mg/Kg wet	1.67		92.0	40-140			
Isophorone	1.91	0.34	mg/Kg wet	1.67		115	40-140			
1-Methylnaphthalene	1.58	0.17	mg/Kg wet	1.67		94.9	40-140			
2-Methylnaphthalene	1.68	0.17	mg/Kg wet	1.67		101	40-140			
2-Methylphenol	1.75	0.34	mg/Kg wet	1.67		105	30-130			R-05
3/4-Methylphenol	1.71	0.34	mg/Kg wet	1.67		103	30-130			
Naphthalene	1.55	0.17	mg/Kg wet	1.67		92.8	40-140			
2-Nitroaniline	1.99	0.34	mg/Kg wet	1.67		119	40-140			
3-Nitroaniline	1.46	0.34	mg/Kg wet	1.67		87.4	30-140			†
4-Nitroaniline	1.75	0.34	mg/Kg wet	1.67		105	40-140			
Nitrobenzene	1.71	0.34	mg/Kg wet	1.67		103	40-140			R-05
2-Nitrophenol	1.64	0.34	mg/Kg wet	1.67		98.3	30-130			R-05
4-Nitrophenol	1.96	0.66	mg/Kg wet	1.67		117	30-130			
N-Nitrosodimethylamine	1.41	0.34	mg/Kg wet	1.67		84.9	40-140			
N-Nitrosodiphenylamine	2.50	0.34	mg/Kg wet	1.67		150	* 40-140			L-07
N-Nitrosodi-n-propylamine	1.70	0.34	mg/Kg wet	1.67		102	40-140			R-05
Pentachloronitrobenzene	1.89	0.34	mg/Kg wet	1.67		113	40-140			V-16

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QUALITY CONTROL
Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B118988 - SW-846 3546										
LCS (B118988-BS1)										
Prepared: 04/10/15 Analyzed: 04/11/15										
Pentachlorophenol	1.30	0.34	mg/Kg wet	1.67		78.1	30-130			
Phenanthrene	1.90	0.17	mg/Kg wet	1.67		114	40-140			
Phenol	1.67	0.34	mg/Kg wet	1.67		100	30-130			R-05
Pyrene	1.93	0.17	mg/Kg wet	1.67		116	40-140			
Pyridine	1.01	0.34	mg/Kg wet	1.67		60.4	30-140			†
1,2,4,5-Tetrachlorobenzene	1.71	0.34	mg/Kg wet	1.67		102	40-140			
1,2,4-Trichlorobenzene	1.56	0.34	mg/Kg wet	1.67		93.4	40-140			
2,4,5-Trichlorophenol	1.81	0.34	mg/Kg wet	1.67		109	30-130			
2,4,6-Trichlorophenol	1.79	0.34	mg/Kg wet	1.67		107	30-130			
Atrazine	2.29	0.67	mg/Kg wet	1.67		137	40-140			V-06
Surrogate: 2-Fluorophenol	6.63		mg/Kg wet	6.67		99.4	30-130			
Surrogate: Phenol-d6	7.35		mg/Kg wet	6.67		110	30-130			
Surrogate: Nitrobenzene-d5	3.54		mg/Kg wet	3.33		106	30-130			
Surrogate: 2-Fluorobiphenyl	3.84		mg/Kg wet	3.33		115	30-130			
Surrogate: 2,4,6-Tribromophenol	8.12		mg/Kg wet	6.67		122	30-130			
Surrogate: p-Terphenyl-d14	4.21		mg/Kg wet	3.33		126	30-130			
LCS Dup (B118988-BSD1)										
Prepared: 04/10/15 Analyzed: 04/11/15										
2,3,4,6-Tetrachlorophenol	1.87	0.67	mg/Kg wet	1.67		112	40-140	10.7	20	V-06
Benzaldehyde	0.934	0.34	mg/Kg wet	1.67		56.0	40-140	27.2	*	20 V-06, R-05
Biphenyl	1.72	0.67	mg/Kg wet	1.67		103	40-140	21.4	*	20 R-05
Caprolactam	1.59	0.34	mg/Kg wet	1.67		95.5	40-140	13.7	20	
Acenaphthene	1.53	0.17	mg/Kg wet	1.67		91.8	40-140	17.8	30	
Acenaphthylene	1.50	0.17	mg/Kg wet	1.67		89.9	40-140	18.9	30	
Acetophenone	1.18	0.34	mg/Kg wet	1.67		70.9	40-140	30.8	*	30 R-05
Aniline	0.696	0.34	mg/Kg wet	1.67		41.7	10-140	31.2	50	† ‡
Anthracene	1.65	0.17	mg/Kg wet	1.67		99.0	40-140	12.5	30	
Benztidine	0.885	0.66	mg/Kg wet	1.67		53.1	40-140	10.8	30	V-05
Benzo(a)anthracene	1.68	0.17	mg/Kg wet	1.67		101	40-140	10.1	30	
Benzo(a)pyrene	1.70	0.17	mg/Kg wet	1.67		102	40-140	11.1	30	
Benzo(b)fluoranthene	1.66	0.17	mg/Kg wet	1.67		99.8	40-140	11.1	30	
Benzo(g,h,i)perylene	1.34	0.17	mg/Kg wet	1.67		80.4	40-140	10.6	30	
Benzo(k)fluoranthene	1.69	0.17	mg/Kg wet	1.67		101	40-140	11.4	30	
Benzoic Acid	0.408	1.0	mg/Kg wet	1.67		24.5	*	30-130	31.0	50 L-07 ‡
Bis(2-chloroethoxy)methane	1.35	0.34	mg/Kg wet	1.67		80.9	40-140	30.8	*	30 R-05
Bis(2-chloroethyl)ether	1.17	0.34	mg/Kg wet	1.67		69.9	40-140	32.7	*	30 R-05
Bis(2-chloroisopropyl)ether	1.14	0.34	mg/Kg wet	1.67		68.1	40-140	31.5	*	30 R-05
Bis(2-Ethylhexyl)phthalate	1.75	0.34	mg/Kg wet	1.67		105	40-140	10.9	30	
4-Bromophenylphenylether	1.68	0.34	mg/Kg wet	1.67		101	40-140	12.3	30	
Butylbenzylphthalate	1.81	0.34	mg/Kg wet	1.67		108	40-140	11.2	30	
Carbazole	1.69	0.17	mg/Kg wet	1.67		101	40-140	12.0	30	
4-Chloroaniline	0.784	0.66	mg/Kg wet	1.67		47.0	10-140	18.0	30	†
4-Chloro-3-methylphenol	1.61	0.66	mg/Kg wet	1.67		96.8	30-130	16.1	30	
2-Chloronaphthalene	1.26	0.34	mg/Kg wet	1.67		75.4	40-140	29.9	30	
2-Chlorophenol	1.15	0.34	mg/Kg wet	1.67		68.8	30-130	32.6	*	30 R-05
4-Chlorophenylphenylether	1.65	0.34	mg/Kg wet	1.67		98.8	40-140	14.0	30	
Chrysene	1.73	0.17	mg/Kg wet	1.67		104	40-140	11.3	30	
Dibenz(a,h)anthracene	1.37	0.17	mg/Kg wet	1.67		82.4	40-140	9.96	30	
Dibenzofuran	1.60	0.34	mg/Kg wet	1.67		96.1	40-140	15.8	30	
Di-n-butylphthalate	1.74	0.34	mg/Kg wet	1.67		105	40-140	12.0	30	
1,2-Dichlorobenzene	1.03	0.34	mg/Kg wet	1.67		61.8	40-140	27.9	30	
1,3-Dichlorobenzene	0.977	0.34	mg/Kg wet	1.67		58.6	40-140	25.4	30	

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QUALITY CONTROL
Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B118988 - SW-846 3546										
LCS Dup (B118988-BSD1)					Prepared: 04/10/15 Analyzed: 04/11/15					
1,4-Dichlorobenzene	0.998	0.34	mg/Kg wet	1.67		59.9	40-140	26.1	30	
3,3-Dichlorobenzidine	1.06	0.17	mg/Kg wet	1.67		63.6	20-140	9.03	50	† ‡
2,4-Dichlorophenol	1.39	0.34	mg/Kg wet	1.67		83.4	30-130	24.4	30	
Diethylphthalate	1.71	0.34	mg/Kg wet	1.67		102	40-140	12.1	30	
2,4-Dimethylphenol	1.38	0.34	mg/Kg wet	1.67		82.5	30-130	26.2	30	
Dimethylphthalate	1.69	0.34	mg/Kg wet	1.67		101	40-140	12.4	30	
4,6-Dinitro-2-methylphenol	1.11	0.34	mg/Kg wet	1.67		66.7	30-130	14.9	30	
2,4-Dinitrophenol	0.406	0.66	mg/Kg wet	1.67		24.4 *	30-130	17.9	30	L-04
2,4-Dinitrotoluene	1.72	0.34	mg/Kg wet	1.67		103	40-140	11.7	30	
2,6-Dinitrotoluene	1.78	0.34	mg/Kg wet	1.67		107	40-140	13.1	30	
Di-n-octylphthalate	1.71	0.34	mg/Kg wet	1.67		102	40-140	11.3	30	
1,2-Diphenylhydrazine (as Azobenzene)	1.82	0.34	mg/Kg wet	1.67		109	40-140	13.7	30	
Fluoranthene	1.64	0.17	mg/Kg wet	1.67		98.5	40-140	10.3	30	
Fluorene	1.62	0.17	mg/Kg wet	1.67		97.4	40-140	14.0	30	
Hexachlorobenzene	1.67	0.34	mg/Kg wet	1.67		100	40-140	13.0	30	
Hexachlorobutadiene	1.09	0.34	mg/Kg wet	1.67		65.2	40-140	30.9 *	30	R-05
Hexachlorocyclopentadiene	1.02	0.34	mg/Kg wet	1.67		61.1	40-140	29.5	30	
Hexachloroethane	1.00	0.34	mg/Kg wet	1.67		60.1	40-140	26.9	30	
Indeno(1,2,3-cd)pyrene	1.40	0.17	mg/Kg wet	1.67		83.9	40-140	9.28	30	
Isophorone	1.44	0.34	mg/Kg wet	1.67		86.5	40-140	28.1	30	
1-Methylnaphthalene	1.20	0.17	mg/Kg wet	1.67		72.2	40-140	27.1	30	
2-Methylnaphthalene	1.26	0.17	mg/Kg wet	1.67		75.8	40-140	28.1	30	
2-Methylphenol	1.29	0.34	mg/Kg wet	1.67		77.6	30-130	30.2 *	30	R-05
3/4-Methylphenol	1.30	0.34	mg/Kg wet	1.67		78.2	30-130	27.2	30	
Naphthalene	1.14	0.17	mg/Kg wet	1.67		68.6	40-140	30.0	30	
2-Nitroaniline	1.70	0.34	mg/Kg wet	1.67		102	40-140	15.6	30	
3-Nitroaniline	1.29	0.34	mg/Kg wet	1.67		77.4	30-140	12.2	30	†
4-Nitroaniline	1.55	0.34	mg/Kg wet	1.67		93.2	40-140	11.8	30	
Nitrobenzene	1.25	0.34	mg/Kg wet	1.67		75.1	40-140	31.1 *	30	R-05
2-Nitrophenol	1.18	0.34	mg/Kg wet	1.67		70.7	30-130	32.6 *	30	R-05
4-Nitrophenol	1.71	0.66	mg/Kg wet	1.67		102	30-130	13.8	50	‡
N-Nitrosodimethylamine	1.10	0.34	mg/Kg wet	1.67		65.9	40-140	25.2	30	
N-Nitrosodiphenylamine	2.20	0.34	mg/Kg wet	1.67		132	40-140	12.6	30	
N-Nitrosodi-n-propylamine	1.24	0.34	mg/Kg wet	1.67		74.4	40-140	31.2 *	30	R-05
Pentachloronitrobenzene	1.68	0.34	mg/Kg wet	1.67		101	40-140	11.8	30	V-16
Pentachlorophenol	1.16	0.34	mg/Kg wet	1.67		69.8	30-130	11.1	30	
Phenanthrene	1.70	0.17	mg/Kg wet	1.67		102	40-140	11.4	30	
Phenol	1.20	0.34	mg/Kg wet	1.67		71.9	30-130	32.7 *	30	R-05
Pyrene	1.72	0.17	mg/Kg wet	1.67		103	40-140	11.4	30	
Pyridine	0.855	0.34	mg/Kg wet	1.67		51.3	30-140	16.3	30	†
1,2,4,5-Tetrachlorobenzene	1.32	0.34	mg/Kg wet	1.67		78.9	40-140	25.9	30	
1,2,4-Trichlorobenzene	1.15	0.34	mg/Kg wet	1.67		69.1	40-140	29.9	30	
2,4,5-Trichlorophenol	1.57	0.34	mg/Kg wet	1.67		94.3	30-130	14.1	30	
2,4,6-Trichlorophenol	1.55	0.34	mg/Kg wet	1.67		93.3	30-130	14.1	30	
Atrazine	2.01	0.67	mg/Kg wet	1.67		121	40-140	12.8	30	V-06
Surrogate: 2-Fluorophenol	4.61		mg/Kg wet	6.67		69.1	30-130			
Surrogate: Phenol-d6	5.07		mg/Kg wet	6.67		76.1	30-130			
Surrogate: Nitrobenzene-d5	2.52		mg/Kg wet	3.33		75.5	30-130			
Surrogate: 2-Fluorobiphenyl	2.92		mg/Kg wet	3.33		87.8	30-130			
Surrogate: 2,4,6-Tribromophenol	6.92		mg/Kg wet	6.67		104	30-130			
Surrogate: p-Terphenyl-d14	3.65		mg/Kg wet	3.33		110	30-130			

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QUALITY CONTROL
Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B118988 - SW-846 3546										
Matrix Spike (B118988-MS1)	Source: 15D0257-02			Prepared: 04/10/15 Analyzed: 04/11/15						
Acenaphthene	1.77	0.19	mg/Kg dry	1.87	0.239	81.7	40-140			
Acenaphthylene	1.63	0.19	mg/Kg dry	1.87	0.138	79.6	40-140			
Acetophenone	1.46	0.38	mg/Kg dry	1.87	ND	77.8	40-140			
Aniline	0.175	0.38	mg/Kg dry	1.87	ND	9.34	* 40-140			MS-09
Anthracene	2.72	0.19	mg/Kg dry	1.87	0.687	109	40-140			
Benzidine	ND	0.74	mg/Kg dry	1.87	ND	*	40-140			MS-09, V-05
Benzo(a)anthracene	5.23	0.19	mg/Kg dry	1.87	2.75	133	40-140			
Benzo(a)pyrene	4.98	0.19	mg/Kg dry	1.87	2.66	124	40-140			
Benzo(b)fluoranthene	5.68	0.19	mg/Kg dry	1.87	3.23	131	40-140			
Benzo(g,h,i)perylene	3.10	0.19	mg/Kg dry	1.87	1.82	68.5	40-140			R-06
Benzo(k)fluoranthene	3.17	0.19	mg/Kg dry	1.87	1.32	99.0	40-140			
Benzoic Acid	0.314	1.1	mg/Kg dry	1.87	ND	16.8	* 40-140			MS-09
Bis(2-chloroethoxy)methane	1.57	0.38	mg/Kg dry	1.87	ND	83.8	40-140			R-05
Bis(2-chloroethyl)ether	1.68	0.38	mg/Kg dry	1.87	ND	90.0	40-140			
Bis(2-chloroisopropyl)ether	1.45	0.38	mg/Kg dry	1.87	ND	77.7	40-140			
Bis(2-Ethylhexyl)phthalate	2.32	0.38	mg/Kg dry	1.87	ND	124	40-140			
4-Bromophenylphenylether	1.48	0.38	mg/Kg dry	1.87	ND	79.3	40-140			
Butylbenzylphthalate	1.74	0.38	mg/Kg dry	1.87	ND	93.3	40-140			
Carbazole	1.67	0.19	mg/Kg dry	1.87	0.195	78.6	40-140			
4-Chloroaniline	0.470	0.74	mg/Kg dry	1.87	ND	25.1	* 40-140			MS-09
4-Chloro-3-methylphenol	1.42	0.74	mg/Kg dry	1.87	ND	76.0	30-130			
2-Chloronaphthalene	1.23	0.38	mg/Kg dry	1.87	ND	66.0	40-140			
2-Chlorophenol	1.35	0.38	mg/Kg dry	1.87	ND	72.2	30-130			
4-Chlorophenylphenylether	1.47	0.38	mg/Kg dry	1.87	ND	78.7	40-140			
Chrysene	5.11	0.19	mg/Kg dry	1.87	2.83	122	40-140			
Dibenz(a,h)anthracene	1.61	0.19	mg/Kg dry	1.87	0.394	65.2	40-140			R-06
Dibenzofuran	1.66	0.38	mg/Kg dry	1.87	0.177	79.2	40-140			
Di-n-butylphthalate	1.61	0.38	mg/Kg dry	1.87	ND	86.3	40-140			
1,2-Dichlorobenzene	1.37	0.38	mg/Kg dry	1.87	ND	73.5	40-140			
1,3-Dichlorobenzene	1.32	0.38	mg/Kg dry	1.87	ND	70.8	40-140			
1,4-Dichlorobenzene	1.34	0.38	mg/Kg dry	1.87	ND	71.5	40-140			
3,3-Dichlorobenzidine	0.282	0.19	mg/Kg dry	1.87	ND	15.1	* 40-140			MS-09
2,4-Dichlorophenol	1.38	0.38	mg/Kg dry	1.87	ND	73.8	30-130			
Diethylphthalate	1.52	0.38	mg/Kg dry	1.87	ND	81.2	40-140			
2,4-Dimethylphenol	1.18	0.38	mg/Kg dry	1.87	ND	63.2	30-130			
Dimethylphthalate	1.50	0.38	mg/Kg dry	1.87	ND	80.4	40-140			
4,6-Dinitro-2-methylphenol	0.375	0.38	mg/Kg dry	1.87	ND	20.1	* 30-130			MS-09
2,4-Dinitrophenol	0.300	0.74	mg/Kg dry	1.87	ND	16.0	* 30-130			MS-09
2,4-Dinitrotoluene	1.44	0.38	mg/Kg dry	1.87	ND	77.0	40-140			
2,6-Dinitrotoluene	1.54	0.38	mg/Kg dry	1.87	ND	82.5	40-140			
Di-n-octylphthalate	1.53	0.38	mg/Kg dry	1.87	ND	82.1	40-140			
1,2-Diphenylhydrazine (as Azobenzene)	1.60	0.38	mg/Kg dry	1.87	ND	85.8	40-140			
Fluoranthene	9.38	0.19	mg/Kg dry	1.87	5.58	203	* 40-140			MS-22
Fluorene	1.86	0.19	mg/Kg dry	1.87	0.269	85.1	40-140			
Hexachlorobenzene	1.44	0.38	mg/Kg dry	1.87	ND	76.8	40-140			
Hexachlorobutadiene	1.43	0.38	mg/Kg dry	1.87	ND	76.7	40-140			
Hexachlorocyclopentadiene	0.616	0.38	mg/Kg dry	1.87	ND	32.9	30-130			
Hexachloroethane	1.36	0.38	mg/Kg dry	1.87	ND	72.7	40-140			
Indeno(1,2,3-cd)pyrene	3.14	0.19	mg/Kg dry	1.87	1.94	64.4	40-140			R-06
Isophorone	1.65	0.38	mg/Kg dry	1.87	ND	88.1	40-140			
1-Methylnaphthalene	1.43	0.19	mg/Kg dry	1.87	ND	76.3	40-140			
2-Methylnaphthalene	1.56	0.19	mg/Kg dry	1.87	ND	83.2	40-140			

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QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B118988 - SW-846 3546										
Matrix Spike (B118988-MS1)	Source: 15D0257-02			Prepared: 04/10/15 Analyzed: 04/11/15						
2-Methylphenol	1.25	0.38	mg/Kg dry	1.87	ND	67.1	30-130			
3/4-Methylphenol	1.31	0.38	mg/Kg dry	1.87	ND	70.1	30-130			
Naphthalene	1.59	0.19	mg/Kg dry	1.87	0.204	74.0	40-140			
2-Nitroaniline	1.45	0.38	mg/Kg dry	1.87	ND	77.4	40-140			
3-Nitroaniline	0.792	0.38	mg/Kg dry	1.87	ND	42.3	40-140			
4-Nitroaniline	0.799	0.38	mg/Kg dry	1.87	ND	42.7	40-140			
Nitrobenzene	1.53	0.38	mg/Kg dry	1.87	ND	82.0	40-140			
2-Nitrophenol	1.40	0.38	mg/Kg dry	1.87	ND	74.7	30-130			
4-Nitrophenol	1.35	0.74	mg/Kg dry	1.87	ND	72.2	30-130			
N-Nitrosodimethylamine	1.44	0.38	mg/Kg dry	1.87	ND	76.8	40-140			
N-Nitrosodiphenylamine	1.89	0.38	mg/Kg dry	1.87	ND	101	40-140			
N-Nitrosodi-n-propylamine	1.48	0.38	mg/Kg dry	1.87	ND	79.2	40-140			
Pentachloronitrobenzene	1.38	0.38	mg/Kg dry	1.87	ND	73.8	40-140			V-16
Pentachlorophenol	0.801	0.38	mg/Kg dry	1.87	ND	42.8	30-130			
Phenanthrene	5.77	0.19	mg/Kg dry	1.87	3.22	136	40-140			
Phenol	1.32	0.38	mg/Kg dry	1.87	ND	70.5	30-130			
Pyrene	9.22	0.19	mg/Kg dry	1.87	5.30	209 *	40-140			MS-22
Pyridine	0.985	0.38	mg/Kg dry	1.87	ND	52.7	40-140			
1,2,4,5-Tetrachlorobenzene	1.41	0.38	mg/Kg dry	1.87	ND	75.2	40-140			
1,2,4-Trichlorobenzene	1.44	0.38	mg/Kg dry	1.87	ND	77.1	40-140			
2,4,5-Trichlorophenol	1.33	0.38	mg/Kg dry	1.87	ND	70.9	30-130			
2,4,6-Trichlorophenol	1.33	0.38	mg/Kg dry	1.87	ND	71.3	30-130			
Surrogate: 2-Fluorophenol	5.53		mg/Kg dry	7.48		73.9	30-130			
Surrogate: Phenol-d6	5.68		mg/Kg dry	7.48		75.9	30-130			
Surrogate: Nitrobenzene-d5	3.07		mg/Kg dry	3.74		82.2	30-130			
Surrogate: 2-Fluorobiphenyl	2.99		mg/Kg dry	3.74		79.8	30-130			
Surrogate: 2,4,6-Tribromophenol	5.52		mg/Kg dry	7.48		73.8	30-130			
Surrogate: p-Terphenyl-d14	3.52		mg/Kg dry	3.74		94.0	30-130			
Matrix Spike Dup (B118988-MSD1)	Source: 15D0257-02			Prepared: 04/10/15 Analyzed: 04/11/15						
Acenaphthene	1.73	0.19	mg/Kg dry	1.87	0.239	79.8	40-140	1.97	30	
Acenaphthylene	1.58	0.19	mg/Kg dry	1.87	0.138	77.1	40-140	3.01	30	
Acetophenone	1.47	0.38	mg/Kg dry	1.87	ND	78.7	40-140	1.10	30	
Aniline	0.284	0.38	mg/Kg dry	1.87	ND	15.2 *	40-140		30	MS-09
Anthracene	2.34	0.19	mg/Kg dry	1.87	0.687	88.3	40-140	15.2	30	
Benzidine	ND	0.74	mg/Kg dry	1.87	ND	*	40-140	NC	30	MS-09, V-05
Benzo(a)anthracene	4.28	0.19	mg/Kg dry	1.87	2.75	82.0	40-140	19.9	30	
Benzo(a)pyrene	4.03	0.19	mg/Kg dry	1.87	2.66	73.3	40-140	21.0	30	
Benzo(b)fluoranthene	4.82	0.19	mg/Kg dry	1.87	3.23	84.8	40-140	16.5	30	
Benzo(g,h,i)perylene	2.03	0.19	mg/Kg dry	1.87	1.82	11.4 *	40-140	41.6 *	30	MS-23
Benzo(k)fluoranthene	3.20	0.19	mg/Kg dry	1.87	1.32	101	40-140	0.963	30	
Benzoic Acid	0.396	1.1	mg/Kg dry	1.87	ND	21.2 *	40-140		30	MS-09
Bis(2-chloroethoxy)methane	1.57	0.38	mg/Kg dry	1.87	ND	83.8	40-140	0.0239	30	R-05
Bis(2-chloroethyl)ether	1.59	0.38	mg/Kg dry	1.87	ND	85.2	40-140	5.50	30	
Bis(2-chloroisopropyl)ether	1.47	0.38	mg/Kg dry	1.87	ND	78.6	40-140	1.15	30	
Bis(2-Ethylhexyl)phthalate	1.82	0.38	mg/Kg dry	1.87	ND	97.4	40-140	23.8	30	
4-Bromophenylphenylether	1.49	0.38	mg/Kg dry	1.87	ND	79.9	40-140	0.754	30	
Butylbenzylphthalate	1.72	0.38	mg/Kg dry	1.87	ND	91.9	40-140	1.53	30	
Carbazole	1.65	0.19	mg/Kg dry	1.87	0.195	77.5	40-140	1.24	30	
4-Chloroaniline	0.451	0.74	mg/Kg dry	1.87	ND	24.1 *	40-140	4.07	30	MS-09
4-Chloro-3-methylphenol	1.44	0.74	mg/Kg dry	1.87	ND	76.9	30-130	1.10	30	
2-Chloronaphthalene	1.28	0.38	mg/Kg dry	1.87	ND	68.4	40-140	3.60	30	

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QUALITY CONTROL
Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B118988 - SW-846 3546										
Matrix Spike Dup (B118988-MSD1)	Source: 15D0257-02			Prepared: 04/10/15 Analyzed: 04/11/15						
2-Chlorophenol	1.36	0.38	mg/Kg dry	1.87	ND	72.5	30-130	0.470	30	
4-Chlorophenylphenylether	1.48	0.38	mg/Kg dry	1.87	ND	79.1	40-140	0.456	30	
Chrysene	4.28	0.19	mg/Kg dry	1.87	2.83	77.3	40-140	17.9	30	
Dibenz(a,h)anthracene	1.09	0.19	mg/Kg dry	1.87	0.394	37.3	* 40-140	38.6	* 30	MS-23
Dibenzofuran	1.65	0.38	mg/Kg dry	1.87	0.177	78.5	40-140	0.747	30	
Di-n-butylphthalate	1.58	0.38	mg/Kg dry	1.87	ND	84.2	40-140	2.39	30	
1,2-Dichlorobenzene	1.37	0.38	mg/Kg dry	1.87	ND	73.1	40-140	0.437	30	
1,3-Dichlorobenzene	1.31	0.38	mg/Kg dry	1.87	ND	70.1	40-140	1.05	30	
1,4-Dichlorobenzene	1.33	0.38	mg/Kg dry	1.87	ND	71.1	40-140	0.645	30	
3,3-Dichlorobenzidine	0.278	0.19	mg/Kg dry	1.87	ND	14.8	* 40-140	1.74	30	MS-09
2,4-Dichlorophenol	1.40	0.38	mg/Kg dry	1.87	ND	75.1	30-130	1.72	30	
Diethylphthalate	1.54	0.38	mg/Kg dry	1.87	ND	82.5	40-140	1.64	30	
2,4-Dimethylphenol	1.15	0.38	mg/Kg dry	1.87	ND	61.6	30-130	2.63	30	
Dimethylphthalate	1.52	0.38	mg/Kg dry	1.87	ND	81.5	40-140	1.33	30	
4,6-Dinitro-2-methylphenol	ND	0.38	mg/Kg dry	1.87	ND	*	30-130		30	MS-09
2,4-Dinitrophenol	0.273	0.74	mg/Kg dry	1.87	ND	14.6	* 30-130		30	MS-09
2,4-Dinitrotoluene	1.45	0.38	mg/Kg dry	1.87	ND	77.3	40-140	0.285	30	
2,6-Dinitrotoluene	1.55	0.38	mg/Kg dry	1.87	ND	82.8	40-140	0.411	30	
Di-n-octylphthalate	1.58	0.38	mg/Kg dry	1.87	ND	84.4	40-140	2.79	30	
1,2-Diphenylhydrazine (as Azobenzene)	1.63	0.38	mg/Kg dry	1.87	ND	87.3	40-140	1.73	30	
Fluoranthene	6.97	0.19	mg/Kg dry	1.87	5.58	74.4	40-140	29.4	30	
Fluorene	1.80	0.19	mg/Kg dry	1.87	0.269	81.7	40-140	3.50	30	
Hexachlorobenzene	1.45	0.38	mg/Kg dry	1.87	ND	77.5	40-140	0.907	30	
Hexachlorobutadiene	1.43	0.38	mg/Kg dry	1.87	ND	76.3	40-140	0.549	30	
Hexachlorocyclopentadiene	0.468	0.38	mg/Kg dry	1.87	ND	25.0	* 30-130	27.2	30	MS-22
Hexachloroethane	1.30	0.38	mg/Kg dry	1.87	ND	69.8	40-140	4.10	30	
Indeno(1,2,3-cd)pyrene	2.09	0.19	mg/Kg dry	1.87	1.94	8.42	* 40-140	40.0	* 30	MS-23
Isophorone	1.62	0.38	mg/Kg dry	1.87	ND	86.7	40-140	1.62	30	
1-Methylnaphthalene	1.42	0.19	mg/Kg dry	1.87	ND	76.1	40-140	0.210	30	
2-Methylnaphthalene	1.56	0.19	mg/Kg dry	1.87	ND	83.4	40-140	0.240	30	
2-Methylphenol	1.25	0.38	mg/Kg dry	1.87	ND	66.9	30-130	0.269	30	
3/4-Methylphenol	1.32	0.38	mg/Kg dry	1.87	ND	70.7	30-130	0.852	30	
Naphthalene	1.57	0.19	mg/Kg dry	1.87	0.204	72.8	40-140	1.42	30	
2-Nitroaniline	1.49	0.38	mg/Kg dry	1.87	ND	79.9	40-140	3.10	30	
3-Nitroaniline	0.837	0.38	mg/Kg dry	1.87	ND	44.7	40-140	5.51	30	
4-Nitroaniline	0.894	0.38	mg/Kg dry	1.87	ND	47.8	40-140	11.2	30	
Nitrobenzene	1.52	0.38	mg/Kg dry	1.87	ND	81.1	40-140	1.13	30	
2-Nitrophenol	1.38	0.38	mg/Kg dry	1.87	ND	74.0	30-130	1.05	30	
4-Nitrophenol	1.37	0.74	mg/Kg dry	1.87	ND	73.2	30-130	1.49	30	
N-Nitrosodimethylamine	1.49	0.38	mg/Kg dry	1.87	ND	79.8	40-140	3.83	30	
N-Nitrosodiphenylamine	1.88	0.38	mg/Kg dry	1.87	ND	101	40-140	0.595	30	
N-Nitrosodi-n-propylamine	1.48	0.38	mg/Kg dry	1.87	ND	79.4	40-140	0.252	30	
Pentachloronitrobenzene	1.45	0.38	mg/Kg dry	1.87	ND	77.5	40-140	4.89	30	V-16
Pentachlorophenol	0.865	0.38	mg/Kg dry	1.87	ND	46.2	30-130	7.64	30	
Phenanthrene	4.98	0.19	mg/Kg dry	1.87	3.22	94.4	40-140	14.6	30	
Phenol	1.35	0.38	mg/Kg dry	1.87	ND	72.2	30-130	2.38	30	
Pyrene	7.16	0.19	mg/Kg dry	1.87	5.30	99.4	40-140	25.1	30	
Pyridine	1.00	0.38	mg/Kg dry	1.87	ND	53.5	40-140	1.55	30	
1,2,4,5-Tetrachlorobenzene	1.42	0.38	mg/Kg dry	1.87	ND	75.7	40-140	0.716	30	
1,2,4-Trichlorobenzene	1.43	0.38	mg/Kg dry	1.87	ND	76.2	40-140	1.15	30	
2,4,5-Trichlorophenol	1.36	0.38	mg/Kg dry	1.87	ND	72.7	30-130	2.51	30	
2,4,6-Trichlorophenol	1.38	0.38	mg/Kg dry	1.87	ND	73.9	30-130	3.61	30	

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QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes

Batch B118988 - SW-846 3546

Matrix Spike Dup (B118988-MSD1)

Source: 15D0257-02

Prepared: 04/10/15 Analyzed: 04/11/15

Surrogate: 2-Fluorophenol	5.50		mg/Kg dry	7.48		73.5	30-130			
Surrogate: Phenol-d6	5.74		mg/Kg dry	7.48		76.8	30-130			
Surrogate: Nitrobenzene-d5	3.02		mg/Kg dry	3.74		80.7	30-130			
Surrogate: 2-Fluorobiphenyl	3.00		mg/Kg dry	3.74		80.1	30-130			
Surrogate: 2,4,6-Tribromophenol	5.55		mg/Kg dry	7.48		74.2	30-130			
Surrogate: p-Terphenyl-d14	3.45		mg/Kg dry	3.74		92.2	30-130			

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QUALITY CONTROL
Organochloride Pesticides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes

Batch B118990 - SW-846 3546
Blank (B118990-BLK1)

Prepared: 04/10/15 Analyzed: 04/13/15

alpha-Chlordane	ND	0.0050	mg/Kg wet							
alpha-Chlordane [2C]	ND	0.0050	mg/Kg wet							
gamma-Chlordane	ND	0.0050	mg/Kg wet							
gamma-Chlordane [2C]	ND	0.0050	mg/Kg wet							
Alachlor	ND	0.020	mg/Kg wet							
Alachlor [2C]	ND	0.020	mg/Kg wet							
Aldrin	ND	0.0050	mg/Kg wet							
Aldrin [2C]	ND	0.0050	mg/Kg wet							
alpha-BHC	ND	0.0050	mg/Kg wet							
alpha-BHC [2C]	ND	0.0050	mg/Kg wet							
beta-BHC	ND	0.0050	mg/Kg wet							
beta-BHC [2C]	ND	0.0050	mg/Kg wet							
delta-BHC	ND	0.0050	mg/Kg wet							
delta-BHC [2C]	ND	0.0050	mg/Kg wet							
gamma-BHC (Lindane)	ND	0.0020	mg/Kg wet							
gamma-BHC (Lindane) [2C]	ND	0.0020	mg/Kg wet							
Chlordane	ND	0.020	mg/Kg wet							
Chlordane [2C]	ND	0.020	mg/Kg wet							
4,4'-DDD	ND	0.0040	mg/Kg wet							
4,4'-DDD [2C]	ND	0.0040	mg/Kg wet							
4,4'-DDE	ND	0.0040	mg/Kg wet							
4,4'-DDE [2C]	ND	0.0040	mg/Kg wet							
4,4'-DDT	ND	0.0040	mg/Kg wet							
4,4'-DDT [2C]	ND	0.0040	mg/Kg wet							
Dieldrin	ND	0.0040	mg/Kg wet							
Dieldrin [2C]	ND	0.0040	mg/Kg wet							
Endosulfan I	ND	0.0050	mg/Kg wet							
Endosulfan I [2C]	ND	0.0050	mg/Kg wet							
Endosulfan II	ND	0.0080	mg/Kg wet							
Endosulfan II [2C]	ND	0.0080	mg/Kg wet							
Endosulfan Sulfate	ND	0.0080	mg/Kg wet							
Endosulfan Sulfate [2C]	ND	0.0080	mg/Kg wet							
Endrin	ND	0.0080	mg/Kg wet							
Endrin [2C]	ND	0.0080	mg/Kg wet							
Endrin Aldehyde	ND	0.0080	mg/Kg wet							
Endrin Aldehyde [2C]	ND	0.0080	mg/Kg wet							
Endrin Ketone	ND	0.0080	mg/Kg wet							
Endrin Ketone [2C]	ND	0.0080	mg/Kg wet							
Heptachlor	ND	0.0050	mg/Kg wet							
Heptachlor [2C]	ND	0.0050	mg/Kg wet							
Heptachlor Epoxide	ND	0.0050	mg/Kg wet							
Heptachlor Epoxide [2C]	ND	0.0050	mg/Kg wet							
Hexachlorobenzene	ND	0.0060	mg/Kg wet							
Hexachlorobenzene [2C]	ND	0.0060	mg/Kg wet							
Methoxychlor	ND	0.050	mg/Kg wet							
Methoxychlor [2C]	ND	0.050	mg/Kg wet							
Toxaphene	ND	0.10	mg/Kg wet							
Toxaphene [2C]	ND	0.10	mg/Kg wet							
Surrogate: Decachlorobiphenyl	0.192		mg/Kg wet	0.200		96.1	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.190		mg/Kg wet	0.200		95.2	30-150			
Surrogate: Tetrachloro-m-xylene	0.191		mg/Kg wet	0.200		95.4	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.188		mg/Kg wet	0.200		94.1	30-150			

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QUALITY CONTROL

Organochloride Pesticides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B118990 - SW-846 3546										
LCS (B118990-BS1)				Prepared: 04/10/15 Analyzed: 04/13/15						
Alachlor	0.11	0.020	mg/Kg wet	0.100		107	40-140			
Alachlor [2C]	0.11	0.020	mg/Kg wet	0.100		108	40-140			
Aldrin	0.11	0.0050	mg/Kg wet	0.100		106	40-140			
Aldrin [2C]	0.11	0.0050	mg/Kg wet	0.100		111	40-140			
alpha-BHC	0.094	0.0050	mg/Kg wet	0.100		93.7	40-140			
alpha-BHC [2C]	0.095	0.0050	mg/Kg wet	0.100		94.7	40-140			
beta-BHC	0.092	0.0050	mg/Kg wet	0.100		92.4	40-140			
beta-BHC [2C]	0.094	0.0050	mg/Kg wet	0.100		94.0	40-140			
delta-BHC	0.096	0.0050	mg/Kg wet	0.100		96.1	40-140			
delta-BHC [2C]	0.098	0.0050	mg/Kg wet	0.100		97.8	40-140			
gamma-BHC (Lindane)	0.097	0.0020	mg/Kg wet	0.100		97.5	40-140			
gamma-BHC (Lindane) [2C]	0.10	0.0020	mg/Kg wet	0.100		99.7	40-140			
4,4'-DDD	0.11	0.0040	mg/Kg wet	0.100		113	40-140			
4,4'-DDD [2C]	0.12	0.0040	mg/Kg wet	0.100		119	40-140			
4,4'-DDE	0.11	0.0040	mg/Kg wet	0.100		115	40-140			
4,4'-DDE [2C]	0.12	0.0040	mg/Kg wet	0.100		119	40-140			
4,4'-DDT	0.11	0.0040	mg/Kg wet	0.100		113	40-140			
4,4'-DDT [2C]	0.12	0.0040	mg/Kg wet	0.100		116	40-140			
Dieldrin	0.11	0.0040	mg/Kg wet	0.100		105	40-140			
Dieldrin [2C]	0.11	0.0040	mg/Kg wet	0.100		115	40-140			
Endosulfan I	0.11	0.0050	mg/Kg wet	0.100		107	40-140			
Endosulfan I [2C]	0.11	0.0050	mg/Kg wet	0.100		109	40-140			
Endosulfan II	0.11	0.0080	mg/Kg wet	0.100		112	40-140			
Endosulfan II [2C]	0.11	0.0080	mg/Kg wet	0.100		114	40-140			
Endosulfan Sulfate	0.11	0.0080	mg/Kg wet	0.100		113	40-140			
Endosulfan Sulfate [2C]	0.11	0.0080	mg/Kg wet	0.100		114	40-140			
Endrin	0.12	0.0080	mg/Kg wet	0.100		117	40-140			
Endrin [2C]	0.12	0.0080	mg/Kg wet	0.100		120	40-140			
Endrin Aldehyde	0.10	0.0080	mg/Kg wet	0.100		104	40-140			
Endrin Aldehyde [2C]	0.10	0.0080	mg/Kg wet	0.100		104	40-140			
Endrin Ketone	0.11	0.0080	mg/Kg wet	0.100		110	40-140			
Endrin Ketone [2C]	0.11	0.0080	mg/Kg wet	0.100		109	40-140			
Heptachlor	0.10	0.0050	mg/Kg wet	0.100		101	40-140			
Heptachlor [2C]	0.11	0.0050	mg/Kg wet	0.100		106	40-140			
Heptachlor Epoxide	0.11	0.0050	mg/Kg wet	0.100		106	40-140			
Heptachlor Epoxide [2C]	0.11	0.0050	mg/Kg wet	0.100		108	40-140			
Hexachlorobenzene	0.11	0.0060	mg/Kg wet	0.100		106	40-140			
Hexachlorobenzene [2C]	0.11	0.0060	mg/Kg wet	0.100		107	40-140			
Methoxychlor	0.11	0.050	mg/Kg wet	0.100		108	40-140			
Methoxychlor [2C]	0.11	0.050	mg/Kg wet	0.100		114	40-140			
Surrogate: Decachlorobiphenyl	0.197		mg/Kg wet	0.200		98.3	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.197		mg/Kg wet	0.200		98.4	30-150			
Surrogate: Tetrachloro-m-xylene	0.191		mg/Kg wet	0.200		95.3	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.193		mg/Kg wet	0.200		96.3	30-150			

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QUALITY CONTROL
Organochloride Pesticides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B118990 - SW-846 3546										
LCS Dup (B118990-BSD1)				Prepared: 04/10/15 Analyzed: 04/13/15						
Alachlor	0.10	0.020	mg/Kg wet	0.100		100	40-140	6.51	30	
Alachlor [2C]	0.10	0.020	mg/Kg wet	0.100		105	40-140	3.20	30	
Aldrin	0.10	0.0050	mg/Kg wet	0.100		105	40-140	0.935	30	
Aldrin [2C]	0.11	0.0050	mg/Kg wet	0.100		111	40-140	0.369	30	
alpha-BHC	0.10	0.0050	mg/Kg wet	0.100		104	40-140	10.7	30	
alpha-BHC [2C]	0.10	0.0050	mg/Kg wet	0.100		101	40-140	6.35	30	
beta-BHC	0.099	0.0050	mg/Kg wet	0.100		99.2	40-140	7.10	30	
beta-BHC [2C]	0.097	0.0050	mg/Kg wet	0.100		97.3	40-140	3.40	30	
delta-BHC	0.10	0.0050	mg/Kg wet	0.100		103	40-140	7.05	30	
delta-BHC [2C]	0.10	0.0050	mg/Kg wet	0.100		102	40-140	4.37	30	
gamma-BHC (Lindane)	0.11	0.0020	mg/Kg wet	0.100		105	40-140	7.54	30	
gamma-BHC (Lindane) [2C]	0.10	0.0020	mg/Kg wet	0.100		105	40-140	4.82	30	
4,4'-DDD	0.11	0.0040	mg/Kg wet	0.100		107	40-140	5.49	30	
4,4'-DDD [2C]	0.11	0.0040	mg/Kg wet	0.100		114	40-140	4.45	30	
4,4'-DDE	0.11	0.0040	mg/Kg wet	0.100		110	40-140	4.64	30	
4,4'-DDE [2C]	0.11	0.0040	mg/Kg wet	0.100		114	40-140	3.95	30	
4,4'-DDT	0.11	0.0040	mg/Kg wet	0.100		108	40-140	4.54	30	
4,4'-DDT [2C]	0.11	0.0040	mg/Kg wet	0.100		110	40-140	5.12	30	
Dieldrin	0.10	0.0040	mg/Kg wet	0.100		101	40-140	3.46	30	
Dieldrin [2C]	0.11	0.0040	mg/Kg wet	0.100		111	40-140	3.27	30	
Endosulfan I	0.10	0.0050	mg/Kg wet	0.100		104	40-140	2.75	30	
Endosulfan I [2C]	0.11	0.0050	mg/Kg wet	0.100		106	40-140	3.13	30	
Endosulfan II	0.11	0.0080	mg/Kg wet	0.100		107	40-140	4.17	30	
Endosulfan II [2C]	0.11	0.0080	mg/Kg wet	0.100		109	40-140	4.46	30	
Endosulfan Sulfate	0.11	0.0080	mg/Kg wet	0.100		108	40-140	4.05	30	
Endosulfan Sulfate [2C]	0.11	0.0080	mg/Kg wet	0.100		109	40-140	4.06	30	
Endrin	0.11	0.0080	mg/Kg wet	0.100		113	40-140	2.89	30	
Endrin [2C]	0.12	0.0080	mg/Kg wet	0.100		117	40-140	2.57	30	
Endrin Aldehyde	0.099	0.0080	mg/Kg wet	0.100		99.4	40-140	4.14	30	
Endrin Aldehyde [2C]	0.10	0.0080	mg/Kg wet	0.100		101	40-140	2.61	30	
Endrin Ketone	0.10	0.0080	mg/Kg wet	0.100		104	40-140	5.10	30	
Endrin Ketone [2C]	0.11	0.0080	mg/Kg wet	0.100		105	40-140	4.04	30	
Heptachlor	0.10	0.0050	mg/Kg wet	0.100		102	40-140	1.51	30	
Heptachlor [2C]	0.11	0.0050	mg/Kg wet	0.100		109	40-140	2.17	30	
Heptachlor Epoxide	0.10	0.0050	mg/Kg wet	0.100		103	40-140	2.46	30	
Heptachlor Epoxide [2C]	0.11	0.0050	mg/Kg wet	0.100		107	40-140	1.36	30	
Hexachlorobenzene	0.11	0.0060	mg/Kg wet	0.100		107	40-140	1.32	30	
Hexachlorobenzene [2C]	0.10	0.0060	mg/Kg wet	0.100		104	40-140	2.46	30	
Methoxychlor	0.10	0.050	mg/Kg wet	0.100		105	40-140	3.12	30	
Methoxychlor [2C]	0.11	0.050	mg/Kg wet	0.100		111	40-140	2.32	30	
Surrogate: Decachlorobiphenyl	0.177		mg/Kg wet	0.200		88.7	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.192		mg/Kg wet	0.200		95.9	30-150			
Surrogate: Tetrachloro-m-xylene	0.194		mg/Kg wet	0.200		97.2	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.193		mg/Kg wet	0.200		96.4	30-150			

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QUALITY CONTROL

Polychlorinated Biphenyls By GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes

Batch B118989 - SW-846 3546

Blank (B118989-BLK1)

Prepared: 04/10/15 Analyzed: 04/11/15

Aroclor-1016	ND	0.020	mg/Kg wet							
Aroclor-1016 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1221	ND	0.020	mg/Kg wet							
Aroclor-1221 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1232	ND	0.020	mg/Kg wet							
Aroclor-1232 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1242	ND	0.020	mg/Kg wet							
Aroclor-1242 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1248	ND	0.020	mg/Kg wet							
Aroclor-1248 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1254	ND	0.020	mg/Kg wet							
Aroclor-1254 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1260	ND	0.020	mg/Kg wet							
Aroclor-1260 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1262	ND	0.020	mg/Kg wet							
Aroclor-1262 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1268	ND	0.020	mg/Kg wet							
Aroclor-1268 [2C]	ND	0.020	mg/Kg wet							
Surrogate: Decachlorobiphenyl	0.195		mg/Kg wet	0.200		97.7	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.199		mg/Kg wet	0.200		99.5	30-150			
Surrogate: Tetrachloro-m-xylene	0.192		mg/Kg wet	0.200		96.0	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.208		mg/Kg wet	0.200		104	30-150			

LCS (B118989-BS1)

Prepared: 04/10/15 Analyzed: 04/11/15

Aroclor-1016	0.21	0.10	mg/Kg wet	0.200		105	40-140			
Aroclor-1016 [2C]	0.22	0.10	mg/Kg wet	0.200		111	40-140			
Aroclor-1260	0.21	0.10	mg/Kg wet	0.200		105	40-140			
Aroclor-1260 [2C]	0.22	0.10	mg/Kg wet	0.200		110	40-140			
Surrogate: Decachlorobiphenyl	0.196		mg/Kg wet	0.200		97.8	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.202		mg/Kg wet	0.200		101	30-150			
Surrogate: Tetrachloro-m-xylene	0.196		mg/Kg wet	0.200		97.8	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.215		mg/Kg wet	0.200		108	30-150			

LCS Dup (B118989-BSD1)

Prepared: 04/10/15 Analyzed: 04/11/15

Aroclor-1016	0.21	0.10	mg/Kg wet	0.200		105	40-140	0.107	30	
Aroclor-1016 [2C]	0.23	0.10	mg/Kg wet	0.200		113	40-140	1.60	30	
Aroclor-1260	0.21	0.10	mg/Kg wet	0.200		106	40-140	1.05	30	
Aroclor-1260 [2C]	0.22	0.10	mg/Kg wet	0.200		112	40-140	1.84	30	
Surrogate: Decachlorobiphenyl	0.197		mg/Kg wet	0.200		98.6	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.204		mg/Kg wet	0.200		102	30-150			
Surrogate: Tetrachloro-m-xylene	0.196		mg/Kg wet	0.200		97.8	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.215		mg/Kg wet	0.200		107	30-150			

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QUALITY CONTROL

Herbicides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B119107 - SW-846 8151										
Blank (B119107-BLK1)										
Prepared: 04/13/15 Analyzed: 04/17/15										
2,4-D	ND	24	µg/kg wet							
2,4-D [2C]	ND	24	µg/kg wet							
2,4-DB	ND	24	µg/kg wet							
2,4-DB [2C]	ND	24	µg/kg wet							
2,4,5-TP (Silvex)	ND	2.4	µg/kg wet							
2,4,5-TP (Silvex) [2C]	ND	2.4	µg/kg wet							
2,4,5-T	ND	2.4	µg/kg wet							
2,4,5-T [2C]	ND	2.4	µg/kg wet							
Dalapon	ND	60	µg/kg wet							
Dalapon [2C]	ND	60	µg/kg wet							
Dicamba	ND	2.4	µg/kg wet							
Dicamba [2C]	ND	2.4	µg/kg wet							
Dichloroprop	ND	24	µg/kg wet							
Dichloroprop [2C]	ND	24	µg/kg wet							
Dinoseb	ND	12	µg/kg wet							
Dinoseb [2C]	ND	12	µg/kg wet							
MCPA	ND	2400	µg/kg wet							
MCPA [2C]	ND	2400	µg/kg wet							
MCPP	ND	2400	µg/kg wet							
MCPP [2C]	ND	2400	µg/kg wet							
Surrogate: 2,4-Dichlorophenylacetic acid	105		µg/kg wet	95.2		110	30-150			
Surrogate: 2,4-Dichlorophenylacetic acid [2C]	89.2		µg/kg wet	95.2		93.7	30-150			
LCS (B119107-BS1)										
Prepared: 04/13/15 Analyzed: 04/17/15										
2,4-D	121	25	µg/kg wet	125		97.0	40-140			
2,4-D [2C]	108	25	µg/kg wet	125		86.4	40-140			
2,4-DB	132	25	µg/kg wet	125		106	40-140			
2,4-DB [2C]	128	25	µg/kg wet	125		102	40-140			
2,4,5-TP (Silvex)	11.3	2.5	µg/kg wet	12.5		90.5	40-140			
2,4,5-TP (Silvex) [2C]	12.3	2.5	µg/kg wet	12.5		98.3	40-140			
2,4,5-T	12.0	2.5	µg/kg wet	12.5		96.3	40-140			
2,4,5-T [2C]	13.6	2.5	µg/kg wet	12.5		109	40-140			
Dalapon	170	62	µg/kg wet	312		54.6	40-140			
Dalapon [2C]	166	62	µg/kg wet	312		53.2	40-140			
Dicamba	12.4	2.5	µg/kg wet	12.5		99.2	40-140			
Dicamba [2C]	13.3	2.5	µg/kg wet	12.5		107	40-140			
Dichloroprop	156	25	µg/kg wet	125		125	40-140			
Dichloroprop [2C]	151	25	µg/kg wet	125		121	40-140			
Dinoseb	18.6	12	µg/kg wet	62.5		29.8	0-42.4			
Dinoseb [2C]	19.7	12	µg/kg wet	62.5		31.6	0-41.1			
MCPA	11600	2500	µg/kg wet	12500		93.0	40-140			
MCPA [2C]	12200	2500	µg/kg wet	12500		97.8	40-140			
MCPP	12500	2500	µg/kg wet	12500		100	40-140			
MCPP [2C]	11600	2500	µg/kg wet	12500		92.9	40-140			
Surrogate: 2,4-Dichlorophenylacetic acid	110		µg/kg wet	100		110	30-150			
Surrogate: 2,4-Dichlorophenylacetic acid [2C]	94.8		µg/kg wet	100		94.8	30-150			

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QUALITY CONTROL
Herbicides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B119107 - SW-846 8151										
LCS Dup (B119107-BSD1)					Prepared: 04/13/15 Analyzed: 04/17/15					
2,4-D	118	25	µg/kg wet	125		94.4	40-140	2.67	30	
2,4-D [2C]	104	25	µg/kg wet	125		83.5	40-140	3.42	30	
2,4-DB	121	25	µg/kg wet	125		96.9	40-140	8.97	30	
2,4-DB [2C]	125	25	µg/kg wet	125		100	40-140	1.68	30	
2,4,5-TP (Silvex)	10.9	2.5	µg/kg wet	12.5		86.8	40-140	4.12	30	
2,4,5-TP (Silvex) [2C]	12.0	2.5	µg/kg wet	12.5		96.4	40-140	2.01	30	
2,4,5-T	11.7	2.5	µg/kg wet	12.5		93.7	40-140	2.66	30	
2,4,5-T [2C]	13.5	2.5	µg/kg wet	12.5		108	40-140	1.17	30	
Dalapon	185	62	µg/kg wet	312		59.2	40-140	8.19	30	
Dalapon [2C]	180	62	µg/kg wet	312		57.6	40-140	7.85	30	
Dicamba	12.1	2.5	µg/kg wet	12.5		97.0	40-140	2.24	30	
Dicamba [2C]	13.4	2.5	µg/kg wet	12.5		107	40-140	0.377	30	
Dichloroprop	151	25	µg/kg wet	125		121	40-140	3.56	30	
Dichloroprop [2C]	147	25	µg/kg wet	125		117	40-140	2.79	30	
Dinoseb	17.6	12	µg/kg wet	62.5		28.1	0-42.4	5.78	30	
Dinoseb [2C]	19.1	12	µg/kg wet	62.5		30.6	0-41.1	3.10	30	
MCPA	11400	2500	µg/kg wet	12500		91.3	40-140	1.86	30	
MCPA [2C]	11900	2500	µg/kg wet	12500		94.9	40-140	3.02	30	
MCPP	12100	2500	µg/kg wet	12500		96.9	40-140	3.51	30	
MCPP [2C]	11300	2500	µg/kg wet	12500		90.5	40-140	2.68	30	
Surrogate: 2,4-Dichlorophenylacetic acid	107		µg/kg wet	100		107	30-150			
Surrogate: 2,4-Dichlorophenylacetic acid [2C]	93.8		µg/kg wet	100		93.8	30-150			

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QUALITY CONTROL

Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes

Batch B118848 - SW-846 3050B

Blank (B118848-BLK1)

Prepared: 04/08/15 Analyzed: 04/09/15

Aluminum	ND	2.5	mg/Kg wet
Antimony	ND	2.5	mg/Kg wet
Arsenic	ND	2.5	mg/Kg wet
Barium	ND	2.5	mg/Kg wet
Beryllium	ND	0.25	mg/Kg wet
Cadmium	ND	0.25	mg/Kg wet
Calcium	ND	7.5	mg/Kg wet
Chromium	ND	0.50	mg/Kg wet
Cobalt	ND	2.5	mg/Kg wet
Copper	ND	0.50	mg/Kg wet
Iron	ND	2.5	mg/Kg wet
Lead	ND	0.75	mg/Kg wet
Magnesium	ND	7.5	mg/Kg wet
Manganese	ND	0.50	mg/Kg wet
Nickel	ND	0.50	mg/Kg wet
Potassium	ND	100	mg/Kg wet
Selenium	ND	2.5	mg/Kg wet
Silver	ND	0.50	mg/Kg wet
Sodium	ND	100	mg/Kg wet
Thallium	ND	2.5	mg/Kg wet
Vanadium	ND	1.0	mg/Kg wet
Zinc	ND	1.0	mg/Kg wet

LCS (B118848-BS1)

Prepared: 04/08/15 Analyzed: 04/09/15

Aluminum	6100	4.9	mg/Kg wet	8100	75.3	51.2-148.1
Antimony	97.3	4.9	mg/Kg wet	116	83.9	0-210.3
Arsenic	107	4.9	mg/Kg wet	122	87.7	77.8-122.1
Barium	155	4.9	mg/Kg wet	167	93.1	82-117.4
Beryllium	55.3	0.49	mg/Kg wet	54.3	102	82.3-117.7
Cadmium	80.6	0.49	mg/Kg wet	88.0	91.6	81.9-118.2
Calcium	5370	15	mg/Kg wet	5920	90.6	81.9-118.2
Chromium	94.8	0.98	mg/Kg wet	102	92.9	78.7-120.6
Cobalt	91.0	4.9	mg/Kg wet	99.4	91.5	83-116.7
Copper	79.9	0.98	mg/Kg wet	78.0	102	80.4-119.6
Iron	13700	4.9	mg/Kg wet	15100	91.0	46.8-153
Lead	84.9	1.5	mg/Kg wet	94.5	89.8	82.4-117.8
Magnesium	2900	15	mg/Kg wet	3020	95.9	75.5-124.2
Manganese	380	0.98	mg/Kg wet	401	94.7	80.8-119.2
Nickel	49.5	0.98	mg/Kg wet	56.3	88.0	82.2-117.8
Potassium	2160	200	mg/Kg wet	2490	86.6	69.9-130.1
Selenium	124	4.9	mg/Kg wet	157	79.0	77.1-122.3
Silver	31.1	0.98	mg/Kg wet	34.2	90.9	74.3-125.4
Sodium	209	200	mg/Kg wet	246	85.0	69.9-130.5
Thallium	104	4.9	mg/Kg wet	116	89.3	78.2-121.6
Vanadium	61.1	2.0	mg/Kg wet	67.1	91.1	64.8-135.2
Zinc	175	2.0	mg/Kg wet	207	84.5	79.7-120.8

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QUALITY CONTROL
Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes

Batch B118848 - SW-846 3050B
LCS Dup (B118848-BSD1)

Prepared: 04/08/15 Analyzed: 04/09/15

Aluminum	6200	5.0	mg/Kg wet	8100		76.5	51.2-148.1	1.67	30	
Antimony	102	5.0	mg/Kg wet	116		87.8	0-210.3	4.56	30	
Arsenic	110	5.0	mg/Kg wet	122		89.9	77.8-122.1	2.52	30	
Barium	155	5.0	mg/Kg wet	167		92.6	82-117.4	0.495	30	
Beryllium	55.4	0.50	mg/Kg wet	54.3		102	82.3-117.7	0.205	30	
Cadmium	81.9	0.50	mg/Kg wet	88.0		93.1	81.9-118.2	1.62	30	
Calcium	5320	15	mg/Kg wet	5920		89.9	81.9-118.2	0.842	30	
Chromium	127	0.99	mg/Kg wet	102		124	* 78.7-120.6	28.7	30	L-07
Cobalt	92.0	5.0	mg/Kg wet	99.4		92.6	83-116.7	1.14	30	
Copper	80.5	0.99	mg/Kg wet	78.0		103	80.4-119.6	0.801	30	
Iron	14300	5.0	mg/Kg wet	15100		94.7	46.8-153	4.00	30	
Lead	89.1	1.5	mg/Kg wet	94.5		94.3	82.4-117.8	4.90	30	
Magnesium	2900	15	mg/Kg wet	3020		96.1	75.5-124.2	0.112	30	
Manganese	384	0.99	mg/Kg wet	401		95.9	80.8-119.2	1.23	30	
Nickel	50.5	0.99	mg/Kg wet	56.3		89.7	82.2-117.8	1.90	30	
Potassium	2210	200	mg/Kg wet	2490		88.7	69.9-130.1	2.46	30	
Selenium	126	5.0	mg/Kg wet	157		80.5	77.1-122.3	1.89	30	
Silver	30.9	0.99	mg/Kg wet	34.2		90.3	74.3-125.4	0.640	30	
Sodium	212	200	mg/Kg wet	246		86.2	69.9-130.5	1.36	30	
Thallium	103	5.0	mg/Kg wet	116		88.7	78.2-121.6	0.711	30	
Vanadium	63.0	2.0	mg/Kg wet	67.1		93.9	64.8-135.2	3.03	30	
Zinc	195	2.0	mg/Kg wet	207		94.0	79.7-120.8	10.6	30	

Duplicate (B118848-DUP1)
Source: 15D0257-02

Prepared: 04/08/15 Analyzed: 04/10/15

Aluminum	6110	3.0	mg/Kg dry		6750			9.97	35	
Antimony	ND	3.0	mg/Kg dry		ND			NC	35	
Arsenic	33.2	3.0	mg/Kg dry		44.7			29.4	35	
Barium	79.2	3.0	mg/Kg dry		86.5			8.80	35	
Beryllium	1.60	0.30	mg/Kg dry		1.65			3.26	35	
Cadmium	3.02	0.30	mg/Kg dry		2.88			4.60	35	
Calcium	11000	8.9	mg/Kg dry		8980			19.8	35	
Chromium	19.6	0.59	mg/Kg dry		20.9			6.78	35	
Cobalt	8.53	3.0	mg/Kg dry		7.74			9.80	35	
Copper	102	0.59	mg/Kg dry		105			2.97	35	
Iron	22900	3.0	mg/Kg dry		23300			1.62	35	
Lead	296	0.89	mg/Kg dry		384			26.0	35	
Magnesium	6270	8.9	mg/Kg dry		6080			3.13	35	
Manganese	229	0.59	mg/Kg dry		225			1.87	35	
Nickel	21.4	0.59	mg/Kg dry		25.2			16.2	35	
Potassium	945	120	mg/Kg dry		1000			6.16	35	
Selenium	ND	3.0	mg/Kg dry		ND			NC	35	
Silver	ND	0.59	mg/Kg dry		ND			NC	35	
Sodium	764	120	mg/Kg dry		750			1.79	35	
Thallium	ND	3.0	mg/Kg dry		ND			NC	35	
Vanadium	63.2	1.2	mg/Kg dry		78.1			21.1	35	
Zinc	522	1.2	mg/Kg dry		526			0.798	35	

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QUALITY CONTROL

Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes

Batch B118848 - SW-846 3050B

MRL Check (B118848-MRL1)

Prepared: 04/08/15 Analyzed: 04/09/15

Lead	0.677	0.72	mg/Kg wet	0.725		93.4	80-120			

Matrix Spike (B118848-MS1)

Source: 15D0257-02

Prepared: 04/08/15 Analyzed: 04/10/15

Aluminum	6980	2.9	mg/Kg dry	115	6750	199	*	75-125		MS-19
Antimony	58.3	2.9	mg/Kg dry	115	ND	50.6	*	75-125		MS-07
Arsenic	157	2.9	mg/Kg dry	115	44.7	97.2		75-125		
Barium	187	2.9	mg/Kg dry	115	86.5	87.5		75-125		
Beryllium	118	0.29	mg/Kg dry	115	1.65	101		75-125		
Cadmium	111	0.29	mg/Kg dry	115	2.88	93.6		75-125		
Calcium	10700	8.6	mg/Kg dry	115	8980	1470	*	75-125		MS-19
Chromium	131	0.58	mg/Kg dry	115	20.9	95.6		75-125		
Cobalt	109	2.9	mg/Kg dry	115	7.74	88.3		75-125		
Copper	229	0.58	mg/Kg dry	115	105	108		75-125		
Iron	20800	2.9	mg/Kg dry	115	23300	-2140	*	75-125		MS-19
Lead	434	0.86	mg/Kg dry	115	384	43.8	*	75-125		MS-07
Magnesium	6150	8.6	mg/Kg dry	115	6080	58.9	*	75-125		MS-19
Manganese	350	0.58	mg/Kg dry	115	225	108		75-125		
Nickel	122	0.58	mg/Kg dry	115	25.2	84.1		75-125		
Potassium	2220	120	mg/Kg dry	1150	1000	106		75-125		
Selenium	94.7	2.9	mg/Kg dry	115	ND	82.2		75-125		
Silver	98.7	0.58	mg/Kg dry	115	ND	85.6		75-125		
Sodium	864	120	mg/Kg dry	115	750	98.8		75-125		
Thallium	99.5	2.9	mg/Kg dry	115	ND	86.4		75-125		
Vanadium	181	1.2	mg/Kg dry	115	78.1	89.1		75-125		
Zinc	611	1.2	mg/Kg dry	115	526	73.8	*	75-125		MS-07

Batch B118849 - SW-846 7471

Blank (B118849-BLK1)

Prepared: 04/08/15 Analyzed: 04/09/15

Mercury	ND	0.025	mg/Kg wet							

LCS (B118849-BS1)

Prepared: 04/08/15 Analyzed: 04/09/15

Mercury	5.46	0.84	mg/Kg wet	7.10		76.8	73.7-126.3			

LCS Dup (B118849-BSD1)

Prepared: 04/08/15 Analyzed: 04/09/15

Mercury	8.98	0.85	mg/Kg wet	7.10		127	*	73.7-126.3	48.8	*	30	L-07A

Duplicate (B118849-DUP1)

Source: 15D0257-02

Prepared: 04/08/15 Analyzed: 04/09/15

Mercury	1.74	0.29	mg/Kg dry		1.77			1.27	35		L-07A

Matrix Spike (B118849-MS1)

Source: 15D0257-02

Prepared: 04/08/15 Analyzed: 04/09/15

Mercury	1.54	0.27	mg/Kg dry	0.181	1.77	-126	*	75-125		MS-19

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QUALITY CONTROL

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes

Batch B119076 - % Solids

Duplicate (B119076-DUP2)		Source: 15D0257-01		Prepared: 04/11/15 Analyzed: 04/13/15						
% Solids	90.1		% Wt		89.1			1.12	20	

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BREAKDOWN REPORT

Lab Sample ID: S008266-PEM1 Analyzed: 04/13/2015

Column Number:	1
Analyte	% Breakdown
4,4'-DDT [1]	0.57
Endrin [1]	5.12

Column Number:	2
Analyte	% Breakdown
4,4'-DDT [2]	0.54
Endrin [2]	5.08

BREAKDOWN REPORT

Lab Sample ID: S008266-PEM2 Analyzed: 04/13/2015

Column Number:	1
Analyte	% Breakdown
4,4'-DDT [1]	0.74
Endrin [1]	5.43

Column Number:	2
Analyte	% Breakdown
4,4'-DDT [2]	0.70
Endrin [2]	5.23

BREAKDOWN REPORT

Lab Sample ID: S008266-PEM3 Analyzed: 04/13/2015

Column Number:	1
Analyte	% Breakdown
4,4'-DDT [1]	0.61
Endrin [1]	3.72

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BREAKDOWN REPORT

Lab Sample ID: S008266-PEM3 Analyzed: 04/13/2015

Column Number: 2

Analyte % Breakdown

4,4'-DDT [2] 0.55

Endrin [2] 3.17

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

SB-08 COMP

Lab Sample ID: 15D0257-02 Date(s) Analyzed: 04/11/2015 04/11/2015

Instrument ID (1): Instrument ID (2):

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1254	1	0.00	0.00	0.00	0.34	
	2	0.00	0.00	0.00	0.43	23.7
Aroclor-1260	1	0.00	0.00	0.00	0.30	
	2	0.00	0.00	0.00	0.30	0.7

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**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**

SW-846 8082A

LCS

Lab Sample ID: B118989-BS1 Date(s) Analyzed: 04/11/2015 04/11/2015

Instrument ID (1): Instrument ID (2):

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1016	1	0.00	0.00	0.00	0.21	
	2	0.00	0.00	0.00	0.22	5
Aroclor-1260	1	0.00	0.00	0.00	0.21	
	2	0.00	0.00	0.00	0.22	5

**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**

SW-846 8082A

LCS Dup

Lab Sample ID: B118989-BSD1 Date(s) Analyzed: 04/11/2015 04/11/2015

Instrument ID (1): Instrument ID (2):

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1016	1	0.00	0.00	0.00	0.21	
	2	0.00	0.00	0.00	0.23	10
Aroclor-1260	1	0.00	0.00	0.00	0.21	
	2	0.00	0.00	0.00	0.22	4

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8081B

LCS

Lab Sample ID: B118990-BS1 Date(s) Analyzed: 04/13/2015 04/13/2015
Instrument ID (1): ECD6 Instrument ID (2): ECD6
GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
4,4'-DDD	1	7.08	0.00	0.00	0.11	
	2	7.64	0.00	0.00	0.12	6
4,4'-DDE	1	6.66	0.00	0.00	0.11	
	2	7.20	0.00	0.00	0.12	4
4,4'-DDT	1	7.28	0.00	0.00	0.11	
	2	7.89	0.00	0.00	0.12	6
Alachlor	1	6.13	0.00	0.00	0.11	
	2	6.34	0.00	0.00	0.11	3
Aldrin	1	6.03	0.00	0.00	0.11	
	2	6.41	0.00	0.00	0.11	4
alpha-BHC	1	5.38	0.00	0.00	0.094	
	2	5.66	0.00	0.00	0.095	1
beta-BHC	1	5.61	0.00	0.00	0.092	
	2	5.94	0.00	0.00	0.094	2
delta-BHC	1	5.72	0.00	0.00	0.096	
	2	6.14	0.00	0.00	0.098	2
Dieldrin	1	6.85	0.00	0.00	0.11	
	2	7.32	0.00	0.00	0.11	5
Endosulfan I	1	6.69	0.00	0.00	0.11	
	2	7.12	0.00	0.00	0.11	3
Endosulfan II	1	7.18	0.00	0.00	0.11	
	2	7.72	0.00	0.00	0.11	2
Endosulfan Sulfate	1	7.82	0.00	0.00	0.11	
	2	8.18	0.00	0.00	0.11	3
Endrin	1	7.02	0.00	0.00	0.12	
	2	7.56	0.00	0.00	0.12	3
Endrin Aldehyde	1	7.49	0.00	0.00	0.10	
	2	7.98	0.00	0.00	0.10	4
Endrin Ketone	1	8.02	0.00	0.00	0.11	
	2	8.53	0.00	0.00	0.11	0
gamma-BHC (Lindane)	1	5.56	0.00	0.00	0.097	

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8081B

LCS

Lab Sample ID: B118990-BS1 Date(s) Analyzed: 04/13/2015 04/13/2015

Instrument ID (1): ECD6 Instrument ID (2): ECD6

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
	2	5.89	0.00	0.00	0.10	3
Heptachlor	1	5.84	0.00	0.00	0.10	
	2	6.19	0.00	0.00	0.11	9
Heptachlor Epoxide	1	6.42	0.00	0.00	0.11	
	2	6.83	0.00	0.00	0.11	4
Hexachlorobenzene	1	5.28	0.00	0.00	0.11	
	2	5.57	0.00	0.00	0.11	4
Methoxychlor	1	7.66	0.00	0.00	0.11	
	2	8.38	0.00	0.00	0.11	2

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8081B

LCS Dup

Lab Sample ID: B118990-BSD1 Date(s) Analyzed: 04/13/2015 04/13/2015
Instrument ID (1): ECD6 Instrument ID (2): ECD6
GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
4,4'-DDD	1	7.08	0.00	0.00	0.11	
	2	7.64	0.00	0.00	0.11	3
4,4'-DDE	1	6.66	0.00	0.00	0.11	
	2	7.20	0.00	0.00	0.11	0
4,4'-DDT	1	7.28	0.00	0.00	0.11	
	2	7.89	0.00	0.00	0.11	2
Alachlor	1	6.13	0.00	0.00	0.10	
	2	6.34	0.00	0.00	0.10	0
Aldrin	1	6.03	0.00	0.00	0.10	
	2	6.41	0.00	0.00	0.11	5
alpha-BHC	1	5.38	0.00	0.00	0.10	
	2	5.66	0.00	0.00	0.10	4
beta-BHC	1	5.61	0.00	0.00	0.099	
	2	5.94	0.00	0.00	0.097	2
delta-BHC	1	5.72	0.00	0.00	0.10	
	2	6.14	0.00	0.00	0.10	3
Dieldrin	1	6.85	0.00	0.00	0.10	
	2	7.32	0.00	0.00	0.11	9
Endosulfan I	1	6.69	0.00	0.00	0.10	
	2	7.12	0.00	0.00	0.11	6
Endosulfan II	1	7.18	0.00	0.00	0.11	
	2	7.72	0.00	0.00	0.11	3
Endosulfan Sulfate	1	7.82	0.00	0.00	0.11	
	2	8.18	0.00	0.00	0.11	2
Endrin	1	7.02	0.00	0.00	0.11	
	2	7.56	0.00	0.00	0.12	6
Endrin Aldehyde	1	7.49	0.00	0.00	0.099	
	2	7.98	0.00	0.00	0.10	1
Endrin Ketone	1	8.02	0.00	0.00	0.10	
	2	8.53	0.00	0.00	0.11	6
gamma-BHC (Lindane)	1	5.56	0.00	0.00	0.11	

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8081B

LCS Dup

Lab Sample ID: B118990-BSD1 Date(s) Analyzed: 04/13/2015 04/13/2015

Instrument ID (1): ECD6 Instrument ID (2): ECD6

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
	2	5.89	0.00	0.00	0.10	5
Heptachlor	1	5.84	0.00	0.00	0.10	
	2	6.19	0.00	0.00	0.11	8
Heptachlor Epoxide	1	6.42	0.00	0.00	0.10	
	2	6.83	0.00	0.00	0.11	7
Hexachlorobenzene	1	5.28	0.00	0.00	0.11	
	2	5.57	0.00	0.00	0.10	7
Methoxychlor	1	7.66	0.00	0.00	0.10	
	2	8.38	0.00	0.00	0.11	5

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES *SW-846 8151A*

LCS

Lab Sample ID: B119107-BS1 Date(s) Analyzed: 04/17/2015 04/17/2015

Instrument ID (1): _____ Instrument ID (2): _____

GC Column (1): _____ ID: _____ (mm) GC Column (2): _____ ID: _____ (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
2,4,5-T	1	15.84	0.00	0.00	12.0	
	2	15.66	0.00	0.00	13.6	13
2,4,5-TP (Silvex)	1	15.22	0.00	0.00	11.3	
	2	14.81	0.00	0.00	12.3	8
2,4-D	1	13.38	0.00	0.00	121	
	2	13.08	0.00	0.00	108	11
2,4-DB	1	16.85	0.00	0.00	132	
	2	16.71	0.00	0.00	128	3
Dalapon	1	4.42	0.00	0.00	170	
	2	3.96	0.00	0.00	166	2
Dicamba	1	11.28	0.00	0.00	12.4	
	2	10.90	0.00	0.00	13.3	7
Dichloroprop	1	12.87	0.00	0.00	156	
	2	12.41	0.00	0.00	151	3
Dinoseb	1	17.59	0.00	0.00	18.6	
	2	17.00	0.00	0.00	19.7	6
MCPA	1	12.10	0.00	0.00	11600	
	2	11.73	0.00	0.00	12200	5
MCP P	1	11.77	0.00	0.00	12500	
	2	11.24	0.00	0.00	11600	7

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

LCS Dup

SW-846 8151A

Lab Sample ID: B119107-BSD1 Date(s) Analyzed: 04/17/2015 04/17/2015

Instrument ID (1): _____ Instrument ID (2): _____

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
2,4,5-T	1	15.84	0.00	0.00	11.7	
	2	15.66	0.00	0.00	13.5	14
2,4,5-TP (Silvex)	1	15.22	0.00	0.00	10.9	
	2	14.81	0.00	0.00	12.0	10
2,4-D	1	13.38	0.00	0.00	118	
	2	13.08	0.00	0.00	104	13
2,4-DB	1	16.85	0.00	0.00	121	
	2	16.71	0.00	0.00	125	3
Dalapon	1	4.42	0.00	0.00	185	
	2	3.96	0.00	0.00	180	3
Dicamba	1	11.27	0.00	0.00	12.1	
	2	10.90	0.00	0.00	13.4	10
Dichloroprop	1	12.87	0.00	0.00	151	
	2	12.41	0.00	0.00	147	3
Dinoseb	1	17.59	0.00	0.00	17.6	
	2	17.00	0.00	0.00	19.1	8
MCPA	1	12.09	0.00	0.00	11400	
	2	11.73	0.00	0.00	11900	4
MCPP	1	11.77	0.00	0.00	12100	
	2	11.24	0.00	0.00	11300	7

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
	No results have been blank subtracted unless specified in the case narrative section.
L-02	Laboratory fortified blank/laboratory control sample recovery and duplicate recoveries outside of control limits. Data validation is not affected since all results are "not detected" for associated samples in this batch and bias is on the high side.
L-04	Laboratory fortified blank/laboratory control sample recovery and duplicate recovery are outside of control limits. Reported value for this compound is likely to be biased on the low side.
L-07	Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.
L-07A	Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD outside of control limits. Reduced precision anticipated for any reported result for this compound.
MS-07	Matrix spike recovery is outside of control limits. Analysis is in control based on laboratory fortified blank recovery. Possibility of sample matrix effects that lead to low bias for reported result or non-homogeneous sample aliquot cannot be eliminated.
MS-09	Matrix spike recovery and matrix spike duplicate recovery outside of control limits. Possibility of sample matrix effects that lead to a low bias for reported result or non-homogeneous sample aliquots cannot be eliminated.
MS-19	Sample to spike ratio is greater than or equal to 4:1. Spiked amount is not representative of the native amount in the sample. Appropriate or meaningful recoveries cannot be calculated.
MS-22	Either matrix spike or MS duplicate is outside of control limits, but the other is within limits. RPD between the two MS/MSD results is within method specified criteria.
MS-23	Either matrix spike or MS duplicate is outside of control limits, but the other is within limits. RPD between the two MS/MSD results is outside of the method specified criteria. Reduced precision anticipated for any reported result for this compound.
O-27	Elevated reporting limit due to sample matrix interference. Multiple extract clean-up procedures were performed on this sample, but they did not sufficiently remove the interference to meet the requested reporting limit.
PR-03	Sample preserved in the laboratory, not in the field as required by the method.
PR-15	According to the NY ELAP program, all voa results less than 0.2mg/Kg are estimated and biased low if not collected according to SW-846 5035-L/5035A-L.
R-05	Laboratory fortified blank duplicate RPD is outside of control limits. Reduced precision is anticipated for any reported value for this compound.
R-06	Matrix spike duplicate RPD is outside of control limits. Reduced precision is anticipated for reported result for this compound in this sample.
V-05	Continuing calibration did not meet method specifications and was biased on the low side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the low side.
V-06	Continuing calibration did not meet method specifications and was biased on the high side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the high side.
V-16	Response factor is less than method specified minimum acceptable value. Reduced precision and accuracy may be associated with reported result.
V-20	Continuing calibration did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 6010C in Soil	
Aluminum	CT,NH,NY,ME,VA,NC,NJ
Antimony	CT,NH,NY,NC,ME,VA,NJ
Arsenic	CT,NH,NY,ME,NC,VA,NJ
Barium	CT,NH,NY,ME,NC,VA,NJ
Beryllium	CT,NH,NY,ME,NC,VA,NJ
Cadmium	CT,NH,NY,ME,NC,VA,NJ
Calcium	CT,NH,NY,ME,NC,VA,NJ
Chromium	CT,NH,NY,ME,NC,VA,NJ
Cobalt	CT,NH,NY,ME,NC,VA,NJ
Copper	CT,NH,NY,ME,NC,VA,NJ
Iron	CT,NH,NY,ME,NC,VA,NJ
Lead	CT,NH,NY,AIHA,ME,NC,VA,NJ
Magnesium	CT,NH,NY,ME,NC,VA,NJ
Manganese	CT,NH,NY,ME,NC,VA,NJ
Nickel	CT,NH,NY,ME,NC,VA,NJ
Potassium	CT,NH,NY,ME,NC,VA,NJ
Selenium	CT,NH,NY,ME,NC,VA,NJ
Silver	CT,NH,NY,ME,NC,VA,NJ
Sodium	CT,NH,NY,ME,NC,VA,NJ
Thallium	CT,NH,NY,ME,NC,VA,NJ
Vanadium	CT,NH,NY,ME,NC,VA,NJ
Zinc	CT,NH,NY,ME,NC,VA,NJ
SW-846 7471B in Soil	
Mercury	CT,NH,NY,NC,ME,VA,NJ
SW-846 8081B in Product/Solid	
Alachlor	NC
Alachlor [2C]	NC
Aldrin	CT,NH,NY,ME,NC,VA,NJ
Aldrin [2C]	CT,NH,NY,ME,NC,VA,NJ
alpha-BHC	CT,NH,NY,ME,NC,VA,NJ
alpha-BHC [2C]	CT,NH,NY,ME,NC,VA,NJ
beta-BHC	CT,NH,NY,ME,NC,VA,NJ
beta-BHC [2C]	CT,NH,NY,ME,NC,VA,NJ
delta-BHC	CT,NH,NY,ME,NC,VA,NJ
delta-BHC [2C]	CT,NH,NY,ME,NC,VA,NJ
gamma-BHC (Lindane)	CT,NH,NY,ME,NC,VA,NJ
gamma-BHC (Lindane) [2C]	CT,NH,NY,ME,NC,VA,NJ
Chlordane	CT,NH,NY,ME,NC,VA,NJ
Chlordane [2C]	CT,NH,NY,ME,NC,VA,NJ
4,4'-DDD	CT,NH,NY,ME,NC,VA,NJ
4,4'-DDD [2C]	CT,NH,NY,ME,NC,VA,NJ
4,4'-DDE	CT,NH,NY,ME,NC,VA,NJ
4,4'-DDE [2C]	CT,NH,NY,ME,NC,VA,NJ
4,4'-DDT	CT,NH,NY,ME,NC,VA,NJ
4,4'-DDT [2C]	CT,NH,NY,ME,NC,VA,NJ
Dieldrin	CT,NH,NY,ME,NC,VA,NJ

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8081B in Product/Solid</i>	
Dieldrin [2C]	CT,NH,NY,ME,NC,VA,NJ
Endosulfan I	CT,NH,NY,ME,NC,VA,NJ
Endosulfan I [2C]	CT,NH,NY,ME,NC,VA,NJ
Endosulfan II	CT,NH,NY,ME,NC,VA,NJ
Endosulfan II [2C]	CT,NH,NY,ME,NC,VA,NJ
Endosulfan Sulfate	CT,NH,NY,ME,NC,VA,NJ
Endosulfan Sulfate [2C]	CT,NH,NY,ME,NC,VA,NJ
Endrin	CT,NH,NY,ME,NC,VA,NJ
Endrin [2C]	CT,NH,NY,ME,NC,VA,NJ
Endrin Aldehyde	CT,NH,NY,ME,NC,VA,NJ
Endrin Aldehyde [2C]	CT,NH,NY,ME,NC,VA,NJ
Endrin Ketone	NC
Endrin Ketone [2C]	NC
Heptachlor	CT,NH,NY,ME,NC,VA,NJ
Heptachlor [2C]	CT,NH,NY,ME,NC,VA,NJ
Heptachlor Epoxide	CT,NH,NY,ME,NC,VA,NJ
Heptachlor Epoxide [2C]	CT,NH,NY,ME,NC,VA,NJ
Methoxychlor	CT,NH,NY,ME,NC,VA,NJ
Methoxychlor [2C]	CT,NH,NY,ME,NC,VA,NJ
Toxaphene	CT,NH,NY,ME,NC,VA,NJ
Toxaphene [2C]	CT,NH,NY,ME,NC,VA,NJ
<i>SW-846 8081B in Soil</i>	
Alachlor	NC
Alachlor [2C]	NC
Aldrin	CT,NH,NY,ME,NC,VA,NJ
Aldrin [2C]	CT,NH,NY,ME,NC,VA,NJ
alpha-BHC	CT,NH,NY,ME,NC,VA,NJ
alpha-BHC [2C]	CT,NH,NY,ME,NC,VA,NJ
beta-BHC	CT,NH,NY,ME,NC,VA,NJ
beta-BHC [2C]	CT,NH,NY,ME,NC,VA,NJ
delta-BHC	CT,NH,NY,ME,NC,VA,NJ
delta-BHC [2C]	CT,NH,NY,ME,NC,VA,NJ
gamma-BHC (Lindane)	CT,NH,NY,ME,NC,VA,NJ
gamma-BHC (Lindane) [2C]	CT,NH,NY,ME,NC,VA,NJ
Chlordane	CT,NH,NY,ME,NC,VA,NJ
Chlordane [2C]	CT,NH,NY,ME,NC,VA,NJ
4,4'-DDD	CT,NH,NY,ME,NC,VA,NJ
4,4'-DDD [2C]	CT,NH,NY,ME,NC,VA,NJ
4,4'-DDE	CT,NH,NY,ME,NC,VA,NJ
4,4'-DDE [2C]	CT,NH,NY,ME,NC,VA,NJ
4,4'-DDT	CT,NH,NY,ME,NC,VA,NJ
4,4'-DDT [2C]	CT,NH,NY,ME,NC,VA,NJ
Dieldrin	CT,NH,NY,ME,NC,VA,NJ
Dieldrin [2C]	CT,NH,NY,ME,NC,VA,NJ
Endosulfan I	CT,NH,NY,ME,NC,VA,NJ
Endosulfan I [2C]	CT,NH,NY,ME,NC,VA,NJ

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8081B in Soil	
Endosulfan II	CT,NH,NY,ME,NC,VA,NJ
Endosulfan II [2C]	CT,NH,NY,ME,NC,VA,NJ
Endosulfan Sulfate	CT,NH,NY,ME,NC,VA,NJ
Endosulfan Sulfate [2C]	CT,NH,NY,ME,NC,VA,NJ
Endrin	CT,NH,NY,ME,NC,VA,NJ
Endrin [2C]	CT,NH,NY,ME,NC,VA,NJ
Endrin Aldehyde	CT,NH,NY,ME,NC,VA,NJ
Endrin Aldehyde [2C]	CT,NH,NY,ME,NC,VA,NJ
Endrin Ketone	NC
Endrin Ketone [2C]	NC
Heptachlor	CT,NH,NY,ME,NC,VA,NJ
Heptachlor [2C]	CT,NH,NY,ME,NC,VA,NJ
Heptachlor Epoxide	CT,NH,NY,ME,NC,VA,NJ
Heptachlor Epoxide [2C]	CT,NH,NY,ME,NC,VA,NJ
Hexachlorobenzene	NC
Hexachlorobenzene [2C]	NC
Methoxychlor	CT,NH,NY,ME,NC,VA,NJ
Methoxychlor [2C]	CT,NH,NY,ME,NC,VA,NJ
Toxaphene	CT,NH,NY,ME,NC,VA,NJ
Toxaphene [2C]	CT,NH,NY,ME,NC,VA,NJ
SW-846 8082A in Soil	
Aroclor-1016	CT,NH,NY,NC,ME,VA,NJ
Aroclor-1016 [2C]	CT,NH,NY,NC,ME,VA,NJ
Aroclor-1221	CT,NH,NY,NC,ME,VA,NJ
Aroclor-1221 [2C]	CT,NH,NY,NC,ME,VA,NJ
Aroclor-1232	CT,NH,NY,NC,ME,VA,NJ
Aroclor-1232 [2C]	CT,NH,NY,NC,ME,VA,NJ
Aroclor-1242	CT,NH,NY,NC,ME,VA,NJ
Aroclor-1242 [2C]	CT,NH,NY,NC,ME,VA,NJ
Aroclor-1248	CT,NH,NY,NC,ME,VA,NJ
Aroclor-1248 [2C]	CT,NH,NY,NC,ME,VA,NJ
Aroclor-1254	CT,NH,NY,NC,ME,VA,NJ
Aroclor-1254 [2C]	CT,NH,NY,NC,ME,VA,NJ
Aroclor-1260	CT,NH,NY,NC,ME,VA,NJ
Aroclor-1260 [2C]	CT,NH,NY,NC,ME,VA,NJ
Aroclor-1262	NC
Aroclor-1262 [2C]	NC
Aroclor-1268	NC
Aroclor-1268 [2C]	NC
SW-846 8151A in Soil	
2,4-D	NY,ME,NC,NH,VA,CT,NJ
2,4-D [2C]	NY,ME,NC,NH,VA,CT,NJ
2,4-DB	NY,ME,NC,NH,VA,CT,NJ
2,4-DB [2C]	NY,ME,NC,NH,VA,CT,NJ
2,4,5-TP (Silvex)	NY,ME,NC,NH,VA,CT,NJ
2,4,5-TP (Silvex) [2C]	NY,ME,NC,NH,VA,CT,NJ

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8151A in Soil</i>	
2,4,5-T	NY,ME,NC,NH,VA,CT,NJ
2,4,5-T [2C]	NY,ME,NC,NH,VA,CT,NJ
Dalapon	NY,ME,NC,NH,VA,CT,NJ
Dalapon [2C]	NY,ME,NC,NH,VA,CT,NJ
Dicamba	NY,ME,NC,NH,VA,CT,NJ
Dicamba [2C]	NY,ME,NC,NH,VA,CT,NJ
Dichloroprop	NY,ME,NC,NH,VA,CT,NJ
Dichloroprop [2C]	NY,ME,NC,NH,VA,CT,NJ
Dinoseb	NY,ME,NC,NH,VA,CT,NJ
Dinoseb [2C]	NY,ME,NC,NH,VA,CT,NJ
MCPA	NY,ME,NC,NH,VA,CT,NJ
MCPA [2C]	NY,ME,NC,NH,VA,CT,NJ
MCPP	NY,ME,NC,NH,VA,CT,NJ
MCPP [2C]	NY,ME,NC,NH,VA,CT,NJ
<i>SW-846 8260C in Soil</i>	
Acetone	CT,NH,NY,ME,VA,NJ
Acrylonitrile	CT,NH,NY,ME,VA,NJ
Benzene	CT,NH,NY,ME,VA,NJ
Bromobenzene	NH,NY,ME,VA,NJ
Bromochloromethane	NH,NY,ME,VA,NJ
Bromodichloromethane	CT,NH,NY,ME,VA,NJ
Bromoform	CT,NH,NY,ME,VA,NJ
Bromomethane	CT,NH,NY,ME,VA,NJ
2-Butanone (MEK)	CT,NH,NY,ME,VA,NJ
n-Butylbenzene	CT,NH,NY,ME,VA,NJ
sec-Butylbenzene	CT,NH,NY,ME,VA,NJ
tert-Butylbenzene	CT,NH,NY,ME,VA,NJ
Carbon Disulfide	CT,NH,NY,ME,VA,NJ
Carbon Tetrachloride	CT,NH,NY,ME,VA,NJ
Chlorobenzene	CT,NH,NY,ME,VA,NJ
Chlorodibromomethane	CT,NH,NY,ME,VA,NJ
Chloroethane	CT,NH,NY,ME,VA,NJ
Chloroform	CT,NH,NY,ME,VA,NJ
Chloromethane	CT,NH,NY,ME,VA,NJ
2-Chlorotoluene	CT,NH,NY,ME,VA,NJ
4-Chlorotoluene	CT,NH,NY,ME,VA,NJ
Dibromomethane	NH,NY,ME,VA,NJ
1,2-Dichlorobenzene	CT,NH,NY,ME,VA,NJ
1,3-Dichlorobenzene	CT,NH,NY,ME,VA,NJ
1,4-Dichlorobenzene	CT,NH,NY,ME,VA,NJ
Dichlorodifluoromethane (Freon 12)	NH,NY,ME,VA,NJ
1,1-Dichloroethane	CT,NH,NY,ME,VA,NJ
1,2-Dichloroethane	CT,NH,NY,ME,VA,NJ
1,1-Dichloroethylene	CT,NH,NY,ME,VA,NJ
cis-1,2-Dichloroethylene	CT,NH,NY,ME,VA,NJ
trans-1,2-Dichloroethylene	CT,NH,NY,ME,VA,NJ

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8260C in Soil	
1,2-Dichloropropane	CT,NH,NY,ME,VA,NJ
1,3-Dichloropropane	NH,NY,ME,VA,NJ
2,2-Dichloropropane	NH,NY,ME,VA,NJ
1,1-Dichloropropene	NH,NY,ME,VA,NJ
cis-1,3-Dichloropropene	CT,NH,NY,ME,VA,NJ
trans-1,3-Dichloropropene	CT,NH,NY,ME,VA,NJ
1,4-Dioxane	NJ
Ethylbenzene	CT,NH,NY,ME,VA,NJ
Hexachlorobutadiene	NH,NY,ME,VA,NJ
Isopropylbenzene (Cumene)	CT,NH,NY,ME,VA,NJ
p-Isopropyltoluene (p-Cymene)	NH,NY,NJ
Methyl tert-Butyl Ether (MTBE)	NY,VA,NJ
Methylene Chloride	CT,NH,NY,ME,VA,NJ
4-Methyl-2-pentanone (MIBK)	CT,NH,NY,VA,NJ
Naphthalene	NH,NY,ME,VA,NJ
n-Propylbenzene	NH,NY,NJ
Styrene	CT,NH,NY,ME,VA,NJ
1,1,1,2-Tetrachloroethane	CT,NH,NY,ME,VA,NJ
Tetrachloroethylene	CT,NH,NY,ME,VA,NJ
Toluene	CT,NH,NY,ME,VA,NJ
1,2,3-Trichlorobenzene	ME
1,2,4-Trichlorobenzene	NH,NY,ME,VA,NJ
1,3,5-Trichlorobenzene	ME
1,1,1-Trichloroethane	CT,NH,NY,ME,VA,NJ
1,1,2-Trichloroethane	CT,NH,NY,ME,VA,NJ
Trichloroethylene	CT,NH,NY,ME,VA,NJ
Trichlorofluoromethane (Freon 11)	CT,NH,NY,ME,VA,NJ
1,2,3-Trichloropropane	NH,NY,ME,VA,NJ
1,2,4-Trimethylbenzene	CT,NH,NY,ME,VA,NJ
1,3,5-Trimethylbenzene	CT,NH,NY,ME,VA,NJ
Vinyl Chloride	CT,NH,NY,ME,VA,NJ
m+p Xylene	CT,NH,NY,ME,VA
o-Xylene	CT,NH,NY,ME,VA
SW-846 8270D in Soil	
Acenaphthene	CT,NY,NH,ME,NC,VA,NJ
Acenaphthylene	CT,NY,NH,ME,NC,VA,NJ
Acetophenone	NY,NH,ME,NC,VA,NJ
Aniline	NY,NH,ME,NC,VA,NJ
Anthracene	CT,NY,NH,ME,NC,VA,NJ
Benzidine	CT,NY,NH,ME,NC,VA,NJ
Benzo(a)anthracene	CT,NY,NH,ME,NC,VA,NJ
Benzo(a)pyrene	CT,NY,NH,ME,NC,VA,NJ
Benzo(b)fluoranthene	CT,NY,NH,ME,NC,VA,NJ
Benzo(g,h,i)perylene	CT,NY,NH,ME,NC,VA,NJ
Benzo(k)fluoranthene	CT,NY,NH,ME,NC,VA,NJ
Benzoic Acid	NY,NH,ME,NC,VA,NJ

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8270D in Soil	
Bis(2-chloroethoxy)methane	CT,NY,NH,ME,NC,VA,NJ
Bis(2-chloroethyl)ether	CT,NY,NH,ME,NC,VA,NJ
Bis(2-chloroisopropyl)ether	CT,NY,NH,ME,NC,VA,NJ
Bis(2-Ethylhexyl)phthalate	CT,NY,NH,ME,NC,VA,NJ
4-Bromophenylphenylether	CT,NY,NH,ME,NC,VA,NJ
Butylbenzylphthalate	CT,NY,NH,ME,NC,VA,NJ
Carbazole	NC
4-Chloroaniline	CT,NY,NH,ME,NC,VA,NJ
4-Chloro-3-methylphenol	CT,NY,NH,ME,NC,VA,NJ
2-Chloronaphthalene	CT,NY,NH,NC,VA,NJ
2-Chlorophenol	CT,NY,NH,ME,NC,VA,NJ
4-Chlorophenylphenylether	CT,NY,NH,ME,NC,VA,NJ
Chrysene	CT,NY,NH,ME,NC,VA,NJ
Dibenz(a,h)anthracene	CT,NY,NH,ME,NC,VA,NJ
Dibenzofuran	CT,NY,NH,ME,NC,VA,NJ
Di-n-butylphthalate	CT,NY,NH,ME,NC,VA,NJ
1,2-Dichlorobenzene	NY,NH,ME,NC,VA,NJ
1,3-Dichlorobenzene	NY,NH,ME,NC,VA,NJ
1,4-Dichlorobenzene	NY,NH,ME,NC,VA,NJ
3,3-Dichlorobenzidine	CT,NY,NH,ME,NC,VA,NJ
2,4-Dichlorophenol	CT,NY,NH,ME,NC,VA,NJ
Diethylphthalate	CT,NY,NH,ME,NC,VA,NJ
2,4-Dimethylphenol	CT,NY,NH,ME,NC,VA,NJ
Dimethylphthalate	CT,NY,NH,ME,NC,VA,NJ
4,6-Dinitro-2-methylphenol	CT,NY,NH,ME,NC,VA,NJ
2,4-Dinitrophenol	CT,NY,NH,ME,NC,VA,NJ
2,4-Dinitrotoluene	CT,NY,NH,ME,NC,VA,NJ
2,6-Dinitrotoluene	CT,NY,NH,ME,NC,VA,NJ
Di-n-octylphthalate	CT,NY,NH,ME,NC,VA,NJ
1,2-Diphenylhydrazine (as Azobenzene)	NY,NH,ME,NC,VA,NJ
Fluoranthene	CT,NY,NH,ME,NC,VA,NJ
Fluorene	NY,NH,ME,NC,VA,NJ
Hexachlorobenzene	CT,NY,NH,ME,NC,VA,NJ
Hexachlorobutadiene	CT,NY,NH,ME,NC,VA,NJ
Hexachlorocyclopentadiene	CT,NY,NH,ME,NC,VA,NJ
Hexachloroethane	CT,NY,NH,ME,NC,VA,NJ
Indeno(1,2,3-cd)pyrene	CT,NY,NH,ME,NC,VA,NJ
Isophorone	CT,NY,NH,ME,NC,VA,NJ
1-Methylnaphthalene	NC
2-Methylnaphthalene	CT,NY,NH,ME,NC,VA,NJ
2-Methylphenol	CT,NY,NH,ME,NC,VA,NJ
3/4-Methylphenol	CT,NY,NH,ME,NC,VA,NJ
Naphthalene	CT,NY,NH,ME,NC,VA,NJ
2-Nitroaniline	CT,NY,NH,ME,NC,VA,NJ
3-Nitroaniline	CT,NY,NH,ME,NC,VA,NJ
4-Nitroaniline	CT,NY,NH,ME,NC,VA,NJ
Nitrobenzene	CT,NY,NH,ME,NC,VA,NJ

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8270D in Soil</i>	
2-Nitrophenol	CT,NY,NH,ME,NC,VA,NJ
4-Nitrophenol	CT,NY,NH,ME,NC,VA,NJ
N-Nitrosodimethylamine	CT,NY,NH,ME,NC,VA,NJ
N-Nitrosodiphenylamine	CT,NY,NH,ME,NC,VA,NJ
N-Nitrosodi-n-propylamine	CT,NY,NH,ME,NC,VA,NJ
Pentachloronitrobenzene	NC
Pentachlorophenol	CT,NY,NH,ME,NC,VA,NJ
Phenanthrene	CT,NY,NH,ME,NC,VA,NJ
Phenol	CT,NY,NH,ME,NC,VA,NJ
Pyrene	CT,NY,NH,ME,NC,VA,NJ
Pyridine	CT,NY,NH,ME,NC,VA,NJ
1,2,4,5-Tetrachlorobenzene	NC
1,2,4-Trichlorobenzene	CT,NY,NH,ME,NC,VA,NJ
2,4,5-Trichlorophenol	CT,NY,NH,ME,NC,VA,NJ
2,4,6-Trichlorophenol	CT,NY,NH,ME,NC,VA,NJ
2-Fluorophenol	NC

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC	100033	02/1/2016
MA	Massachusetts DEP	M-MA100	06/30/2015
CT	Connecticut Department of Public Health	PH-0567	09/30/2015
NY	New York State Department of Health	10899 NELAP	04/1/2016
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2016
RI	Rhode Island Department of Health	LAO00112	12/30/2015
NC	North Carolina Div. of Water Quality	652	12/31/2015
NJ	New Jersey DEP	MA007 NELAP	06/30/2015
FL	Florida Department of Health	E871027 NELAP	06/30/2015
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2015
WA	State of Washington Department of Ecology	C2065	02/23/2016
ME	State of Maine	2011028	06/9/2015
VA	Commonwealth of Virginia	460217	12/14/2015
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2015



Page 1 of 1

CONTAMINATE THIS DOCUMENT

39 Spruce St.
East Longmeadow, MA. 01028
P: 413-525-2332
F: 413-525-6405
www.contestlabs.com



Page 1 of 2



Sample Receipt Checklist

CLIENT NAME: Liro Engineers RECEIVED BY: JDL DATE: 4/6/15

1) Was the chain(s) of custody relinquished and signed? Yes No No CoC Included

2) Does the chain agree with the samples?

If not, explain:

3) Are all the samples in good condition?

If not, explain:

4) How were the samples received:

On Ice ☒ Direct from Sampling ☐ Ambient ☐ In Cooler(s) ☒

Were the samples received in Temperature Compliance of (2-6°C)? Yes No N/A

Temperature °C by Temp blank _____ Temperature °C by Temp gun 5.5

5) Are there Dissolved samples for the lab to filter?

Yes No

Who was notified _____ Date _____ Time _____

6) Are there any RUSH or SHORT HOLDING TIME samples?

Yes No

Who was notified _____ Date _____ Time _____

7) Location where samples are stored:

19

Permission to subcontract samples? Yes No
(Walk-in clients only) if not already approved
Client Signature: _____

8) Do all samples have the proper Acid pH: Yes No N/A

9) Do all samples have the proper Base pH: Yes No N/A

10) Was the PC notified of any discrepancies with the CoC vs the samples: Yes No N/A

Containers received at Con-Test

	# of containers		# of containers
1 Liter Amber		8 oz amber/clear jar	
500 mL Amber		4 oz amber/clear jar	<u>1</u>
250 mL Amber (8oz amber)		2 oz amber/clear jar	
1 Liter Plastic		Plastic Bag / Ziploc	
500 mL Plastic		SOC Kit	
250 mL plastic		Non-ConTest Container	
40 mL Vial - type listed below		Perchlorate Kit	
Colisure / bacteria bottle		Flashpoint bottle	
Dissolved Oxygen bottle		Other glass jar <u>16oz clear</u>	<u>1</u>
Encore		Other	

Laboratory Comments:

40 mL vials: # HCl _____ # Methanol _____

Doc# 277 # Bisulfate _____ # DI Water _____

Rev. 4 August 2013 # Thiosulfate _____ Unpreserved _____

Time and Date Frozen:

Login Sample Receipt Checklist
(Rejection Criteria Listing - Using Sample Acceptance Policy)
Any False statement will be brought to the attention of Client

Question	Answer (True/False)	Comment
	T/F/NA	
1) The cooler's custody seal, if present, is intact.	NA	
2) The cooler or samples do not appear to have been compromised or tampered with.	T	
3) Samples were received on ice.	T	
4) Cooler Temperature is acceptable.	T	
5) Cooler Temperature is recorded.	T	
6) COC is filled out in ink and legible.	T	
7) COC is filled out with all pertinent information.	T	
8) Field Sampler's name present on COC.	T	
9) There are no discrepancies between the sample IDs on the container and the COC.	T	
10) Samples are received within Holding Time.	T	
11) Sample containers have legible labels.	T	
12) Containers are not broken or leaking.	T	
13) Air Cassettes are not broken/open.	NA	
14) Sample collection date/times are provided.	T	
15) Appropriate sample containers are used.	T	
16) Proper collection media used.	T	
17) No headspace sample bottles are completely filled.	T	
18) There is sufficient volume for all requested analyses, including any requested MS/MSDs.	T	
19) Trip blanks provided if applicable.	NA	
20) VOA sample vials do not have head space or bubble is <6mm (1/4") in diameter.	NA	
21) Samples do not require splitting or compositing.	T	

Doc #277 Rev. 4 August 2013

Who notified of False statements?
 Log-In Technician Initials: JDL

Date/Time: 4/5/15 1925
 Date/Time:

APPENDIX D

RESUMES



Robert Kreuzer

Vice President/ Project Manager

Education

B.S., Geological Science, State
University of New York College at
Buffalo

Licenses/Registrations

NYSDEC Asbestos
Contractor/Supervisor
NYSDEC Asbestos Project Monitor

Certifications

OSHA 40 Hazwoper
OSHA 8 Certified
OSHA 10 Certified
OSHA Confined Space Entry Certified
NYSDEC DER-25 Certified

Years with LiRo: 17

Years at other firms: 9

PROFESSIONAL PROFILE

Mr. Kreuzer is a LiRo Vice President who has over 26 years of experience in site evaluations, corridor studies, environmental sampling, soil management, supervision of field activities, aquifer testing, groundwater modeling, project coordination, and report development at sites throughout New York State as well as hazardous waste sites, industrial sites, and commercial sites. His experience also includes asbestos, lead, decommissioning/demolition projects, petroleum remediation projects, and industrial waste management projects. He has worked under the New York State Department of Environmental Conservation (NYSDEC) Superfund and at Voluntary Cleanup Program (VCP), Brownfields, Environmental Restoration Program (ERP) and petroleum consent order sites. During his career, he has demonstrated an exceptional ability to manage and coordinate a wide range of environmental projects for public and private sector clients throughout the country, with the majority of the work being located in New York. He has been involved with numerous projects involving Federal agency remedial efforts (i.e., United States Environmental Protection Agency [USEPA], United States Army Corps. Of Engineers [USACE], Air Force Center for Engineering and the Environment [AFCEE]) and NYSDEC site characterization and remediation programs.

EXPERIENCE

New York City Department of Design and Construction (NYCDDC) Bureau of Environmental and Geotechnical Services (BEGS), Requirements Contract for Environmental Services: Project Manager for work-order based contract to perform Phase I/Phase II Environmental Site Assessments (ESAs) and corridor studies in support of NYCDDC property acquisition and corridor rehabilitation projects. More than 150 task orders have been issued and completed. Mr. Kreuzer is the Project Manager responsible for the coordination of field activities and implementation of Phase I ESAs in accordance with ASTM standards. He is also responsible for: the development and implementation of Phase II/Corridor Investigation work plans; and, the review and management of all aspects of the program including records reviews, data acquisition, work plan development, oversight of subsurface investigation work, data review, and report preparation. Mr. Kreuzer also oversees all administrative functions for project tracking and invoicing.

New York City Mayor's Office of Environmental Remediation (MOER) Environmental Consulting Services: Program Manager for a multi-site task order based contract to conduct United States Environmental Protection Agency (USEPA)-compliant Environmental Site Assessments (ESAs) and investigations of brownfield sites for the City of New York MOER under a USEPA Brownfield Grant program. LiRo has also been assigned a petroleum tank audit and tightness testing assignment under this contract to evaluate over 600 petroleum tank systems for compliance with State and Federal regulatory requirements. LiRo is currently performing ESA, Phase II investigations, and petroleum tank audits at more than 20 sites.

NYCDDC Remediation Program, NY DDC PW-348-22, 32, 51: Project Coordinator responsible for coordination of field activities such as collecting monitoring data and evaluating system performance at 30 active remediation sites. Duties included oversight of collection of pilot test data, measurement of groundwater/product levels in wells, collection of remedial system influent and effluent samples, and recording system operating parameters. Mr. Kreuzer also tracks system data and prepares monthly maintenance reports.

NYCHPD Environmental Site Assessment and Remedial Design, NY: Project Manager for a multiple site indefinite delivery contract to perform environmental assessments in support of property redevelopment projects conducted by the New York City Department of Housing Preservation and Development (HPD). Mr. Kreuzer managed the investigation and preparation of Phase I ESAs, the implementation of Phase II investigations (including the preparation of HASP and SAP documents), vapor intrusion evaluations and sub-slab vapor barrier system design and



Robert Kreuzer

Vice President/ Project Manager

construction. Projects included spill sites, uncontrolled waste disposal sites, USEPA Brownfield program sites and the investigation of chlorinated solvent groundwater contamination in the 40-block Melrose Commons Urban Renewal Area. The Melrose project was conducted using Triad and involved a cooperative effort between USEPA, NYSDEC, NYSDOH and HPD with LiRo as the lead investigator.

New York State Office of General Services (NYS OGS) Subsurface Soil Investigations, NY: Program Manager for an on-call, work-order based contract to perform comprehensive environmental consulting services for the design and oversight of petroleum bulk storage systems and remediation systems, including tank closure reports, spill investigations, remedial option and work plans, operations and maintenance (O&M) services, and Spill Prevention, Control, and Countermeasure (SPCC) plans, on an immediate response basis throughout the State of New York.

Hunters Point South Waterfront Redevelopment, NY: Project Manager responsible for review and implementation of the Remedial Action Plan (RAP) for development of the Hunters Point South Site in Queens New York. The Site is constructed on made land that was filled in the early 1900s with contaminated fill. LiRo provided design review for soil management, site remediation, infrastructure installation, and Park construction. LiRo has also provided construction Management for the work. Other LiRo responsibilities include community air monitoring, contaminated soil disposition and all ancillary site remedial activities. Early in the demolition phase of the project, petroleum contamination associated with a leaking UST was discovered. LiRo coordinated the spill response with the New York State Department of Environmental Conservation (NYSDEC) and prepared a spill excavation Work Plan that was reviewed and approved by NYSDEC.

Spaulding Fibre ERP Remediation and Demolition, Tonawanda NY: Project Manager responsible for all aspects of comprehensive site ERP investigations, Remedial Alternatives Analysis, remedial design and remedial construction. Mr. Kreuzer also lead the project design and construction management team for the remaining portion of the Spaulding Fibre Plant facility in the City of Tonawanda demolition. The site work was conducted with funding from State, Federal and local sources and Mr. Kreuzer was responsible for ensuring that all funding source requirements were met for the project. He also played a key role in developing innovative abatement/demolition approaches which included a pre-approved asbestos abatement variance that was included in the bidding documents and on-site crushing/recycling of brick and concrete.

NYSDEC Hazardous Waste Standby Contract - PSAs, NY: Project Geologist for the New York State Standby Preliminary Site Assessment of various sites in Allegheny County, New York, for the New York State Department of Environmental Conservation, involving an assessment of the sites' potential for groundwater, surface water, and airborne contamination which could present a threat to public health as well as the environment.

NYSDEC Standby Contract - Utica Harbor Site: Project Geologist for NYSDEC Phase I and II Investigation at Utica Harbor of the NYS Barge and Canal System in Utica, NY. The site investigation included evaluation of the harbor which is affected by runoff from four nearby NYSDEC waste sites (including a Niagara Mohawk MGP site). In addition to sediment and surface water sampling in the harbor, the investigation also included a subsurface evaluation of an adjacent land area that was historically filled with harbor dredge spoils. Contaminants of concern for the site included coal tars, PAHs, cyanide wastes, PCBs and chlorinated solvents. Responsible for field investigation and reporting activities.



Stephen Frank

Senior Environmental Scientist

Education

B.S., Geology, Cleveland State University

Licenses/Registrations:

OSHA 40 Hr. HAZWOPER Certified

OSHA 10 Hr. Certified

Years with LiRo: 16

Years at other firms: 9

PROFESSIONAL PROFILE

Mr. Frank is a Sr. Geologist with more than 25 years of experience in site evaluations, aquifer testing, groundwater modeling, project coordination, environmental sampling, soil management, supervision of field activities, and report development at various hazardous waste sites, industrial sites and commercial sites. He has extensive experience in working with NYSDEC under various brownfield and consent order programs and working on New York City redevelopment projects under the City Environmental Quality Review program. He has working knowledge of DER 10 and spill guidance manual. He also has specialized experience coordinating field investigation, reporting, and design tasks for multiple-site work order based contracts.

EXPERIENCE

NYCDDC Bureau of Environmental and Geotechnical Services (BEGS), Requirements Contract for Environmental Services, Contract Nos. PW335EPS6/PW311GEN1: Mr. Frank serves as Project Technical Lead and coordinator for work-order based contract to perform Phase I/Phase II Environmental Site Assessments (ESAs), spill investigations, hazardous waste investigations, incinerator wastes, and corridor studies in support of NYCDDC property acquisition and corridor rehabilitation projects. More than 150 task orders have been issued and completed including sites with radioactive waste concerns, drummed hazardous wastes, and petroleum wastes. Responsible for coordinating all aspects of the program including scheduling, client/regulatory agency communications, data acquisition, work plan development, oversight of subsurface investigation work, data review, and report preparation.

New York City Mayor's Office of Environmental Remediation (MOER) Environmental Consulting Services: Project Technical Lead Scientist for a multi-site task order based contract to conduct United States Environmental Protection Agency (USEPA)-compliant Environmental Site Assessments (ESAs) and investigations of brownfield sites for the City of New York MOER under a USEPA Brownfield Grant program. LiRo has also been assigned a petroleum tank audit and tightness testing assignment under this contract to evaluate over 600 petroleum tank systems for compliance with State and Federal regulatory requirements. LiRo is currently performing ESA, Phase II investigations, and petroleum tank audits at more than 20 sites.

New York City Department of Design and Construction (NYCDDC) Remediation Program, DDC PW-348-22, 32, 51: Mr. Frank was the Project Technical Lead Investigator for the implementation of a comprehensive site investigation and remediation program at over New York City owned petroleum spill sites. Duties included development and implementation of work plans and Investigation Summary and Remedial Plans (ISRP) to comply with NYSDEC consent order, remedial design development, pilot testing, design analysis reporting, compliance monitoring, and system operation/troubleshooting. For each site, LiRo established the nature and extent of contamination, determined the need for site remediation, performed an evaluation of remedial alternative, and recommended site remedies for NYSDEC approval. Upon approval, LiRo's design team prepared Plans and Specification for the approved alternative, provided New York City with bidding assistance, and provided construction oversight for the remedial system construction.

New York City Housing and Preservation Department (NYCHPD) Environmental Site Assessment and Remedial Design, NY: Mr. Frank served as Lead Geologist for a multiple site indefinite delivery contract to perform environmental assessments in support of property redevelopment projects conducted by the NYCHPD. Mr. Frank coordinated the investigation and preparation of Phase I ESAs, the implementation of Phase II investigations (including the preparation of Health and Safety Plan (HASP) and Sample Analysis Plan (SAP) documents), vapor intrusion evaluations, and sub-slab vapor barrier system design and construction. Projects included spill sites, uncontrolled waste disposal sites, USEPA Brownfield program sites, and the



Stephen Frank

Senior Environmental Scientist

investigation of chlorinated solvent groundwater contamination in the 40-block Melrose Commons Urban Renewal Area. The Melrose project was conducted using Triad and involved a cooperative effort between USEPA, NYSDEC, New York State Department of Health (NYSDOH) and NYCHPD with LiRo as the lead investigator.

Hunters Point South Waterfront Redevelopment, NY: Project Scientist responsible for review and implementation of the Remedial Action Plan (RAP) for development of the Hunters Point South Site in Queens New York. The Site is constructed on made land that was filled in the early 1900s with contaminated fill. LiRo provided design review for soil management, site remediation, infrastructure installation, and Park construction. LiRo has also provided construction Management for the work. Other LiRo responsibilities include community air monitoring, contaminated soil disposition and all ancillary site remedial activities. Early in the demolition phase of the project, petroleum contamination associated with a leaking UST was discovered. LiRo coordinated the spill response with the New York State Department of Environmental Conservation (NYSDEC) and prepared a spill excavation Work Plan that was reviewed and approved by NYSDEC. Mr. Frank directed the soil excavation and confirmation sampling work, prepared a spill closure report for submittal to NYSDEC and acquired a spill closure letter for the project owner.

U.S. Air Force - Searsport Pipeline, ME: Project Technical Lead for Environmental Site Assessment (ESA) along 130-mile portion of the Searsport Oil Pipeline. Responsible for development and implementation of phased investigation program which identified potential problem areas, confirmed the presence of contaminants in soil and groundwater, and delineated the extent of contaminants. Supervised field investigations and interpreted/reported data using geographical information system (GIS). Developed remedial alternatives based on ESA results.

Spaulding Fibre Plant Environmental Restoration Program, Tonawanda NY: Project Coordinator responsible for environmental subsurface investigations at a 47-acre former industrial facility. Responsible for development of subsurface investigation work plans, coordination of subcontractor activities, performing subsurface sampling, and interpretation of subsurface conditions and environmental sampling results. Mr. Frank also lead the Project remedial design team effort, developed remedial plans and specifications, provided bid support services, reviewed Contractor submittals and is coordinated the site inspection for a \$3 million site remediation/foundation demolition program. Prepared NYSDEC IRM Construction completion reports, Site Management Plan and Final Engineering Report

Mendon Truck Leasing Site Remediation, NY: Project Scientist responsible for installation, compliance monitoring, troubleshooting, reporting, and closeout of a multi-phase remediation system at a redevelopment site. The system was installed simultaneously with construction of retail facilities at a former trucking company - petroleum spill site. The system was operated for 13 months collecting approximately 700 gallons of product and treating over 480,000 gallons of contaminated groundwater. Mr. Frank was also responsible for completing a Site Closure Investigation, petitioning NYSDEC, and obtained spill closure.

New York Bus Site Remediation, NY: Project Scientist responsible for installation, compliance monitoring, troubleshooting, and corrective action reporting at an active Bus Company parking/maintenance yard in Bronx, NY. The system was installed at a site with complex hydrogeological conditions including bedrock/overburden water bearing zones and tidal influences. The system operates on a manifold system for optimal collection with the tidal cycle and has collected more than 7,000 gallons of diesel fuel.

NYSDEC Standby Contract - North Franklin Street Site, NY: Onsite Coordinator and hydrogeologist for the Remedial Investigation/Feasibility Study at the North Franklin Street Site, Watkins Glen, NY. Supervised all field aspects of RI including GPR survey, soil gas and groundwater screening, monitoring well installation, and 72-hour aquifer testing.



Scott Swanson, PG

Field Staff Supervisor

Education

M.S., Geology, Florida International University

B.S., Geology, Florida International University

Certifications

Airtek 4-hour Mold Awareness

OSHA 10 Certified

OSHA 40 Hazwoper Certified

Years with LiRo: 15

Years at other firms: 20

PROFESSIONAL PROFILE

Mr. Swanson is an Environmental Project manager who has over 35 years of experience in environmental assessments, planning, supervision, and interpretation of hydro-geologic/geotechnical investigations, and report preparation for various sites. Mr. Swanson has provided reconnaissance and inspection services for Phase I/II Environmental Site Assessments (ESAs), and remediation design, monitoring and maintenance, and implementation including monitoring well installations, soil and groundwater sampling, permeability testing, pilot testing for remediation system design, building permit expediting, geotechnical boring oversight, Geoprobe, hollow stem auger (HAS), mud and air rotary drilling methods, geophysical subsurface investigative capabilities, product vacuum remediation, spill response, air monitoring services during asbestos and lead removal, water level monitoring, environmental auditing/oversight, health and safety oversight, vapor barrier inspection during construction, and regulatory compliance sampling for State Pollutant Discharge Elimination System (SPDES) discharge permits.

EXPERIENCE

New York City Health and Hospitals Corporation (HHC):

Provided Project Management support for spill investigation and groundwater monitoring projects performed under two consecutive on-call service contracts since 2008; interface frequently with facility managers to evaluate project scope of work and budget. Worked closely with HHC management and facility representatives in coordinating field work.

New York City Department of Design & Construction, Underground Storage Tank Program, NY:

Mr. Swanson was responsible for conducting pre-design investigations at 32 NYCDDC Underground Storage Tank Facilities. The investigations were conducted to determine the integrity of a Facility UST System and compliance with local, state and federal regulations. Based on the investigations recommendations for upgrade, replacement and/or closure of the systems were made.

New York City Mayor's Office of Environmental Remediation (MOER) Environmental Consulting Services, NY:

Field Coordinator for a multiple site indefinite delivery contract to perform environmental assessments in support of property redevelopment or rehabilitation projects overseen by the NYC MOER under the City's United States Environmental Protection Agency (USEPA) Brownfield Grant. Mr. Swanson completed scope evaluations and field investigations for Phase I ESAs, scoping and implementation of Phase II investigations and site remedial alternatives analysis. Projects included the Queensway rail corridor study, spill sites, industrial sites, transit facility sites, and uncontrolled waste disposal sites.

New York State Office of General Services (NYS OGS) Subsurface Soil Investigations, NY:

Project Geologist for numerous subsurface investigations performed for NYS OGS Structural Engineering Division. Supervised drilling and observation of well installation, geotechnical sampling, and percolation testing at various sites in NYS.

New York City Department of Design & Construction, Remediation, NY:

Mr. Swanson served as the Project Coordinator responsible for four remediation and investigation contracts for NYCDDC. Duties included subcontractor coordination, project management, cost tracking, and contract development. He was also responsible for tracking the progress of investigation and remediation activities until the spill closure is achieved.



Scott Swanson, PG

Field Staff Supervisor

New York City Department of Design and Construction (NYCDDC) Bureau of Environmental and Geotechnical Services (BEGS) Requirements Contract for Environmental Services:

Mr. Swanson oversees the field efforts for Phase I and II corridor assessments of areas of planned utility upgrades for roadways in the five boroughs and has been working on asbestos investigations at various facilities including a former New York City Department of Sanitation (NYCDOS) incinerator plant performing surveys for potential hazardous wastes. Mr. Swanson also performed soil investigations for suitability for tree growth selection in urban settings working with a certified arborist and spill response for various construction sites throughout Manhattan.

New York City Housing Authority, Fuel Oil Tank Replacement, NY:

Mr. Swanson served as Field Coordinator for the removal and installation of the Underground Storage Tank systems for eleven Housing Authority Facilities. Work included the installation of double-walled steel fiberglass jacketed tanks with leak detection, inventory control and tank selection systems. The new fuel oil tanks ranged from 10,000 to 30,000 gal capacities.

Expedited Permit Applications For Various Projects: Tank Installations and New Construction or Upgrades of Fire Dept Facilities:

Mr. Swanson worked with design engineers during site reconnaissance while surveying existing conditions at facilities and utility locations. He also expedited permit applications. Expediting required licensing by NYCDOB and involved pre-filing design drawings and meeting with plan examiners to resolve objections.

JetBlue Airways, Boston, MA:

Mr. Swanson was responsible for air quality testing for a warehouse near Logan Airport using summa canisters in conjunction with a survey of potential hazards for JetBlue's search for a suitable food/drink storage facility.

JFK Airport, Terminal 5 Reconstruction, NY:

Mr. Swanson monitored worker safety in all areas of active excavation. More than 30,000 ft of jet fuel lines (former TWA) were removed and new pipe was installed to accommodate JetBlue's construction of a new 26-gate terminal. All excavation areas were monitored with a PID, and multi-gas (LEL, O₂ & CO₂) meter. His responsibilities included documentation of training and medical surveillance of workers and preparing a daily log of activities and monitoring results.

Russel St, Rochester, NY:

Mr. Swanson investigated soil and ground water contamination at an industrial site with an open spill number on file with NYSDEC. Geo-probe borings were drilled around a heating oil tank, and soils/groundwater was sampled. A report was submitted to NYSDEC recommending closure of spill and tank. Mr. Swanson also coordinated the tank closure with contractor.

New York City Department of Environmental Protection, Pennsylvania and Fountain Ave. Landfills, NY:

Mr. Swanson served as the Lead Geologist and Site Coordinator for the 110 acre peninsula C&D fill mound site on Jamaica Bay requiring field management of three geologists and three technicians. Monitoring well clusters were drilled through hazardous fill to depths greater than 100 ft. Four drilling companies were employed utilizing hollow stem auger rigs, Barber-rigs to set double cased wells, Schramm rigs to set wells in the deeper horizons, and a barge rig to drill offshore borings. Responsibilities included soil gas surveys, surface and subsurface soil sampling, surface water and sediment sampling of Jamaica Bay. Field work was performed on a rigorous schedule from March through October, 1983 to satisfy a consent order by the NYSDEC. Oversight was conducted daily by four NYSDEC monitors and two NYCDEP managers.



Amy Hewson

Senior Environmental Scientist

Education

B.S., Geology/Environmental Science, State University of New York College at Cortland

Licenses/Registrations

NYSDEL Asbestos Project Supervisor

USEPA Lead Risk Assessor

Certifications

OSHA 40 Hazwoper

OSHA 8 Certified

OSHA 10 Certified

ASTM Environmental Assessments for Commercial Real Estate

Years with LiRo: 3

Years at other firms: 15

PROFESSIONAL PROFILE

Ms. Hewson is a Senior Environmental Analyst with over 18 years of experience including managing, coordinating, and supervising environmental investigations and remediation. She has worked primarily on petroleum remediation projects. During her career, she has demonstrated an exceptional ability to manage and coordinate multi-million dollar portfolios. She has been involved with numerous projects involving the New York State Department of Environmental Conservation (NYSDEC), the New York State Thruway Authority (NYSTA), and ExxonMobil Environmental Services (EMES).

Ms. Hewson has been assigned to task-order based contracts performing Phase I and Phase II investigations for property transfer/corridor projects in New York City and New Jersey. Phase I investigations include the collection and evaluation of topographic maps, regulatory database searches, soil/geologic information, historical records, municipal records, aerial photographs, a site reconnaissance, review of all previous site investigation reports, and a report summarizing the findings and recommendations. Phase II investigations include development of a work plan, soil and/or groundwater sampling, testing, and analysis, and reporting of the findings and recommendations.

EXPERIENCE

Liberty Industrial Finishing, Farmingdale, NY Project Geologists responsible for developing site remedial plans to support Town acquisition of a former industrial site and redevelopment of the site for public park use. The site was listed on the National Priorities list and has undergone remediation by the Responsible Party (RP) under United States Environmental Protection Agency (USEPA) supervision. LiRo developed excavation and disposal plans, health and safety plans and the Community Air Monitoring Plan (CAMP) that were implemented for the remedial work. In addition, LiRo prepared a Site Management Plan to ensure that future Park construction and maintenance work is conducted in a manner that is protective of workers, the environment and the surrounding community. LiRo also has developed a final engineering report to summarize all of the work completed by Town of Oyster Bay.

Delta Air Lines Terminal 4 Redevelopment at JFK International Airport: Project Geologist for the environmental remediation phase of Delta's Terminal 4 Redevelopment at JFK. The environmental program included the removal of an underground jet fueling system, the installation of a new fueling system and terminal building as support facilities. The hydrant fueling system work was complicated by the presence of asbestos-wrapped underground fueling system pipe.

JetBlue Phase I/II Site Assessments, Geotechnical Investigations and Terminal 5 Redevelopment at JFK International Airport: Project Geologist for the environmental remediation phase of JetBlue's Terminal 5 Development at JFK. The environmental program included the removal of an underground jet fueling system, the demolition of old jet way and hangar structures and the installation of a new fueling system and terminal building as support facilities. The hydrant fueling system work was complicated by the presence of asbestos-wrapped underground fueling system pipe. LiRo also performed an extensive evaluation of "baseline" subsurface conditions to document the nature and extent of pre-existing contamination for JetBlue to incorporate into their lease agreement with the airport owner.

NYCDDC BEGS Requirements Contract for Environmental Services: Environmental Scientist for work-order based contract to perform Phase I and Phase II Environmental Site Assessments (ESAs) and corridor studies in support of NYCDDC property acquisition and corridor rehabilitation projects. Ms. Hewson has assisted in completing the Phase I ESAs in accordance with ASTM and client-specific standards. Based upon the Phase I results, Ms. Hewson has also developed and implemented Phase II/Corridor Investigation work plans.



Amy Hewson

Senior Environmental Scientist

NYCDCC UST Investigation/Remediation, City-wide New York City: Environmental Scientist responsible for site coordination, investigation, remedial planning and design and post installation system monitoring, evaluation and optimization for a multi-site long-term project with NYC Department of Design and Construction.

NYC Mayor's Office of Environmental Remediation (OER): Environmental Services: Environmental Scientist to perform Phase I and Phase II ESAs in support of OER brownfield programs in NYC. Ms. Hewson has assisted in completing the Phase I ESAs in accordance with ASTM, USEPA Brownfield Assessment Grant Program, and client-specific requirements/standards. Ms. Hewson has also developed and implemented Phase II Investigation work plans.

Monadnock Construction, Inc.: Environmental Services: Environmental Scientist to perform Phase I ESAs on multiple properties. Ms. Hewson has assisted in completing the Phase I ESAs in accordance with ASTM, USEPA All Appropriate Inquiry (AAI), and client-specific requirements/standards.

ExxonMobil Account Project Manager: As the ExxonMobil Environmental Services (EMES) Project Manager for Groundwater and Environmental Services, Inc., Ms. Hewson oversaw, managed, and reviewed all aspects of the EMES retail petroleum remediation account ranging between 21 and 54 projects at various times. She personally managed all aspects of a \$3.4 million dollar remedial excavation, including the coordination with various subcontractors, numerous staff members, the NYSDEC, the NYSTA, and a separate lessee of the facility. The Project Managers role also included developing and tracking annual proposals, change orders, and budgets for all projects within the EMES account totaling over \$5.4 million one year. Ms. Hewson assisted in the development and tracking of an Excel spreadsheet to track monthly spends on each individual project based upon specific categories and forecasted spends on all projects within the account for the next five years. In this role, she had routine communications with the NYSDEC on each project along with other regulators, as needed.

Vice President, Due Diligence Services: As the VP of Due Diligence Services: As the VP of Due Diligence Services for Lender Consulting Services, Inc., Ms. Hewson oversaw, managed, and reviewed Phase I, Transaction Screen, and EAQuick ESAs throughout the Northeastern United States for various lending agencies and private organizations. She has personally performed over 5,000 ESAs throughout the Northeastern United States including the collection and evaluation of topographic maps, computer database searches, soil/geologic information, historical records, municipal records, aerial photographs, site reconnaissance, and review of all previous site investigation reports, if available. In this role, Ms. Hewson developed the Policy and Procedures for the Due Diligence Department (DDD) relative to Phase I, Transaction Screen, and EAQuick ESAs. She also created various report templates dependant on client requirements. As a result of this position, Ms. Hewson has extensive experience with ASTM E1527-00 and E1528-00 Standard Practices for ESAs.



Eva Jakubowska

Independent Environmental Monitor Assistant

Education

B.A., History/Environmental Science,
Brooklyn College

A.S., Business Administration,
Brooklyn College

Licenses/Registrations

USEPA Lead Risk Assessor

Certifications

Airtek 4-hour Mold Awareness

NYSDEC Erosion and Sediment
Control

OSHA 40 Hazwoper Certified

OSHA 10 Certified

Years with LiRo: 3

Years at other firms: 6

PROFESSIONAL PROFILE

Ms. Jakubowska is an Environmental Scientist with over 9 years of experience performing environmental site assessments, hazardous material assessments, spill investigations, brownfield site investigations, soil and ground water sampling, mold and asbestos surveys, lead investigations, and oversight of remediation systems operation and monitoring. Ms. Jakubowska has performed a variety of services including mold air sampling and mold surveys.

EXPERIENCE

New York City Economic Development Corporation, Hunters Point South Development Project, NY: Ms. Jakubowska serves as environmental monitor for Waterfront Park and infrastructure development project in Queens for the New York City Economic Development Corp. The project involves conversion of the site from a 60-acre abandoned sports complex to a complex community center complete with a public school and retail, residential, and park facilities. Contaminants at the site include historic fill, creosote soaked timbers from former bulkhead structures and petroleum contamination from underground storage tanks (USTs). Her duties include oversight of excavation work and segregation of various waste streams, dust monitoring oversight, soil and groundwater sampling in potential petroleum contamination areas, UST and spill closure investigations, waste characterization testing of stockpiled soil, and oversight of soil transport and disposal activities.

New York City Department of Design & Construction, BEGS Requirements Contract for Environmental Services, NY: Ms. Jakubowska served as Environmental Scientist/Project Geologist for work-order based contract to perform Phase I/Phase II Environmental Site Assessments (ESAs) and corridor studies in support of NYCDDC property acquisition and corridor rehabilitation projects. More than 60 task orders have been issued and completed. She has performed all aspects of Phase II site investigation field work including drilling supervision, borehole logging, monitoring well installation, subsurface soil sampling, and groundwater sampling.

New York City School Construction Authority, NY: Performed site assessments for the construction and renovations of New York City Public Schools. Responsibilities included the performance of Phase I Environmental Site Assessments, Phase II Environmental Site Investigations, PCB Remediation and Outdoor/Indoor Air Assessments.

Queens West Development Site, NY: Served as a project scientist for post-excavation remedial activities. Supervised the installation of monitoring wells including monitoring well development and groundwater sampling.

Con Edison Inc., Nevins Street, NY: Served as a project scientist performing air monitoring during the demolition of one of the Con Edison substations.

Long Island Rail Road, Morris and Richmond Hill Yard Parks, NY: Served as a project scientist for the Long Island Rail Road in Queens. Responsibilities included conducting groundwater sampling events and Nitrate sampling events,

New York City Department of Environmental Protection, Various Properties, NY: Served as a project/environmental manager, handling NYCDEP "E" Designation projects from start until final construction including closure reports.

Con Edison Inc., Amoco Rainey Remediation Project, NY: Served as a Scientist II/Air Monitoring Technician with Shaw Environmental & Infrastructure's Holbrook, New York office. Responsibilities included reviewing contractor submittals and preparation of reports.