

PROJECT NO. 8674

REPORT TO

**YOUR HOME DEVELOPMENTS (MISSISSAUGA)
INCORPORATED**

ON

PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

**5080 NINTH LINE,
MISSISSAUGA, ONTARIO**

CONDUCTED BY:



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Environmental Inc.**

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EXECUTIVE SUMMARY

S2S Environmental Inc. (S2S) was retained by Your Home Developments (Mississauga) Inc. (Client) to conduct a Phase Two Environmental Site Assessment (ESA) of a vacant residential property, located at 5080 Ninth Line, Mississauga, Ontario (Phase Two Property).

At the time of the site reconnaissance, the Phase Two Property consisted of one single-storey vacant residential building with a full basement (Subject Building); and one single-storey brick and vinyl clad garage and one single-storey storage shed and two mobile truck trailers, on the central portion of the Phase Two Property. The Subject Building was reportedly constructed in the mid-1960s. Vehicular access to the Phase Two Property was from one gravel covered driveway off Ninth Line, located on the northeast side of the Phase One Property. Gravel covered surface parking/driveway areas were present on the south side and a portion of the east side of the Subject Building; on the north, east and south sides of the garage and storage shed; and on the northeast portion of the Subject Property. Overgrown vegetation was present on the north side, on a portion of the east side and the west side of the Subject Building and on the west side of the garage; and on the north, south and west portions of the Phase Two Property. The total floor area of the Subject Building was reportedly 564 m² (6,071 ft²), and the Phase Two Property has a total area of 37,000 m² (398,265 ft²). The Property Identification Number (PIN) for the Phase Two Property is 24931-0183 (LT). At the time of the site reconnaissance, the Phase Two Property was reportedly owned and managed by Your Home Developments (Mississauga) Inc.

It is understood that this Phase Two ESA is being carried out for Site Plan Application purposes with the City of Mississauga (the Region); therefore, this Phase Two ESA was completed in accordance with *Ontario Regulation 153/04 Records of Site Condition - Part XV.1 of the Environmental Protection Act (referred to as O. Reg. 153/04, as amended)*.

The scope of work for the Phase Two ESA was discussed with and approved by the Client on January 29, 2019, which consisted of the completion of a Phase Two ESA for the Phase Two Property.

The following Potentially Contaminating Activities (PCAs) resulting in Areas of Potential Environmental Concern (APECs) were identified as part of the Phase One ESA completed at the Phase Two Property and documented in the S2S Phase One ESA report dated April 29, 2019:



Area of Potential Environmental Concern (APEC)	Location of Area of Potential Environmental Concern on Phase One Property	Potentially Contaminating Activity (PCA)	Location of PCA (on-site or off-site)	Contaminants of Potential Concern	Media Potentially Impacted (Groundwater, soil and/or sediment)
APEC 1	East portion of the Phase One Property	30 – Importation of Fill Material of Unknown Quality <i>(The quality of the fill material is unknown on the east portion of the Phase One Property)</i>	On-site	PAHs, Metals, As, Sb, Se, Cr (VI), Hg, CN-, B-HWS, EC, SAR ¹	Soil
APEC 2	West and south portions of the Phase One Property	40 – Pesticides (including Herbicides, Fungicides and Anti-Fouling Agents) Manufacturing, Processing, Bulk Storage and Large-Scale Application <i>(The west and south portions of the Phase One Property were historically used for agricultural purposes)</i>	On-site	OCPs, PAHs, Metals ¹	Soil

Note:

- 1- The acronyms noted above indicate the following contaminants of potential concern: petroleum hydrocarbons (PHCs); benzene, toluene, ethylbenzene and xylene (BTEX); polycyclic aromatic hydrocarbons (PAHs); Polychlorinated biphenyls (PCBs); arsenic (As), antimony (Sb), selenium (Se), chromium VI (Cr(VI)); mercury (Hg); cyanide (CN-); boron (hot water soluble) (B-HWS); Electrical Conductivity (EC), Sodium Adsorption Ratio (SAR); volatile organic compounds (VOCs) and organochlorine pesticides (OCPs).

The Phase Two ESA consisted of advancing 19 boreholes (BH1 to BH16, and BH201 to BH203), at the Phase Two Property, five of which were completed as monitoring wells, to address the above-noted PCAs and APECs from on-site and off-site land uses, as identified in the Phase One ESA.

The following is a summary of the Phase Two ESA:

1. The drilling of 16 boreholes was completed on March 6 to 8 and March 11 to 15, 2019 (BH1 to BH16) on the Phase Two Property. Five of the boreholes were completed as



- groundwater monitoring wells (BH4, BH9, BH11, BH12, and BH15). Three boreholes were completed on July 2, 2019 (BH201 to BH203) on the Phase Two Property;
2. Based on conditions encountered in the boreholes advanced during the Phase Two ESA, visual observations and the results of laboratory grain size analyses, the subsoils at the Phase Two Property were found to generally consist of silt and clay. A clay seam was present in BH5, BH8 and BH9 from approximately 0.2 m to 2.3 m bgs. Silt was present beneath the topsoil or clay seam from approximately 0.2 m to 8.2 m bgs. An underlying clay layer extended to a maximum drilled depth of approximately 15.8 m bgs;
 3. In accordance with the requirements of *O. Reg. 153/04*, based on the most sensitive expected use (residential) of the Phase Two Property, laboratory analysis of grain size on two soil samples and field classification (approximately 54% medium and fine grained in BH2 and approximately 50% medium and fine grained in BH11), satisfactory soil pH analyses within the required range by *O. Reg. 153/04*, and the potable groundwater usage adjacent to the Phase Two Property, S2S determined that the appropriate standards for the Phase Two Property would be the *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the EPA dated April 15, 2011, Table 2 Full Depth Site Condition Standards in a Potable Groundwater Condition* (for residential property use and medium and fine textured soils – Ministry of the Environment, Conservation, and Parks (MECP) Standards);
 4. Soil and groundwater samples from the newly-installed boreholes/monitoring wells were collected and submitted for laboratory analyses of concentrations of selected volatile organic compounds (VOCs), petroleum hydrocarbon (PHC) fractions F1 to F4, benzene, toluene, ethylbenzene, xylenes (BTEX), selected metals and inorganics (including As, Sb, Se, B-HWS, Cr(VI), Hg, CN⁻, Electrical Conductivity (EC) and Sodium Adsorption Ratio (SAR)), polycyclic aromatic hydrocarbons (PAHs), organochlorine pesticides (OCPs) and Triazines herbicides; and
 5. Based on the results of laboratory analyses conducted by S2S as part of this investigation, there were no exceedances noted in the submitted soil and groundwater samples in comparison to the applicable MECP Standards.

There are no further investigations recommended in the areas investigated at the Phase Two Property at this time.

The statements made in this Executive Summary text are subject to the same limitations included in Section 6.1 and are to be read in conjunction with the remainder of this report.



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1 INTRODUCTION

S2S Environmental Inc. (S2S) was retained by Your Home Developments (Mississauga) Inc. (Client) to conduct a Phase Two Environmental Site Assessment (ESA) at the property located at 5080 Ninth Line in Mississauga, Ontario (Phase Two Property). The format for this report is compliant with Schedule E – Phase Two Environmental Site Assessments of *Ontario Regulation 153/04 Records of Site Condition - Part XV.1 of the Environmental Protection Act* (referred to as *O. Reg. 153/04*, as amended).

1.1 Site Description

At the time of the site reconnaissance, the Phase Two Property consisted of one single-storey vacant residential building with a full basement (Subject Building); and one single-storey brick and vinyl clad garage and one single-storey storage shed and two mobile truck trailers, on the central portion of the Phase Two Property. The Subject Building was reportedly constructed in the mid-1960s. Vehicular access to the Phase Two Property was from one gravel covered driveway off Ninth Line, located on the northeast side of the Phase One Property. Gravel covered surface parking/driveway areas were present on the south side and a portion of the east side of the Subject Building; on the north, east and south sides of the garage and storage shed; and on the northeast portion of the Subject Property. Overgrown vegetation was present on the north side, on a portion of the east side and the west side of the Subject Building and on the west side of the garage; and on the north, south and west portions of the Phase Two Property. The total floor area of the Subject Building was reportedly 564 m² (6,071 ft²), and the Phase Two Property has a total area of 37,000 m² (398,265 ft²). The Property Identification Number (PIN) for the Phase Two Property is 24931-0183 (LT). At the time of the site reconnaissance, the Phase Two Property was reportedly owned and managed by Your Home Developments. A summary of pertinent information on the Phase Two Property is presented below in Table 1.

Table 1 - Property Details

Phase Two Property	
Legal Description and Property Identification Number (PIN)	Part Lot 1, Concession 9 (New Survey) Geographic Township of Trafalgar, (formerly in the Town of Milton), City of Mississauga, Region of Peel PIN 24931-0183 (LT)
Max Length, Max Width	220 m, 180 m
Area	37,000 m ² (398,265 ft ²)
Basement or Below Grade Structures	Full basement in the Subject Building No basement in the garage
Utility Services: Sewer, Water, Natural Gas, Electricity	All services were disconnected at the time of the site reconnaissance based on locates and confirmation with the Client.



Phase Two Property	
Exit and Entry Points	Vehicular access to the Phase Two Property was from one gravel covered driveway off Ninth Line, located on the northeast side of the Phase Two Property.

The Phase Two Property was located on the west side of Ninth Line in the City of Mississauga, approximately 210 m north of the intersection of Ninth Line and Eglinton Avenue West. A site location plan including the adjacent/neighbouring properties is shown as Drawing No. 3.

1.2 Property Ownership

The ownership and Client details for the Phase Two Property are shown in Table 2 below.

Table 2 - Client and Property Ownership

Client	
Company Name	Your Home Developments (Mississauga) Inc.
Company Address	4965 Steeles Avenue West, Toronto, Ontario M9L 1R4
Company Contact Name	Mr. Stewart Turk, President
Contact Telephone Number	(416) 745-6686
Contact Email Address	sturk@yhdev.ca

1.3 Current and Proposed Future Uses

The Phase Two Property consisted of one single-storey vacant residential building with a full basement (Subject Building); and one single-storey brick and vinyl clad garage and one single-storey storage shed and two mobile truck trailers, on the central portion of the Phase Two Property. The Subject Building was reportedly constructed in the mid-1960s. Gravel covered surface parking/driveway areas were present on the south side and a portion of the east side of the Subject Building; on the north, east and south sides of the garage and storage shed; and on the northeast portion of the Subject Property. Overgrown vegetation was present on the north side, on a portion of the east side and the west side of the Subject Building and on the west side of the garage; and on the north, south and west portions of the Phase Two Property.

It is our understanding that the Phase Two Property will be redeveloped with multiple residential buildings. It is understood that this Phase Two ESA is being completed in support of a Site Plan Application with the City of Mississauga (the City); therefore, this Phase Two ESA was completed in accordance with O. Reg. 153/04, however a Records of Site Condition (RSC) will not be filed with the Ontario Ministry of the Environment, Conservation and Parks (MECP).



1.4 Applicable Site Condition Standards

The selection of applicable site condition standards was conducted in accordance with the requirements of the amended *O. Reg. 153/04*. As per Sections 35, 41 and 43.1 of *O. Reg. 153/04*, as amended, the following factors were considered when determining applicable site condition standards:

Environmentally Sensitive Areas

The Phase Two Property was not considered to be environmentally sensitive based on the following details:

- The Phase Two Property was neither located within an area of natural significance nor adjacent to such an area, as defined on Drawing No. 1, a drawing identifying the locations of any areas of natural and scientific interest (ANSI) and water bodies within a 200 metres (m) radius of the Phase Two Property;
- S2S completed pH analysis on near surface soil samples BH2-1, BH3-1 (and its duplicate, DUP1), BH4-1, BH5-1 and BH9-1 which were retrieved at depths of approximately 0.0 m to 0.6 m below grade surface (bgs), and subsurface soil samples BH10-6 and BH11-6 which were retrieved at depths of approximately 4.6 m to 5.0 m bgs. The near surface soil pH was determined to be between 7.13 and 7.68, within the range of 5 to 9 for surficial soils. The subsurface soil pH was determined to be between 7.79 and 7.82, within the range of 5 to 11 for subsurface soils; and
- The Phase Two Property is not a “shallow soil property”.

Soil pH

As discussed, based on laboratory analysis of the soil samples recovered from BH2, BH3, BH4, BH5, BH9, BH10 and BH11, S2S determined the pH of soil on the Phase Two Property to be within the required range of 5 to 11 for subsurface soils; and within the required range of 5 to 9 for surficial soils.

Land Use

As noted in Section 1.1, the Phase Two Property was identified as an unoccupied property with residential land use and is expected to be redeveloped and used for residential purposes.

Soil Grain Size Analysis

Grain size analysis was conducted on a recovered soil samples from BH2-6 (at approximately 4.6 m to 5.0 m bgs) and BH11-5 (at approximately 3.0 m to 3.5 m bgs) by SOLA Engineering Inc. (SOLA) of Vaughan, Ontario. The results of the grain size analyses for the submitted soil sample from BH2-6 were 54% medium and fine textured soils and from BH11-5, 50% medium and fine texture soils.



Based on the results of grain size analyses, it was determined that the soil at the Phase Two Property, measured by volume, consists of medium and fine textured soil. Based on the expected zone of impact and overall stratigraphy, S2S has chosen to apply a fine textured Site Condition Standards.

Potable Water

Groundwater at the Phase Two Property was considered potable based on a search of MECP well records within 250 m of the Phase Two Property showing potable drinking water wells within this area. Potable groundwater Site Condition Standards (Table 2) were used when comparing laboratory analyses of soil and groundwater.

Applicable Site Condition Standards

In accordance with the requirements of *O. Reg. 153/04*, based on the most sensitive expected use of the Phase Two Property (residential), laboratory analysis of grain size on two soil samples (approximately 50-54% medium and fine grained), satisfactory soil pH analyses within the required range by *O. Reg. 153/04* (as previously discussed), and the potable groundwater usage adjacent to the Phase Two Property, S2S determined that the appropriate standards for the Phase Two Property would be the *Soil, Ground Water and Sediment Standards* for Use Under Part XV.1 of the EPA dated April 15, 2011, Table 2 Full Depth Site Condition Standards in a Potable Groundwater Condition (for residential property use and medium and fine textured soils – MECP Standards).

For comparison of soil and groundwater data, the MECP Standards are present in the analytical results tables at the end of this report.

2 BACKGROUND INFORMATION

2.1 Physical Setting

A summary of the site topography, hydrology, and regional geology collected as part of the S2S Phase One ESA dated April 29, 2019 is described in the excerpts below.

Water Bodies and Areas of Natural Significance

No water bodies or other permanent bodies of water were identified on the Phase Two Property. No ANSIs were identified on the Phase Two Property. Drawing No. 1 identifies locations of any ANSI and water bodies within a 200 m radius of the Phase Two Property.

Topography and Surface Water Drainage

Topographic information obtained from Google Earth, showed the site elevation to range from approximately 188 m to 192 m above mean sea level (asl). The ground surface at the Phase Two Property was generally visually noted to be flat, and surface water at the Phase Two



Property was assumed to infiltrate into the on-site areas of overgrown vegetation; or drain towards off-site catch basins, which reportedly discharged to the municipal storm sewer system. It should be noted that the immediate adjacent/neighbouring properties to the northwest, northeast (across Ninth Line) and southeast of the Phase Two Property visually appeared to be generally at the same elevation as the Phase Two Property; while the adjacent property to the southwest of the Phase Two Property visually appeared to be generally at a higher elevation than the Phase Two Property.

The shallow horizontal groundwater flow direction in the area, based on apparent topography, was likely southeast towards a tributary of Credit River, located approximately 1.0 km southeast of the Phase Two Property. It should be noted that the direction of shallow groundwater flow in limited areas are also be influenced by the presence of underground utility corridors and is not necessarily a reflection of local groundwater flow or a replica of the Phase Two Property or area topography.

As discussed in Section 5.2 of this report, based on the groundwater level data obtained on April 25, 2019, as part of this Phase Two ESA, the inferred direction of shallow groundwater flow on May 24, 2019 was generally east and groundwater was found at depths ranging from approximately 0.3 m to 1.0 m bgs within the Phase Two Property.

2.2 Past Investigations

S2S requested the Client to provide all available information for the Phase Two Property with respect to the current Phase Two ESA. Company records provided by the Client consisted of previous environmental assessments of the Phase Two Property.

A list of these documents is provided in Section 7. These previous reports/documents were used as sources of background information by S2S during the completion of this Phase Two ESA report.

A summary of each of the previous environmental reports is discussed below:

“Phase One Environmental Site Assessment, 5080 Ninth Line, Mississauga, Ontario” report, prepared for Your Home Developments (Mississauga) Incorporated, prepared by S2S, dated April 29, 2019 (hereinafter referred to as the ‘2019 S2S Phase One ESA’ report)

In 2019, S2S completed a Phase One ESA for the Phase Two Property. The following information within the 2019 S2S Phase One ESA report was of note:

- Fill material of unknown quality is present on the east portion of the Phase One Property; and
- The west and south portions of the Phase One Property were historically used for agricultural purposes.



S2S concluded in the report, that “based on the above-noted APECs identified during the completion of this Phase One ESA, it is recommended that a Phase Two ESA be completed at the Phase One Property to assess the quality of the soils and groundwater in accordance with the current applicable MECP O. Reg. 153/04 Standards.”

The following Phase I ESA report was completed for the mortgage refinancing purposes and was not completed to O. Reg. 153/04 Standards. It did not recommend a Phase II ESA, as noted in the 2018 S2S Phase I ESA report:

- “Phase I Environmental Site Assessment, 5080 Ninth Line, Mississauga, Ontario” report, prepared for Your Home Developments (Mississauga) Inc., prepared by S2S, dated July 30, 2018.

3 SCOPE OF SUBSURFACE INVESTIGATION

3.1 Overview of the Site Investigation

The purpose of the Phase Two ESA was to assess subsurface conditions associated with the historical onsite and offsite land uses.

A site plan showing neighbouring land uses and an aerial photograph comprising the Phase Two Conceptual Site Model (CSM), identifying the locations of potentially contaminating activities (PCAs) are provided as Drawing Nos. 3 and 4.

The scope of work for the Phase Two ESA was discussed with and approved by the Client on January 29, 2019, which consisted of the completion of a Phase Two ESA, compliant with O. Reg. 153/04, for the Phase Two Property.

3.2 Media Investigated

Based on the findings of the Phase One ESA, S2S investigated soil and groundwater in the APECs at the Phase Two Property, in accordance with the Sampling and Analysis Plan, as provided in Appendix A. As part of this Phase Two ESA, S2S investigated soil via the advancement of 19 boreholes (BH1 to BH16, and BH201 to BH203) and the collection and analysis of soil samples from these borehole locations. Groundwater was investigated through the installation of monitoring wells in five of the boreholes (BH4, BH9, BH11, BH12 and BH15) and the collection and analysis of groundwater samples from these borehole locations. Surface water was not present at the Phase Two Property, therefore, sampling of sediment was not conducted as part of this Phase Two ESA.

3.3 Phase One Conceptual Site Model

The Phase One CSM is based on the Phase One ESA by S2S, dated April 29, 2019. A brief summary of the CSM information relevant to the Phase Two ESA and not otherwise discussed in this report is as follows:



Based on this Phase One ESA, the following comprises the Phase One CSM:

At the time of the site reconnaissance, the Phase One Property consisted of one single-storey vacant residential building with a full basement (Subject Building); and one single-storey brick and vinyl clad garage and one single-storey storage shed and two mobile truck trailers, on the central portion of the Phase One Property. The Subject Building was reportedly constructed in the mid-1960s. Vehicular access to the Phase One Property was from one gravel covered driveway off Ninth Line, located on the northeast side of the Phase One Property. Gravel covered surface parking/driveway areas were present on the south side and a portion of the east side of the Subject Building; on the north, east and south sides of the garage and storage shed; and on the northeast portion of the Subject Property. Overgrown vegetation was present on the north side, on a portion of the east side and the west side of the Subject Building and on the west side of the garage; and on the north, south and west portions of the Phase One Property. The total floor area of the Subject Building was reportedly 564 m² (6,071 ft²), and the Phase One Property has a total area of 37,000 m² (398,265 ft²). The PIN for the Phase One Property is 24931-0183 (LT). At the time of the site reconnaissance, the Phase One Property was reportedly owned and managed by Your Home Developments (Mississauga) Inc.

The Phase One Study Area and the Phase One Property are situated in a developed portion of the City of Mississauga. The City of Mississauga Official Plan and the ANSI maps provided on-line were reviewed to determine if an environmentally sensitive area is located within the Phase One Study Area. Based on this review of these plans and maps, the following is of note:

- No water bodies or other permanent bodies of water were identified on the Phase One Property or in the Phase One Study Area; and
- No ANSIs were identified on the Phase One Property or in the Phase One Study Area.

Potable water in the Phase One Study Area is provided by the City of Mississauga, which is obtained from Lake Ontario. No potable water wells were identified at the Phase One Property. According to information provided in the reviewed ERIS report, a search of the Water Well Information System (WWIS) database for the Phase One Property and Phase One Study Area indicated that a total of 17 water well sites were located within the Phase One Study Area.

The Phase One Property was surrounded by agricultural lands/single-family residential dwellings to the northwest and southeast of the Phase One Property; single-family residential dwellings to the northeast (across Ninth Line) of the Phase One Property; and a community property (Highway No. 407 ROW) to the west of the Phase One Property.

The following identified PCAs (description based on the *O. Reg. 153/04*, as amended – Table 2: Potentially Contaminating Activities) within the Phase One Study Area contribute to APECs on the Phase One Property:

- PCA 1 – *Importation of Fill Material of Unknown Quality*. fill materials of unknown quality may have been applied at various portions of the Phase One Property at the time



of first development in approximately the mid-1960s, or during re-configuration of parking or landscaped areas. Based on the above-noted information, the potential presence of fill materials of unknown quality may have impacted the soils at the Phase One Property, and likely represents a potential environmental concern to the Phase One Property.

- *PCA 2 – Pesticides (including Herbicides, Fungicides and Anti-Fouling Agents) Manufacturing, Processing, Bulk Storage and Large-Scale Application.* Based on available aerial photographs, a grove was observed on the northwest side of the single-storey brick and vinyl clad garage at the time of the site reconnaissance. According to available aerial photographs, this grove appeared to have been present on this portion of the Phase One Property from approximately the early 1950s to the mid-1990s. Furthermore, according to discussions with the Client, the Phase One Property was utilized as an agricultural farm complex from approximately the mid-1960s to 2017. Based on the presence of this grove and historical agricultural operations at the Phase One Property, it is possible that large-scale application of pesticides and/or herbicides may have occurred at the Phase One Property during this time, and may represent an environmental concern to the Phase One Property.

APECs associated with the above noted PCAs were determined to be the east portion of the Phase One Property for PCA 1; and the south and west portions of the Phase One Property for PCA 2. The locations of the PCAs and on-site APECs are shown on the attached Drawing No. 3 and 4.

Contaminants of Potential Concern (COPCs) identified, based on the APECs include PHCs, BTEX; OCPs, PAHs; and selected Metals and Inorganics including As, Sb, Se, B-HWS, Cr(VI), Hg, CN-, Electrical Conductivity and SAR.

Based on discussions with Mr. Shirriff of Your Home Developments, all utility services were disconnected at the time of the site reconnaissance.

Topographic information obtained from Google Earth, showed the site elevation to range from approximately 187 m to 192 m above mean sea level (asl). The ground surface at the Phase One Property was generally visually noted to be flat, and surface water at the Phase One Property was assumed to infiltrate into the on-site areas of overgrown vegetation; or drain towards off-site catch basins, which reportedly discharged to the municipal storm sewer system. It should be noted that the immediate adjacent/neighbouring properties to the northwest, northeast (across Ninth Line) and southeast of the Phase One Property visually appeared to be generally at the same elevation as the Phase One Property; while the adjacent property to the southwest of the Phase One Property visually appeared to be generally at a higher elevation than the Phase One Property.

The shallow horizontal groundwater flow direction in the area, based on apparent topography, was likely southeast towards a tributary of Credit River, located approximately 1.0 km southeast of the Phase One Property. It should be noted that the direction of shallow



groundwater flow in limited areas are also be influenced by the presence of underground utility corridors and is not necessarily a reflection of local groundwater flow or a replica of the Phase One Property or area topography.

Based on available surficial geology maps, accessed using Google Earth, the native surficial soils in the vicinity of the Phase One Property, are reportedly predominantly comprised of sandy Clay to silt-textured till. Available geology maps (Ontario Geological Survey (OGS) database “Surface Geology Report”) indicated that the Phase One Study Area is comprised of red to brown gritty silt to clayey silt till.

According to information provided in the reviewed ERIS report, a search of the WWIS database for the Phase One Property and Phase One Study Area indicated that a total of 17 water well sites were located within the Phase One Study Area. WWIS Well ID No. 2804137, a domestic/potable water well, was advanced on August 19, 1973, on the Phase One Property (UTM Zone 17, UTM Co-ordinates Northing – 4821230, Easting – 602089.6). In addition, it should be noted that S2S obtained the well record for this domestic/potable water well as part of a provincial online well record search. This well was reportedly advanced to a depth of 22.9 m bgs and consisted of the following stratigraphy:

- Brown topsoil from ground surface to a reported depth of approximately 0.6 m bgs;
- Brown clay from a reported depth of 0.6 m bgs to a reported depth of approximately 4.3 m bgs;
- Grey clay from a reported depth of 4.3 m bgs to a reported depth of approximately 15.2 m bgs;
- Red clay from a reported depth of 15.2 m bgs to a reported depth of approximately 15.8 m bgs;
- Grey packed clay from a reported depth of 15.8 m bgs to a reported depth of approximately 18.9 m bgs;
- Brown hardpacked sand and stones from a reported depth of 18.9 m bgs to a reported depth of approximately 22.6 m bgs; and
- Black sand from a reported depth of 22.6 m bgs to a reported depth of 22.9 m bgs (the maximum extent of the domestic water well).

It should be noted that the Client retained S2S in June, 2017 to complete a well abandonment program for the above-noted on-site domestic/potable water well. Based on discussions with the Client and information available in S2S’s files, this domestic/potable water well was abandoned in accordance to O. Reg. 903 at that time.

Based on the OGS database “Bedrock Geology of Ontario” (2011), the Phase One Property is assumed to be underlain by shale, limestone, dolostone and siltstone from the Queenston Formation. According to information provided in the ERIS report, bedrock was not encountered in any of the boreholes (completed as domestic and observations/monitoring wells) at the Phase One Property and Phase One Study Area. Depth to bedrock is anticipated to be deeper than the deepest extent (42.6 m bgs) of the observation/monitoring water wells advanced at the Phase One Property and Phase One Study Area.



There were no material deviations to the Phase One ESA requirements set out in *O. Reg. 153/04* (as amended) that would cause uncertainty or absence of information that would affect the validity of the findings of this assessment.

3.4 Deviations from Sampling and Analysis Plan

The Sampling and Analysis Plan is included in Appendix A.

Based on the site conditions, groundwater at the site was found to be shallow, ranging from 0.37 m to 0.75 m bgs. Therefore, groundwater was included as a potentially impacted media, and was investigated for APECs 1 and 2.

Additionally, based on additional conversations with the Client, private activities within the garage were unknown, and additional due diligence sampling for PHCs and VOCs was included in an apparent downgradient location in both soil and groundwater.

Upon review of analytical soil results of Zinc collected from a soil sample from BH5, additional shallow soil samples were collected in the same sampling location and depth to average out the sampling results, as per *O.Reg. 153/04*, s. 48 (2).

3.5 Impediments

There were no physical impediments on the Phase Two Property interfering with the ability to conduct the investigations.

4 INVESTIGATION METHOD

4.1 General

The investigation methodology was conducted in general accordance with the *O. Reg. 153/04*, as amended, the *MECP Guidance on Sampling and Analytical Methods for Use at Contaminated Sites in Ontario*, December 1996 document (MECP Sampling Guideline), and S2S standard field procedures (collectively referred to as Standard Protocols).

4.2 Drilling

4.2.1 Utility Locates

Prior to the commencement of any subsurface investigations as part of this Phase Two ESA, S2S contacted Ontario One Call to obtain clearances for public utility services traversing the Phase Two Property. In addition, S2S retained All Clear Locates of Mississauga, Ontario on February 19, 2019 to clear the proposed locations of each borehole for the Phase Two ESA. All Clear Locates used electromagnetic scanning equipment to identify locations of the underground utilities in the vicinity of each proposed borehole location.



4.2.2 Drilling

S2S retained Profile Drilling Inc. of Mississauga, Ontario to advance sixteen boreholes (BH1 to BH16) at the Phase Two Property on March 6 to 8 and March 11 to 15, 2019. Depths of the boreholes (BH1 to BH16) ranged from approximately 2.1 m bgs in BH14 and BH16 to approximately 15.8 m bgs in BH12. Three additional shallow boreholes (BH201 to BH203) were advanced using a hand auger tool on July 2, 2019 to a depth of approximately 1.2 m bgs. The approximate borehole locations are shown on Drawing No. 2 and borehole logs are provided in Appendix B.

BH1 to BH16 were drilled using a track-mounted B-45HD drill rig equipped with 203 mm hollow stem augers. Soil samples were obtained at regular depth intervals using 0.6 m split spoon soil sampling equipment. The split spoon samplers and hand auger were washed with Alconox detergent and rinsed with water before each use. Subsurface conditions encountered in the boreholes were logged by S2S personnel at the time of drilling.

4.3 Soil: Sampling

Soil samples were recovered, classified, collected, and preserved in accordance with Standard Protocols to minimize the potential for cross-contamination. Disposable nitrile gloves were worn and changed between samples, and sampling tools were washed with Alconox detergent and rinsed with deionized water prior to use and between samples.

Soil samples were recovered from the boreholes at regular intervals, visually classified, and collected in laboratory prepared bottles, preserved in the range of approximately 2.0°C to 4.0°C and submitted for laboratory analyses.

The subsoils at the Phase Two Property generally consist of silt and clay. A clay seam was present in BH5, BH8 and BH9 from approximately 0.2 m to 2.3 m bgs. Silt was present beneath the topsoil or clay seam from approximately 0.2 m to 8.2 m bgs. An underlying clay layer extended to a maximum drilled depth of approximately 15.8 m bgs.

A geologic description of the subsurface soils encountered at the Phase Two Property is described in Section 5.1; the borehole logs are included in Appendix B.

Following the collection of soil samples, the boreholes BH4, BH9, BH11, BH12 and BH15 were completed as monitoring wells.

4.4 Field Screening Measurements

A portion of each soil sample was placed in a disposable plastic bag and analyzed the same day of collection for petroleum derived headspace vapour concentrations (where possible) using an RKI Model Eagle 2 portable gas monitor equipped with a dual sensor for hydrocarbons (i.e. in the parts-per-million (ppm) and lower explosive limit (LEL) range) and for volatile compounds (i.e. photo-ionization detector [PID] sensor in the ppm range). The



hydrocarbon sensor was set to methane elimination mode and calibrated with hexane (for petroleum-derived vapours) and the PID sensor was calibrated with isobutylene (for solvent-derived vapours).

The RKI Eagle 2 was equipped with PID detector with a 10.6 eV standard lamp and calibrated prior to sample analysis with 100 ppm isobutylene gas for detection of solvent-derived vapours, as well as an infrared sensor (IRS) calibrated prior to sample analysis with 15% LEL hexane for detection of petroleum-derived vapours. The Eagle 2 was selected for field screening purposes since it can be used to field screen for solvent derived headspace vapour concentrations from chlorinated hydrocarbons, chlorofluorocarbons (CFCs), and some semi-volatiles, as well as petroleum-derived vapours from PHCs and BTEX. The RKI Eagle 2 is according its manual accurate to within 5% of the displayed reading or 25 ppm whichever is greater.

Groundwater levels and presence of product in the newly installed monitoring wells at the time of the drilling program were monitored using a Solinst Model 122 Interface Meter. The meter identifies the presence of product (non-conductive liquid) with a steady state light and tone and the presence of water (conductive liquid) with an intermittent tone and light. The conductive liquid must have an EC that is greater than 50 micro Siemens per centimetre ($\mu\text{S}/\text{cm}$). The conductive and non-conductive sensors have a reported accuracy of 1/200 feet or 1.0 mm. The conductive sensor has a reported accuracy of 1/100 feet or 1.0 mm.

4.5 Ground Water: Monitoring Well Installation

Boreholes BH4, BH9, BH11, BH12 and BH15 were completed as monitoring wells to facilitate groundwater monitoring. Monitoring wells were installed by Profile Drilling Inc. and well materials were dedicated to their respective monitoring wells to prevent cross-contamination. The monitoring wells in BH9, BH11 and BH15 consisted of a 51 mm diameter PVC riser pipe fitted with a 51 mm diameter threaded PVC well screen which was 10 slotted and 3.0 m in length. The monitoring well in BH12 consisted of a 51 mm diameter PVC riser pipe fitted with a 51 mm diameter threaded PVC well screen which was 10 slotted and 6.1 m in length. The monitoring well in BH4 consisted of a 38 mm diameter PVC riser pipe fitted with a 38 mm diameter threaded PVC well screen which was 10 slotted and 3.0 m in length. The annuli of all the monitoring wells were filled with silica sand around the well screen (to approximately 0.3 m above the top of the well screen), while all wells were sealed with hydrated Bentonite pellets around the riser. The wells were completed with a stick-up metal casing with cover. The five newly installed monitoring wells (BH4, BH9, BH11, BH12 and BH15) were installed from depths of approximately 3.3 m bgs (in BH15) to 9.1 m bgs (in BH12).

After drilling, the monitoring wells in BH9, BH11, BH12 and BH15 were developed to remove fines and to establish a hydraulic connection with the surrounding formation. The monitoring well installed in BH4 was used for groundwater level data. Well development was accomplished by purging groundwater from the monitoring well using dedicated polyethylene tubing with foot valves and surge blocks until a minimum of three well volumes was removed.



4.6 Ground Water: Field Measurement of Water Quality Parameters

Groundwater samples from BH9, BH11, BH12 and BH15 as per the Sampling and Analysis Plan were collected using low-flow (typically less than 200 millilitres per minute [ml/min]) sampling procedures, periodically monitoring both drawdown and the water quality indicator parameters during the well purge. Groundwater from the monitoring wells were discharged through a flow-through cell equipped with a YSI 556 Multi-parameter Water Quality Meter and probes to measure indicator parameters; i.e., pH, oxidation-reduction potential (ORP), electrical conductivity (EC), dissolved oxygen (DO) and water temperature. After drawdown and/or the field indicator parameters had stabilized, indicating that the well was recharging with formation water, groundwater samples were collected in laboratory-supplied sample containers.

4.7 Ground Water: Sampling

Groundwater samples were collected from the monitoring wells in BH9, BH11, BH12 and BH15 following purging of the monitoring wells and recovery of groundwater to at least 80 percent of static levels, indicating that the observed groundwater was likely to be the formation groundwater. The monitoring well installed in BH4 was used for groundwater level data.

Groundwater samples from BH9, BH11, BH12 and BH15 were collected using low-flow sampling procedures, as discussed in the previous section and the Sampling and Analysis Plan provided in Appendix A.

Samples of groundwater submitted for laboratory analyses of concentrations of BTEX, PHC fraction F1 and selected VOCs were collected under zero headspace conditions, while other samples were collected under minimal headspace conditions. Groundwater samples submitted for analysis of dissolved metals, chromium VI, and mercury were passed through a 0.45 micron filter before entering the sampling containers. The groundwater samples were collected in accordance with Standard Protocols, placed in laboratory prepared bottles, preserved on ice and submitted for laboratory analyses on the day of sampling.

Groundwater samples were collected and preserved in accordance with Standard Protocols to minimize the potential for cross-contamination. Disposable nitrile gloves were worn and changed between samples, and sampling equipment was washed with Alconox detergent and rinsed with deionized water prior to use and between samples.

4.8 Sediment: Sampling

Surface water was not present at the Phase Two Property, therefore, sampling of sediment was not conducted as part of this Phase Two ESA.

4.9 Analytical Testing



As discussed in Section 1.4 of this report, the soil grain size analysis was conducted by Sola Engineering Inc. (Sola), of Vaughan, Ontario.

The analyses of the soil and groundwater samples for concentrations of BTEX, PHC fraction F1, PAHs, selected Metals and Inorganics, OCPs, Triazines herbicides, and selected VOCs were conducted by Maxxam Analytics Inc. (Maxxam) of Mississauga, Ontario. Maxxam is accredited by the Standards Council of Canada (SCC).

4.10 Residue Management Procedures

Soil cuttings were consolidated in stockpiles on the Phase Two Property for removal with other soil on site at time of redevelopment.

4.11 Elevation Surveying

Elevations of the monitoring wells (in BH4, BH9, BH11, BH12 and BH15) were established with reference to a City of Mississauga Geodetic Benchmark #075033001 with a reported elevation of 193.804 m asl. The elevations were determined based on the 1978 G.S.C. re-adjustment.

4.12 Quality Assurance and Quality Control Measures

Sampling Container Quality Assurance

Soil and groundwater samples were collected in laboratory prepared bottles and jars. A summary of the bottles and jars used for the collection of the soil and groundwater samples are presented in Table 3 below:

Table 3 - Sample Containers and Preservation

Sample Matrix	Analyses Required	Sample Container	Preservatives Used	Sampling and Handling
Soil	BTEX and PHC F1and/or selected VOCs	40 mL clear glass septum vial,	Methanol (10 mL)	Field preservation with Methanol
Soil	PHC F2 to F4, OCPs, Triazines herbicides and selected PAHs	120 mL clear glass jar, Teflon lined lid	None	Minimal headspace
Soil	Selected Metals and Inorganics	2 × 120 mL clear glass jars, Teflon lined lid	None	Minimal headspace
Groundwater	BTEX and PHC F1and/or selected VOCs	40 mL clear glass septum vial,	Sodium Bisulfate	Zero headspace



Sample Matrix	Analyses Required	Sample Container	Preservatives Used	Sampling and Handling
Groundwater	PHC F2 to F4, and selected PAHs	250 Amber glass bottle, Teflon lined lid	Sodium Bisulfate	Minimal headspace
Groundwater	Selected Metals and Inorganics	250 mL plastic bottle (dissolved metals), 250 mL plastic bottle (Chromium VI), 100 mL glass bottle (mercury), 500mL plastic bottle (general)	Nitric Acid, Ammonium Sulfate/ Sodium Hydroxide, Hydrochloric Acid, respectively	Minimal headspace
Groundwater	OCPs and Triazine Herbicides	500mL amber glass bottle, 1L amber glass bottle	No preservative	fill to neck

The soil and groundwater containers were labelled with the following details: Company Name, Project ID, Sample ID, Analysis Requested, Date and Time of sampling and Preservatives. To minimize transcription errors, pre-labelled jars (including the Company Name, Project ID and Preservatives) prepared by the lab were used. Soil and groundwater samples were sealed in air tight jars or vials, placed in bubble wrap bags and transported in laboratory-supplied coolers, surrounded by ice. Where samples were delivered to the laboratory by a laboratory courier, custody seals were placed over the seal of the cooler by S2S personnel and remained intact until delivered to the lab.

Equipment Cleaning Procedures

Soil sampling equipment and the Solinst Model 122 Interface Probe were cleaned using a solution of Alconox (or phosphate-free detergent) and distilled water before each use. Excess soil from the sampling equipment was removed using a scrub brush. The soil sampling equipment (split spoons, augers) was either placed into a container with a solution of Alconox and water or sprayed with the solution. A rinse solution was subsequently applied to the sampling equipment and the sampling equipment was either allowed to air dry or wiped dry with a clean paper towel.

Application of Field Quality Control Measures

Laboratory-prepared and sealed trip blanks were brought to the Phase Two Property and maintained in accordance with standard field practices, preserved at approximately 6.4°C and submitted for laboratory analyses. Field duplicate soil samples were collected for each sampled parameter at a frequency of at least one duplicate per ten submitted samples.

In the case of the RKI Eagle 2, calibration with reference gases of 15% LEL Hexane and 100 ppm Isobutylene was performed at the start of each day it was expected to be used.

Deviations from Quality Assurance Procedures



No deviations from quality assurance procedures were noted.

5 REVIEW AND EVALUATION

5.1 Geology

The stratigraphic information recorded during the investigation is presented on the borehole logs included in Appendix B and the subsurface profiles (Drawing Nos. 6 to 8) are found at the end of this report.

The subsoils at the Phase Two Property generally consist of silt and clay. A clay seam was present in BH5, BH8 and BH9 from approximately 0.2 m to 2.3 m bgs. Silt was present beneath the topsoil or clay seam from approximately 0.2 m to 8.2 m bgs. An underlying clay layer extended to a maximum drilled depth of approximately 15.8 m bgs.

Based on the onsite PCAs, impacts located deeper than the first aquifer were not expected, therefore, soil between grade surface and the first aquifer was sampled and, the monitoring wells were screened within the first aquifer.

5.2 Ground Water: Elevations and Flow Direction

Groundwater flow direction was determined using the monitoring wells in BH4, BH9, BH11, BH12 and BH15 as these provided appropriate lateral coverage of the Phase Two Property. No free-flowing product was detected in the monitoring wells at the Phase Two Property during the monitoring events conducted on April 25, May 10 and May 24, 2019.

Based on the groundwater level data obtained on May 24, 2019, the elevation of the groundwater table ranged from approximately 186.93 m asl (in the monitoring well in BH4) to approximately 189.71 m asl (in the monitoring well in BH12). A drawing showing local groundwater contours based on groundwater elevation data collected on May 24, 2019 is shown as Drawing No. 5. Based on this drawing, local groundwater appears to be flowing to the east.

It should be noted that with time, groundwater levels and hence apparent groundwater flow direction could change. Since no contamination was identified in groundwater at the Phase Two Property, it is our opinion that a detailed investigation into temporal variability is unnecessary for this report.

It should also be noted that while it is possible for groundwater to be influenced by local underground utilities, no utilities were detected near the monitoring wells used to establish groundwater flow direction.

The groundwater levels measured at the Phase Two Property are presented in the following Table 4:



Table 4 - Groundwater Elevations and Monitoring Well Installation Details

Groundwater Monitoring Well	Elevation of Riser (m asl)	Elevation of Ground Surface (m asl)	Length of Screen (m)	Top of Screen Elevation (m asl)	Bottom of Screen Elevation (m asl)
BH4	188.134	187.334	3.0	182.284	179.234
BH9	189.897	189.047	3.0	186.297	183.247
BH11	190.437	189.607	3.0	186.357	183.307
BH12	191.186	190.316	6.1*	187.316	181.216
BH15	189.843	188.933	3.0	188.683	185.633

*Monitoring well was used for a concurrent Hydrogeological Study

Monitoring Well ID	Groundwater Depth (m bgs)	Groundwater elevation (m asl)	Groundwater Depth (m bgs)	Groundwater elevation (m asl)	Groundwater Depth (m bgs)	Groundwater elevation (m asl)
	Apr 25-19	Apr 25-19	May 10-19	May 10-19	May 24-19	May 24-19
BH4	0.34	186.99	0.26	187.08	0.40	186.93
BH9	0.27	188.78	0.17	188.88	0.75	188.30
BH11	0.40	189.21	0.17	189.44	0.37	189.24
BH12	0.35	189.97	0.38	189.94	0.61	189.71
BH15	0.99	187.94	0.15	188.79	0.24	188.69

5.3 Ground Water: Hydraulic Gradients

The horizontal hydraulic gradient for the Phase Two Property, based on groundwater levels measured on May 24, 2019, was approximately 0.0094 (calculated from groundwater elevations in BH12 and BH15). There was only one hydrogeological unit identified as part of the Phase Two ESA at the Subject Property; therefore, the vertical hydraulic gradient was not determined.

5.4 Fine-Medium Soil Texture

As further detailed in Section 1.4, the soils on the Phase Two Property are classified as fine-medium, based on analysis of grain size of two soil samples (BH2-6 and BH11-5).

5.5 Soil: Field Screening

Headspace vapour concentrations measured in the soil samples recovered during drilling are presented on the borehole logs in Appendix B. As shown, soil headspace vapour concentrations (HSVCs) in the soil samples recovered from the boreholes at the Phase Two Property were relatively low and did not exceed 1 ppm by Isobutylene or 30 ppm Hexane or exhibit any odours/staining.



There are no regulatory criteria for PHC- or solvent-derived soil vapour concentrations; however, soil vapour concentrations are often used as a field screening tool to practically identify soils impacted with combustible liquids or PHCs. Elevated soil vapour concentrations are generally indicative of the presence of volatile combustible products i.e. gasoline, methane, solvents, and to a lesser extent diesel and fuel oil. It should be noted that elevated soil vapour concentrations may also be associated with the presence of moisture, microbial activity, or decaying organic matter, especially in the absence of visual or olfactory evidence of impact.

5.6 Soil Quality

On March 7, 9, 11, 12 and 15, 2019, a total of fifteen soil samples, based on headspace vapour concentrations, visual and/or olfactory considerations and relative location to the expected shallow groundwater table, were recovered from thirteen boreholes (BH2 to BH5, BH9, BH11, BH12, BH14 to BH16, and BH201 to BH203) and submitted for laboratory analyses for concentrations of one or more of selected VOCs, PHCs fractions F1 to F4, selected metals and inorganics, selected PAHs, OCPs, and Triazines herbicides in general accordance with the sampling and analysis plan in Appendix A. A field duplicate soil sample (DUP3) was recovered from BH9, at an approximate depth of 2.3 m to 2.7 m bgs and submitted for laboratory analyses of concentrations of PHC fractions F1 to F4 and BTEX and at an approximate depth of 3.0 m to 3.5 m bgs (DUP4) for laboratory analysis of concentrations of selected VOCs. A field duplicate soil sample was also recovered from BH3 (DUP1), at a depth of approximately 0.0 m to 0.6 m bgs and submitted for laboratory analyses of selected metals and inorganics and at a depth of approximately 0.8 m to 1.2 m bgs (DUP2) and submitted for laboratory analyses of selected PAHs. An additional field duplicate soil sample was recovered from BH14 (DUP-P), at a depth of approximately 0.0 m to 0.6 m bgs and submitted for laboratory analyses of OCPs and Triazines herbicides.

The laboratory analytical results for selected VOCs for the submitted soil samples from BH9-5 and DUP4 (duplicate sample of BH9-5) are presented in Section 8.4. As indicated, all reported concentrations were below the applicable MECP Standards for selected VOCs.

The laboratory analytical results for PHC fractions F1 to F4 and BTEX for the submitted soil samples from BH3-6, BH9-4 and DUP3 (duplicate sample of BH9-4) are presented in Section 8.4. As indicated, all reported concentrations were below the applicable MECP Standards for PHC fractions F1 to F4 and BTEX.

The laboratory analytical results for selected metals and inorganics for the submitted soil samples from BH2-1, BH3-1, BH4-1, BH5-1, BH9-1 and DUP1 (duplicate sample of BH3-1) are presented in Section 8.4. As indicated, all reported concentrations were below the applicable MECP Standards for selected metals and inorganics except BH5-1 which exceeded for Zinc (380 µg/g versus the standard of 340 µg/g). Additional soil samples were collected and analyzed for ICP-MS Metals from the same sampling point and sampling depth (BH201-1, BH201-2, BH202-1, and BH203-1 and BH202-1 DUP), as defined by O.Reg. 153/04, s. 48 (2), and the average of these sampling results (BH5-1, BH201-1, BH202-1, and BH203-1)



meet the standard. Therefore, all reported concentrations were below the applicable MECP Standards for selected metals and inorganics.

The laboratory analytical results for selected PAHs for the submitted soil samples from BH3-2, BH4-1, BH5-1, BH9-1 and DUP2 (duplicate sample of BH3-2) are presented in Section 8.4. As indicated, all reported concentrations were below the applicable MECP Standards for selected PAHs.

The laboratory analytical results for OCPs for the submitted soil samples from BH4-1, BH11-1, BH12-1, BH14-1, BH15-1, BH16-1 and DUP-P (duplicate sample of BH14-1) are presented in Section 8.4. As indicated, all reported concentrations were below the applicable MECP Standards for OCPs.

The laboratory analytical results for all analyzed parameters for the submitted soil samples from BH2-1, BH3-1, DUP1 (duplicate sample of BH3-1), BH3-2, DUP2 (duplicate sample of BH3-2), BH3-6, BH4-1, BH5-1, BH5-3, BH9-1, BH9-4, DUP3 (duplicate sample of BH9-4), BH9-5, DUP4 (duplicate sample of BH9-5), BH11-1, BH12-1, BH14-1, DUP-P (duplicate sample of BH14-1), BH15-1, BH16-1, BH201-1, BH201-2, BH202-1, and BH203-1 are presented in Section 8.4.

Table 5 - Soil Sample Parameters

Borehole ID	APEC Investigated	Sample ID	Sample Depth (metres below grade surface)	Laboratory Analysis Conducted	Analyzed Concentration versus MECP Standard ¹ (µg/g, unless noted)
BH2	1	BH2-1	0.0 to 0.6	Metals & Inorganics	No Exceedances
BH3	1	BH3-1	0.0 to 0.6	Metals & Inorganics	No Exceedances
		DUP1	0.0 to 0.6	Metals & Inorganics	No Exceedances
		BH3-2	0.8 to 1.2	PAHs	No Exceedances
		DUP2	0.8 to 1.2	PAHs	No Exceedances
		BH3-6	3.8 to 4.4	PHCs, BTEX	No Exceedances
BH4	1, 2	BH4-1	0.0 to 0.6	OCPs, Metals & Inorganics, PAHs	No Exceedances
BH5	1	BH5-1	0.0 to 0.6	Metals & Inorganics, PAHs	No Exceedances*
		BH5-3	1.5 to 2.0	PHCs, BTEX	No Exceedances
BH9	1	BH9-1	0.0 to 0.6	Metals & Inorganics, PAHs	No Exceedances
		BH9-4	2.3 to 2.7	PHCs, BTEX	No Exceedances
		DUP3	2.3 to 2.7	PHCs, BTEX	No Exceedances
		BH9-5	3.0 to 3.5	VOCs	No Exceedances
		DUP4	3.0 to 3.5	VOCs	No Exceedances
BH11	2	BH11-1	0.0 to 0.6	OCPs	No Exceedances
BH12	2	BH12-1	0.0 to 0.6	OCPs	No Exceedances



Borehole ID	APEC Investigated	Sample ID	Sample Depth (metres below grade surface)	Laboratory Analysis Conducted	Analyzed Concentration versus MECP Standard ¹ (µg/g, unless noted)
BH14	2	BH14-1	0.0 to 0.6	OCPs	No Exceedances
		DUP-P	0.0 to 0.6	OCPs	No Exceedances
BH15	2	BH15-1	0.0 to 0.6	OCPs	No Exceedances
BH16	2	BH16-1	0.0 to 0.6	OCPs	No Exceedances
BH201	1	BH201-1	0.0 to 0.6	ICP-MS Metals	No Exceedances
		BH201-2	0.6 to 1.2	ICP-MS Metals	No Exceedances
BH202	1	BH202-1	0.0 to 0.6	ICP-MS Metals	No Exceedances
BH203	1	BH202-1	0.0 to 0.6	ICP-MS Metals	No Exceedances

1 – Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the EPA dated April 15, 2011, Table 2 Full Depth Site Condition Standards in a Potable Groundwater Condition (for residential property use and medium and fine textured soils –MECP Standards).

* Additional soil samples were collected and analyzed for ICP-MS Metals from the same sampling point and sampling depth (BH201-1, BH201-2, BH202-1, and BH203-1), as defined by O. Reg 153/04, and the average of the sampling results (BH5-1, BH201-1, BH202-1, and BH203-1) meet the standard. Therefore, all reported concentrations were below the applicable MECP Standards for selected metals and inorganics.

Laboratory certificates for the soil analytical results are included in Appendix C.

Based on the results of the soil analyses at the Phase Two Property, all reported concentrations were below the applicable MECP Standards for all parameters.

The results of the soil analyses do not indicate the presence of LNAPLs or DNAPLs.

5.7 Groundwater Quality

On March 19, 2019 a total of four groundwater samples recovered from four of the newly installed environmental monitoring wells (BH9, BH11, BH12 and BH15), and were submitted for laboratory analyses for concentrations of one or more of selected VOCs, PHCs fractions F1 to F4 and BTEX, selected metals and inorganic parameters, selected PAHs, OCPs, and Triazines herbicides, in accordance with the Sampling and Analysis Plan in Appendix A. In addition, two duplicate groundwater samples were recovered from BH9 and BH11 and submitted for laboratory analyses for concentrations of selected VOCs, PHCs fractions F1 to F4 and BTEX, selected PAHs, selected metals and inorganic parameters and/or OCPs and Triazines herbicides.

The laboratory analytical results for concentrations of selected VOCs, PHCs fractions F1 to F4 and BTEX, selected PAHs, selected metals and inorganic parameters and/or OCPs and Triazines herbicides, for the submitted groundwater samples from the monitoring wells in BH9, BH11, BH12 and B15 are presented at the end of this report.



As indicated, none of the measured concentrations of selected VOCs, PHCs fractions F1 to F4 and BTEX, selected PAHs, selected metals and inorganic parameters and/or OCPs in the submitted groundwater samples exceeded the applicable MECP Standards.

Table 6 - Groundwater Sample Parameters

Borehole ID	Location of APEC Investigated	Sample ID	Laboratory Analysis Conducted	Analyzed Concentration versus MECP Standard ¹ (µg/L)
BH9	Central portion of the Phase Two Property	BH9	Metals & Inorganics, PAHs, VOCs, PHCs, BTEX	No Exceedances
		DUP	Metals & Inorganics, PAHs, VOCs, PHCs, BTEX	No Exceedances
BH11	Northwestern portion of the Phase Two Property	BH11	OCPs and Triazines herbicides,	No Exceedances
BH12	Western portion of the Phase Two Property	BH12	OCPs and Triazines herbicides,	No Exceedances
BH15	Southwestern portion of the Phase Two Property	BH15	OCPs and Triazines herbicides,	No Exceedances
		DUP1	OCPs and Triazines herbicides,	No Exceedances

1 – Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the EPA, published April 15, 2011, Table 2 Full Depth Generic Site Condition Standards In a Potable Ground Water Condition (for All Types of Property Use, fine/medium textured soils).

The laboratory certificate for the groundwater analytical results is included in Appendix C. Based on the results of the groundwater analyses at the Phase Two Property, all reported concentrations were below the applicable MECP Standards for all parameters.

5.8 Sediment Quality

Sediment was not sampled as part of this Phase Two ESA.

5.9 Quality Assurance and Quality Control Results

S2S standard field procedures were developed in compliance with *O. Reg. 153/04*, as amended, for borehole drilling, soil sampling, field screening measurements, monitoring well installation, monitoring well development, field measurement of water quality indicators and ground water sampling (collectively referred to as Standard Protocols). The Standard Protocols were adhered to in completing the field activities for this Phase Two ESA.

S2S staff with experience in both intrusive field investigation techniques and COCs encountered at the Phase Two Property either performed or supervised the soil and groundwater sampling under the guidance of the QP_{ESA}. As mentioned throughout this report, the field program maintained QA/QC using appropriate equipment-cleaning procedures and



duplicate sampling. Appropriate measures (such as field staff wearing disposable gloves, using dedicated sampling equipment, decontaminating non-dedicated sampling equipment, using pre-cleaned laboratory-supplied sample containers, labelling samples, and completing laboratory-supplied, chain-of-custody records) were used to ensure data quality. S2S collected soil samples in conformance with S2S' Standard Operating Procedures (SOPs) and field forms, which were developed in accordance with O. Reg. 153/04, as amended.

Samples were shipped in ice-filled coolers (to maintain temperatures at less than 10°C), along with a chain of custody record, to Maxxam. Maxxam performed the chemical analysis in compliance with the MECP Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act, as amended (MECP, 2011c).

To evaluate sample precision related to the analysis of all submitted soil and groundwater samples, field duplicate samples were collected for a minimum of 10% of the submitted samples. Relative Percent Differences (RPDs) were calculated for each compound detected if it was present in both samples of the duplicate pair, at concentrations above 5 times of the method detection limits of each parameter.

Certificates of analysis and analytical reports have been received in full for each sample submitted for laboratory analysis and have been verified to comply with *O.Reg 153/04*, subsection 47 (3). All certificates of analysis and analytical reports are included in Appendix C.

To assess potential contamination introduced during sample transport or from field handling procedures and the sampling process, one laboratory-supplied trip blank was submitted per groundwater submission for laboratory analysis.

Results of Field Duplicates

Field duplicate samples were collected to evaluate sample precision related to the analysis of all submitted soil and groundwater samples. Relative Percent Difference (RPD) calculations were determined for each compound if it was measured in both the result of the submitted sample and the corresponding duplicate sample and it was more than 5 times the method detection limit for the respective parameter. A summary of the RPD calculations are shown in the table below:

Table 7 - Duplicate Results and RPD Calculations for Submitted Soil Samples

Sample ID	Approximate Sample Depth (m bgs)	Parameters	Analyzed Concentration (µg/g)	Duplicate Concentration (µg/g)	RPD (%)	Alert Criteria ¹
BH3-1	0.0 to 0.6	Antimony	0.27	0.22	20.4	100%
BH3-1	0.0 to 0.6	Arsenic	4.7	4.8	2.1	
BH202-1	0.0 to 0.6	Arsenic	4.3	4.7	8.9	
BH3-1	0.0 to 0.6	Barium	68	67	1.5	



Sample ID	Approximate Sample Depth (m bgs)	Parameters	Analyzed Concentration (µg/g)	Duplicate Concentration (µg/g)	RPD (%)	Alert Criteria ¹
BH202-1	0.0 to 0.6	Barium	84	94	11.2	
BH3-1	0.0 to 0.6	Beryllium	0.54	0.65	18.5	
BH202-1	0.0 to 0.6	Beryllium	0.70	0.64	9.0	
BH3-1	0.0 to 0.6	Boron	10	7.4	29.9	
BH202-1	0.0 to 0.6	Boron	6.8	7.7	12.4	
BH3-1	0.0 to 0.6	Cadmium	0.50	0.47	6.2	
BH202-1	0.0 to 0.6	Cadmium	0.32	0.27	16.9	
BH3-1	0.0 to 0.6	Chromium	19	21	10.0	
BH202-1	0.0 to 0.6	Chromium	23	23	0.0	
BH3-1	0.0 to 0.6	Cobalt	7.6	8.1	6.4	
BH202-1	0.0 to 0.6	Cobalt	9.2	9.3	1.1	
BH3-1	0.0 to 0.6	Copper	30	29	3.4	
BH202-1	0.0 to 0.6	Copper	26	28	7.4	
BH3-1	0.0 to 0.6	Lead	44	36	20.0	
BH202-1	0.0 to 0.6	Lead	25	26	3.9	
BH3-1	0.0 to 0.6	Molybdenum	0.80	0.59	30.2	
BH202-1	0.0 to 0.6	Molybdenum	0.54	0.55	1.8	
BH3-1	0.0 to 0.6	Nickel	22	22	0.0	
BH202-1	0.0 to 0.6	Nickel	20	21	4.9	
BH3-1	0.0 to 0.6	Thallium	0.12	0.14	15.4	
BH202-1	0.0 to 0.6	Thallium	0.15	0.15	0.0	
BH3-1	0.0 to 0.6	Uranium	0.54	0.64	16.9	
BH202-1	0.0 to 0.6	Uranium	0.80	0.78	2.5	
BH3-1	0.0 to 0.6	Vanadium	26	30	14.3	
BH202-1	0.0 to 0.6	Vanadium	33	32	3.1	
BH3-1	0.0 to 0.6	Zinc	100	91	9.4	
BH202-1	0.0 to 0.6	Zinc	80	87	8.4	
BH3-1	0.0 to 0.6	Hot Water Extractable Boron	1.00	0.77	26.0	
BH3-1	0.0 to 0.6	WAD Cyanide (Free)	0.02	0.01	66.7	
BH3-1	0.0 to 0.6	Acid Extractable Mercury	0.067	0.053	23.3	
BH3-1	0.0 to 0.6	Conductivity (mS/cm)	0.46	0.41	11.5	
BH3-1	0.0 to 0.6	SAR	2.2	2.6	16.7	

Notes: 1 – Alert Criteria from Maxxam Quality Assurance RPD Alert Criteria

Table 8 - Duplicate Results and RPD Calculations for submitted Groundwater Samples



Sample ID	Parameters	Analyzed Concentration (µg/L)	Duplicate Concentration (µg/L)	RPD (%)	Alert Criteria ¹
BH9	Chloride	34	35	2.9	80%
BH9	Arsenic	1	1.1	9.5	
BH9	Barium	85	85	0.0	
BH9	Boron	95	96	1.0	
BH9	Copper	1	1.5	40.0	
BH9	Molybdenum	2.6	2.7	3.8	
BH9	Nickel	1.7	1.8	5.7	
BH9	Sodium	26000	26000	0.0	
BH9	Uranium	6.3	6.3	0.0	
BH9	Vanadium	1.1	1.1	0.0	

Notes: 1 – Alert Criteria from Maxxam Quality Assurance RPD Alert Criteria

The RPD results were compared to the recommended alert criteria used by Maxxam for all calculable parameters for the submitted soil and groundwater samples. Twenty-one of the analyzed parameters and duplicate pairs in the submitted soil samples had detectable concentrations in which the RPDs were calculable. RPDs calculated between these duplicate pairs ranged from 0% to 66.7% for the selected metals and inorganic parameters. These RPDs were compared to the applicable Alert Criteria of 100%. All calculable RPDs for the soil duplicate pairs were within the recommended alert criteria and therefore, no quality control issues were identified with respect to the calculable RPDs in soil.

Ten of the analyzed parameters and duplicate pairs in the submitted groundwater samples had detectable concentrations in which the RPDs were calculable. The RPDs calculated between the duplicate pairs ranged from 0.0% to 40.0% for the selected metal and inorganic parameters. This RPD was compared to the applicable Alert Criteria of 80%. All calculable RPDs for the groundwater duplicate pairs were within the recommended alert criteria and therefore, no quality control issues were identified with respect to the calculable RPDs in groundwater.

The laboratory certificate for the field quality assurance/quality control analytical results is included in Appendix C.

Data Quality Objectives

The analytical data received from the laboratory was reviewed for the following:

- to verify that samples were analyzed for the methods requested in the Chain of Custody (COC);
- to verify that the requested analyses were conducted as outlined in Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act, as amended;
- to review any laboratory quality assurance/quality control (QA/QC) issues with respect to laboratory duplicates, matrix spikes, spiked blanks, method blanks, or surrogate; and



- comparability of the data. Standard analytical procedures and standard units for reporting were used for ensuring comparability of the data. Results obtained are comparable to industry standards in that the collection and analytical techniques that followed approved, documented procedures.

Maxxam did not identify any QA/QC issues with respect to submitted soil or groundwater samples.

The laboratory certificates for the field quality assurance/quality control analytical results are included in Appendix C.

In consultation with S2S field staff, other S2S team members, and Maxxam, the QP_{ESA} concluded that the data met the data quality objectives of this investigation, and the overall objectives of the Phase Two ESA investigation and assessment were met.

6 CONCLUSIONS AND DISCUSSIONS

1. The drilling of 19 boreholes was completed on March 6 to 8, March 11 to 15, and July 2, 2019 on the Phase Two Property (BH1 to BH16, and BH201 to BH203). Five of the boreholes were completed as groundwater monitoring wells (BH4, BH9, BH11, BH12, BH15);
2. Based on conditions encountered in the boreholes advanced during the Phase Two ESA, visual observations and the results of laboratory grain size analyses, the subsoils at the Phase Two Property generally consist of silt and clay. A clay seam was present in BH5, BH8 and BH9 from approximately 0.2 m to 2.3 m bgs. Silt was present beneath the topsoil or clay seam from approximately 0.2 m to 8.2 m bgs. An underlying clay layer extended to a maximum drilled depth of approximately 15.8 m bgs.;
3. In accordance with the requirements of *O. Reg. 153/04*, based on the most sensitive expected use (residential) of the Phase Two Property, laboratory analysis of grain size on one soil sample (approximately 54% medium and fine grained), satisfactory soil pH analyses within the required range by *O. Reg. 153/04* (as previously discussed), and the potable groundwater usage on the Phase Two Property, S2S determined that the appropriate standards for the Phase Two Property would be the *Soil, Ground Water and Sediment Standards* for Use Under Part XV.1 of the EPA dated April 15, 2011, Table 2 Full Depth Site Condition Standards in a Potable Groundwater Condition (for residential property use and medium and fine textured soils –MECP Standards);
4. Soil and groundwater samples from the newly-installed boreholes/monitoring wells were collected and submitted for laboratory analyses of concentrations of selected volatile organic compounds (VOCs), petroleum hydrocarbon (PHC) fractions F1 to F4, benzene, toluene, ethylbenzene, xylenes (BTEX), selected Metals and Inorganics (including As, Sb, Se, B-HWS, Cr(VI), Hg, CN⁻, Electrical Conductivity (EC) and



Sodium Adsorption Ratio (SAR)), selected polycyclic aromatic hydrocarbons (PAHs), organochlorine pesticides (OCPs), and Triazines herbicides; and

5. Based on the results of laboratory analyses conducted by S2S as part of this investigation, there were no exceedances noted in the submitted soil and groundwater samples in comparison to the MECP Standards.

There are no further investigations recommended in the areas investigated at the Phase Two Property at this time.

6.1 Signatures

This report has been prepared for the sole benefit of Your Home Developments (Mississauga) Inc. (Client).

The report may not be relied upon by any other person or entity without the express written consent of S2S Environmental Inc. and the Client. Any use that a party makes of this report, or any reliance on decisions made based on it, is the responsibility of such parties. S2S accepts no responsibility for damages, if any, suffered by any party as a result of decisions made or actions based on this report.

S2S makes no other representation whatsoever, including those concerning the legal significance of its findings or as to the other legal matters addressed incidentally in this report, including but not limited to, ownership of any property, or the application of any law to the facts set forth herein. With respect to regulatory compliance issues, regulatory statutes are subject to interpretation. These interpretations may change over time, thus the Client should review such issues with appropriate legal counsel.

An environmental site characterization is a limited sampling of a site. The conclusions given herein are based on information gathered at the specific borehole locations and can only be extrapolated to an undefined limited area around these locations. The extent of the limited area depends on the soil and groundwater conditions, as well as the history of the site reflecting natural, construction, and other activities. In addition, analyses have been carried out for a limited number of chemical parameters, and it should not be inferred that other chemical species are not present. Due to the nature of the investigation and the limited data available, S2S Environmental Inc. cannot warrant against undiscovered environmental liabilities. No other warranty or representation, either expressed or implied, is included or intended in this report.



Should any conditions at the site be encountered which differ from those at the borehole locations and/or additional site information become available, S2S request that this information be brought to our attention so that we may re-assess the conclusions presented herein. It should also be noted that current environmental Regulations, Guidelines, Policies, Standards, Protocols and Objectives are subject to change, and such changes, when put into effect, could alter the conclusions and recommendations noted throughout this report.

Respectfully submitted,

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7 REFERENCES

LIST OF PREVIOUS ENVIRONMENTAL REPORTS

- “Phase One Environmental Site Assessment, 5080 Ninth Line, Mississauga, Ontario” report, prepared for Your Home Developments (Mississauga) Incorporated, prepared by S2S, dated April 29, 2019 (referred to as the ‘2019 S2S Phase One ESA’ report); and
- “Phase I Environmental Site Assessment, 5080 Ninth Line, Mississauga, Ontario” report, prepared for Your Home Developments (Mississauga) Inc., prepared by S2S, dated July 30, 2018.



8 TABLES

8.1 Monitoring Well Installation

Table 9 - Monitoring Well Installation Details

Groundwater Monitoring Well	Elevation of Riser (m asl)	Elevation of Ground Surface (m asl)	Length of Screen (m)	Top of Screen Elevation (m asl)	Bottom of Screen Elevation (m asl)
BH4	188.134	187.334	3.0	182.284	179.234
BH9	189.897	189.047	3.0	186.297	183.247
BH11	190.437	189.607	3.0	186.357	183.307
BH12	191.186	190.316	6.1	187.316	181.216
BH15	189.843	188.933	3.0	188.683	185.633

8.2 Water Levels

Table 10 - Groundwater Elevations

Monitoring Well ID	Groundwater Depth (m bgs)	Groundwater elevation (m asl)	Groundwater Depth (m bgs)	Groundwater elevation (m asl)	Groundwater Depth (m bgs)	Groundwater elevation (m asl)
	Apr 25-19	Apr 25-19	May 10-19	May 10-19	May 24-19	May 24-19
BH4	0.34	186.99	0.26	187.08	0.40	186.93
BH9	0.27	188.78	0.17	188.88	0.75	188.30
BH11	0.40	189.21	0.17	189.44	0.37	189.24
BH12	0.35	189.97	0.38	189.94	0.61	189.71
BH15	0.99	187.94	0.15	188.79	0.24	188.69

8.3 LNAPLs and DNAPLs

LNAPL/DNAPLs were not encountered in the boreholes during drilling on March 6 to 8 and March 11 to 15, 2019 and evidence of LNAPL/DNAPLs were not encountered during monitoring, of the monitoring wells on April 25, May 10 and May 24, 2019.



8.4 Soil Data



Parameter	Criteria ¹	Units	RDL	Sample ID									
				BV Labs Job ID / Sample ID									
				Sample Collection Date									
				Sample Collection Time									
				BH0-1 B961919 / JDU679 0.0 to 0.6 m bgs Mar 07, 2019 09:00 AM	BH4-1 B961919 / JDU680 0.0 to 0.6 m bgs Mar 07, 2019 01:50 PM	DUP1 B961919 / JDU684 0.0 to 0.6 m bgs Mar 08, 2019 08:40 AM	BH0-1 B961919 / JDU685 0.0 to 0.6 m bgs Mar 08, 2019 08:40 AM	BH0-1 Lab-Dup B961919 / JDU685 0.0 to 0.6 m bgs Mar 08, 2019 08:40 AM	BH0-1 B961919 / JDU682 0.0 to 0.6 m bgs Mar 08, 2019 02:00 PM	BH0-1 Lab-Dup B961919 / JDU682 0.0 to 0.6 m bgs Mar 08, 2019 02:00 PM	BH0-1 B962914 / JEA504 0.0 to 0.6 m bgs Mar 11, 2019 09:00 AM	BH0-1 Lab-Dup B962914 / JEA504 0.0 to 0.6 m bgs Mar 11, 2019 09:00 AM	
Metals (Including Hydride-Forming Metals)													
Acid Extractable Antimony (Sb)	7.5	ug/g	0.20	<0.20	<0.20	0.27	0.22	-	<0.20	-	<0.20	-	
Acid Extractable Arsenic (As)	18	ug/g	1.0	4.4	5.4	4.7	4.8	-	3.8	-	3.4	-	
Acid Extractable Barium (Ba)	390	ug/g	0.50	88	110	68	67	-	71	-	49	-	
Acid Extractable Beryllium (Be)	5	ug/g	0.20	0.75	1	0.54	0.65	-	0.67	-	0.51	-	
Acid Extractable Boron (B)	120	ug/g	5.0	8.5	6.9	10	7.4	-	8.5	-	5.8	-	
Acid Extractable Cadmium (Cd)	1.2	ug/g	0.10	0.2	0.13	0.5	0.47	-	0.14	-	0.12	-	
Acid Extractable Chromium (Cr)	160	ug/g	1.0	23	30	19	21	-	20	-	16	-	
Acid Extractable Cobalt (Co)	22	ug/g	0.10	11	12	7.6	8.1	-	9.5	-	7.3	-	
Acid Extractable Copper (Cu)	180	ug/g	0.50	25	33	30	29	-	24	-	17	-	
Acid Extractable Lead (Pb)	120	ug/g	1.0	16	13	44	35	-	13	-	11	-	
Acid Extractable Molybdenum (Mo)	6.9	ug/g	0.50	0.5	<0.50	0.8	0.59	-	<0.50	-	<0.50	-	
Acid Extractable Nickel (Ni)	130	ug/g	0.50	24	33	22	22	-	22	-	14	-	
Acid Extractable Selenium (Se)	2.4	ug/g	0.50	<0.50	<0.50	<0.50	<0.50	-	<0.50	-	<0.50	-	
Acid Extractable Silver (Ag)	25	ug/g	0.20	<0.20	<0.20	<0.20	<0.20	-	<0.20	-	<0.20	-	
Acid Extractable Thallium (Tl)	1	ug/g	0.050	0.15	0.19	0.12	0.14	-	0.14	-	0.089	-	
Acid Extractable Uranium (U)	23	ug/g	0.050	0.77	0.83	0.54	0.64	-	0.58	-	0.45	-	
Acid Extractable Vanadium (V)	86	ug/g	5.0	33	40	26	30	-	29	-	25	-	
Acid Extractable Zinc (Zn)	340	ug/g	5.0	389	73	100	91	-	62	-	46	-	
Other Regulated Parameters													
Hot Water Extractable Boron	1.5	ug/g	0.050	0.36	0.18	1	0.77	-	0.21	-	0.4	-	
Soluble (20:1 Chloride (Cl-))	-	ug/g	-	-	-	-	-	-	-	-	-	-	
WAD Cyanide (Free)	0.051	ug/g	0.01	<0.01	<0.01	0.02	0.01	0.01	<0.01	-	<0.01	-	
Electrical Conductivity	0.7	mS/cm	0.002	0.69	0.17	0.46	0.41	-	0.22	0.23	0.23	-	
Hexavalent Chromium (CrVI)	10	ug/g	0.2	<0.2	<0.2	<0.2	<0.2	-	<0.2	-	<0.2	<0.2	
Acid Extractable Mercury (Hg)	1.8	ug/g	0.050	<0.050	<0.050	0.067	0.053	-	<0.050	-	<0.050	-	
Available (CaCl2) pH	-	pH	-	7.68	7.13	7.63	7.58	-	7.59	-	7.54	-	
Sodium Adsorption Ratio	5	N/A	-	4.2	0.36	2.2	2.6	-	0.2	-	0.2	-	

Parameter	Criteria ¹	Units	RDL	Sample ID									
				BV Labs Job ID / Sample ID									
				Sample Collection Date									
				Sample Collection Time									
				BH11-6 B960295 / JFC445 4.6 to 5.0 m bgs Mar 15, 2019 09:30 AM	BH10-6 B968295 / JFC444 4.6 to 5.0 m bgs Mar 15, 2019 01:40 PM	BH2001-1 B960163 / KDS708 0.0 to 0.6 m bgs Jul 02, 2019 09:45 AM	BH2001-1 Lab-Dup B960163 / KDS708 0.0 to 0.6 m bgs Jul 02, 2019 09:45 AM	BH2001-2 B960163 / KDS709 0.0 to 1.2 m bgs Jul 02, 2019 10:00 AM	BH2002-1 B960163 / KDS710 0.0 to 0.6 m bgs Jul 02, 2019 10:15 AM	BH2002-1 DUP B960163 / KDS711 0.0 to 0.6 m bgs Jul 02, 2019 10:15 AM	BH2003-1 B960163 / KDS712 0.0 to 0.6 m bgs Jul 02, 2019 10:45 AM		
Metals (Including Hydride-Forming Metals)													
Acid Extractable Antimony (Sb)	7.5	ug/g	0.20	-	-	0.4	0.35	<0.20	<0.20	<0.20	<0.20	-	-
Acid Extractable Arsenic (As)	18	ug/g	1.0	-	-	5.4	5.4	4.5	4.3	4.7	4.5	-	-
Acid Extractable Barium (Ba)	390	ug/g	0.50	-	-	40	40	130	84	94	85	-	-
Acid Extractable Beryllium (Be)	5	ug/g	0.20	-	-	0.24	0.25	0.99	0.7	0.64	0.73	-	-
Acid Extractable Boron (B)	120	ug/g	5.0	-	-	8.7	8.9	7	6.8	7.7	7.2	-	-
Acid Extractable Cadmium (Cd)	1.2	ug/g	0.10	-	-	0.65	0.81	0.18	0.52	0.27	0.29	-	-
Acid Extractable Chromium (Cr)	160	ug/g	1.0	-	-	21	30	30	23	24	24	-	-
Acid Extractable Cobalt (Co)	22	ug/g	0.10	-	-	4.6	4.7	12	9.2	9.3	10	-	-
Acid Extractable Copper (Cu)	180	ug/g	0.50	-	-	40	39	33	26	28	27	-	-
Acid Extractable Lead (Pb)	120	ug/g	1.0	-	-	110	120	15	25	26	21	-	-
Acid Extractable Molybdenum (Mo)	6.9	ug/g	0.50	-	-	1	1.1	<0.50	0.54	0.55	0.57	-	-
Acid Extractable Nickel (Ni)	130	ug/g	0.10	-	-	15	17	30	21	21	21	-	-
Acid Extractable Selenium (Se)	2.4	ug/g	0.50	-	-	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	-	-
Acid Extractable Silver (Ag)	25	ug/g	0.20	-	-	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	-	-
Acid Extractable Thallium (Tl)	1	ug/g	0.050	-	-	0.084	0.086	0.16	0.15	0.15	0.16	-	-
Acid Extractable Uranium (U)	23	ug/g	0.050	-	-	0.45	0.45	0.74	0.8	0.78	0.82	-	-
Acid Extractable Vanadium (V)	86	ug/g	5.0	-	-	15	15	40	33	32	34	-	-
Acid Extractable Zinc (Zn)	340	ug/g	5.0	-	-	220	310	110	80	87	82	-	-
Other Regulated Parameters													
Hot Water Extractable Boron	1.5	ug/g	0.050	-	-	-	-	-	-	-	-	-	-
Soluble (20:1 Chloride (Cl-))	-	ug/g	-	-	-	-	-	-	-	-	-	-	-
WAD Cyanide (Free)	0.051	ug/g	0.01	-	-	-	-	-	-	-	-	-	-
Electrical Conductivity	0.7	mS/cm	0.002	-	-	-	-	-	-	-	-	-	-
Hexavalent Chromium (CrVI)	10	ug/g	0.2	-	-	-	-	-	-	-	-	-	-

Legend	
Exceeds one Criteria	Result
DL > Criteria	Result
Criteria 1	Reg153/04 T2-Soil/Res.F/M

Polycyclic Aromatic Hydrocarbons (PAHs) in Soil

Parameter	Criteria ¹	Units	RDL	Sample ID				
				BV Labs Job ID / Sample ID				
				Sample Collection Date				
				Sample Collection Time				
				BH5-1 B961919 / JDU679 0.0 to 0.6 m bgs Mar 07, 2019 09:00 AM	BH4-1 B961919 / JDU680 0.0 to 0.6 m bgs Mar 07, 2019 01:50 PM	BH3-2 B961919 / JDU677 0.8 to 1.4 m bgs Mar 08, 2019 08:50 AM	DUP2 B961919 / JDU678 0.8 to 1.4 m bgs Mar 08, 2019 08:50 AM	BH9-1 B962914 / JEA504 0.0 to 0.6 m bgs Mar 11, 2019 09:00 AM
Polycyclic Aromatic Hydrocarbons (PAHs)								
Acenaphthene	29	ug/g	0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Acenaphthylene	0.17	ug/g	0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Anthracene	0.74	ug/g	0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Benzo(a)anthracene	0.63	ug/g	0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Benzo(a)pyrene	0.3	ug/g	0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Benzo(b,j)fluoranthene	0.78	ug/g	0.0050	0.0086	0.0077	<0.0050	<0.0050	0.0064
Benzo(g,h,i)perylene	7.8	ug/g	0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Benzo(k)fluoranthene	0.78	ug/g	0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Chrysene	7.8	ug/g	0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Dibenz(a,h)anthracene	0.1	ug/g	0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Fluoranthene	0.69	ug/g	0.0050	0.0072	0.0091	<0.0050	<0.0050	0.0057
Fluorene	69	ug/g	0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Indeno(1,2,3-cd)pyrene	0.48	ug/g	0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
1-Methylnaphthalene	3.4	ug/g	0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
2-Methylnaphthalene	3.4	ug/g	0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
1+2-Methylnaphthalene		ug/g	0.0071	<0.0071	<0.0071	<0.0071	<0.0071	<0.0071
Naphthalene	0.75	ug/g	0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Phenanthrene	7.8	ug/g	0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Pyrene	78	ug/g	0.0050	0.0056	0.007	<0.0050	<0.0050	<0.0050

Legend	
Exceeds one Criteria	Result
DL > Criteria	Result
Criteria 1	Reg153/04 T2-Soil/Res-F/M

Petroleum Hydrocarbons (PHCs) and Volatile Organic Compounds (VOCs) in Soil

Parameter	Criteria ¹	Units	RDL	Sample ID					
				BV Labs Job ID / Sample ID					
				Sample Collection Date					
				Sample Collection Time					
				BH5-3 B964520 / JEI585 1.5 to 2.1 m bgs Mar 07, 2019 09:15 AM	BH3-6 B961919 / JDU681 3.8 to 4.3 m bgs Mar 08, 2019 11:35 AM	BH9-4 B962914 / JEA505 2.3 to 2.7 m bgs Mar 11, 2019 09:30 AM	DUP3 B962914 / JEA507 2.3 to 2.7 m bgs Mar 11, 2019 09:35 AM	BH9-5 B962914 / JEA506 3.2 to 3.7 m bgs Mar 11, 2019 10:00 AM	DUP4 B962914 / JEA508 3.2 to 3.7 m bgs Mar 11, 2019 10:00 AM
Petroleum Hydrocarbons									
F1 (C6-C10)	65	ug/g	10	<10	<10	<10	<10	-	-
F1 (C6-C10) - BTEX	65	ug/g	10	<10	<10	<10	<10	-	-
F2 (C10-C16)	150	ug/g	10	<10	<10	<10	<10	-	-
F3 (C16-C34)	1300	ug/g	50	<50	<50	<50	<50	-	-
F4 (C34-C50)	5600	ug/g	50	<50	<50	<50	<50	-	-
Reached Baseline at C50		ug/g		YES	YES	YES	YES	-	-
Volatile Organic Compounds									
Benzene	0.17	ug/g	0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Toluene	6	ug/g	0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Ethylbenzene	1.6	ug/g	0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
m+p-Xylene		ug/g	0.020 - 0.040	<0.040	<0.040	<0.040	<0.040	<0.020	<0.020
o-Xylene		ug/g	0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Xylenes, Total	25	ug/g	0.020 - 0.040	<0.040	<0.040	<0.040	<0.040	<0.020	<0.020
Acetone	28	ug/g	0.50	-	-	-	-	<0.50	<0.50
Bromodichloromethane	1.9	ug/g	0.050	-	-	-	-	<0.050	<0.050
Bromoform	0.26	ug/g	0.050	-	-	-	-	<0.050	<0.050
Bromomethane	0.05	ug/g	0.050	-	-	-	-	<0.050	<0.050
Carbon Tetrachloride	0.12	ug/g	0.050	-	-	-	-	<0.050	<0.050
Chlorobenzene	2.7	ug/g	0.050	-	-	-	-	<0.050	<0.050
Chloroform	0.17	ug/g	0.050	-	-	-	-	<0.050	<0.050
Dibromochloromethane	2.9	ug/g	0.050	-	-	-	-	<0.050	<0.050
1,2-Dichlorobenzene	1.7	ug/g	0.050	-	-	-	-	<0.050	<0.050
1,3-Dichlorobenzene	6	ug/g	0.050	-	-	-	-	<0.050	<0.050
1,4-Dichlorobenzene	0.097	ug/g	0.050	-	-	-	-	<0.050	<0.050
Dichlorodifluoromethane	25	ug/g	0.050	-	-	-	-	<0.050	<0.050
1,1-Dichloroethane	0.6	ug/g	0.050	-	-	-	-	<0.050	<0.050
1,2-Dichloroethane	0.05	ug/g	0.050	-	-	-	-	<0.050	<0.050
1,1-Dichloroethylene	0.05	ug/g	0.050	-	-	-	-	<0.050	<0.050
cis-1,2-Dichloroethylene	2.5	ug/g	0.050	-	-	-	-	<0.050	<0.050
trans-1,2-Dichloroethylene	0.75	ug/g	0.050	-	-	-	-	<0.050	<0.050
1,2-Dichloropropane	0.085	ug/g	0.050	-	-	-	-	<0.050	<0.050
cis-1,3-Dichloropropene	0.081	ug/g	0.030	-	-	-	-	<0.030	<0.030
trans-1,3-Dichloropropene	0.081	ug/g	0.040	-	-	-	-	<0.040	<0.040
1,3-Dichloropropene (cis+trans)	0.081	ug/g	0.050	-	-	-	-	<0.050	<0.050
Ethylene Dibromide	0.05	ug/g	0.050	-	-	-	-	<0.050	<0.050
Hexane (n-Hexane)	34	ug/g	0.050	-	-	-	-	<0.050	<0.050
Methyl Ethyl Ketone (MEK)	44	ug/g	0.50	-	-	-	-	<0.50	<0.50
Methyl Isobutyl Ketone (MIBK)	4.3	ug/g	0.50	-	-	-	-	<0.50	<0.50
Methyl tert-butyl ether (MTBE)	1.4	ug/g	0.050	-	-	-	-	<0.050	<0.050
Methylene Chloride (Dichloromethane)	0.96	ug/g	0.050	-	-	-	-	<0.050	<0.050
Styrene	2.2	ug/g	0.050	-	-	-	-	<0.050	<0.050
1,1,1,2-Tetrachloroethane	0.05	ug/g	0.050	-	-	-	-	<0.050	<0.050
1,1,2,2-Tetrachloroethane	0.05	ug/g	0.050	-	-	-	-	<0.050	<0.050
Tetrachloroethylene	2.3	ug/g	0.050	-	-	-	-	<0.050	<0.050
1,1,1-Trichloroethane	3.4	ug/g	0.050	-	-	-	-	<0.050	<0.050
1,1,2-Trichloroethane	0.05	ug/g	0.050	-	-	-	-	<0.050	<0.050
Trichloroethylene	0.52	ug/g	0.050	-	-	-	-	<0.050	<0.050
Trichlorofluoromethane	5.8	ug/g	0.050	-	-	-	-	<0.050	<0.050
Vinyl Chloride	0.022	ug/g	0.020	-	-	-	-	<0.020	<0.020

Legend	
Exceeds one Criteria	Result
DL > Criteria	Result
Criteria 1	Reg153/04 T2-Soil/Res-F/M

Legend	
Exceeds one Criteria	Result
DL > Criteria	Result
Criteria 1	Reg153/04 T2-Soil/Res-F/M

8.5 Groundwater Data



Metals and Inorganics in Water

Parameter	Criteria ¹	Units	RDL	Sample ID	
				BV Labs Job ID / Sample ID	
				Sample Collection Date	
				Sample Collection Time	
				BH9 B971566 / JFV161 Mar 19, 2019 12:30 PM	DUP B971566 / JFV162 Mar 19, 2019 12:30 PM
Metals (Including Hydride-Forming Metals)					
Dissolved Antimony (Sb)	6	ug/L	0.50	<0.50	<0.50
Dissolved Arsenic (As)	25	ug/L	1.0	1	1.1
Dissolved Barium (Ba)	1000	ug/L	2.0	85	85
Dissolved Beryllium (Be)	4	ug/L	0.50	<0.50	<0.50
Dissolved Boron (B)	5000	ug/L	10	95	96
Dissolved Cadmium (Cd)	2.7	ug/L	0.10	<0.10	<0.10
Dissolved Chromium (Cr)	50	ug/L	5.0	<5.0	<5.0
Dissolved Cobalt (Co)	3.8	ug/L	0.50	<0.50	<0.50
Dissolved Copper (Cu)	87	ug/L	1.0	1	1.5
Dissolved Lead (Pb)	10	ug/L	0.50	<0.50	<0.50
Dissolved Molybdenum (Mo)	70	ug/L	0.50	2.6	2.7
Dissolved Nickel (Ni)	100	ug/L	1.0	1.7	1.8
Dissolved Selenium (Se)	10	ug/L	2.0	<2.0	<2.0
Dissolved Silver (Ag)	1.5	ug/L	0.10	<0.10	<0.10
Dissolved Thallium (Tl)	2	ug/L	0.050	<0.050	<0.050
Dissolved Uranium (U)	20	ug/L	0.10	6.3	6.3
Dissolved Vanadium (V)	6.2	ug/L	0.50	1.1	1.1
Dissolved Zinc (Zn)	1100	ug/L	5.0	<5.0	<5.0
Sodium					
Dissolved Sodium (Na)	490000	ug/L	100	26000	26000
Other Regulated Parameters					
Dissolved Chloride (Cl-)	790	mg/L	1.0	34	35
WAD Cyanide (Free)	66	ug/L	1	<1	<1
Hexavalent Chromium (CrVI)	25	ug/L	0.50	<0.50	<0.50
Mercury (Hg)	1	ug/L	0.1	<0.1	<0.1

Legend	
Exceeds one Criteria	Result
DL > Criteria	Result
Criteria 1	Reg153/04 T2-GW-F/M

Polycyclic Aromatic Hydrocarbons (PAHs) in Water

Parameter	Criteria ¹	Units	RDL	Sample ID	
				BV Labs Job ID / Sample ID	
				Sample Collection Date	
				Sample Collection Time	
				BH9 B971566 / JFV161 Mar 19, 2019 12:30 PM	DUP B971566 / JFV162 Mar 19, 2019 12:30 PM
Polycyclic Aromatic Hydrocarbons (PAHs)					
Acenaphthene	4.1	ug/L	0.050	<0.050	<0.050
Acenaphthylene	1	ug/L	0.050	<0.050	<0.050
Anthracene	2.4	ug/L	0.050	<0.050	<0.050
Benzo(a)anthracene	1	ug/L	0.050	<0.050	<0.050
Benzo(a)pyrene	0.01	ug/L	0.010	<0.010	<0.010
Benzo(b/j)fluoranthene	0.1	ug/L	0.050	<0.050	<0.050
Benzo(g,h,i)perylene	0.2	ug/L	0.050	<0.050	<0.050
Benzo(k)fluoranthene	0.1	ug/L	0.050	<0.050	<0.050
Chrysene	0.1	ug/L	0.050	<0.050	<0.050
Dibenz(a,h)anthracene	0.2	ug/L	0.050	<0.050	<0.050
Fluoranthene	0.41	ug/L	0.050	<0.050	<0.050
Fluorene	120	ug/L	0.050	<0.050	<0.050
Indeno(1,2,3-cd)pyrene	0.2	ug/L	0.050	<0.050	<0.050
1-Methylnaphthalene	3.2	ug/L	0.050	<0.050	<0.050
2-Methylnaphthalene	3.2	ug/L	0.050	<0.050	<0.050
1+2-Methylnaphthalene	3.2	ug/L	0.071	<0.071	<0.071
Naphthalene	11	ug/L	0.050	<0.050	<0.050
Phenanthrene	1	ug/L	0.030	<0.030	<0.030
Pyrene	4.1	ug/L	0.050	<0.050	<0.050

Legend	
Exceeds one Criteria	Result
DL > Criteria	Result
Criteria 1	Reg153/04 T2-GW-F/M



Parameter	Criteria ¹	Units	RDL	Sample ID		
				BV Labs Job ID / Sample ID		
				Sample Collection Date		
				Sample Collection Time		
				BH9 B971566 / JFV161 Mar 19, 2019 12:30 PM	DUP B971566 / JFV162 Mar 19, 2019 12:30 PM	TRIP BLANK B971566 / JFV167 Mar 19, 2019 12:30 PM
Petroleum Hydrocarbons (PHCs)						
F1 (C6-C10)	750	ug/L	25	<25	<25	<25
F1 (C6-C10) - BTEX	750	ug/L	25	<25	<25	<25
F2 (C10-C16)	150	ug/L	100	<100	<100	<100
F3 (C16-C34)	500	ug/L	200	<200	<200	<200
F4 (C34-C50)	500	ug/L	200	<200	<200	<200
Reached Baseline at C50		ug/L		YES	YES	YES
F4G (Gravimetric)		ug/L		-	-	-
Volatile Organic Compounds (VOCs)						
Benzene	5	ug/L	0.20 - 0.40	<0.20	<0.20	<0.20
Toluene	24	ug/L	0.20 - 0.40	<0.20	<0.20	<0.20
Ethylbenzene	2.4	ug/L	0.20 - 0.40	<0.20	<0.20	<0.20
m+p-Xylene		ug/L	0.20 - 0.40	<0.20	<0.20	<0.20
o-Xylene		ug/L	0.20 - 0.40	<0.20	<0.20	<0.20
Xylenes, Total	300	ug/L	0.20 - 0.40	<0.20	<0.20	<0.20
Acetone	2700	ug/L	10	<10	<10	<10
Bromodichloromethane	16	ug/L	0.50	<0.50	<0.50	<0.50
Bromoform	25	ug/L	1.0	<1.0	<1.0	<1.0
Bromomethane	0.89	ug/L	0.50	<0.50	<0.50	<0.50
Carbon Tetrachloride	5	ug/L	0.20	<0.20	<0.20	<0.20
Chlorobenzene	30	ug/L	0.20	<0.20	<0.20	<0.20
Chloroform	22	ug/L	0.20 - 0.40	<0.20	<0.20	<0.20
Dibromochloromethane	25	ug/L	0.50	<0.50	<0.50	<0.50
1,2-Dichlorobenzene	3	ug/L	0.50 - 1.0	<0.50	<0.50	<0.50
1,3-Dichlorobenzene	59	ug/L	0.50	<0.50	<0.50	<0.50
1,4-Dichlorobenzene	1	ug/L	0.50 - 1.0	<0.50	<0.50	<0.50
Dichlorodifluoromethane	590	ug/L	1.0	<1.0	<1.0	<1.0
1,1-Dichloroethane	5	ug/L	0.20	<0.20	<0.20	<0.20
1,2-Dichloroethane	5	ug/L	0.50	<0.50	<0.50	<0.50
1,1-Dichloroethylene	14	ug/L	0.20	<0.20	<0.20	<0.20
cis-1,2-Dichloroethylene	17	ug/L	0.50 - 1.0	<0.50	<0.50	<0.50
trans-1,2-Dichloroethylene	17	ug/L	0.50	<0.50	<0.50	<0.50
1,2-Dichloropropane	5	ug/L	0.20	<0.20	<0.20	<0.20
cis-1,3-Dichloropropene	0.5	ug/L	0.30	<0.30	<0.30	<0.30
trans-1,3-Dichloropropene	0.5	ug/L	0.40 - 0.80	<0.40	<0.40	<0.40
1,3-Dichloropropene (cis+trans)	0.5	ug/L	0.50	<0.50	<0.50	<0.50
Ethylene Dibromide	0.2	ug/L	0.20	<0.20	<0.20	<0.20
Hexane	520	ug/L	1.0	<1.0	<1.0	<1.0
Methyl Ethyl Ketone (MEK)	1800	ug/L	10 - 20	<10	<10	<10
Methyl Isobutyl Ketone (MIBK)	640	ug/L	5.0	<5.0	<5.0	<5.0
Methyl tert-butyl ether (MTBE)	15	ug/L	0.50	<0.50	<0.50	<0.50
Methylene Chloride (Dichloromethane)	50	ug/L	2.0 - 4.0	<2.0	<2.0	<2.0
Styrene	5.4	ug/L	0.50 - 1.0	<0.50	<0.50	<0.50
1,1,1,2-Tetrachloroethane	1.1	ug/L	0.50	<0.50	<0.50	<0.50
1,1,2,2-Tetrachloroethane	1	ug/L	0.50 - 1.0	<0.50	<0.50	<0.50
Tetrachloroethylene	17	ug/L	0.20 - 0.40	<0.20	<0.20	<0.20
1,1,1-Trichloroethane	200	ug/L	0.20	<0.20	<0.20	<0.20
1,1,2-Trichloroethane	5	ug/L	0.50	<0.50	<0.50	<0.50
Trichloroethylene	5	ug/L	0.20 - 0.40	<0.20	<0.20	<0.20
Trichlorofluoromethane	150	ug/L	0.50	<0.50	<0.50	<0.50
Vinyl Chloride	1.7	ug/L	0.20	<0.20	<0.20	<0.20

Legend	
Exceeds one Criteria	Result
DL > Criteria	Result
Criteria 1	Reg153/04 T2-GW-F/M

Organochlorine Pesticides (OCs) and Polychlorinated Biphenyls (PCBs) in Water

Parameter	Criteria ¹	Units	RDL	Sample ID				
				BV Labs Job ID / Sample ID				
				Sample Collection Date				
				Sample Collection Time				
				DUP1 B971566 / JFV164 Mar 19, 2019 02:30 PM	BH15 B971566 / JFV165 Mar 19, 2019 02:30 PM	BH12 B971566 / JFV166 Mar 19, 2019 04:30 PM	BH12 Lab-Dup B971566 / JFV166 Mar 19, 2019 04:30 PM	BH11 B971566 / JFV163 Mar 19, 2019 06:30 PM
Polychlorinated Biphenyls (PCBs)								
Aroclor 1242		ug/L	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Aroclor 1248		ug/L	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Aroclor 1254		ug/L	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Aroclor 1260		ug/L	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Total Polychlorinated Biphenyls (PCBs)	3	ug/L	0.05	<0.05	<0.05	<0.05	-	<0.05
Organochlorine Pesticides (OCs)								
Aldrin	0.35	ug/L	0.005	<0.005	<0.005	<0.005	<0.005	<0.005
alpha-Chlordane	7	ug/L	0.005	<0.005	<0.005	<0.005	<0.005	<0.005
gamma-Chlordane	7	ug/L	0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Total Chlordane	7	ug/L	0.005	<0.005	<0.005	<0.005	-	<0.005
o,p-DDD	10	ug/L	0.005	<0.005	<0.005	<0.005	<0.005	<0.005
p,p-DDD	10	ug/L	0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Total DDD		ug/L	0.005	<0.005	<0.005	<0.005	-	<0.005
o,p-DDE	10	ug/L	0.005	<0.005	<0.005	<0.005	<0.005	<0.005
p,p-DDE	10	ug/L	0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Total DDE		ug/L	0.005	<0.005	<0.005	<0.005	-	<0.005
o,p-DDT	2.8	ug/L	0.005	<0.005	<0.005	<0.005	<0.005	<0.005
p,p-DDT	2.8	ug/L	0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Total DDT		ug/L	0.005	<0.005	<0.005	<0.005	-	<0.005
Dieldrin	0.35	ug/L	0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Endosulfan I	1.5	ug/L	0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Endosulfan II (beta)	1.5	ug/L	0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Total Endosulfan		ug/L	0.005	<0.005	<0.005	<0.005	-	<0.005
Endrin	0.48	ug/L	0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Heptachlor	1.5	ug/L	0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Heptachlor epoxide	0.048	ug/L	0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Hexachlorobenzene	1	ug/L	0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Hexachlorobutadiene	0.6	ug/L	0.009	<0.009	<0.009	<0.009	<0.009	<0.009
gamma-Hexachlorocyclohexane (Lindane)	1.2	ug/L	0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Hexachloroethane	2.1	ug/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Methoxychlor	6.5	ug/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01

Legend	
Exceeds one Criteria	Result
DL > Criteria	Result
Criteria 1	Reg153/04 T2-GW-F/M

8.6 Sediment Data

No sediment was sampled as part of this investigation.



8.7 Soil: Maximum Concentration Data

Table 11
Maximum Concentrations in Soil
5080 Ninth Line, Mississauga, Ontario
(µg/g or ppm)

Parameter	Maximum Concentration
VOCs	
Acetone	<0.50
Benzene	<0.020
Bromodichloromethane	<0.050
Bromoform	<0.050
Bromomethane	<0.050
Carbon Tetrachloride	<0.050
Chlorobenzene	<0.050
Chloroform	<0.050
Dibromochloromethane	<0.050
1,2-Dichlorobenzene	<0.050
1,3-Dichlorobenzene	<0.050
1,4-Dichlorobenzene	<0.050
Dichlorodifluoromethane	<0.050
1,1-Dichloroethane	<0.050
1,2-Dichloroethane	<0.050
1,1-Dichloroethylene	<0.050
Cis-1,2-Dichloroethylene	<0.050
Trans-1,2-Dichloroethylene	<0.050
1,2-Dichloropropane	<0.050
1,3-Dichloropropylene (cis + trans) ¹	<0.050
Ethylbenzene	<0.020
Ethylene Dibromide	<0.050
Hexane(n)	<0.050
Methyl Ethyl Ketone	<0.50
Methyl Isobutyl Ketone	<0.50
Methyl-t-Butyl Ether	<0.050
Methylene Chloride	<0.050
Styrene	<0.050
1,1,1,2-Tetrachloroethane	<0.050
1,1,2,2-Tetrachloroethane	<0.050
Tetrachloroethylene	<0.050
Toluene	<0.020
1,1,1-Trichloroethane	<0.050
1,1,2-Trichloroethane	<0.050
Trichloroethylene	<0.050
Trichlorofluoromethane	<0.050
Vinyl Chloride	<0.020
Total Xylenes	<0.020
PHCs	
PHC F1 ² (C6-C10 Hydrocarbons)	<10
PHC F2 (C10-C16 Hydrocarbons)	<10
PHC F3 (C16-C34 Hydrocarbons)	<50
PHC F4 (C34-C50 Hydrocarbons)	<50

Notes: 1 – Calculated parameter from the laboratory certificate of analyses.
2 – F1 fraction of petroleum hydrocarbons does not include BTEX.



Table 10 (Continued)
Maximum Concentrations in Soil
5080 Ninth Line, Mississauga, Ontario
(µg/g or ppm)

Parameter	Maximum Concentration
Metals & Inorganics	
Antimony	0.40
Arsenic	5.4
Barium	130
Beryllium	1.00
Boron (Hot Water Ext)	1.00
Boron (Total)	10
Cadmium	0.81
Chromium	30
Chromium (VI)	<0.2
Cobalt	12
Copper	40
Free Cyanide	0.02
Lead	110
Mercury	0.067
Molybdenum	1.00
Nickel	33
Selenium	<0.50
Silver	<0.20
Thallium	0.19
Uranium	0.83
Vanadium	40
Zinc	380*
Conductivity (in mS/cm)	0.69
SAR (no units)	4.2

*See discussion in Section 5.6 Soil Quality



Table 10 (Continued)
Maximum Concentrations in Soil
5080 Ninth Line, Mississauga, Ontario
(µg/g or ppm)

Parameter	Maximum Concentration
PAHs	
Acenaphthene	<0.0050
Acenaphthylene	<0.0050
Anthracene	<0.0050
Benzo(a)anthracene	<0.0050
Benzo(a)pyrene	<0.0050
Benzo(b/j)fluoranthene	0.0086
Benzo(ghi)perylene	<0.0050
Benzo(k)fluoranthene	<0.0050
Chrysene	<0.0050
Dibenzo(a,h)anthracene	<0.0050
Fluoranthene	0.0091
Fluorene	<0.0050
Indeno(1,2,3-cd)pyrene	<0.0050
Methylnaphthalene, 2-(1-) ¹	<0.0071
Naphthalene	<0.0050
Phenanthrene	<0.0050
Pyrene	0.0070

Notes: 1 – Calculated parameter from the laboratory certificate of analyses.



Table 10 (Continued)
Maximum Concentrations in Soil
5080 Ninth Line, Mississauga, Ontario
(µg/g or ppm)

Parameter	Maximum Concentration
OCPs	
Aldrin	<0.0040
alpha-Chlordane	<0.0040
gamma-Chlordane	<0.0040
Total Chlordane	<0.0040
o,p-DDD	<0.0040
p,p-DDD	<0.0040
Total DDD	<0.0040
o,p-DDE	<0.0040
p,p-DDE	<0.0040
Total DDE	<0.0040
o,p-DDT	<0.0040
p,p-DDT	<0.0040
Total DDT	<0.0040
Dieldrin	<0.0040
Endosulfan I	<0.0040
Endosulfan II (beta)	<0.0040
Total Endosulfan	<0.0040
Endrin	<0.0040
Heptachlor	<0.0040
Heptachlor epoxide	<0.0040
Hexachlorobenzene	<0.0040
Hexachlorobutadiene	<0.0040
gamma-Hexachlorocyclohexane (Lindane)	<0.0040
Hexachloroethane	<0.0040
Methoxychlor	<0.010
PCBs	
Total Polychlorinated Biphenyls (PCBs)	<0.030



8.8 Groundwater: Maximum Concentration Data

Table 12
Maximum Concentrations in Groundwater
5080 Ninth Line, Mississauga, Ontario
(µg/L or ppb)

Parameter	Maximum Concentration
VOCs	
Acetone	<10
Benzene	<0.20
Bromodichloromethane	<0.50
Bromoform	<1.0
Bromomethane	<0.50
Carbon Tetrachloride	<0.20
Chlorobenzene	<0.20
Chloroform	<0.20
Dibromochloromethane	<2.0
1,2-Dichlorobenzene	<0.50
1,3-Dichlorobenzene	<0.50
1,4-Dichlorobenzene	<0.50
Dichlorodifluoromethane	<1.0
1,1-Dichloroethane	<0.20
1,2-Dichloroethane	<0.50
1,1-Dichloroethylene	<0.20
Cis-1,2-Dichloroethylene	<0.50
Trans-1,2-Dichloroethylene	<0.50
1,2-Dichloropropane	<0.20
Ethylbenzene	<0.20
Ethylene Dibromide	<0.20
Hexane(n)	<1.0
Methyl Ethyl Ketone	<10
Methyl Isobutyl Ketone	<5.0
Methyl-t-Butyl Ether	<0.50
Methylene Chloride	<2.0
Styrene	<0.50
1,1,1,2-Tetrachloroethane	<0.50
1,1,2,2-Tetrachloroethane	<0.50
Tetrachloroethylene	<0.20
Toluene	<0.20
1,1,1-Trichloroethane	<0.20
1,1,2-Trichloroethane	<0.50
Trichloroethylene	<0.20
Trichlorofluoromethane	<0.50
Vinyl Chloride	<0.20
Total Xylenes	<0.20
PHCs	
PHC F1 ² (C6-C10 Hydrocarbons)	<25
PHC F2 (C10-C16 Hydrocarbons)	<100
PHC F3 (C16-C34 Hydrocarbons)	<200
PHC F4 (C34-C50 Hydrocarbons)	<200

Notes: 1 – Calculated parameter from the laboratory certificate of analyses.
2 – F1 fraction of petroleum hydrocarbons does not include BTEX.



Table 11 (Continued)
Maximum Concentrations in Groundwater
5080 Ninth Line, Mississauga, Ontario
(µg/L or ppb)

Parameter	Maximum Concentration
Metals & Inorganics	
Antimony	<0.50
Arsenic	1.1
Barium	85
Beryllium	<0.50
Boron (Total)	96
Cadmium	<0.10
Chloride	35
Chromium	<5.0
Chromium (VI)	<0.50
Cobalt	<0.50
Copper	1.5
Free Cyanide	<1
Lead	<0.50
Mercury	<0.1
Molybdenum	2.7
Nickel	1.8
Selenium	<2.0
Silver	<0.10
Thallium	<0.050
Uranium	6.3
Vanadium	1.1
Zinc	<5.0



Table 11 (Continued)
Maximum Concentrations in Groundwater
5080 Ninth Line, Mississauga, Ontario
(µg/L or ppb)

Parameter	Maximum Concentration
PAHs	
Acenaphthene	<0.050
Acenaphthylene	<0.050
Anthracene	<0.050
Benzo(a)anthracene	<0.050
Benzo(a)pyrene	<0.010
Benzo(b/j)fluoranthene	<0.050
Benzo(ghi)perylene	<0.050
Benzo(k)fluoranthene	<0.050
Chrysene	<0.050
Dibenzo(a,h)anthracene	<0.050
Fluoranthene	<0.050
Fluorene	<0.050
Indeno(1,2,3-cd)pyrene	<0.050
Methylnaphthalene, 2-(1-) ¹	<0.071
Naphthalene	<0.050
Phenanthrene	<0.030
Pyrene	<0.050

Notes: 1 – Calculated parameter from the laboratory certificate of analyses.



Table 11 (Continued)
Maximum Concentrations in Groundwater
5080 Ninth Line, Mississauga, Ontario
(µg/L or ppb)

Parameter	Maximum Concentration
OCPs	
Aldrin	<0.005
alpha-Chlordane	<0.005
gamma-Chlordane	<0.005
Total Chlordane	<0.005
o,p-DDD	<0.005
p,p-DDD	<0.005
Total DDD	<0.005
o,p-DDE	<0.005
p,p-DDE	<0.005
Total DDE	<0.005
o,p-DDT	<0.005
p,p-DDT	<0.005
Total DDT	<0.005
Dieldrin	<0.005
Endosulfan I	<0.005
Endosulfan II (beta)	<0.005
Total Endosulfan	<0.005
Endrin	<0.005
Heptachlor	<0.005
Heptachlor epoxide	<0.005
Hexachlorobenzene	<0.005
Hexachlorobutadiene	<0.009
gamma-Hexachlorocyclohexane (Lindane)	<0.003
Hexachloroethane	<0.01
Methoxychlor	<0.01
PCBs	
Total Polychlorinated Biphenyls (PCBs)	<0.05



9 DRAWINGS

The following drawings are attached to this report on the following pages:

Drawing No. 1: Areas of Natural Significance and Water Bodies

Drawing No. 2: Site Plan Showing Approximate Locations of Boreholes and
Monitoring Wells

Drawing No. 3: Phase One CSM with Locations of Potentially Contaminating Activities

Drawing No. 4: Site Plan Showing Locations of Areas of Potential Environmental Concerns

Drawing No. 5: Site Plan Showing Elevations, Contour Map & Inferred Groundwater Flow
Direction

Drawing No. 6: Site Plan Showing Cross-Section Legend

Drawing No. 7 and 8: Subsurface Profile (Cross Sections A-A' and B-B')



10 APPENDICES



APPENDIX A: SAMPLING AND ANALYSIS PLAN



The sampling and analysis plan for the Phase Two Property investigation areas was developed to determine the nature and extent of the environmental contaminant concerns in the APECs associated with PCAs identified in the Phase One CSM, as shown in the following table:

Areas of Potential Environmental Concern

Area of Potential Environmental Concern (APEC)	Location of Area of Potential Environmental Concern on Phase One Property	Potentially Contaminating Activity (PCA)	Location of PCA (on-site or off-site)	Contaminants of Potential Concern	Media Potentially Impacted (Groundwater, soil and/or sediment)
APEC 1	East portion of the Phase One Property	30 – Importation of Fill Material of Unknown Quality <i>(The quality of the fill material is unknown on the east portion of the Phase One Property)</i>	On-site	PAHs, Metals, As, Sb, Se, Cr (VI), Hg, CN-, B-HWS, EC, SAR ¹	Soil
APEC 2	West and south portions of the Phase One Property	40 – Pesticides (including Herbicides, Fungicides and Anti-Fouling Agents) Manufacturing, Processing, Bulk Storage and Large-Scale Application <i>(The west and south portions of the Phase One Property were historically used for agricultural purposes)</i>	On-site	OCPs, PAHs, Metals ¹	Soil

The sampling and analysis plan included the following:

- Sixteen (16) boreholes were drilled in the APECs to collect soil samples for laboratory analyses to determine contaminant concentrations across the investigated areas; and
- Monitoring wells were installed in five of the boreholes (BH4, BH9, BH11, BH12, and BH15) to obtain groundwater data (samples for laboratory analysis) at the Phase Two Property.

The following sampling and analyses rationale table summarises the location of the boreholes, and monitoring wells, and sampling and analyses conducted (not including deviations or impediments, discussed in Section 3.4 and 3.5.



Sampling and Analysis Plan (March 6 to 8 and 11 to 15, 2019)

Borehole/ Test Pit/ Stockpile ID	APEC Investigated	Media	Sample ID	Sample Depth (metres below grade surface)	Laboratory Analysis Conducted
BH2	1, 2	Soil	BH2-1	0.0 to 0.6	Metals, As, Sb, Se, Cr (VI), Hg, CN-, B- HWS, EC, SAR ¹
BH3	1, 2	Soil	BH3-1	0.0 to 0.6	Metals, As, Sb, Se, Cr (VI), Hg, CN-, B- HWS, EC, SAR ¹
			DUP1 (BH3-1)	0.0 to 0.6	Metals, As, Sb, Se, Cr (VI), Hg, CN-, B- HWS, EC, SAR ¹
			BH3-2	0.8 to 1.4	PAHs ¹
			DUP2 (BH3-2)	0.8 to 1.4	PAHs ¹
BH4	2	Soil	BH4-1	0.0 to 0.6	OCP, Triazines, PAHs ¹
		Groundwater	-	-	Groundwater Levels
BH5	1, 2	Soil	BH5-1	0.0 to 0.6	Metals, As, Sb, Se, Cr (VI), Hg, CN-, B- HWS, EC, SAR, PAHs ¹
BH9	1, 2	Soil	BH9-1	0.0 to 0.6	Metals, As, Sb, Se, Cr (VI), Hg, CN-, B- HWS, EC, SAR, PAHs ¹
		Groundwater	BH9	N/A	Metals, As, Sb, Se, Cr (VI), Hg, CN-, B- HWS, EC, SAR, PAHs ¹
			DUP (BH9)		Metals, As, Sb, Se, Cr (VI), Hg, CN-, B- HWS, EC, SAR, PAHs ¹
BH11	2	Soil	BH11-1	0.0 to 0.6	OCPs, Triazines ¹
		Groundwater	BH11	N/A	OCPs, Triazines ¹
BH12	2	Soil	BH12-1	0.0 to 0.6	OCPs, Triazines ¹
		Groundwater	BH12	N/A	OCPs, Triazines ¹



Borehole/ Test Pit/ Stockpile ID	APEC Investigated	Media	Sample ID	Sample Depth (metres below grade surface)	Laboratory Analysis Conducted
BH14	2	Soil	BH14-1	0.0 to 0.6	OCPs, Triazines ¹
			DUP-P (BH14-1)	0.0 to 0.6	OCPs, Triazines ¹
BH15	2	Soil	BH15-1	0.0 to 0.6	OCPs, Triazines ¹
		Groundwater	BH15	N/A	OCPs, Triazines ¹
			DUP1 (BH15)	N/A	OCPs, Triazines ¹
BH16	2	Soil	BH16-1	0.0 to 0.6	OCPs, Triazines ¹

Note:

- 1- The acronyms noted above indicate the following contaminants of potential concern: petroleum hydrocarbons (PHCs); benzene, toluene, ethylbenzene and xylene (BTEX); polycyclic aromatic hydrocarbons (PAHs); Polychlorinated biphenyls (PCBs); arsenic (As), antimony (Sb), selenium (Se), chromium VI (Cr(VI)); mercury (Hg); cyanide (CN-); boron (hot water soluble) (B-HWS); Electrical Conductivity (EC), Sodium Adsorption Ratio (SAR); volatile organic compounds (VOCs) and organochlorine pesticides (OCPs).

Based on previous reports and historical records for the Phase Two Property, it is our opinion that the most likely media for contamination are soil and groundwater. We do not believe that sediment is a likely media and have excluded it as a media of analysis in this investigation.



APPENDIX B: FIELD LOGS





S2S
Environmental Inc.

Project Number: 8674

Client: Your Home Developments

Location: 5080 Ninth Line, Mississauga, ON

Drill Date: March 6, 2019

Log of Borehole: BH1

SUBSURFACE PROFILE					SAMPLE				Hex (%LEL)		Well Completion Details
Depth (ft)	Depth (m)	Symbol	Description	Elevation (m)	Number	Type	Recovery	Laboratory Analyses	Hex (ppm)	IBL (ppm)	
									0 100	0.01 1000	
-2	0										
0	0		TOPSOIL, cohesive, dark brown, moist	187.28	1		20%		<25	<1	
2	1		SILT, some clay, trace sand, some clasts (poorly sorted), grey	186.51	2		40%		<25	<1	
4	2				3		100%		<25	<1	
6	2				4		100%		<25	<1	
8	3				5		100%		<25	<1	
10	3				6		100%		<25	<1	
12	4				7		10%		<25	<1	
14	4		- no sand at approximately 4.7 m bgs								
16	5		- some orange mottling at approximately 6.2 m bgs								
18	5										
20	6		CLAY, some silt, trace sand, trace clasts, medium plasticity, grey, moist	179.66	8		10%				
22	6										
24	7										
26	8										
28	8										
30	9		- trace silt, very soft at approximately 12.2 m bgs		9		20%				
32	10										
34	10										
36	11										
38	11		- trace silt, very soft at approximately 12.2 m bgs		10		10%				
40	12				11		100%		<25	<1	
42	13		End of Borehole								
44	14										
46	14										
48	15										
50	15										
52											

Drill Rig: B-45HD

Hole Size/Drill Method: 8", HSA

Easting: 602189 E

Northing: 4821156 N

Datum: Geodetic

Logged by: RB

Checked by: LF

Sheet: 1 of 1

Notes: No monitoring well installed.



S2S
Environmental Inc.

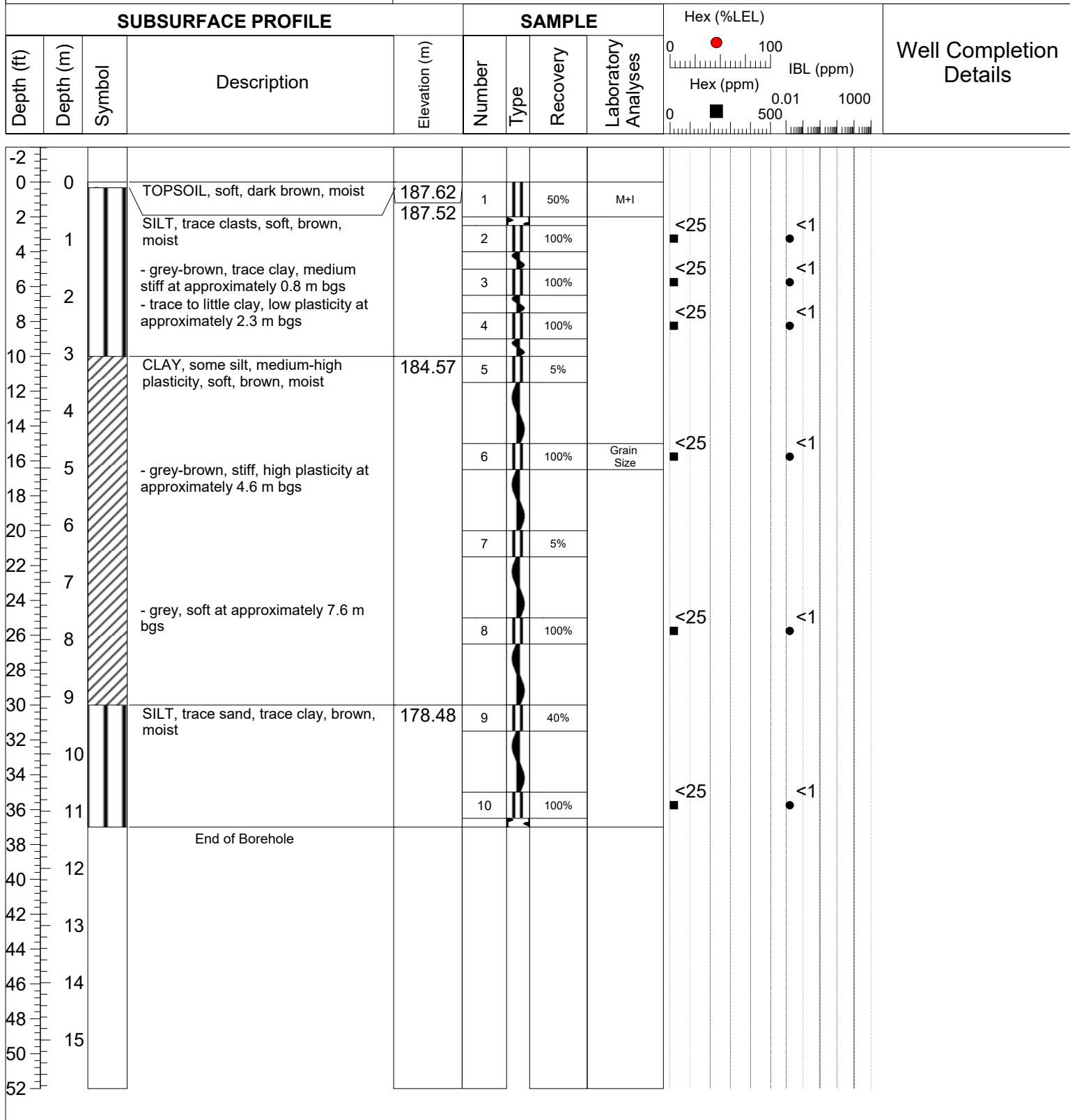
Project Number: 8674

Client: Your Home Developments

Location: 5080 Ninth Line, Mississauga, ON

Drill Date: March 8, 2019

Log of Borehole: BH2



Drill Rig: B-45HD

Hole Size/Drill Method: 8", HSA

Easting: 602122 E

Northing: 4821215 N

Datum: Geodetic

Logged by: RB

Checked by: LF

Sheet: 1 of 1

Notes: No monitoring well installed.



S2S
Environmental Inc.

Project Number: 8674

Client: Your Home Developments

Location: 5080 Ninth Line, Mississauga, ON

Drill Date: March 8, 2019

Log of Borehole: BH3

SUBSURFACE PROFILE					SAMPLE				Hex (%LEL)		Well Completion Details
Depth (ft)	Depth (m)	Symbol	Description	Elevation (m)	Number	Type	Recovery	Laboratory Analyses	Hex (ppm)	IBL (ppm)	
-2	0		TOPSOIL, rootlets, wood chips, soft, dark brown, moist	187.93	1		60%	M+I, DUP1			
2	1		- black sheen and odour from approximately 0.8 to 0.9 m bgs	187.02	2		100%	PAHs, DUP2	<25	<1	
4	2		SILT, trace clay, medium stiff, grey-brown, moist		3		100%		<25	<1	
6			- some clasts (poorly sorted), stiff at approximately 1.5 m bgs		4		100%		<25	<1	
8			- some fine sand at approximately 2.3 m bgs		5		100%		<25	<1	
10	3		- some clay, trace sand at approximately 2.7 m bgs	184.88	6		100%	PHCs, BTEX	<25	<1	
12	4		CLAY, some clasts, some silt, medium plasticity, very stiff, brown, moist		7		100%		<25	<1	
14	5		- trace sand at approximately 3.8 m bgs		8		100%		<25	<1	
16			- grey at approximately 4 m bgs		9		100%		<25	<1	
18	6		- high plasticity, soft at approximately 5.3 m bgs		10		100%		<25	<1	
20	7		GRAVEL (3"), wet	180.92	11		100%		<25	<1	
22			SILT, trace clay, medium stiff, grey, moist	180.84							
24	8		CLAY, some silt, trace sand, medium plasticity, medium stiff, moist	180.31							
26			End of Borehole								
28	9										
30											
32	10										
34											
36	11										
38											
40	12										
42											
44	13										
46											
48	14										
50											
52	15										

Drill Rig: B-45HD

Hole Size/Drill Method: 8", HSA

Easting: 602116 E

Northing: 4821178 N

Datum: Geodetic

Logged by: RB

Checked by: LF

Sheet: 1 of 1

Notes: No monitoring well installed.



S2S
Environmental Inc.

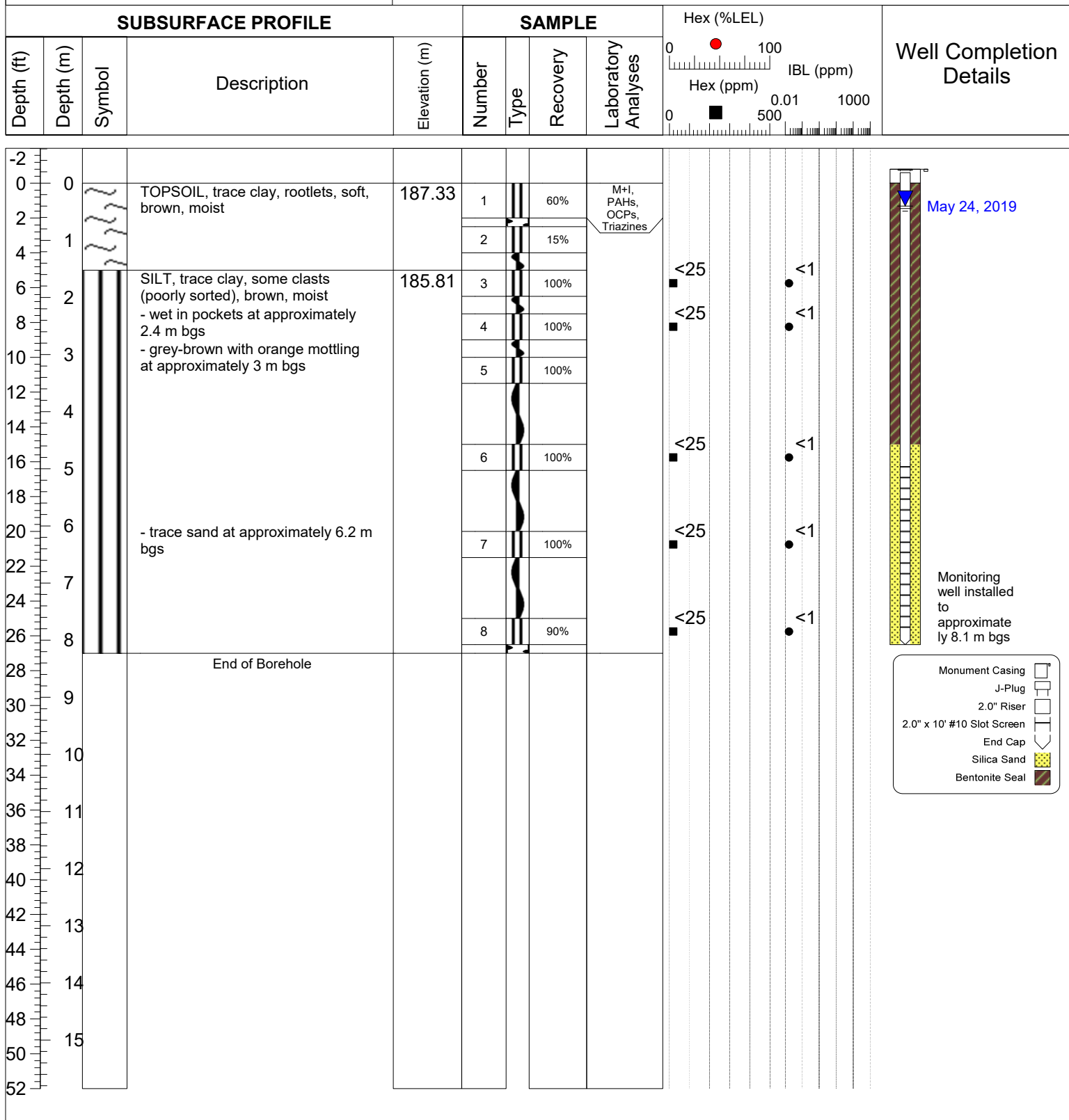
Project Number: 8674

Client: Your Home Developments

Location: 5080 Ninth Line, Mississauga, ON

Drill Date: March 7, 2019

Log of Borehole: BH4



Drill Rig: B-45HD

Hole Size/Drill Method: 8", HSA

Easting: 602141 E

Northing: 4821114 N

Datum: Geodetic

Logged by: RB

Checked by: LF

Sheet: 1 of 1

Notes: No monitoring well installed.



S2S
Environmental Inc.

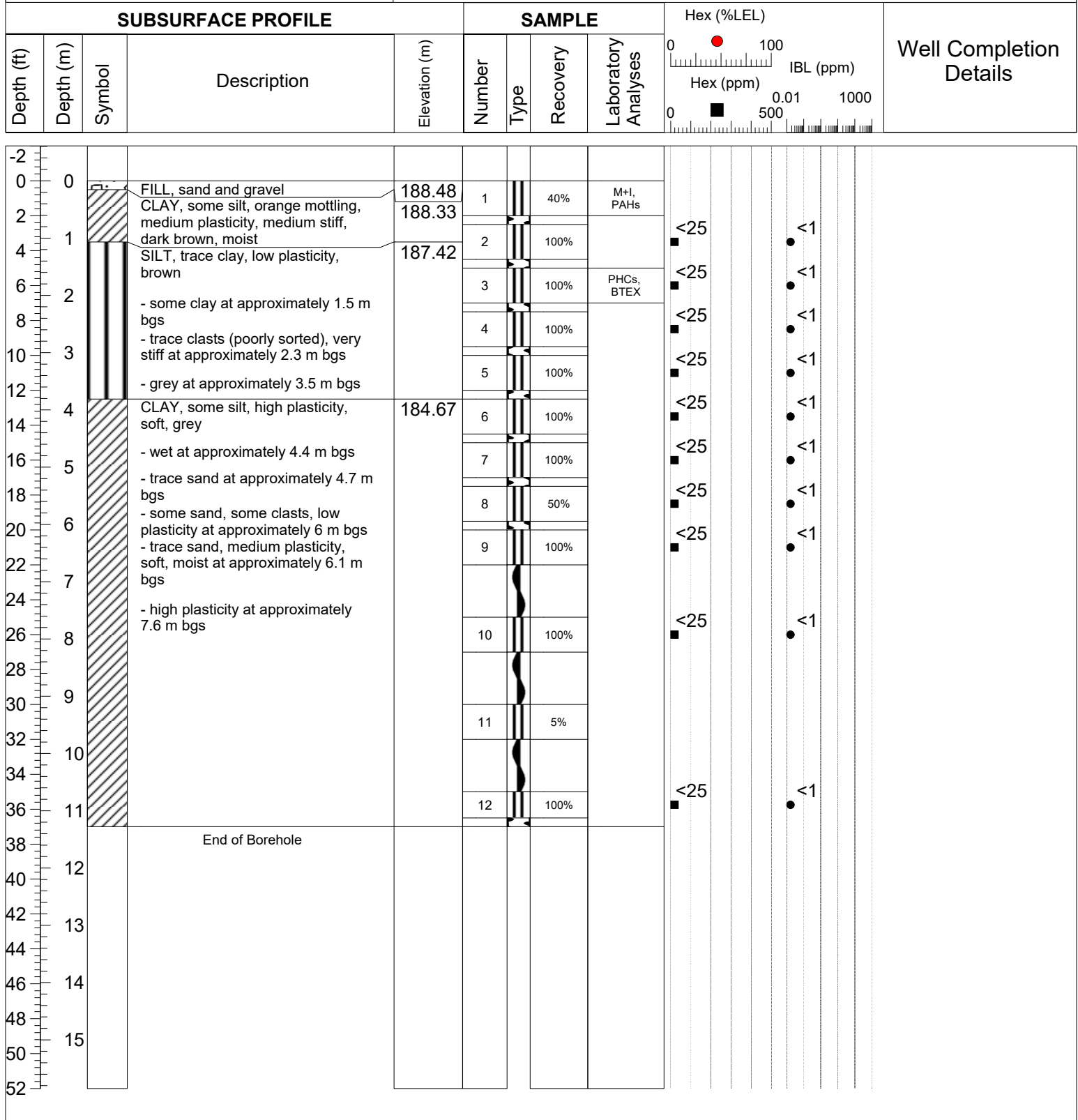
Project Number: 8674

Client: Your Home Developments

Location: 5080 Ninth Line, Mississauga, ON

Drill Date: March 7, 2019

Log of Borehole: BH5



Drill Rig: B-45HD

Hole Size/Drill Method: 8", HSA

Easting: 602083 E

Northing: 4821154 N

Datum: Geodetic

Logged by: RB

Checked by: LF

Sheet: 1 of 1

Notes: No monitoring well installed.



S2S
Environmental Inc.

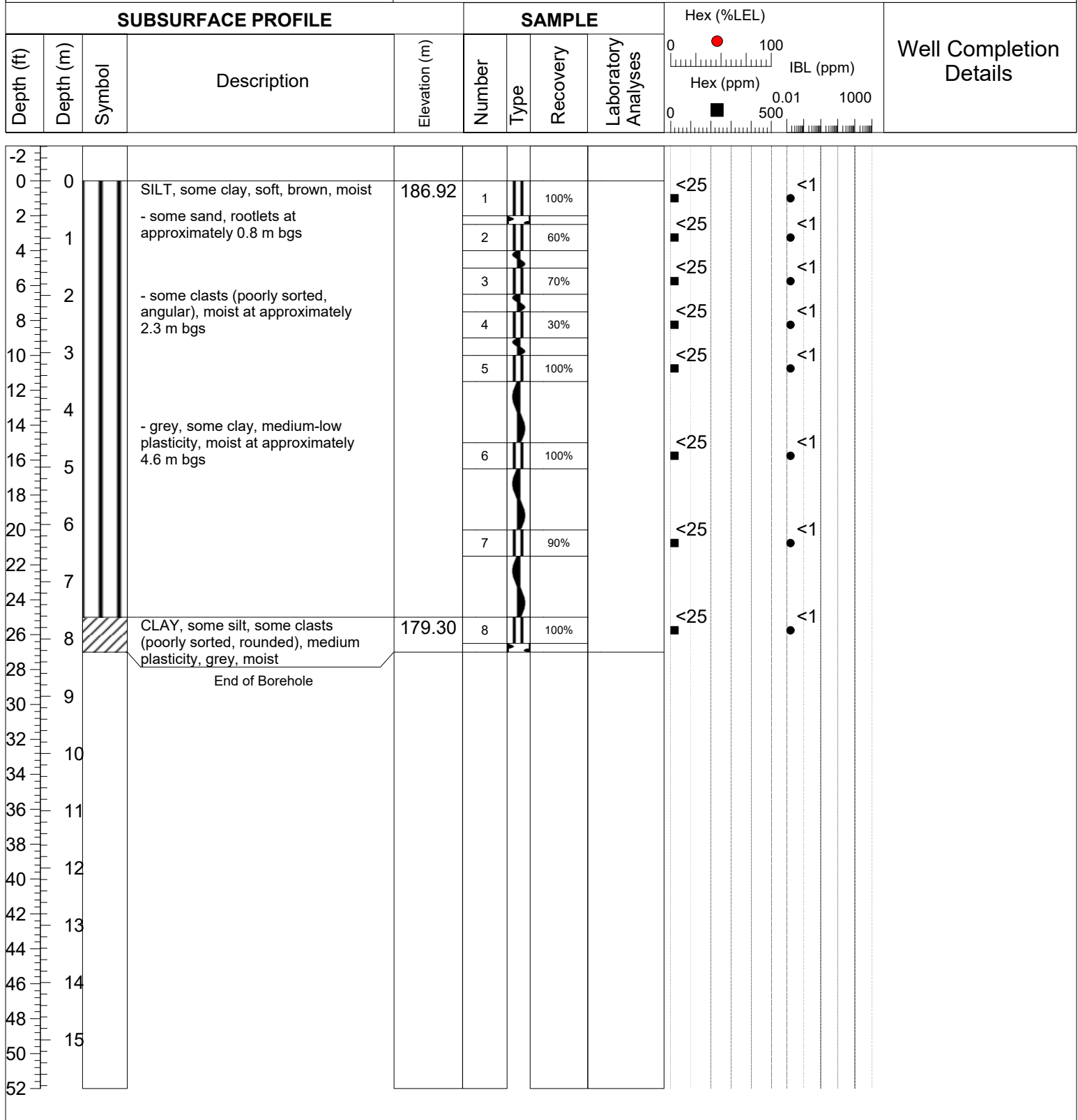
Project Number: 8674

Client: Your Home Developments

Location: 5080 Ninth Line, Mississauga, ON

Drill Date: March 14, 2019

Log of Borehole: BH6



Drill Rig: B-45HD

Hole Size/Drill Method: 8", HSA

Easting: 602126 E

Northing: 4821073 N

Datum: Geodetic

Logged by: RB

Checked by: LF

Sheet: 1 of 1

Notes: No monitoring well installed.



S2S
Environmental Inc.

Project Number: 8674

Client: Your Home Developments

Location: 5080 Ninth Line, Mississauga, ON

Drill Date: March 11 and 14, 2019

Log of Borehole: BH7

SUBSURFACE PROFILE					SAMPLE				Hex (%LEL)		Well Completion Details
Depth (ft)	Depth (m)	Symbol	Description	Elevation (m)	Number	Type	Recovery	Laboratory Analyses	Hex (ppm)	IBL (ppm)	
-2	0										
0	0		SILT, some clay, trace gravel, trace roots, dark brown, moist	187.11	1		50%				
2	1		- brown at approximately 0.8 m bgs		2		100%		<25	<1	
4	2				3		70%		<25	<1	
6	2				4		100%		<25	<1	
8	3		- trace sand at approximately 3 m bgs		5		80%		<25	<1	
10	3										
12	4		- grey at approximately 4.6 m bgs		6		80%		<25	<1	
14	4										
16	5										
18	5										
20	6		CLAY, some silt, some clasts (poorly sorted), medium plasticity, medium stiff, grey, moist	181.01	7		100%		<25	<1	
22	7										
24	7										
26	8				8		50%		<25	<1	
28	8										
30	9		End of Borehole								
32	10										
34	10										
36	11										
38	12										
40	12										
42	13										
44	13										
46	14										
48	14										
50	15										
52	15										

Drill Rig: B-45HD

Hole Size/Drill Method: 8", HSA

Easting: 602101 E

Northing: 4821066 N

Datum: Geodetic

Logged by: RB

Checked by: LF

Sheet: 1 of 1

Notes: No monitoring well installed.



S2S
Environmental Inc.

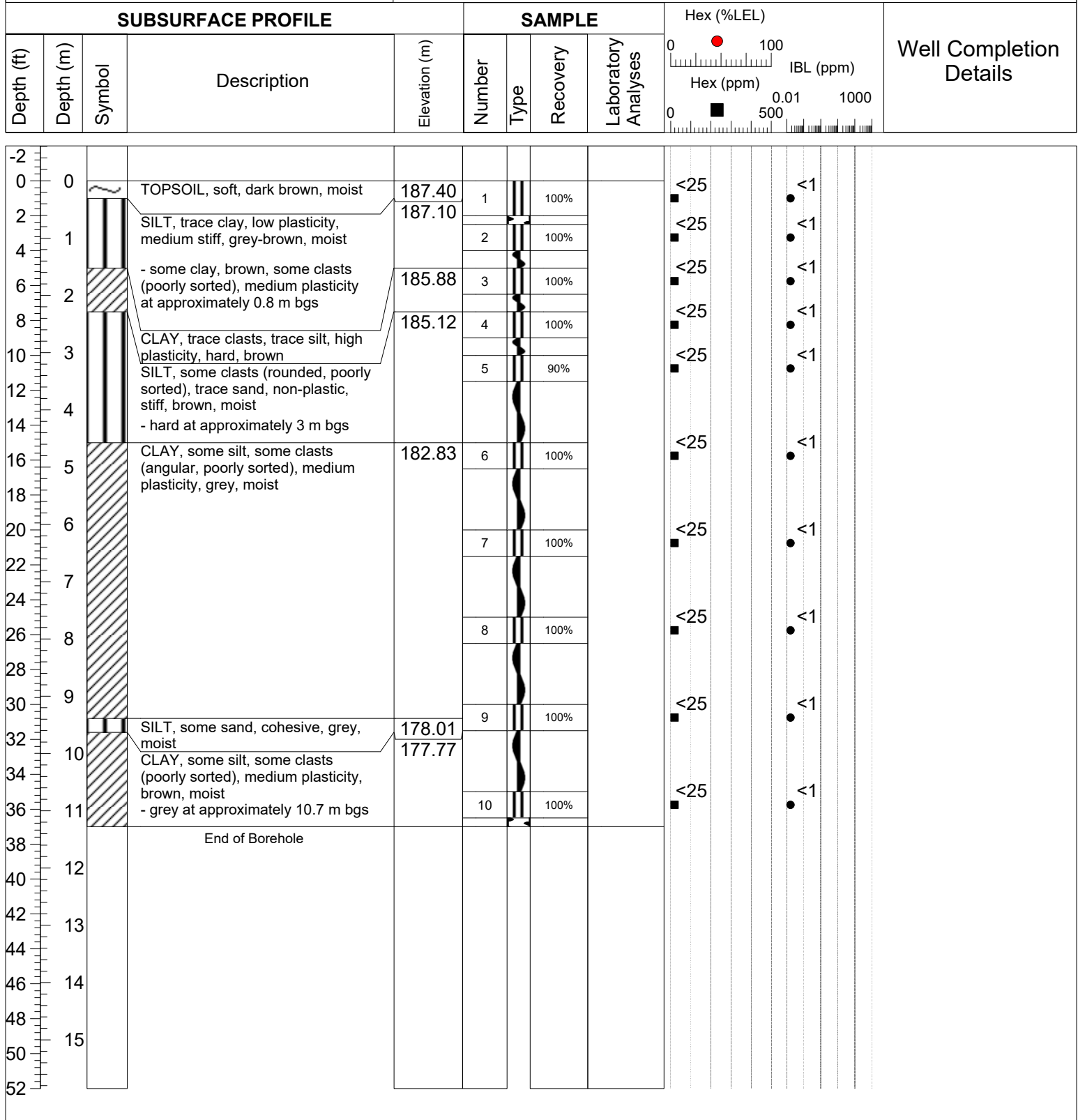
Project Number: 8674

Client: Your Home Developments

Location: 5080 Ninth Line, Mississauga, ON

Drill Date: March 14, 2019

Log of Borehole: BH8



Drill Rig: B-45HD

Hole Size/Drill Method: 8", HSA

Easting: 602073 E

Northing: 4821007 N

Datum: Geodetic

Logged by: RB

Checked by: LF

Sheet: 1 of 1

Notes: No monitoring well installed.



S2S
Environmental Inc.

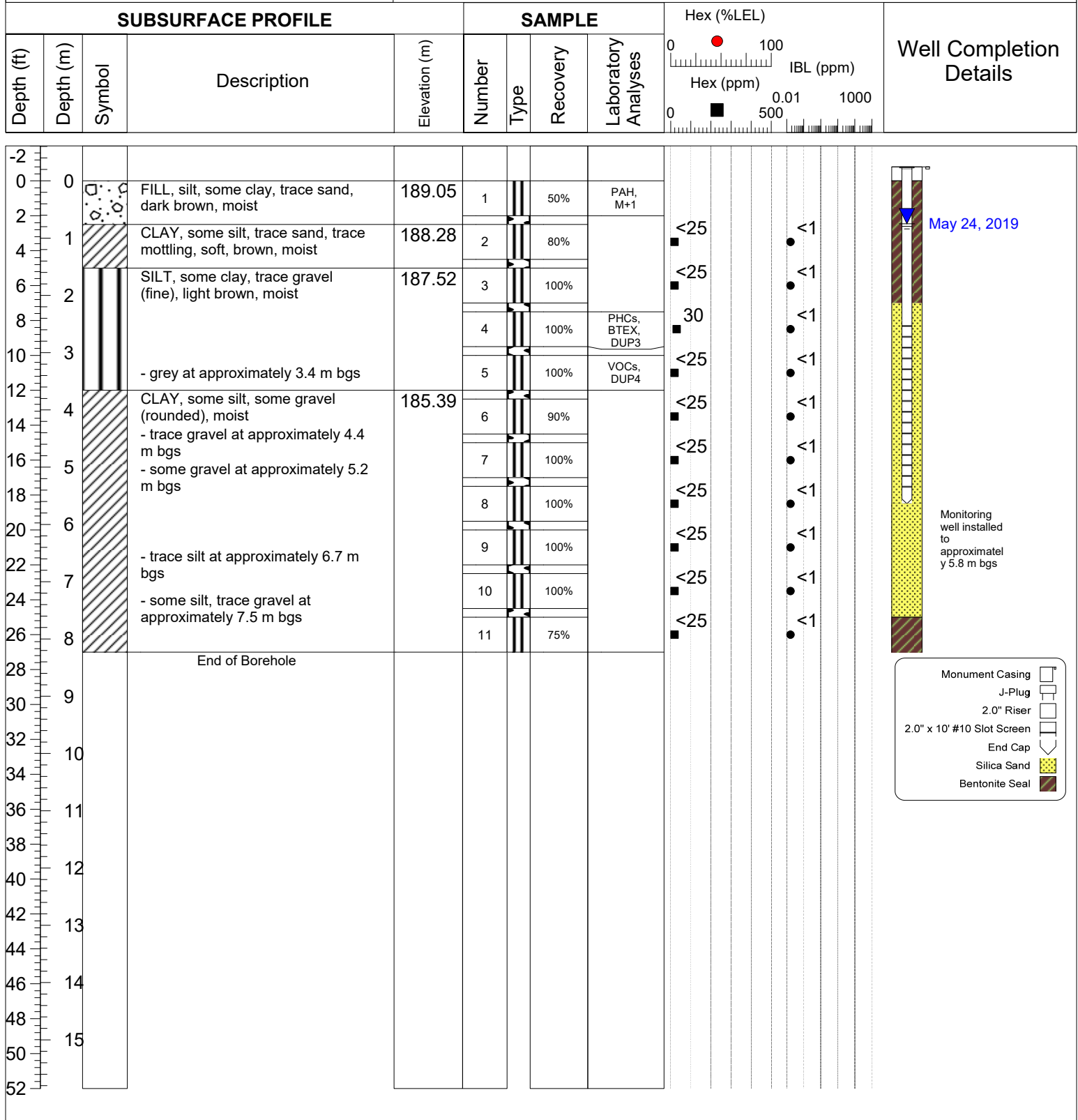
Project Number: 8674

Client: Your Home Developments

Location: 5080 Ninth Line, Mississauga, ON

Drill Date: March 11, 2019

Log of Borehole: BH9



Drill Rig: B-45HD

Hole Size/Drill Method: 8", HSA

Easting: 602046 E

Northing: 4821115 N

Datum: Geodetic

Logged by: RB

Checked by: LF

Sheet: 1 of 1

Notes: One groundwater sample (BH9) and a duplicate (DUP) was collected on March 19, 2019 and submitted for laboratory analyses of PHCs & BTEX, PAHs, Metals & Inorganics and VOCs.



S2S
Environmental Inc.

Project Number: 8674

Client: Your Home Developments

Location: 5080 Ninth Line, Mississauga, ON

Drill Date: March 14, 2019

Log of Borehole: BH10

SUBSURFACE PROFILE					SAMPLE				Hex (%LEL)		Well Completion Details
Depth (ft)	Depth (m)	Symbol	Description	Elevation (m)	Number	Type	Recovery	Laboratory Analyses	Hex (ppm)	IBL (ppm)	
-2	0		TOPSOIL, soft, dark brown, moist	189.15	1		100%		<25	<1	
2	1		SILT, trace clay, stiff, brown, moist - some clasts (poorly sorted), hard, no clay at approximately 0.9 m bgs	188.92	2		100%		<25	<1	
4	2		- stiff at approximately 2.3 m bgs		3		90%		<25	<1	
6	3		- grey, trace sand at approximately 3.4 m bgs		4		100%		<25	<1	
8	4		- medium stiff, no sand at approximately 4.7 m bgs		5		100%		<25	<1	
10	5		- some sand (2") at approximately 6.5 m bgs		6		100%	pH	<25	<1	
12	6				7		100%		<25	<1	
14	7		CLAY, some silt, medium plasticity, medium stiff, grey, moist	182.59							
16	8		SILT, non-plastic, medium stiff, grey, moist	181.53	8		5%				
18			End of Borehole								
20	9										
22	10										
24	11										
26	12										
28	13										
30	14										
32	15										
34											
36											
38											
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50											
52											

Drill Rig: B-45HD

Hole Size/Drill Method: 8", HSA

Easting: 602019 E

Northing: 4821081 N

Datum: Geodetic

Logged by: RB

Checked by: LF

Sheet: 1 of 1

Notes: No monitoring well installed.



S2S
Environmental Inc.

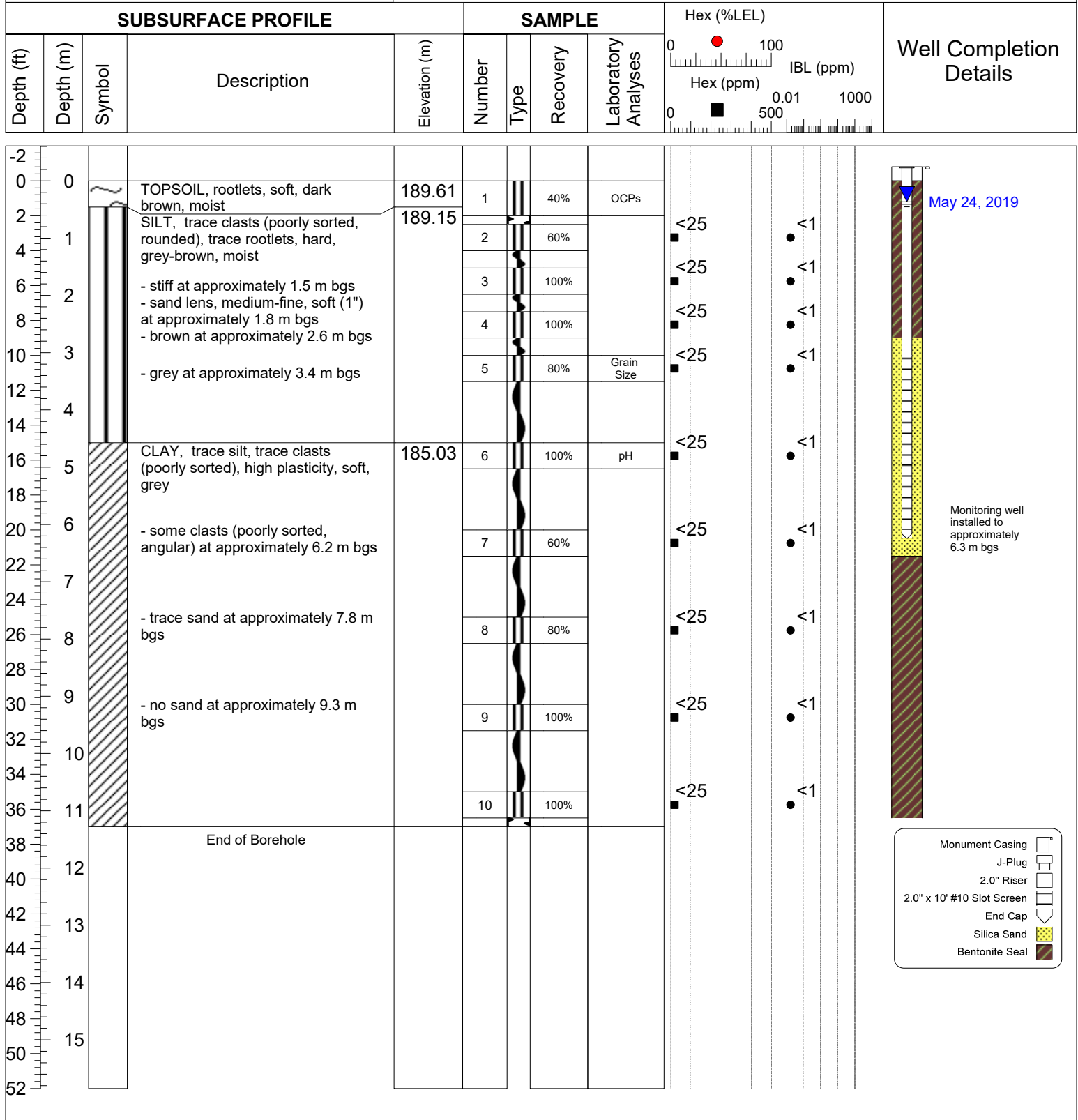
Project Number: 8674

Client: Your Home Developments

Location: 5080 Ninth Line, Mississauga, ON

Drill Date: March 15, 2019

Log of Borehole: BH11



Drill Rig: B-45HD

Hole Size/Drill Method: 8", HSA

Easting: 602011 E

Northing: 4821199 N

Datum: Geodetic

Logged by: RB

Checked by: LF

Sheet: 1 of 1

Notes: One groundwater sample (BH11) was collected on March 19, 2019 and submitted for laboratory analyses of OCPs.



S2S
Environmental Inc.

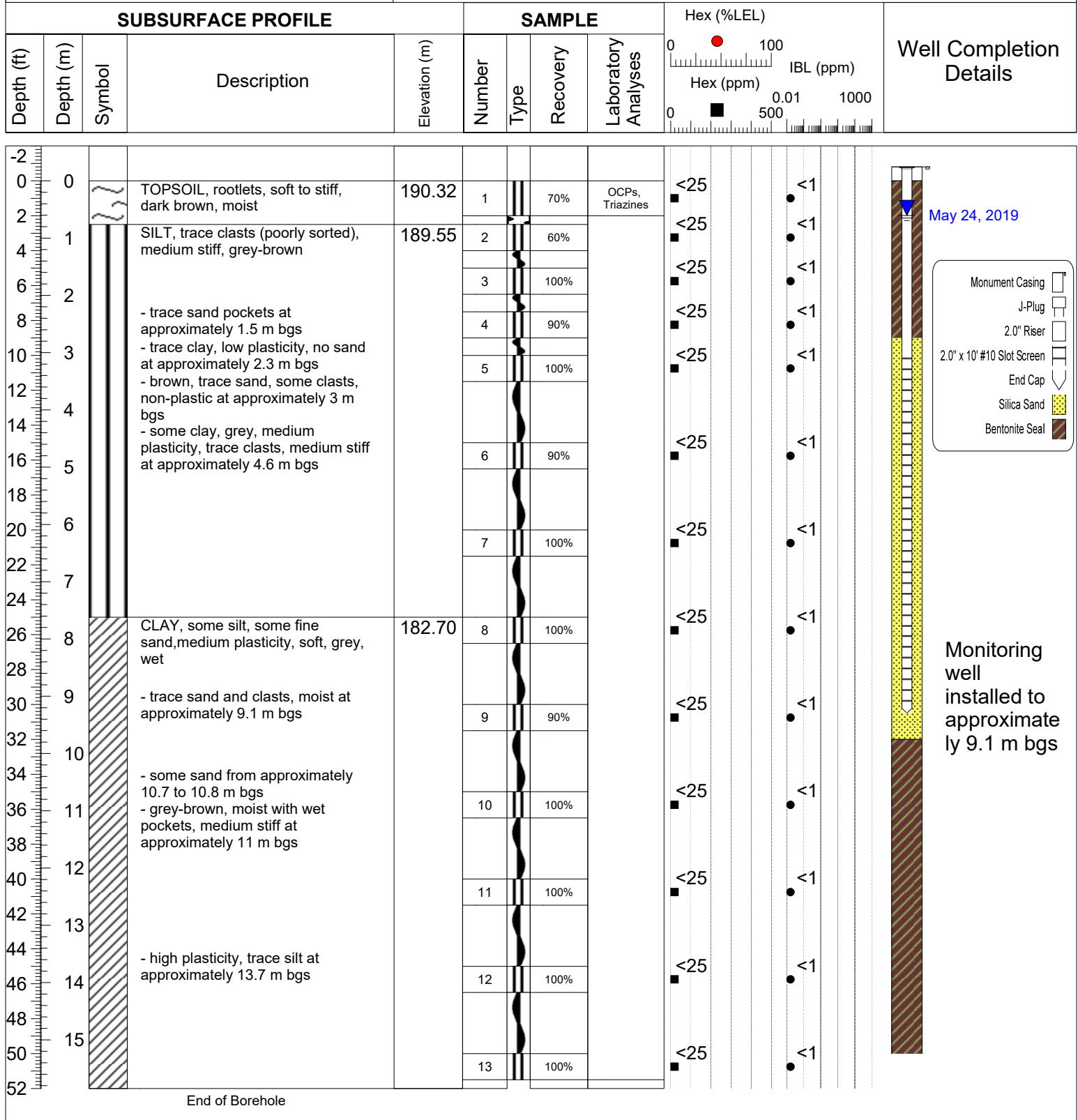
Project Number: 8674

Client: Your Home Developments

Location: 5080 Ninth Line, Mississauga, ON

Drill Date: March 12, 2019

Log of Borehole: BH12



Drill Rig: B-45HD

Hole Size/Drill Method: 8", HSA

Easting: 601982 E

Northing: 4821149 N

Datum: Geodetic

Logged by: RB

Checked by: LF

Sheet: 1 of 1

Notes: One groundwater sample (BH12) was collected on March 19, 2019 and submitted for laboratory analyses of OCPs.



S2S
Environmental Inc.

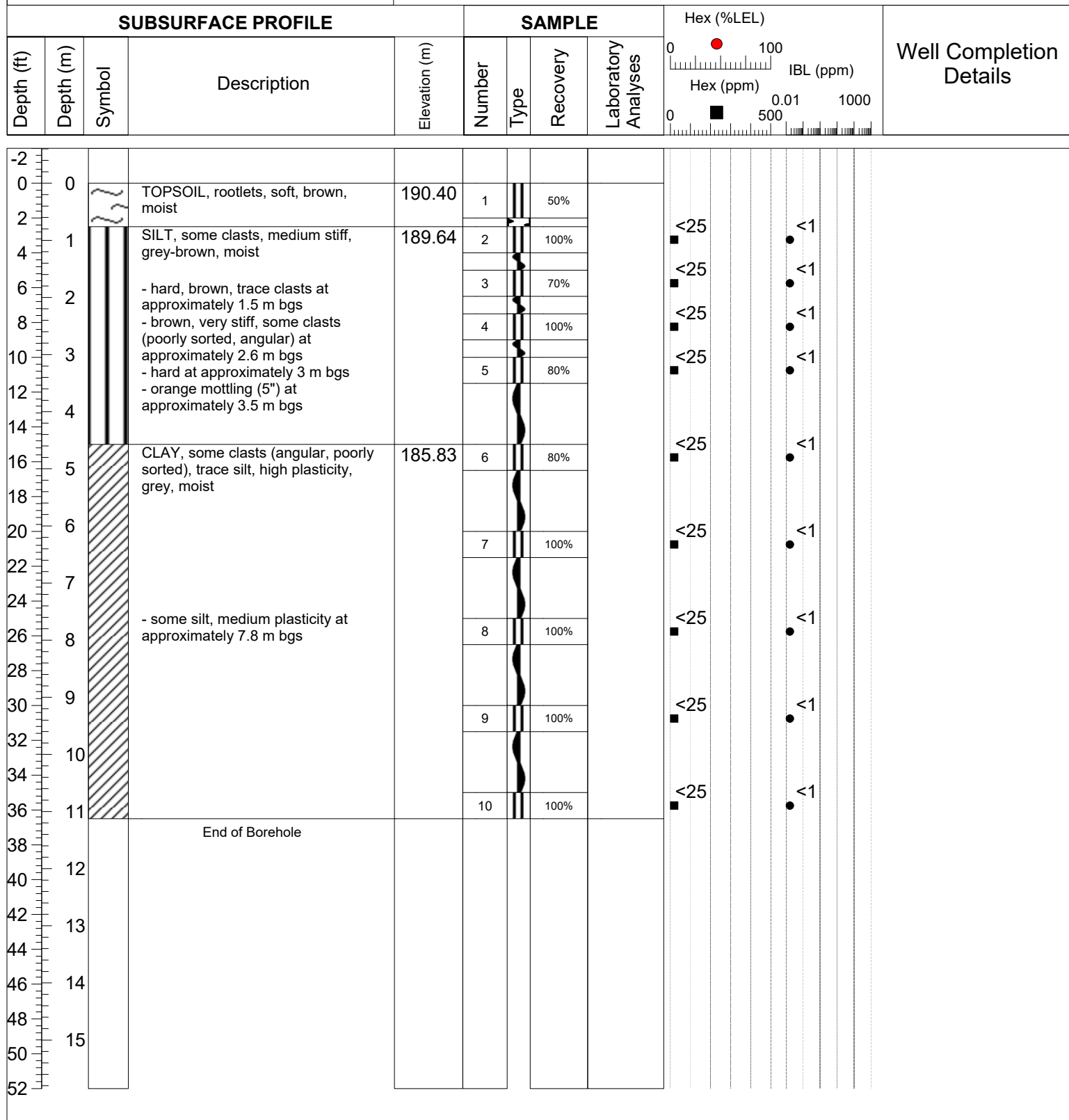
Project Number: 8674

Client: Your Home Developments

Location: 5080 Ninth Line, Mississauga, ON

Drill Date: March 15, 2019

Log of Borehole: BH13



Drill Rig: B-45HD

Hole Size/Drill Method: 8", HSA

Easting: 601938 E

Northing: 4821115 N

Datum: Geodetic

Logged by: RB

Checked by: LF

Sheet: 1 of 1

Notes: No monitoring well installed.



S2S
Environmental Inc.

Project Number: 8674

Client: Your Home Developments

Location: 5080 Ninth Line, Mississauga, ON

Drill Date: March 12, 2019

Log of Borehole: BH14

SUBSURFACE PROFILE					SAMPLE				Hex (%LEL)		Well Completion Details
Depth (ft)	Depth (m)	Symbol	Description	Elevation (m)	Number	Type	Recovery	Laboratory Analyses	Hex (ppm)	IBL (ppm)	
0	0		TOPSOIL, rootlets, organics, soft, dark brown, moist	190.72	1		70%	OCPs, DUP-P, Triazines			
4	1		SILT, some clasts (poorly sorted), non-plastic, stiff, brown, moist	190.11	2		100%				
8	2				3		100%				
12	3		End of Borehole								
16											
20											
24											
28											
32											
36											
40											
44											
48											
52											

Drill Rig: B-45HD

Hole Size/Drill Method: 8", HSA

Easting: 601933 E

Northing: 4821073 N

Datum: Geodetic

Logged by: RB

Checked by: LF

Sheet: 1 of 1

Notes: No monitoring well installed.



S2S
Environmental Inc.

Project Number: 8674

Client: Your Home Developments

Location: 5080 Ninth Line, Mississauga, ON

Drill Date: March 12, 2019

Log of Borehole: BH15

SUBSURFACE PROFILE					SAMPLE				Hex (%LEL)		Well Completion Details
Depth (ft)	Depth (m)	Symbol	Description	Elevation (m)	Number	Type	Recovery	Laboratory Analyses	Hex (ppm)	IBL (ppm)	
-4									0	0	
0	0		SILT, some clay, trace clasts (poorly sorted), medium plasticity, soft to stiff, brown, moist	188.93	1		70%	OCPs, Triazines	<25	<1	
1					2		60%		<25	<1	
2			- red-brown, some clasts, very stiff at approximately 0.8 m bgs		3		100%		<25	<1	
3			- non-plastic, no clay at approximately 1.5 m bgs		4		80%		<25	<1	
4			- brown, trace sand at approximately 3 m bgs		5		100%		<25	<1	
5											
6											
7											
8											
9											
10											
11											
12											
13			End of Borehole								
14											
15											
16											
17											
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20											
21											
22											
23											
24											
25											
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Drill Rig: B-45HD

Hole Size/Drill Method: 8", HSA

Easting: 601988 E

Northing: 4821035 N

Datum: Geodetic

Logged by: RB

Checked by: LF

Sheet: 1 of 1

Notes: One groundwater sample (BH15) and a duplicate (DUP1) was collected on March 19, 2019 and submitted for laboratory analyses of OCPs.



S2S
Environmental Inc.

Project Number: 8674

Client: Your Home Developments

Location: 5080 Ninth Line, Mississauga, ON

Drill Date: March 12, 2019

Log of Borehole: BH16

SUBSURFACE PROFILE					SAMPLE				Hex (%LEL)		Well Completion Details
Depth (ft)	Depth (m)	Symbol	Description	Elevation (m)	Number	Type	Recovery	Laboratory Analyses	Hex (ppm)	IBL (ppm)	
-4									0	0	
0	0		TOPSOIL, soft, cohesive, dark brown, moist	187.83	1		70%	OCPs, Triazines	0	0	
1	1								100	100	
2	2								0	0	
3	3								0	0	
4	4								0	0	
5	5								0	0	
6	6								0	0	
7	7								0	0	
8	8								0	0	
9	9								0	0	
10	10								0	0	
11	11								0	0	
12	12								0	0	
13	13								0	0	
14	14								0	0	
15	15								0	0	
16	16								0	0	
17	17								0	0	
18	18								0	0	
19	19								0	0	
20	20								0	0	
21	21								0	0	
22	22								0	0	
23	23								0	0	
24	24								0	0	
25	25								0	0	
26	26								0	0	
27	27								0	0	
28	28								0	0	
29	29								0	0	
30	30								0	0	
31	31								0	0	
32	32								0	0	
33	33								0	0	
34	34								0	0	
35	35								0	0	
36	36								0	0	
37	37								0	0	
38	38								0	0	
39	39								0	0	
40	40								0	0	
41	41								0	0	
42	42								0	0	
43	43								0	0	
44	44								0	0	
45	45								0	0	
46	46								0	0	
47	47								0	0	
48	48								0	0	
49	49								0	0	
50	50								0	0	
51	51								0	0	
52	52								0	0	

Drill Rig: B-45HD

Hole Size/Drill Method: 8", HSA

Easting: 602055 E

Northing: 4820992 N

Datum: Geodetic

Logged by: RB

Checked by: LF

Sheet: 1 of 1

Notes: No monitoring well installed.



S2S
Environmental Inc.

Project Number: 8674
Client: Your Home Developments
Location: 5080 Ninth Line, Milton, ON
Drill Date: July 2, 2019

Log of Borehole: BH201

SUBSURFACE PROFILE					SAMPLE				Hex (%LEL)		Well Completion Details
Depth (ft)	Depth (m)	Symbol	Description	Elevation (m)	Number	Type	Recovery	Laboratory Analyses	Hex (ppm)	IBL (ppm)	
									0 100	0.01 1000	
0	0		FILL, sand and gravel, topsoil, brown, loose	188.48							
2			CLAY, some silt, trace fine sand and gravel, brown-grey, high plasticity, medium stiff, moist	188.00	1			Metals			
4	1				2			Metals			
6	2		End of Borehole								
8											
10	3										
12											
14	4										
16											
18	5										
20											
22	6										
24											
26	7										
28											
30	8										
32											
34	9										
36											
38	10										
40											
42	11										
44											
46	12										
48											
50	13										
52											
	14										
	15										

Drill Rig: Hand-Auger

Hole Size/Drill Method: 3"

Easting: 602083 E

Northing: 4821154 N

Datum: Geodetic

Logged by: BG

Checked by: LF

Sheet: 1 of 1

Notes: Collected within one square meter of BH5 for metals.



S2S
Environmental Inc.

Project Number: 8674
Client: Your Home Developments
Location: 5080 Ninth Line, Milton, ON
Drill Date: July 2, 2019

Log of Borehole: BH202

SUBSURFACE PROFILE					SAMPLE				Hex (%LEL)		Well Completion Details
Depth (ft)	Depth (m)	Symbol	Description	Elevation (m)	Number	Type	Recovery	Laboratory Analyses	Hex (ppm)	IBL (ppm)	
									0 100	0.01 1000	
0	0		FILL, Sand and gravel, topsoil, brown, loose	188.48							
2			CLAY, some silt, trace fine sand and gravel, brown-grey, high plasticity, medium stiff, moist	188.00	1			Metals, BH202-1-DUP			
4	1				2						
6	2		End of Borehole								
8											
10	3										
12											
14	4										
16											
18	5										
20											
22	6										
24											
26	7										
28											
30	8										
32											
34	9										
36											
38	10										
40											
42	11										
44											
46	12										
48											
50	13										
52											
	14										
	15										

Drill Rig: Hand-Auger

Hole Size/Drill Method: 3"

Easting: 602083 E

Northing: 4821154 N

Datum: Geodetic

Logged by: BG

Checked by: LF

Sheet: 1 of 1

Notes: Collected within one square meter of BH5 for metals.



S2S
Environmental Inc.

Project Number: 8674
Client: Your Home Developments
Location: 5080 Ninth Line, Milton, ON
Drill Date: July 2, 2019

Log of Borehole: BH203

SUBSURFACE PROFILE					SAMPLE				Hex (%LEL)		Well Completion Details
Depth (ft)	Depth (m)	Symbol	Description	Elevation (m)	Number	Type	Recovery	Laboratory Analyses	Hex (ppm)	IBL (ppm)	
									0 100	0.01 1000	
0	0		FILL, Sand and gravel, topsoil, brown, loose	188.48							
2	1		CLAY, some silt, trace fine sand and gravel, brown-grey, high plasticity, medium stiff, moist	188.00	1			Metals			
4	1				2						
6	2		End of Borehole								
8											
10	3										
12											
14	4										
16											
18	5										
20											
22	6										
24											
26	7										
28											
30	8										
32											
34	9										
36											
38	10										
40											
42	11										
44											
46	12										
48											
50	13										
52											
	14										
	15										

Drill Rig: Hand-Auger

Hole Size/Drill Method: 3"

Easting: 602083 E

Northing: 4821154 N

Datum: Geodetic

Logged by: BG

Checked by: LF

Sheet: 1 of 1

Notes: Collected within one square meter of BH5 for metals.

APPENDIX C: LABORATORY CERTIFICATES OF ANALYSIS



Your P.O. #: 8674.PT.09.17.A
Your Project #: 8674
Site Location: 5080 NINTH LINE, MILTON
Your C.O.C. #: 125049, 125169

Attention: Rachel Baldwin

S2S Environmental Inc
1099 Kingston Rd
Suite 260
Pickering, ON
CANADA L1V 1B5

Report Date: 2019/03/21
Report #: R5638477
Version: 2 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B961919

Received: 2019/03/08, 19:41

Sample Matrix: Soil
Samples Received: 8

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
Methylnaphthalene Sum	4	N/A	2019/03/15	CAM SOP-00301	EPA 8270D m
Hot Water Extractable Boron	5	2019/03/13	2019/03/13	CAM SOP-00408	R153 Ana. Prot. 2011
Free (WAD) Cyanide	5	2019/03/13	2019/03/14	CAM SOP-00457	OMOE E3015 m
Conductivity	5	2019/03/14	2019/03/14	CAM SOP-00414	OMOE E3530 v1 m
Hexavalent Chromium in Soil by IC (1)	5	2019/03/12	2019/03/12	CAM SOP-00436	EPA 3060/7199 m
Petroleum Hydro. CCME F1 & BTEX in Soil (2)	1	N/A	2019/03/13	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydrocarbons F2-F4 in Soil (3)	1	2019/03/13	2019/03/13	CAM SOP-00316	CCME CWS m
Strong Acid Leachable Metals by ICPMS	5	2019/03/13	2019/03/13	CAM SOP-00447	EPA 6020B m
Moisture	8	N/A	2019/03/11	CAM SOP-00445	Carter 2nd ed 51.2 m
OC Pesticides (Selected) & PCB (4)	1	2019/03/12	2019/03/13	CAM SOP-00307	SW846 8081, 8082
OC Pesticides Summed Parameters	1	N/A	2019/03/12	CAM SOP-00307	EPA 8081/8082 m
PAH Compounds in Soil by GC/MS (SIM)	4	2019/03/14	2019/03/15	CAM SOP-00318	EPA 8270D m
pH CaCl2 EXTRACT	5	2019/03/12	2019/03/13	CAM SOP-00413	EPA 9045 D m
Sodium Adsorption Ratio (SAR)	5	N/A	2019/03/15	CAM SOP-00102	EPA 6010C
Triazines	1	2019/03/14	2019/03/20	CAM SOP-00301	EPA 8270 m

Remarks:

Maxxam Analytics' laboratories are accredited to ISO/IEC 17025:2005 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Maxxam are based upon recognized Provincial, Federal or US method compendia such as CCME, MDDELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Maxxam's profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Maxxam in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Maxxam Analytics' liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Maxxam has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Maxxam, unless otherwise agreed in writing. Maxxam is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope

Your P.O. #: 8674.PT.09.17.A
Your Project #: 8674
Site Location: 5080 NINTH LINE, MILTON
Your C.O.C. #: 125049, 125169

Attention: Rachel Baldwin

S2S Environmental Inc
1099 Kingston Rd
Suite 260
Pickering, ON
CANADA L1V 1B5

Report Date: 2019/03/21
Report #: R5638477
Version: 2 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B961919

Received: 2019/03/08, 19:41

dilution methods.

Results relate to samples tested. When sampling is not conducted by Maxxam, results relate to the supplied samples tested.

This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) Soils are reported on a dry weight basis unless otherwise specified.

(2) No lab extraction date is given for F1BTX & VOC samples that are field preserved with methanol. Extraction date is the date sampled unless otherwise stated.

(3) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Maxxam conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following "Alberta Environment's Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Validation of Performance-Based Alternative Methods September 2003". Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.

(4) Chlordane (Total) = Alpha Chlordane + Gamma Chlordane

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

Jolanta Goralczyk, Project Manager

Email: JGoralczyk@maxxam.ca

Phone# (905)817-5751

=====

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

O.REG 153 METALS & INORGANICS PKG (SOIL)

Maxxam ID		JDU679			JDU680		JDU682		
Sampling Date		2019/03/07 09:00			2019/03/07 13:50		2019/03/08 14:00		
COC Number		125049			125049		125049		
	UNITS	BH5-1	RDL	QC Batch	BH4-1	QC Batch	BH2-1	RDL	QC Batch
Calculated Parameters									
Sodium Adsorption Ratio	N/A	4.2		6010806	0.36	6010806	0.20		6010806
Inorganics									
Conductivity	mS/cm	0.69	0.002	6016182	0.17	6016182	0.22	0.002	6016182
Moisture	%				27	6011904	20	1.0	6013139
Available (CaCl ₂) pH	pH	7.68		6013785	7.13	6013785	7.59		6013785
WAD Cyanide (Free)	ug/g	<0.01	0.01	6015864	<0.01	6015864	<0.01	0.01	6015864
Chromium (VI)	ug/g	<0.2	0.2	6013283	<0.2	6013283	<0.2	0.2	6013283
Metals									
Hot Water Ext. Boron (B)	ug/g	0.36	0.050	6015893	0.18	6015893	0.31	0.050	6015893
Acid Extractable Antimony (Sb)	ug/g	<0.20	0.20	6015604	<0.20	6015604	<0.20	0.20	6015604
Acid Extractable Arsenic (As)	ug/g	4.4	1.0	6015604	5.4	6015604	3.8	1.0	6015604
Acid Extractable Barium (Ba)	ug/g	88	0.50	6015604	110	6015604	71	0.50	6015604
Acid Extractable Beryllium (Be)	ug/g	0.75	0.20	6015604	1.0	6015604	0.67	0.20	6015604
Acid Extractable Boron (B)	ug/g	8.5	5.0	6015604	6.9	6015604	8.5	5.0	6015604
Acid Extractable Cadmium (Cd)	ug/g	0.20	0.10	6015604	0.13	6015604	0.14	0.10	6015604
Acid Extractable Chromium (Cr)	ug/g	23	1.0	6015604	30	6015604	20	1.0	6015604
Acid Extractable Cobalt (Co)	ug/g	11	0.10	6015604	12	6015604	9.5	0.10	6015604
Acid Extractable Copper (Cu)	ug/g	25	0.50	6015604	33	6015604	24	0.50	6015604
Acid Extractable Lead (Pb)	ug/g	16	1.0	6015604	13	6015604	13	1.0	6015604
Acid Extractable Molybdenum (Mo)	ug/g	0.50	0.50	6015604	<0.50	6015604	<0.50	0.50	6015604
Acid Extractable Nickel (Ni)	ug/g	24	0.50	6015604	33	6015604	22	0.50	6015604
Acid Extractable Selenium (Se)	ug/g	<0.50	0.50	6015604	<0.50	6015604	<0.50	0.50	6015604
Acid Extractable Silver (Ag)	ug/g	<0.20	0.20	6015604	<0.20	6015604	<0.20	0.20	6015604
Acid Extractable Thallium (Tl)	ug/g	0.15	0.050	6015604	0.19	6015604	0.14	0.050	6015604
Acid Extractable Uranium (U)	ug/g	0.77	0.050	6015604	0.83	6015604	0.58	0.050	6015604
Acid Extractable Vanadium (V)	ug/g	33	5.0	6015604	40	6015604	29	5.0	6015604
Acid Extractable Zinc (Zn)	ug/g	380	5.0	6015604	73	6015604	62	5.0	6015604
Acid Extractable Mercury (Hg)	ug/g	<0.050	0.050	6015604	<0.050	6015604	<0.050	0.050	6015604
RDL = Reportable Detection Limit									
QC Batch = Quality Control Batch									

Maxxam Job #: B961919
Report Date: 2019/03/21

S2S Environmental Inc
Client Project #: 8674
Site Location: 5080 NINTH LINE, MILTON
Your P.O. #: 8674.PT.09.17.A
Sampler Initials: PB

O.REG 153 METALS & INORGANICS PKG (SOIL)

Maxxam ID		JDU682			JDU684	JDU685			JDU685		
Sampling Date		2019/03/08 14:00			2019/03/08 08:40	2019/03/08 08:40			2019/03/08 08:40		
COC Number		125049			125049	125049			125049		
	UNITS	BH2-1 Lab-Dup	RDL	QC Batch	DUP1	BH3-1	RDL	QC Batch	BH3-1 Lab-Dup	RDL	QC Batch

Calculated Parameters											
Sodium Adsorption Ratio	N/A				2.2	2.6		6010806			

Inorganics											
Conductivity	mS/cm	0.23	0.002	6016182	0.46	0.41	0.002	6016182			
Moisture	%	20	1.0	6013139	26	18	1.0	6013139			
Available (CaCl ₂) pH	pH				7.63	7.58		6013785			
WAD Cyanide (Free)	ug/g				0.02	0.01	0.01	6015864	0.01	0.01	6015864
Chromium (VI)	ug/g				<0.2	<0.2	0.2	6013283			

Metals											
Hot Water Ext. Boron (B)	ug/g				1.0	0.77	0.050	6015893			
Acid Extractable Antimony (Sb)	ug/g				0.27	0.22	0.20	6015604			
Acid Extractable Arsenic (As)	ug/g				4.7	4.8	1.0	6015604			
Acid Extractable Barium (Ba)	ug/g				68	67	0.50	6015604			
Acid Extractable Beryllium (Be)	ug/g				0.54	0.65	0.20	6015604			
Acid Extractable Boron (B)	ug/g				10	7.4	5.0	6015604			
Acid Extractable Cadmium (Cd)	ug/g				0.50	0.47	0.10	6015604			
Acid Extractable Chromium (Cr)	ug/g				19	21	1.0	6015604			
Acid Extractable Cobalt (Co)	ug/g				7.6	8.1	0.10	6015604			
Acid Extractable Copper (Cu)	ug/g				30	29	0.50	6015604			
Acid Extractable Lead (Pb)	ug/g				44	36	1.0	6015604			
Acid Extractable Molybdenum (Mo)	ug/g				0.80	0.59	0.50	6015604			
Acid Extractable Nickel (Ni)	ug/g				22	22	0.50	6015604			
Acid Extractable Selenium (Se)	ug/g				<0.50	<0.50	0.50	6015604			
Acid Extractable Silver (Ag)	ug/g				<0.20	<0.20	0.20	6015604			
Acid Extractable Thallium (Tl)	ug/g				0.12	0.14	0.050	6015604			
Acid Extractable Uranium (U)	ug/g				0.54	0.64	0.050	6015604			
Acid Extractable Vanadium (V)	ug/g				26	30	5.0	6015604			
Acid Extractable Zinc (Zn)	ug/g				100	91	5.0	6015604			
Acid Extractable Mercury (Hg)	ug/g				0.067	0.053	0.050	6015604			

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

O.REG 153 OC PESTICIDES (SOIL)

Maxxam ID		JDU680		
Sampling Date		2019/03/07 13:50		
COC Number		125049		
	UNITS	BH4-1	RDL	QC Batch
Calculated Parameters				
Chlordane (Total)	ug/g	<0.0020	0.0020	6010812
o,p-DDD + p,p-DDD	ug/g	<0.0020	0.0020	6010812
o,p-DDE + p,p-DDE	ug/g	<0.0020	0.0020	6010812
o,p-DDT + p,p-DDT	ug/g	<0.0020	0.0020	6010812
Total Endosulfan	ug/g	<0.0020	0.0020	6010812
Total PCB	ug/g	<0.015	0.015	6010812
Pesticides & Herbicides				
Aldrin	ug/g	<0.0020	0.0020	6014786
a-Chlordane	ug/g	<0.0020	0.0020	6014786
g-Chlordane	ug/g	<0.0020	0.0020	6014786
o,p-DDD	ug/g	<0.0020	0.0020	6014786
p,p-DDD	ug/g	<0.0020	0.0020	6014786
o,p-DDE	ug/g	<0.0020	0.0020	6014786
p,p-DDE	ug/g	<0.0020	0.0020	6014786
o,p-DDT	ug/g	<0.0020	0.0020	6014786
p,p-DDT	ug/g	<0.0020	0.0020	6014786
Dieldrin	ug/g	<0.0020	0.0020	6014786
Lindane	ug/g	<0.0020	0.0020	6014786
Endosulfan I (alpha)	ug/g	<0.0020	0.0020	6014786
Endosulfan II (beta)	ug/g	<0.0020	0.0020	6014786
Endrin	ug/g	<0.0020	0.0020	6014786
Heptachlor	ug/g	<0.0020	0.0020	6014786
Heptachlor epoxide	ug/g	<0.0020	0.0020	6014786
Hexachlorobenzene	ug/g	<0.0020	0.0020	6014786
Hexachlorobutadiene	ug/g	<0.0020	0.0020	6014786
Hexachloroethane	ug/g	<0.0020	0.0020	6014786
Methoxychlor	ug/g	<0.0050	0.0050	6014786
Aroclor 1242	ug/g	<0.015	0.015	6014786
Aroclor 1248	ug/g	<0.015	0.015	6014786
Aroclor 1254	ug/g	<0.015	0.015	6014786
RDL = Reportable Detection Limit				
QC Batch = Quality Control Batch				

Maxxam Job #: B961919
Report Date: 2019/03/21

S2S Environmental Inc
Client Project #: 8674
Site Location: 5080 NINTH LINE, MILTON
Your P.O. #: 8674.PT.09.17.A
Sampler Initials: PB

O.REG 153 OC PESTICIDES (SOIL)

Maxxam ID		JDU680		
Sampling Date		2019/03/07 13:50		
COC Number		125049		
	UNITS	BH4-1	RDL	QC Batch
Aroclor 1260	ug/g	<0.015	0.015	6014786
Surrogate Recovery (%)				
2,4,5,6-Tetrachloro-m-xylene	%	84		6014786
Decachlorobiphenyl	%	109		6014786
RDL = Reportable Detection Limit				
QC Batch = Quality Control Batch				

O.REG 153 PAHS (SOIL)

Maxxam ID		JDU677	JDU678	JDU679			JDU680		
Sampling Date		2019/03/08 08:50	2019/03/08 08:50	2019/03/07 09:00			2019/03/07 13:50		
COC Number		125049	125049	125049			125049		
	UNITS	BH3-2	DUP2	BH5-1	RDL	QC Batch	BH4-1	RDL	QC Batch
Inorganics									
Moisture	%	14	13	21	1.0	6011904			
Calculated Parameters									
Methylnaphthalene, 2-(1-)	ug/g	<0.0071	<0.0071	<0.0071	0.0071	6010740	<0.0071	0.0071	6010740
Polyaromatic Hydrocarbons									
Acenaphthene	ug/g	<0.0050	<0.0050	<0.0050	0.0050	6018770	<0.0050	0.0050	6018770
Acenaphthylene	ug/g	<0.0050	<0.0050	<0.0050	0.0050	6018770	<0.0050	0.0050	6018770
Anthracene	ug/g	<0.0050	<0.0050	<0.0050	0.0050	6018770	<0.0050	0.0050	6018770
Benzo(a)anthracene	ug/g	<0.0050	<0.0050	<0.0050	0.0050	6018770	<0.0050	0.0050	6018770
Benzo(a)pyrene	ug/g	<0.0050	<0.0050	<0.0050	0.0050	6018770	<0.0050	0.0050	6018770
Benzo(b/j)fluoranthene	ug/g	<0.0050	<0.0050	0.0086	0.0050	6018770	0.0077	0.0050	6018770
Benzo(g,h,i)perylene	ug/g	<0.0050	<0.0050	<0.0050	0.0050	6018770	<0.0050	0.0050	6018770
Benzo(k)fluoranthene	ug/g	<0.0050	<0.0050	<0.0050	0.0050	6018770	<0.0050	0.0050	6018770
Chrysene	ug/g	<0.0050	<0.0050	<0.0050	0.0050	6018770	<0.0050	0.0050	6018770
Dibenz(a,h)anthracene	ug/g	<0.0050	<0.0050	<0.0050	0.0050	6018770	<0.0050	0.0050	6018770
Fluoranthene	ug/g	<0.0050	<0.0050	0.0072	0.0050	6018770	0.0091	0.0050	6018770
Fluorene	ug/g	<0.0050	<0.0050	<0.0050	0.0050	6018770	<0.0050	0.0050	6018770
Indeno(1,2,3-cd)pyrene	ug/g	<0.0050	<0.0050	<0.0050	0.0050	6018770	<0.0050	0.0050	6018770
1-Methylnaphthalene	ug/g	<0.0050	<0.0050	<0.0050	0.0050	6018770	<0.0050	0.0050	6018770
2-Methylnaphthalene	ug/g	<0.0050	<0.0050	<0.0050	0.0050	6018770	<0.0050	0.0050	6018770
Naphthalene	ug/g	<0.0050	<0.0050	<0.0050	0.0050	6018770	<0.0050	0.0050	6018770
Phenanthrene	ug/g	<0.0050	<0.0050	<0.0050	0.0050	6018770	<0.0050	0.0050	6018770
Pyrene	ug/g	<0.0050	<0.0050	0.0056	0.0050	6018770	0.0070	0.0050	6018770
Surrogate Recovery (%)									
D10-Anthracene	%	100	97	101		6018770	99		6018770
D14-Terphenyl (FS)	%	94	92	94		6018770	95		6018770
D8-Acenaphthylene	%	92	91	97		6018770	96		6018770
RDL = Reportable Detection Limit									
QC Batch = Quality Control Batch									

O.REG 153 PETROLEUM HYDROCARBONS (SOIL)

Maxxam ID		JDU681		
Sampling Date		2019/03/08 11:35		
COC Number		125049		
	UNITS	BH3-6	RDL	QC Batch
Inorganics				
Moisture	%	13	1.0	6011904
BTEX & F1 Hydrocarbons				
Benzene	ug/g	<0.020	0.020	6017226
Toluene	ug/g	<0.020	0.020	6017226
Ethylbenzene	ug/g	<0.020	0.020	6017226
o-Xylene	ug/g	<0.020	0.020	6017226
p+m-Xylene	ug/g	<0.040	0.040	6017226
Total Xylenes	ug/g	<0.040	0.040	6017226
F1 (C6-C10)	ug/g	<10	10	6017226
F1 (C6-C10) - BTEX	ug/g	<10	10	6017226
F2-F4 Hydrocarbons				
F2 (C10-C16 Hydrocarbons)	ug/g	<10	10	6016467
F3 (C16-C34 Hydrocarbons)	ug/g	<50	50	6016467
F4 (C34-C50 Hydrocarbons)	ug/g	<50	50	6016467
Reached Baseline at C50	ug/g	Yes		6016467
Hydrocarbon Resemblance	ug/g	NA (1)	N/A	6016467
Surrogate Recovery (%)				
1,4-Difluorobenzene	%	103		6017226
4-Bromofluorobenzene	%	100		6017226
D10-Ethylbenzene	%	107		6017226
D4-1,2-Dichloroethane	%	101		6017226
o-Terphenyl	%	95		6016467
RDL = Reportable Detection Limit QC Batch = Quality Control Batch N/A = Not Applicable (1) NA: Not Applicable				

SEMI-VOLATILE ORGANICS BY GC-MS (SOIL)

Maxxam ID		JDU680		
Sampling Date		2019/03/07 13:50		
COC Number		125049		
	UNITS	BH4-1	RDL	QC Batch
Pesticides & Herbicides				
Prometon	ug/g	<0.050	0.050	6023938
Simazine	ug/g	<0.25	0.25	6023938
Atrazine	ug/g	<0.10	0.10	6023938
Propazine	ug/g	<0.25	0.25	6023938
Metribuzin (Sencor)	ug/g	<0.10	0.10	6023938
Simetryn	ug/g	<0.050	0.050	6023938
Ametryn	ug/g	<0.25	0.25	6023938
Prometryne	ug/g	<0.25	0.25	6023938
Terbutryne	ug/g	<0.050	0.050	6023938
Cyanazine (Bladex)	ug/g	<0.25	0.25	6023938
Surrogate Recovery (%)				
2-Fluorobiphenyl	%	79		6023938
D14-Terphenyl (FS)	%	91		6023938
D5-Nitrobenzene	%	78		6023938
RDL = Reportable Detection Limit				
QC Batch = Quality Control Batch				

Maxxam Job #: B961919
Report Date: 2019/03/21

S2S Environmental Inc
Client Project #: 8674
Site Location: 5080 NINTH LINE, MILTON
Your P.O. #: 8674.PT.09.17.A
Sampler Initials: PB

TEST SUMMARY

Maxxam ID: JDU677
Sample ID: BH3-2
Matrix: Soil

Collected: 2019/03/08
Shipped:
Received: 2019/03/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	6010740	N/A	2019/03/15	Anastassia Hamanov
Moisture	BAL	6011904	N/A	2019/03/11	Min Yang
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	6018770	2019/03/14	2019/03/15	Mitesh Raj

Maxxam ID: JDU678
Sample ID: DUP2
Matrix: Soil

Collected: 2019/03/08
Shipped:
Received: 2019/03/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	6010740	N/A	2019/03/15	Anastassia Hamanov
Moisture	BAL	6011904	N/A	2019/03/11	Min Yang
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	6018770	2019/03/14	2019/03/15	Mitesh Raj

Maxxam ID: JDU679
Sample ID: BH5-1
Matrix: Soil

Collected: 2019/03/07
Shipped:
Received: 2019/03/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	6010740	N/A	2019/03/15	Anastassia Hamanov
Hot Water Extractable Boron	ICP	6015893	2019/03/13	2019/03/13	Jolly John
Free (WAD) Cyanide	TECH	6015864	2019/03/13	2019/03/14	Barbara Kalbasi Esfahani
Conductivity	AT	6016182	2019/03/14	2019/03/14	Kazzandra Adeva
Hexavalent Chromium in Soil by IC	IC/SPEC	6013283	2019/03/12	2019/03/12	Sally Norouz
Strong Acid Leachable Metals by ICPMS	ICP/MS	6015604	2019/03/13	2019/03/13	Viviana Canzonieri
Moisture	BAL	6011904	N/A	2019/03/11	Min Yang
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	6018770	2019/03/14	2019/03/15	Mitesh Raj
pH CaCl2 EXTRACT	AT	6013785	2019/03/12	2019/03/13	Gnana Thomas
Sodium Adsorption Ratio (SAR)	CALC/MET	6010806	N/A	2019/03/15	Anastassia Hamanov

Maxxam ID: JDU680
Sample ID: BH4-1
Matrix: Soil

Collected: 2019/03/07
Shipped:
Received: 2019/03/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	6010740	N/A	2019/03/15	Anastassia Hamanov
Hot Water Extractable Boron	ICP	6015893	2019/03/13	2019/03/13	Jolly John
Free (WAD) Cyanide	TECH	6015864	2019/03/13	2019/03/14	Barbara Kalbasi Esfahani
Conductivity	AT	6016182	2019/03/14	2019/03/14	Kazzandra Adeva
Hexavalent Chromium in Soil by IC	IC/SPEC	6013283	2019/03/12	2019/03/12	Sally Norouz
Strong Acid Leachable Metals by ICPMS	ICP/MS	6015604	2019/03/13	2019/03/13	Viviana Canzonieri
Moisture	BAL	6011904	N/A	2019/03/11	Min Yang
OC Pesticides (Selected) & PCB	GC/ECD	6014786	2019/03/12	2019/03/13	Li Peng
OC Pesticides Summed Parameters	CALC	6010812	N/A	2019/03/12	Ewa Pranjic
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	6018770	2019/03/14	2019/03/15	Mitesh Raj
pH CaCl2 EXTRACT	AT	6013785	2019/03/12	2019/03/13	Gnana Thomas

Maxxam Job #: B961919
Report Date: 2019/03/21

S2S Environmental Inc
Client Project #: 8674
Site Location: 5080 NINTH LINE, MILTON
Your P.O. #: 8674.PT.09.17.A
Sampler Initials: PB

TEST SUMMARY

Maxxam ID: JDU680
Sample ID: BH4-1
Matrix: Soil

Collected: 2019/03/07
Shipped:
Received: 2019/03/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Sodium Adsorption Ratio (SAR)	CALC/MET	6010806	N/A	2019/03/15	Anastassia Hamanov
Triazines	GC/MS	6023938	2019/03/14	2019/03/20	May Yin Mak

Maxxam ID: JDU681
Sample ID: BH3-6
Matrix: Soil

Collected: 2019/03/08
Shipped:
Received: 2019/03/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	6017226	N/A	2019/03/13	Georgeta Rusu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	6016467	2019/03/13	2019/03/13	Prabhjot Gulati
Moisture	BAL	6011904	N/A	2019/03/11	Min Yang

Maxxam ID: JDU682
Sample ID: BH2-1
Matrix: Soil

Collected: 2019/03/08
Shipped:
Received: 2019/03/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	6015893	2019/03/13	2019/03/13	Jolly John
Free (WAD) Cyanide	TECH	6015864	2019/03/13	2019/03/14	Barbara Kalbasi Esfahani
Conductivity	AT	6016182	2019/03/14	2019/03/14	Kazzandra Adeva
Hexavalent Chromium in Soil by IC	IC/SPEC	6013283	2019/03/12	2019/03/12	Sally Norouz
Strong Acid Leachable Metals by ICPMS	ICP/MS	6015604	2019/03/13	2019/03/13	Viviana Canzonieri
Moisture	BAL	6013139	N/A	2019/03/11	Prgya Panchal
pH CaCl2 EXTRACT	AT	6013785	2019/03/12	2019/03/13	Gnana Thomas
Sodium Adsorption Ratio (SAR)	CALC/MET	6010806	N/A	2019/03/15	Anastassia Hamanov

Maxxam ID: JDU682 Dup
Sample ID: BH2-1
Matrix: Soil

Collected: 2019/03/08
Shipped:
Received: 2019/03/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Conductivity	AT	6016182	2019/03/14	2019/03/14	Kazzandra Adeva
Moisture	BAL	6013139	N/A	2019/03/11	Prgya Panchal

Maxxam ID: JDU684
Sample ID: DUP1
Matrix: Soil

Collected: 2019/03/08
Shipped:
Received: 2019/03/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	6015893	2019/03/13	2019/03/13	Jolly John
Free (WAD) Cyanide	TECH	6015864	2019/03/13	2019/03/14	Barbara Kalbasi Esfahani
Conductivity	AT	6016182	2019/03/14	2019/03/14	Kazzandra Adeva
Hexavalent Chromium in Soil by IC	IC/SPEC	6013283	2019/03/12	2019/03/12	Sally Norouz
Strong Acid Leachable Metals by ICPMS	ICP/MS	6015604	2019/03/13	2019/03/13	Viviana Canzonieri
Moisture	BAL	6013139	N/A	2019/03/11	Prgya Panchal

Maxxam Job #: B961919
Report Date: 2019/03/21

S2S Environmental Inc
Client Project #: 8674
Site Location: 5080 NINTH LINE, MILTON
Your P.O. #: 8674.PT.09.17.A
Sampler Initials: PB

TEST SUMMARY

Maxxam ID: JDU684
Sample ID: DUP1
Matrix: Soil

Collected: 2019/03/08
Shipped:
Received: 2019/03/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
pH CaCl ₂ EXTRACT	AT	6013785	2019/03/12	2019/03/13	Gnana Thomas
Sodium Adsorption Ratio (SAR)	CALC/MET	6010806	N/A	2019/03/15	Anastassia Hamanov

Maxxam ID: JDU685
Sample ID: BH3-1
Matrix: Soil

Collected: 2019/03/08
Shipped:
Received: 2019/03/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	6015893	2019/03/13	2019/03/13	Jolly John
Free (WAD) Cyanide	TECH	6015864	2019/03/13	2019/03/14	Barbara Kalbasi Esfahani
Conductivity	AT	6016182	2019/03/14	2019/03/14	Kazzandra Adeva
Hexavalent Chromium in Soil by IC	IC/SPEC	6013283	2019/03/12	2019/03/12	Sally Norouz
Strong Acid Leachable Metals by ICPMS	ICP/MS	6015604	2019/03/13	2019/03/13	Viviana Canzonieri
Moisture	BAL	6013139	N/A	2019/03/11	Prgya Panchal
pH CaCl ₂ EXTRACT	AT	6013785	2019/03/12	2019/03/13	Gnana Thomas
Sodium Adsorption Ratio (SAR)	CALC/MET	6010806	N/A	2019/03/15	Anastassia Hamanov

Maxxam ID: JDU685 Dup
Sample ID: BH3-1
Matrix: Soil

Collected: 2019/03/08
Shipped:
Received: 2019/03/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Free (WAD) Cyanide	TECH	6015864	2019/03/13	2019/03/14	Barbara Kalbasi Esfahani

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	4.0°C
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Sample JDU682 [BH2-1] : SAR Analysis: Sodium was not detected. To report SAR the sodium detection limit was used in the calculation. This value represents a maximum ratio.

Results relate only to the items tested.

Maxxam Job #: B961919
Report Date: 2019/03/21

S2S Environmental Inc
Client Project #: 8674
Site Location: 5080 NINTH LINE, MILTON
Your P.O. #: 8674.PT.09.17.A
Sampler Initials: PB

QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
6011904	GYA	RPD	Moisture	2019/03/11	4.1		%	20
6013139	NKG	RPD [JDU682-01]	Moisture	2019/03/11	2.5		%	20
6013283	SAC	Matrix Spike	Chromium (VI)	2019/03/12		48 (1)	%	70 - 130
6013283	SAC	Spiked Blank	Chromium (VI)	2019/03/12		86	%	80 - 120
6013283	SAC	Method Blank	Chromium (VI)	2019/03/12	<0.2		ug/g	
6013283	SAC	RPD	Chromium (VI)	2019/03/12	NC		%	35
6013785	GTO	Spiked Blank	Available (CaCl ₂) pH	2019/03/13		101	%	97 - 103
6013785	GTO	RPD	Available (CaCl ₂) pH	2019/03/13	1.3		%	N/A
6014786	LPG	Matrix Spike	2,4,5,6-Tetrachloro-m-xylene	2019/03/13		78	%	50 - 130
			Decachlorobiphenyl	2019/03/13		100	%	50 - 130
			Aldrin	2019/03/13		79	%	50 - 130
			a-Chlordane	2019/03/13		88	%	50 - 130
			g-Chlordane	2019/03/13		83	%	50 - 130
			o,p-DDD	2019/03/13		99	%	50 - 130
			p,p-DDD	2019/03/13		89	%	50 - 130
			o,p-DDE	2019/03/13		89	%	50 - 130
			p,p-DDE	2019/03/13		95	%	50 - 130
			o,p-DDT	2019/03/13		98	%	50 - 130
			p,p-DDT	2019/03/13		108	%	50 - 130
			Dieldrin	2019/03/13		94	%	50 - 130
			Lindane	2019/03/13		72	%	50 - 130
			Endosulfan I (alpha)	2019/03/13		79	%	50 - 130
			Endosulfan II (beta)	2019/03/13		92	%	50 - 130
			Endrin	2019/03/13		90	%	50 - 130
			Heptachlor	2019/03/13		92	%	50 - 130
			Heptachlor epoxide	2019/03/13		77	%	50 - 130
			Hexachlorobenzene	2019/03/13		81	%	50 - 130
			Hexachlorobutadiene	2019/03/13		88	%	50 - 130
			Hexachloroethane	2019/03/13		91	%	50 - 130
			Methoxychlor	2019/03/13		110	%	50 - 130
6014786	LPG	Spiked Blank	2,4,5,6-Tetrachloro-m-xylene	2019/03/13		87	%	50 - 130
			Decachlorobiphenyl	2019/03/13		112	%	50 - 130
			Aldrin	2019/03/13		87	%	50 - 130
			a-Chlordane	2019/03/13		95	%	50 - 130
			g-Chlordane	2019/03/13		90	%	50 - 130
			o,p-DDD	2019/03/13		105	%	50 - 130
			p,p-DDD	2019/03/13		93	%	50 - 130
			o,p-DDE	2019/03/13		97	%	50 - 130
			p,p-DDE	2019/03/13		98	%	50 - 130
			o,p-DDT	2019/03/13		99	%	50 - 130
			p,p-DDT	2019/03/13		105	%	50 - 130
			Dieldrin	2019/03/13		107	%	50 - 130
			Lindane	2019/03/13		82	%	50 - 130
			Endosulfan I (alpha)	2019/03/13		87	%	50 - 130
			Endosulfan II (beta)	2019/03/13		92	%	50 - 130
			Endrin	2019/03/13		93	%	50 - 130
			Heptachlor	2019/03/13		89	%	50 - 130
			Heptachlor epoxide	2019/03/13		87	%	50 - 130
			Hexachlorobenzene	2019/03/13		94	%	50 - 130
			Hexachlorobutadiene	2019/03/13		106	%	50 - 130
			Hexachloroethane	2019/03/13		88	%	50 - 130
			Methoxychlor	2019/03/13		115	%	50 - 130

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QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
6014786	LPG	RPD	Aroclor 1242	2019/03/13	200 (2)		%	40
			Aldrin	2019/03/13	NC		%	40
			a-Chlordane	2019/03/13	NC		%	40
			g-Chlordane	2019/03/13	NC		%	40
			o,p-DDD	2019/03/13	NC		%	40
			p,p-DDD	2019/03/13	NC		%	40
			o,p-DDE	2019/03/13	NC		%	40
			p,p-DDE	2019/03/13	NC		%	40
			o,p-DDT	2019/03/13	NC		%	40
			p,p-DDT	2019/03/13	NC		%	40
			Dieldrin	2019/03/13	NC		%	40
			Lindane	2019/03/13	NC		%	40
			Endosulfan I (alpha)	2019/03/13	NC		%	40
			Endosulfan II (beta)	2019/03/13	NC		%	40
			Endrin	2019/03/13	NC		%	40
			Heptachlor	2019/03/13	NC		%	40
			Heptachlor epoxide	2019/03/13	NC		%	40
			Hexachlorobenzene	2019/03/13	NC		%	40
			Hexachlorobutadiene	2019/03/13	NC		%	40
			Hexachloroethane	2019/03/13	NC		%	40
			Methoxychlor	2019/03/13	NC		%	40
6014786	LPG	Method Blank	2,4,5,6-Tetrachloro-m-xylene	2019/03/13		91	%	50 - 130
			Decachlorobiphenyl	2019/03/13		114	%	50 - 130
			Aldrin	2019/03/13	<0.0020		ug/g	
			a-Chlordane	2019/03/13	<0.0020		ug/g	
			g-Chlordane	2019/03/13	<0.0020		ug/g	
			o,p-DDD	2019/03/13	<0.0020		ug/g	
			p,p-DDD	2019/03/13	<0.0020		ug/g	
			o,p-DDE	2019/03/13	<0.0020		ug/g	
			p,p-DDE	2019/03/13	<0.0020		ug/g	
			o,p-DDT	2019/03/13	<0.0020		ug/g	
			p,p-DDT	2019/03/13	<0.0020		ug/g	
			Dieldrin	2019/03/13	<0.0020		ug/g	
			Lindane	2019/03/13	<0.0020		ug/g	
			Endosulfan I (alpha)	2019/03/13	<0.0020		ug/g	
			Endosulfan II (beta)	2019/03/13	<0.0020		ug/g	
			Endrin	2019/03/13	<0.0020		ug/g	
			Heptachlor	2019/03/13	<0.0020		ug/g	
			Heptachlor epoxide	2019/03/13	<0.0020		ug/g	
			Hexachlorobenzene	2019/03/13	<0.0020		ug/g	
			Hexachlorobutadiene	2019/03/13	<0.0020		ug/g	
			Hexachloroethane	2019/03/13	<0.0020		ug/g	
			Methoxychlor	2019/03/13	<0.0050		ug/g	
			Aroclor 1242	2019/03/13	<0.015		ug/g	
			Aroclor 1248	2019/03/13	<0.015		ug/g	
			Aroclor 1254	2019/03/13	<0.015		ug/g	
			Aroclor 1260	2019/03/13	<0.015		ug/g	
6015604	VIV	Matrix Spike	Acid Extractable Antimony (Sb)	2019/03/13		119	%	75 - 125
			Acid Extractable Arsenic (As)	2019/03/13		116	%	75 - 125
			Acid Extractable Barium (Ba)	2019/03/13		NC	%	75 - 125
			Acid Extractable Beryllium (Be)	2019/03/13		115	%	75 - 125
			Acid Extractable Boron (B)	2019/03/13		112	%	75 - 125

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QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
6015604	VIV	Spiked Blank	Acid Extractable Cadmium (Cd)	2019/03/13		118	%	75 - 125
			Acid Extractable Chromium (Cr)	2019/03/13		118	%	75 - 125
			Acid Extractable Cobalt (Co)	2019/03/13		114	%	75 - 125
			Acid Extractable Copper (Cu)	2019/03/13		111	%	75 - 125
			Acid Extractable Lead (Pb)	2019/03/13		118	%	75 - 125
			Acid Extractable Molybdenum (Mo)	2019/03/13		123	%	75 - 125
			Acid Extractable Nickel (Ni)	2019/03/13		112	%	75 - 125
			Acid Extractable Selenium (Se)	2019/03/13		120	%	75 - 125
			Acid Extractable Silver (Ag)	2019/03/13		120	%	75 - 125
			Acid Extractable Thallium (Tl)	2019/03/13		117	%	75 - 125
			Acid Extractable Uranium (U)	2019/03/13		114	%	75 - 125
			Acid Extractable Vanadium (V)	2019/03/13		120	%	75 - 125
			Acid Extractable Zinc (Zn)	2019/03/13		NC	%	75 - 125
			Acid Extractable Mercury (Hg)	2019/03/13		102	%	75 - 125
			Acid Extractable Antimony (Sb)	2019/03/13		108	%	80 - 120
			Acid Extractable Arsenic (As)	2019/03/13		108	%	80 - 120
			Acid Extractable Barium (Ba)	2019/03/13		103	%	80 - 120
			Acid Extractable Beryllium (Be)	2019/03/13		104	%	80 - 120
			Acid Extractable Boron (B)	2019/03/13		105	%	80 - 120
			Acid Extractable Cadmium (Cd)	2019/03/13		108	%	80 - 120
			Acid Extractable Chromium (Cr)	2019/03/13		106	%	80 - 120
			Acid Extractable Cobalt (Co)	2019/03/13		105	%	80 - 120
			Acid Extractable Copper (Cu)	2019/03/13		105	%	80 - 120
			Acid Extractable Lead (Pb)	2019/03/13		110	%	80 - 120
			Acid Extractable Molybdenum (Mo)	2019/03/13		110	%	80 - 120
			Acid Extractable Nickel (Ni)	2019/03/13		109	%	80 - 120
			Acid Extractable Selenium (Se)	2019/03/13		112	%	80 - 120
			Acid Extractable Silver (Ag)	2019/03/13		111	%	80 - 120
			Acid Extractable Thallium (Tl)	2019/03/13		110	%	80 - 120
			Acid Extractable Uranium (U)	2019/03/13		105	%	80 - 120
			Acid Extractable Vanadium (V)	2019/03/13		109	%	80 - 120
			Acid Extractable Zinc (Zn)	2019/03/13		105	%	80 - 120
			Acid Extractable Mercury (Hg)	2019/03/13		101	%	80 - 120
6015604	VIV	Method Blank	Acid Extractable Antimony (Sb)	2019/03/13	<0.20		ug/g	
			Acid Extractable Arsenic (As)	2019/03/13	<1.0		ug/g	
			Acid Extractable Barium (Ba)	2019/03/13	<0.50		ug/g	
			Acid Extractable Beryllium (Be)	2019/03/13	<0.20		ug/g	
			Acid Extractable Boron (B)	2019/03/13	<5.0		ug/g	
			Acid Extractable Cadmium (Cd)	2019/03/13	<0.10		ug/g	
			Acid Extractable Chromium (Cr)	2019/03/13	<1.0		ug/g	
			Acid Extractable Cobalt (Co)	2019/03/13	<0.10		ug/g	
			Acid Extractable Copper (Cu)	2019/03/13	<0.50		ug/g	
			Acid Extractable Lead (Pb)	2019/03/13	<1.0		ug/g	
			Acid Extractable Molybdenum (Mo)	2019/03/13	<0.50		ug/g	
			Acid Extractable Nickel (Ni)	2019/03/13	<0.50		ug/g	
			Acid Extractable Selenium (Se)	2019/03/13	<0.50		ug/g	
			Acid Extractable Silver (Ag)	2019/03/13	<0.20		ug/g	
			Acid Extractable Thallium (Tl)	2019/03/13	<0.050		ug/g	
			Acid Extractable Uranium (U)	2019/03/13	<0.050		ug/g	
			Acid Extractable Vanadium (V)	2019/03/13	<5.0		ug/g	
			Acid Extractable Zinc (Zn)	2019/03/13	<5.0		ug/g	
			Acid Extractable Mercury (Hg)	2019/03/13	<0.050		ug/g	

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6015604	VIV	RPD	Acid Extractable Antimony (Sb)	2019/03/13	NC		%	30
			Acid Extractable Arsenic (As)	2019/03/13	13		%	30
			Acid Extractable Barium (Ba)	2019/03/13	1.9		%	30
			Acid Extractable Beryllium (Be)	2019/03/13	15		%	30
			Acid Extractable Boron (B)	2019/03/13	3.9		%	30
			Acid Extractable Cadmium (Cd)	2019/03/13	NC		%	30
			Acid Extractable Chromium (Cr)	2019/03/13	3.3		%	30
			Acid Extractable Cobalt (Co)	2019/03/13	1.4		%	30
			Acid Extractable Copper (Cu)	2019/03/13	12		%	30
			Acid Extractable Lead (Pb)	2019/03/13	0.81		%	30
			Acid Extractable Molybdenum (Mo)	2019/03/13	NC		%	30
			Acid Extractable Nickel (Ni)	2019/03/13	0.70		%	30
			Acid Extractable Selenium (Se)	2019/03/13	NC		%	30
			Acid Extractable Silver (Ag)	2019/03/13	NC		%	30
			Acid Extractable Thallium (Tl)	2019/03/13	0.52		%	30
			Acid Extractable Uranium (U)	2019/03/13	1.6		%	30
			Acid Extractable Vanadium (V)	2019/03/13	2.2		%	30
			Acid Extractable Zinc (Zn)	2019/03/13	3.9		%	30
			Acid Extractable Mercury (Hg)	2019/03/13	NC		%	30
6015864	BKE	Matrix Spike [JDU685-01]	WAD Cyanide (Free)	2019/03/14		91	%	75 - 125
6015864	BKE	Spiked Blank	WAD Cyanide (Free)	2019/03/14		99	%	80 - 120
6015864	BKE	Method Blank	WAD Cyanide (Free)	2019/03/14	<0.01		ug/g	
6015864	BKE	RPD [JDU685-01]	WAD Cyanide (Free)	2019/03/14	24		%	35
6015893	JOH	Matrix Spike	Hot Water Ext. Boron (B)	2019/03/13		100	%	75 - 125
6015893	JOH	Spiked Blank	Hot Water Ext. Boron (B)	2019/03/13		92	%	75 - 125
6015893	JOH	Method Blank	Hot Water Ext. Boron (B)	2019/03/13	<0.050		ug/g	
6015893	JOH	RPD	Hot Water Ext. Boron (B)	2019/03/13	6.5		%	40
6016182	KAD	Spiked Blank	Conductivity	2019/03/14		103	%	90 - 110
6016182	KAD	Method Blank	Conductivity	2019/03/14	<0.002		mS/cm	
6016182	KAD	RPD [JDU682-01]	Conductivity	2019/03/14	1.7		%	10
6016467	GUL	Matrix Spike	o-Terphenyl	2019/03/13		108	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2019/03/13		101	%	50 - 130
			F3 (C16-C34 Hydrocarbons)	2019/03/13		105	%	50 - 130
			F4 (C34-C50 Hydrocarbons)	2019/03/13		113	%	50 - 130
6016467	GUL	Spiked Blank	o-Terphenyl	2019/03/13		96	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2019/03/13		96	%	80 - 120
			F3 (C16-C34 Hydrocarbons)	2019/03/13		92	%	80 - 120
			F4 (C34-C50 Hydrocarbons)	2019/03/13		97	%	80 - 120
6016467	GUL	Method Blank	o-Terphenyl	2019/03/13		90	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2019/03/13	<10		ug/g	
			F3 (C16-C34 Hydrocarbons)	2019/03/13	<50		ug/g	
			F4 (C34-C50 Hydrocarbons)	2019/03/13	<50		ug/g	
6016467	GUL	RPD	F2 (C10-C16 Hydrocarbons)	2019/03/14	NC		%	30
			F3 (C16-C34 Hydrocarbons)	2019/03/14	NC		%	30
			F4 (C34-C50 Hydrocarbons)	2019/03/14	NC		%	30
6017226	GRU	Matrix Spike	1,4-Difluorobenzene	2019/03/13		101	%	60 - 140
			4-Bromofluorobenzene	2019/03/13		101	%	60 - 140
			D10-Ethylbenzene	2019/03/13		107	%	60 - 140
			D4-1,2-Dichloroethane	2019/03/13		99	%	60 - 140
			Benzene	2019/03/13		97	%	60 - 140
			Toluene	2019/03/13		107	%	60 - 140
			Ethylbenzene	2019/03/13		105	%	60 - 140

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6017226	GRU	Spiked Blank	o-Xylene	2019/03/13		109	%	60 - 140
			p+m-Xylene	2019/03/13		108	%	60 - 140
			F1 (C6-C10)	2019/03/13		117	%	60 - 140
			1,4-Difluorobenzene	2019/03/13		102	%	60 - 140
			4-Bromofluorobenzene	2019/03/13		100	%	60 - 140
			D10-Ethylbenzene	2019/03/13		96	%	60 - 140
			D4-1,2-Dichloroethane	2019/03/13		100	%	60 - 140
			Benzene	2019/03/13		92	%	60 - 140
			Toluene	2019/03/13		102	%	60 - 140
			Ethylbenzene	2019/03/13		100	%	60 - 140
6017226	GRU	Method Blank	o-Xylene	2019/03/13		101	%	60 - 140
			p+m-Xylene	2019/03/13		103	%	60 - 140
			F1 (C6-C10)	2019/03/13		111	%	80 - 120
			1,4-Difluorobenzene	2019/03/13		103	%	60 - 140
			4-Bromofluorobenzene	2019/03/13		98	%	60 - 140
			D10-Ethylbenzene	2019/03/13		94	%	60 - 140
			D4-1,2-Dichloroethane	2019/03/13		99	%	60 - 140
			Benzene	2019/03/13	<0.020		ug/g	
			Toluene	2019/03/13	<0.020		ug/g	
			Ethylbenzene	2019/03/13	<0.020		ug/g	
6017226	GRU	RPD	o-Xylene	2019/03/13	<0.020		ug/g	
			p+m-Xylene	2019/03/13	<0.040		ug/g	
			Total Xylenes	2019/03/13	<0.040		ug/g	
			F1 (C6-C10)	2019/03/13	<10		ug/g	
			F1 (C6-C10) - BTEX	2019/03/13	<10		ug/g	
			Benzene	2019/03/13	NC		%	50
			Toluene	2019/03/13	NC		%	50
			Ethylbenzene	2019/03/13	NC		%	50
			o-Xylene	2019/03/13	NC		%	50
			p+m-Xylene	2019/03/13	NC		%	50
6018770	RAJ	Matrix Spike	Total Xylenes	2019/03/13	NC		%	50
			F1 (C6-C10)	2019/03/13	NC		%	30
			F1 (C6-C10) - BTEX	2019/03/13	NC		%	30
			D10-Anthracene	2019/03/15		93	%	50 - 130
			D14-Terphenyl (FS)	2019/03/15		88	%	50 - 130
			D8-Acenaphthylene	2019/03/15		88	%	50 - 130
			Acenaphthene	2019/03/15		86	%	50 - 130
			Acenaphthylene	2019/03/15		88	%	50 - 130
			Anthracene	2019/03/15		83	%	50 - 130
			Benzo(a)anthracene	2019/03/15		92	%	50 - 130
6018770	RAJ	Matrix Spike	Benzo(a)pyrene	2019/03/15		87	%	50 - 130
			Benzo(b,j)fluoranthene	2019/03/15		88	%	50 - 130
			Benzo(g,h,i)perylene	2019/03/15		78	%	50 - 130
			Benzo(k)fluoranthene	2019/03/15		83	%	50 - 130
			Chrysene	2019/03/15		88	%	50 - 130
			Dibenz(a,h)anthracene	2019/03/15		76	%	50 - 130
			Fluoranthene	2019/03/15		93	%	50 - 130
			Fluorene	2019/03/15		85	%	50 - 130
			Indeno(1,2,3-cd)pyrene	2019/03/15		79	%	50 - 130
			1-Methylnaphthalene	2019/03/15		92	%	50 - 130
6018770	RAJ	Matrix Spike	2-Methylnaphthalene	2019/03/15		83	%	50 - 130
			Naphthalene	2019/03/15		83	%	50 - 130

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6018770	RAJ	Spiked Blank	Phenanthrene	2019/03/15		86	%	50 - 130
			Pyrene	2019/03/15		91	%	50 - 130
			D10-Anthracene	2019/03/15		94	%	50 - 130
			D14-Terphenyl (FS)	2019/03/15		91	%	50 - 130
			D8-Acenaphthylene	2019/03/15		93	%	50 - 130
			Acenaphthene	2019/03/15		88	%	50 - 130
			Acenaphthylene	2019/03/15		90	%	50 - 130
			Anthracene	2019/03/15		85	%	50 - 130
			Benzo(a)anthracene	2019/03/15		93	%	50 - 130
			Benzo(a)pyrene	2019/03/15		88	%	50 - 130
			Benzo(b/j)fluoranthene	2019/03/15		91	%	50 - 130
			Benzo(g,h,i)perylene	2019/03/15		76	%	50 - 130
			Benzo(k)fluoranthene	2019/03/15		86	%	50 - 130
			Chrysene	2019/03/15		91	%	50 - 130
			Dibenz(a,h)anthracene	2019/03/15		70	%	50 - 130
			Fluoranthene	2019/03/15		95	%	50 - 130
			Fluorene	2019/03/15		87	%	50 - 130
			Indeno(1,2,3-cd)pyrene	2019/03/15		77	%	50 - 130
			1-Methylnaphthalene	2019/03/15		94	%	50 - 130
			2-Methylnaphthalene	2019/03/15		84	%	50 - 130
6018770	RAJ	Method Blank	Naphthalene	2019/03/15		85	%	50 - 130
			Phenanthrene	2019/03/15		88	%	50 - 130
			Pyrene	2019/03/15		93	%	50 - 130
			D10-Anthracene	2019/03/15		94	%	50 - 130
			D14-Terphenyl (FS)	2019/03/15		89	%	50 - 130
			D8-Acenaphthylene	2019/03/15		92	%	50 - 130
			Acenaphthene	2019/03/15	<0.0050		ug/g	
			Acenaphthylene	2019/03/15	<0.0050		ug/g	
			Anthracene	2019/03/15	<0.0050		ug/g	
			Benzo(a)anthracene	2019/03/15	<0.0050		ug/g	
			Benzo(a)pyrene	2019/03/15	<0.0050		ug/g	
			Benzo(b/j)fluoranthene	2019/03/15	<0.0050		ug/g	
			Benzo(g,h,i)perylene	2019/03/15	<0.0050		ug/g	
			Benzo(k)fluoranthene	2019/03/15	<0.0050		ug/g	
			Chrysene	2019/03/15	<0.0050		ug/g	
			Dibenz(a,h)anthracene	2019/03/15	<0.0050		ug/g	
			Fluoranthene	2019/03/15	<0.0050		ug/g	
			Fluorene	2019/03/15	<0.0050		ug/g	
			Indeno(1,2,3-cd)pyrene	2019/03/15	<0.0050		ug/g	
			1-Methylnaphthalene	2019/03/15	<0.0050		ug/g	
			2-Methylnaphthalene	2019/03/15	<0.0050		ug/g	
6018770	RAJ	RPD	Naphthalene	2019/03/15	<0.0050		ug/g	
			Phenanthrene	2019/03/15	<0.0050		ug/g	
			Pyrene	2019/03/15	<0.0050		ug/g	
			Acenaphthene	2019/03/15	NC		%	40
			Acenaphthylene	2019/03/15	NC		%	40
			Anthracene	2019/03/15	NC		%	40
			Benzo(a)anthracene	2019/03/15	NC		%	40
			Benzo(a)pyrene	2019/03/15	NC		%	40
			Benzo(b/j)fluoranthene	2019/03/15	NC		%	40
			Benzo(g,h,i)perylene	2019/03/15	NC		%	40
			Benzo(k)fluoranthene	2019/03/15	NC		%	40

Maxxam Job #: B961919
Report Date: 2019/03/21

S2S Environmental Inc
Client Project #: 8674
Site Location: 5080 NINTH LINE, MILTON
Your P.O. #: 8674.PT.09.17.A
Sampler Initials: PB

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
6023938	MYI	Matrix Spike	Chrysene	2019/03/15	NC		%	40
			Dibenz(a,h)anthracene	2019/03/15	NC		%	40
			Fluoranthene	2019/03/15	NC		%	40
			Fluorene	2019/03/15	NC		%	40
			Indeno(1,2,3-cd)pyrene	2019/03/15	NC		%	40
			1-Methylnaphthalene	2019/03/15	NC		%	40
			2-Methylnaphthalene	2019/03/15	NC		%	40
			Naphthalene	2019/03/15	NC		%	40
			Phenanthrene	2019/03/15	NC		%	40
			Pyrene	2019/03/15	NC		%	40
			2-Fluorobiphenyl	2019/03/20		85	%	30 - 130
			D14-Terphenyl (FS)	2019/03/20		91	%	30 - 130
			D5-Nitrobenzene	2019/03/20		80	%	30 - 130
			Prometon	2019/03/20		97	%	40 - 130
			Simazine	2019/03/20		91	%	40 - 130
			Atrazine	2019/03/20		87	%	40 - 130
			Propazine	2019/03/20		90	%	40 - 130
			Metribuzin (Sencor)	2019/03/20		88	%	40 - 130
			Simetryn	2019/03/20		93	%	40 - 130
			Ametryn	2019/03/20		96	%	40 - 130
6023938	MYI	Spiked Blank	Prometryne	2019/03/20		100	%	40 - 130
			Terbutryne	2019/03/20		99	%	40 - 130
			Cyanazine (Bladex)	2019/03/20		94	%	40 - 130
			2-Fluorobiphenyl	2019/03/20		87	%	30 - 130
			D14-Terphenyl (FS)	2019/03/20		103	%	30 - 130
			D5-Nitrobenzene	2019/03/20		89	%	30 - 130
			Prometon	2019/03/20		82	%	40 - 130
			Simazine	2019/03/20		90	%	40 - 130
			Atrazine	2019/03/20		88	%	40 - 130
			Propazine	2019/03/20		89	%	40 - 130
			Metribuzin (Sencor)	2019/03/20		98	%	40 - 130
			Simetryn	2019/03/20		104	%	40 - 130
			Ametryn	2019/03/20		107	%	40 - 130
			Prometryne	2019/03/20		104	%	40 - 130
			Terbutryne	2019/03/20		93	%	40 - 130
			Cyanazine (Bladex)	2019/03/20		102	%	40 - 130
			2-Fluorobiphenyl	2019/03/20		95	%	30 - 130
			D14-Terphenyl (FS)	2019/03/20		97	%	30 - 130
			D5-Nitrobenzene	2019/03/20		89	%	30 - 130
6023938	MYI	Method Blank	Prometon	2019/03/20	<0.050		ug/g	
			Simazine	2019/03/20	<0.25		ug/g	
			Atrazine	2019/03/20	<0.10		ug/g	
			Propazine	2019/03/20	<0.25		ug/g	
			Metribuzin (Sencor)	2019/03/20	<0.10		ug/g	
			Simetryn	2019/03/20	<0.050		ug/g	
			Ametryn	2019/03/20	<0.25		ug/g	
			Prometryne	2019/03/20	<0.25		ug/g	
			Terbutryne	2019/03/20	<0.050		ug/g	
			Cyanazine (Bladex)	2019/03/20	<0.25		ug/g	
	MYI	RPD	Prometon	2019/03/20	NC		%	50
			Simazine	2019/03/20	NC		%	50
			Atrazine	2019/03/20	NC		%	50

Maxxam Job #: B961919
Report Date: 2019/03/21

S2S Environmental Inc
Client Project #: 8674
Site Location: 5080 NINTH LINE, MILTON
Your P.O. #: 8674.PT.09.17.A
Sampler Initials: PB

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Propazine	2019/03/20	NC		%	50
			Metribuzin (Sencor)	2019/03/20	NC		%	50
			Simetryn	2019/03/20	NC		%	50
			Ametryn	2019/03/20	NC		%	50
			Prometryne	2019/03/20	NC		%	50
			Terbutryne	2019/03/20	NC		%	50
			Cyanazine (Bladex)	2019/03/20	NC		%	50

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference $\leq 2 \times \text{RDL}$).

(1) The matrix spike recovery was below the lower control limit. This may be due in part to the reducing environment of the sample. The sample was reanalyzed with the same results.

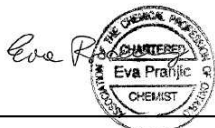
(2) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



Anastassia Hamanov, Scientific Specialist



Ewa Pranjic, M.Sc., C.Chem, Scientific Specialist

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Your P.O. #: PN19-8674.PT.09.17.A
Your Project #: 8674
Your C.O.C. #: 125057

Attention: Laura Fitzgerald

S2S Environmental Inc
1099 Kingston Rd
Suite 260
Pickering, ON
CANADA L1V 1B5

Report Date: 2019/03/15
Report #: R5630940
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B962914

Received: 2019/03/11, 16:53

Sample Matrix: Soil
Samples Received: 5

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
Methylnaphthalene Sum	1	N/A	2019/03/15	CAM SOP-00301	EPA 8270D m
Hot Water Extractable Boron	1	2019/03/13	2019/03/14	CAM SOP-00408	R153 Ana. Prot. 2011
1,3-Dichloropropene Sum	2	N/A	2019/03/14		EPA 8260C m
Free (WAD) Cyanide	1	2019/03/13	2019/03/14	CAM SOP-00457	OMOE E3015 m
Conductivity	1	2019/03/14	2019/03/14	CAM SOP-00414	OMOE E3530 v1 m
Hexavalent Chromium in Soil by IC (1)	1	2019/03/13	2019/03/14	CAM SOP-00436	EPA 3060/7199 m
Petroleum Hydro. CCME F1 & BTEX in Soil (2)	2	N/A	2019/03/14	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydrocarbons F2-F4 in Soil (3)	2	2019/03/14	2019/03/15	CAM SOP-00316	CCME CWS m
Strong Acid Leachable Metals by ICPMS	1	2019/03/14	2019/03/14	CAM SOP-00447	EPA 6020B m
Moisture	5	N/A	2019/03/12	CAM SOP-00445	Carter 2nd ed 51.2 m
PAH Compounds in Soil by GC/MS (SIM)	1	2019/03/14	2019/03/15	CAM SOP-00318	EPA 8270D m
pH CaCl2 EXTRACT	1	2019/03/14	2019/03/14	CAM SOP-00413	EPA 9045 D m
Sodium Adsorption Ratio (SAR)	1	N/A	2019/03/15	CAM SOP-00102	EPA 6010C
Volatile Organic Compounds in Soil	2	N/A	2019/03/14	CAM SOP-00228	EPA 8260C m

Remarks:

Maxxam Analytics' laboratories are accredited to ISO/IEC 17025:2005 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Maxxam are based upon recognized Provincial, Federal or US method compendia such as CCME, MDDELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Maxxam's profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Maxxam in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Maxxam Analytics' liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Maxxam has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Maxxam, unless otherwise agreed in writing. Maxxam is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.

Your P.O. #: PN19-8674.PT.09.17.A
Your Project #: 8674
Your C.O.C. #: 125057

Attention: Laura Fitzgerald

S2S Environmental Inc
1099 Kingston Rd
Suite 260
Pickering, ON
CANADA L1V 1B5

Report Date: 2019/03/15
Report #: R5630940
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B962914

Received: 2019/03/11, 16:53

Results relate to samples tested. When sampling is not conducted by Maxxam, results relate to the supplied samples tested.

This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) Soils are reported on a dry weight basis unless otherwise specified.

(2) No lab extraction date is given for F1BTX & VOC samples that are field preserved with methanol. Extraction date is the date sampled unless otherwise stated.

(3) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Maxxam conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following "Alberta Environment's Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Validation of Performance-Based Alternative Methods September 2003". Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

Jolanta Goralczyk, Project Manager

Email: JGoralczyk@maxxam.ca

Phone# (905)817-5751

=====

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

O.REG 153 METALS & INORGANICS PKG (SOIL)

Maxxam ID		JEA504			JEA504		
Sampling Date		2019/03/11 09:00			2019/03/11 09:00		
COC Number		125057			125057		
	UNITS	BH9-1	RDL	QC Batch	BH9-1 Lab-Dup	RDL	QC Batch
Calculated Parameters							
Sodium Adsorption Ratio	N/A	0.20		6011541			
Inorganics							
Conductivity	mS/cm	0.23	0.002	6018215			
Available (CaCl ₂) pH	pH	7.54		6018247			
WAD Cyanide (Free)	ug/g	<0.01	0.01	6015864			
Chromium (VI)	ug/g	<0.2	0.2	6016474	<0.2	0.2	6016474
Metals							
Hot Water Ext. Boron (B)	ug/g	0.40	0.050	6016208			
Acid Extractable Antimony (Sb)	ug/g	<0.20	0.20	6017887			
Acid Extractable Arsenic (As)	ug/g	3.4	1.0	6017887			
Acid Extractable Barium (Ba)	ug/g	49	0.50	6017887			
Acid Extractable Beryllium (Be)	ug/g	0.51	0.20	6017887			
Acid Extractable Boron (B)	ug/g	5.8	5.0	6017887			
Acid Extractable Cadmium (Cd)	ug/g	0.12	0.10	6017887			
Acid Extractable Chromium (Cr)	ug/g	16	1.0	6017887			
Acid Extractable Cobalt (Co)	ug/g	7.3	0.10	6017887			
Acid Extractable Copper (Cu)	ug/g	17	0.50	6017887			
Acid Extractable Lead (Pb)	ug/g	11	1.0	6017887			
Acid Extractable Molybdenum (Mo)	ug/g	<0.50	0.50	6017887			
Acid Extractable Nickel (Ni)	ug/g	14	0.50	6017887			
Acid Extractable Selenium (Se)	ug/g	<0.50	0.50	6017887			
Acid Extractable Silver (Ag)	ug/g	<0.20	0.20	6017887			
Acid Extractable Thallium (Tl)	ug/g	0.088	0.050	6017887			
Acid Extractable Uranium (U)	ug/g	0.45	0.050	6017887			
Acid Extractable Vanadium (V)	ug/g	25	5.0	6017887			
Acid Extractable Zinc (Zn)	ug/g	46	5.0	6017887			
Acid Extractable Mercury (Hg)	ug/g	<0.050	0.050	6017887			
RDL = Reportable Detection Limit QC Batch = Quality Control Batch Lab-Dup = Laboratory Initiated Duplicate							

O.REG 153 PAHS (SOIL)

Maxxam ID		JEA504		
Sampling Date		2019/03/11 09:00		
COC Number		125057		
	UNITS	BH9-1	RDL	QC Batch
Inorganics				
Moisture	%	23	1.0	6014653
Calculated Parameters				
Methylnaphthalene, 2-(1-)	ug/g	<0.0071	0.0071	6011542
Polyaromatic Hydrocarbons				
Acenaphthene	ug/g	<0.0050	0.0050	6018770
Acenaphthylene	ug/g	<0.0050	0.0050	6018770
Anthracene	ug/g	<0.0050	0.0050	6018770
Benzo(a)anthracene	ug/g	<0.0050	0.0050	6018770
Benzo(a)pyrene	ug/g	<0.0050	0.0050	6018770
Benzo(b,j)fluoranthene	ug/g	0.0064	0.0050	6018770
Benzo(g,h,i)perylene	ug/g	<0.0050	0.0050	6018770
Benzo(k)fluoranthene	ug/g	<0.0050	0.0050	6018770
Chrysene	ug/g	<0.0050	0.0050	6018770
Dibenz(a,h)anthracene	ug/g	<0.0050	0.0050	6018770
Fluoranthene	ug/g	0.0057	0.0050	6018770
Fluorene	ug/g	<0.0050	0.0050	6018770
Indeno(1,2,3-cd)pyrene	ug/g	<0.0050	0.0050	6018770
1-Methylnaphthalene	ug/g	<0.0050	0.0050	6018770
2-Methylnaphthalene	ug/g	<0.0050	0.0050	6018770
Naphthalene	ug/g	<0.0050	0.0050	6018770
Phenanthrene	ug/g	<0.0050	0.0050	6018770
Pyrene	ug/g	<0.0050	0.0050	6018770
Surrogate Recovery (%)				
D10-Anthracene	%	100		6018770
D14-Terphenyl (FS)	%	98		6018770
D8-Acenaphthylene	%	97		6018770
RDL = Reportable Detection Limit				
QC Batch = Quality Control Batch				

O.REG 153 PETROLEUM HYDROCARBONS (SOIL)

Maxxam ID		JEA505	JEA507		
Sampling Date		2019/03/11 09:30	2019/03/11 09:35		
COC Number		125057	125057		
	UNITS	BH9-4	DUP3	RDL	QC Batch
Inorganics					
Moisture	%	10	10	1.0	6014653
BTEX & F1 Hydrocarbons					
Benzene	ug/g	<0.020	<0.020	0.020	6018238
Toluene	ug/g	<0.020	<0.020	0.020	6018238
Ethylbenzene	ug/g	<0.020	<0.020	0.020	6018238
o-Xylene	ug/g	<0.020	<0.020	0.020	6018238
p+m-Xylene	ug/g	<0.040	<0.040	0.040	6018238
Total Xylenes	ug/g	<0.040	<0.040	0.040	6018238
F1 (C6-C10)	ug/g	<10	<10	10	6018238
F1 (C6-C10) - BTEX	ug/g	<10	<10	10	6018238
F2-F4 Hydrocarbons					
F2 (C10-C16 Hydrocarbons)	ug/g	<10	<10	10	6018685
F3 (C16-C34 Hydrocarbons)	ug/g	<50	<50	50	6018685
F4 (C34-C50 Hydrocarbons)	ug/g	<50	<50	50	6018685
Reached Baseline at C50	ug/g	Yes	Yes		6018685
Hydrocarbon Resemblance	ug/g	NA (1)	NA (1)	N/A	6018685
Surrogate Recovery (%)					
1,4-Difluorobenzene	%	99	98		6018238
4-Bromofluorobenzene	%	101	100		6018238
D10-Ethylbenzene	%	99	99		6018238
D4-1,2-Dichloroethane	%	101	99		6018238
o-Terphenyl	%	89	90		6018685
RDL = Reportable Detection Limit QC Batch = Quality Control Batch N/A = Not Applicable (1) NA: Not Applicable					

O.REG 153 VOCs BY HS (SOIL)

Maxxam ID		JEA506	JEA508			JEA508		
Sampling Date		2019/03/11 10:00	2019/03/11 10:00			2019/03/11 10:00		
COC Number		125057	125057			125057		
	UNITS	BH9-5	DUP4	RDL	QC Batch	DUP4 Lab-Dup	RDL	QC Batch
Inorganics								
Moisture	%	10	9.3	1.0	6013966	8.8	1.0	6013966
Calculated Parameters								
1,3-Dichloropropene (cis+trans)	ug/g	<0.050	<0.050	0.050	6012072			
Volatile Organics								
Acetone (2-Propanone)	ug/g	<0.50	<0.50	0.50	6015514			
Benzene	ug/g	<0.020	<0.020	0.020	6015514			
Bromodichloromethane	ug/g	<0.050	<0.050	0.050	6015514			
Bromoform	ug/g	<0.050	<0.050	0.050	6015514			
Bromomethane	ug/g	<0.050	<0.050	0.050	6015514			
Carbon Tetrachloride	ug/g	<0.050	<0.050	0.050	6015514			
Chlorobenzene	ug/g	<0.050	<0.050	0.050	6015514			
Chloroform	ug/g	<0.050	<0.050	0.050	6015514			
Dibromochloromethane	ug/g	<0.050	<0.050	0.050	6015514			
1,2-Dichlorobenzene	ug/g	<0.050	<0.050	0.050	6015514			
1,3-Dichlorobenzene	ug/g	<0.050	<0.050	0.050	6015514			
1,4-Dichlorobenzene	ug/g	<0.050	<0.050	0.050	6015514			
Dichlorodifluoromethane (FREON 12)	ug/g	<0.050	<0.050	0.050	6015514			
1,1-Dichloroethane	ug/g	<0.050	<0.050	0.050	6015514			
1,2-Dichloroethane	ug/g	<0.050	<0.050	0.050	6015514			
1,1-Dichloroethylene	ug/g	<0.050	<0.050	0.050	6015514			
cis-1,2-Dichloroethylene	ug/g	<0.050	<0.050	0.050	6015514			
trans-1,2-Dichloroethylene	ug/g	<0.050	<0.050	0.050	6015514			
1,2-Dichloropropane	ug/g	<0.050	<0.050	0.050	6015514			
cis-1,3-Dichloropropene	ug/g	<0.030	<0.030	0.030	6015514			
trans-1,3-Dichloropropene	ug/g	<0.040	<0.040	0.040	6015514			
Ethylbenzene	ug/g	<0.020	<0.020	0.020	6015514			
Ethylene Dibromide	ug/g	<0.050	<0.050	0.050	6015514			
Hexane	ug/g	<0.050	<0.050	0.050	6015514			
Methylene Chloride(Dichloromethane)	ug/g	<0.050	<0.050	0.050	6015514			
Methyl Ethyl Ketone (2-Butanone)	ug/g	<0.50	<0.50	0.50	6015514			
RDL = Reportable Detection Limit								
QC Batch = Quality Control Batch								
Lab-Dup = Laboratory Initiated Duplicate								

O.REG 153 VOCs BY HS (SOIL)

Maxxam ID		JEA506	JEA508			JEA508		
Sampling Date		2019/03/11 10:00	2019/03/11 10:00			2019/03/11 10:00		
COC Number		125057	125057			125057		
	UNITS	BH9-5	DUP4	RDL	QC Batch	DUP4 Lab-Dup	RDL	QC Batch
Methyl Isobutyl Ketone	ug/g	<0.50	<0.50	0.50	6015514			
Methyl t-butyl ether (MTBE)	ug/g	<0.050	<0.050	0.050	6015514			
Styrene	ug/g	<0.050	<0.050	0.050	6015514			
1,1,1,2-Tetrachloroethane	ug/g	<0.050	<0.050	0.050	6015514			
1,1,2,2-Tetrachloroethane	ug/g	<0.050	<0.050	0.050	6015514			
Tetrachloroethylene	ug/g	<0.050	<0.050	0.050	6015514			
Toluene	ug/g	<0.020	<0.020	0.020	6015514			
1,1,1-Trichloroethane	ug/g	<0.050	<0.050	0.050	6015514			
1,1,2-Trichloroethane	ug/g	<0.050	<0.050	0.050	6015514			
Trichloroethylene	ug/g	<0.050	<0.050	0.050	6015514			
Trichlorofluoromethane (FREON 11)	ug/g	<0.050	<0.050	0.050	6015514			
Vinyl Chloride	ug/g	<0.020	<0.020	0.020	6015514			
p+m-Xylene	ug/g	<0.020	<0.020	0.020	6015514			
o-Xylene	ug/g	<0.020	<0.020	0.020	6015514			
Total Xylenes	ug/g	<0.020	<0.020	0.020	6015514			
Surrogate Recovery (%)								
4-Bromofluorobenzene	%	97	97		6015514			
D10-o-Xylene	%	100	102		6015514			
D4-1,2-Dichloroethane	%	103	104		6015514			
D8-Toluene	%	92	92		6015514			
RDL = Reportable Detection Limit QC Batch = Quality Control Batch Lab-Dup = Laboratory Initiated Duplicate								

Maxxam Job #: B962914
Report Date: 2019/03/15

S2S Environmental Inc
Client Project #: 8674
Your P.O. #: PN19-8674.PT.09.17.A
Sampler Initials: GC

TEST SUMMARY

Maxxam ID: JEA504
Sample ID: BH9-1
Matrix: Soil

Collected: 2019/03/11
Shipped:
Received: 2019/03/11

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	6011542	N/A	2019/03/15	Anastassia Hamanov
Hot Water Extractable Boron	ICP	6016208	2019/03/13	2019/03/14	Jolly John
Free (WAD) Cyanide	TECH	6015864	2019/03/13	2019/03/14	Barbara Kalbasi Esfahani
Conductivity	AT	6018215	2019/03/14	2019/03/14	Kazzandra Adeva
Hexavalent Chromium in Soil by IC	IC/SPEC	6016474	2019/03/13	2019/03/14	Sally Norouz
Strong Acid Leachable Metals by ICPMS	ICP/MS	6017887	2019/03/14	2019/03/14	Daniel Teclu
Moisture	BAL	6014653	N/A	2019/03/12	Prgya Panchal
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	6018770	2019/03/14	2019/03/15	Mitesh Raj
pH CaCl2 EXTRACT	AT	6018247	2019/03/14	2019/03/14	Gnana Thomas
Sodium Adsorption Ratio (SAR)	CALC/MET	6011541	N/A	2019/03/15	Anastassia Hamanov

Maxxam ID: JEA504 Dup
Sample ID: BH9-1
Matrix: Soil

Collected: 2019/03/11
Shipped:
Received: 2019/03/11

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hexavalent Chromium in Soil by IC	IC/SPEC	6016474	2019/03/13	2019/03/14	Sally Norouz

Maxxam ID: JEA505
Sample ID: BH9-4
Matrix: Soil

Collected: 2019/03/11
Shipped:
Received: 2019/03/11

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	6018238	N/A	2019/03/14	Abdi Mohamud
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	6018685	2019/03/14	2019/03/15	(Kent) Maolin Li
Moisture	BAL	6014653	N/A	2019/03/12	Prgya Panchal

Maxxam ID: JEA506
Sample ID: BH9-5
Matrix: Soil

Collected: 2019/03/11
Shipped:
Received: 2019/03/11

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	6012072	N/A	2019/03/14	Automated Statchk
Moisture	BAL	6013966	N/A	2019/03/12	Min Yang
Volatile Organic Compounds in Soil	GC/MS	6015514	N/A	2019/03/14	Anna Gabrielyan

Maxxam ID: JEA507
Sample ID: DUP3
Matrix: Soil

Collected: 2019/03/11
Shipped:
Received: 2019/03/11

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	6018238	N/A	2019/03/14	Abdi Mohamud
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	6018685	2019/03/14	2019/03/15	(Kent) Maolin Li
Moisture	BAL	6014653	N/A	2019/03/12	Prgya Panchal

Maxxam Job #: B962914
Report Date: 2019/03/15

S2S Environmental Inc
Client Project #: 8674
Your P.O. #: PN19-8674.PT.09.17.A
Sampler Initials: GC

TEST SUMMARY

Maxxam ID: JEA508
Sample ID: DUP4
Matrix: Soil

Collected: 2019/03/11
Shipped:
Received: 2019/03/11

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	6012072	N/A	2019/03/14	Automated Statchk
Moisture	BAL	6013966	N/A	2019/03/12	Min Yang
Volatile Organic Compounds in Soil	GC/MS	6015514	N/A	2019/03/14	Anna Gabrielyan

Maxxam ID: JEA508 Dup
Sample ID: DUP4
Matrix: Soil

Collected: 2019/03/11
Shipped:
Received: 2019/03/11

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	6013966	N/A	2019/03/12	Min Yang

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	3.7°C
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Sample JEA504 [BH9-1] : SAR Analysis: Sodium was not detected. To report SAR the sodium detection limit was used in the calculation. This value represents a maximum ratio.

Results relate only to the items tested.

Maxxam Job #: B962914
Report Date: 2019/03/15

S2S Environmental Inc
Client Project #: 8674
Your P.O. #: PN19-8674.PT.09.17.A
Sampler Initials: GC

QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
6013966	NKG	RPD [JEA508-01]	Moisture	2019/03/12	5.5		%	20
6014653	NKG	RPD	Moisture	2019/03/12	4.6		%	20
6015514	AYA	Matrix Spike	4-Bromofluorobenzene	2019/03/13		104	%	60 - 140
			D10-o-Xylene	2019/03/13		113	%	60 - 130
			D4-1,2-Dichloroethane	2019/03/13		96	%	60 - 140
			D8-Toluene	2019/03/13		103	%	60 - 140
			Acetone (2-Propanone)	2019/03/13		88	%	60 - 140
			Benzene	2019/03/13		91	%	60 - 140
			Bromodichloromethane	2019/03/13		93	%	60 - 140
			Bromoform	2019/03/13		90	%	60 - 140
			Bromomethane	2019/03/13		92	%	60 - 140
			Carbon Tetrachloride	2019/03/13		97	%	60 - 140
			Chlorobenzene	2019/03/13		96	%	60 - 140
			Chloroform	2019/03/13		94	%	60 - 140
			Dibromochloromethane	2019/03/13		90	%	60 - 140
			1,2-Dichlorobenzene	2019/03/13		96	%	60 - 140
			1,3-Dichlorobenzene	2019/03/13		98	%	60 - 140
			1,4-Dichlorobenzene	2019/03/13		99	%	60 - 140
			Dichlorodifluoromethane (FREON 12)	2019/03/13		103	%	60 - 140
			1,1-Dichloroethane	2019/03/13		95	%	60 - 140
			1,2-Dichloroethane	2019/03/13		91	%	60 - 140
			1,1-Dichloroethylene	2019/03/13		97	%	60 - 140
			cis-1,2-Dichloroethylene	2019/03/13		92	%	60 - 140
			trans-1,2-Dichloroethylene	2019/03/13		96	%	60 - 140
			1,2-Dichloropropane	2019/03/13		93	%	60 - 140
			cis-1,3-Dichloropropene	2019/03/13		81	%	60 - 140
			trans-1,3-Dichloropropene	2019/03/13		80	%	60 - 140
			Ethylbenzene	2019/03/13		99	%	60 - 140
			Ethylene Dibromide	2019/03/13		89	%	60 - 140
			Hexane	2019/03/13		104	%	60 - 140
			Methylene Chloride(Dichloromethane)	2019/03/13		100	%	60 - 140
			Methyl Ethyl Ketone (2-Butanone)	2019/03/13		83	%	60 - 140
			Methyl Isobutyl Ketone	2019/03/13		94	%	60 - 140
			Methyl t-butyl ether (MTBE)	2019/03/13		90	%	60 - 140
			Styrene	2019/03/13		107	%	60 - 140
			1,1,1,2-Tetrachloroethane	2019/03/13		98	%	60 - 140
			1,1,2,2-Tetrachloroethane	2019/03/13		92	%	60 - 140
			Tetrachloroethylene	2019/03/13		100	%	60 - 140
			Toluene	2019/03/13		96	%	60 - 140
			1,1,1-Trichloroethane	2019/03/13		98	%	60 - 140
			1,1,2-Trichloroethane	2019/03/13		90	%	60 - 140
			Trichloroethylene	2019/03/13		98	%	60 - 140
			Trichlorofluoromethane (FREON 11)	2019/03/13		98	%	60 - 140
			Vinyl Chloride	2019/03/13		100	%	60 - 140
			p+m-Xylene	2019/03/13		102	%	60 - 140
			o-Xylene	2019/03/13		100	%	60 - 140
6015514	AYA	Spiked Blank	4-Bromofluorobenzene	2019/03/13		105	%	60 - 140
			D10-o-Xylene	2019/03/13		102	%	60 - 130
			D4-1,2-Dichloroethane	2019/03/13		101	%	60 - 140
			D8-Toluene	2019/03/13		101	%	60 - 140
			Acetone (2-Propanone)	2019/03/13		103	%	60 - 140
			Benzene	2019/03/13		94	%	60 - 130
			Bromodichloromethane	2019/03/13		99	%	60 - 130

Maxxam Job #: B962914
Report Date: 2019/03/15

S2S Environmental Inc
Client Project #: 8674
Your P.O. #: PN19-8674.PT.09.17.A
Sampler Initials: GC

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
6015514	AYA	Method Blank	Bromoform	2019/03/13		100	%	60 - 130
			Bromomethane	2019/03/13		99	%	60 - 140
			Carbon Tetrachloride	2019/03/13		98	%	60 - 130
			Chlorobenzene	2019/03/13		97	%	60 - 130
			Chloroform	2019/03/13		98	%	60 - 130
			Dibromochloromethane	2019/03/13		97	%	60 - 130
			1,2-Dichlorobenzene	2019/03/13		98	%	60 - 130
			1,3-Dichlorobenzene	2019/03/13		98	%	60 - 130
			1,4-Dichlorobenzene	2019/03/13		100	%	60 - 130
			Dichlorodifluoromethane (FREON 12)	2019/03/13		102	%	60 - 140
			1,1-Dichloroethane	2019/03/13		98	%	60 - 130
			1,2-Dichloroethane	2019/03/13		98	%	60 - 130
			1,1-Dichloroethylene	2019/03/13		96	%	60 - 130
			cis-1,2-Dichloroethylene	2019/03/13		96	%	60 - 130
			trans-1,2-Dichloroethylene	2019/03/13		97	%	60 - 130
			1,2-Dichloropropane	2019/03/13		97	%	60 - 130
			cis-1,3-Dichloropropene	2019/03/13		90	%	60 - 130
			trans-1,3-Dichloropropene	2019/03/13		90	%	60 - 130
			Ethylbenzene	2019/03/13		98	%	60 - 130
			Ethylene Dibromide	2019/03/13		97	%	60 - 130
			Hexane	2019/03/13		102	%	60 - 130
			Methylene Chloride(Dichloromethane)	2019/03/13		105	%	60 - 130
			Methyl Ethyl Ketone (2-Butanone)	2019/03/13		100	%	60 - 140
			Methyl Isobutyl Ketone	2019/03/13		114	%	60 - 130
			Methyl t-butyl ether (MTBE)	2019/03/13		94	%	60 - 130
			Styrene	2019/03/13		110	%	60 - 130
			1,1,1,2-Tetrachloroethane	2019/03/13		101	%	60 - 130
			1,1,1,2,2-Tetrachloroethane	2019/03/13		103	%	60 - 130
			Tetrachloroethylene	2019/03/13		98	%	60 - 130
			Toluene	2019/03/13		96	%	60 - 130
			1,1,1-Trichloroethane	2019/03/13		99	%	60 - 130
			1,1,2-Trichloroethane	2019/03/13		96	%	60 - 130
			Trichloroethylene	2019/03/13		100	%	60 - 130
			Trichlorofluoromethane (FREON 11)	2019/03/13		98	%	60 - 130
			Vinyl Chloride	2019/03/13		100	%	60 - 130
			p+m-Xylene	2019/03/13		101	%	60 - 130
			o-Xylene	2019/03/13		101	%	60 - 130
			4-Bromofluorobenzene	2019/03/13		98	%	60 - 140
			D10-o-Xylene	2019/03/13		84	%	60 - 130
			D4-1,2-Dichloroethane	2019/03/13		108	%	60 - 140
			D8-Toluene	2019/03/13		90	%	60 - 140
			Acetone (2-Propanone)	2019/03/13	<0.50		ug/g	
			Benzene	2019/03/13	<0.020		ug/g	
			Bromodichloromethane	2019/03/13	<0.050		ug/g	
			Bromoform	2019/03/13	<0.050		ug/g	
			Bromomethane	2019/03/13	<0.050		ug/g	
			Carbon Tetrachloride	2019/03/13	<0.050		ug/g	
			Chlorobenzene	2019/03/13	<0.050		ug/g	
			Chloroform	2019/03/13	<0.050		ug/g	
			Dibromochloromethane	2019/03/13	<0.050		ug/g	
			1,2-Dichlorobenzene	2019/03/13	<0.050		ug/g	
			1,3-Dichlorobenzene	2019/03/13	<0.050		ug/g	
			1,4-Dichlorobenzene	2019/03/13	<0.050		ug/g	

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
6015514	AYA	RPD	Dichlorodifluoromethane (FREON 12)	2019/03/13	<0.050		ug/g	
			1,1-Dichloroethane	2019/03/13	<0.050		ug/g	
			1,2-Dichloroethane	2019/03/13	<0.050		ug/g	
			1,1-Dichloroethylene	2019/03/13	<0.050		ug/g	
			cis-1,2-Dichloroethylene	2019/03/13	<0.050		ug/g	
			trans-1,2-Dichloroethylene	2019/03/13	<0.050		ug/g	
			1,2-Dichloropropane	2019/03/13	<0.050		ug/g	
			cis-1,3-Dichloropropene	2019/03/13	<0.030		ug/g	
			trans-1,3-Dichloropropene	2019/03/13	<0.040		ug/g	
			Ethylbenzene	2019/03/13	<0.020		ug/g	
			Ethylene Dibromide	2019/03/13	<0.050		ug/g	
			Hexane	2019/03/13	<0.050		ug/g	
			Methylene Chloride(Dichloromethane)	2019/03/13	<0.050		ug/g	
			Methyl Ethyl Ketone (2-Butanone)	2019/03/13	<0.50		ug/g	
			Methyl Isobutyl Ketone	2019/03/13	<0.50		ug/g	
			Methyl t-butyl ether (MTBE)	2019/03/13	<0.050		ug/g	
			Styrene	2019/03/13	<0.050		ug/g	
			1,1,1,2-Tetrachloroethane	2019/03/13	<0.050		ug/g	
			1,1,2,2-Tetrachloroethane	2019/03/13	<0.050		ug/g	
			Tetrachloroethylene	2019/03/13	<0.050		ug/g	
			Toluene	2019/03/13	<0.020		ug/g	
			1,1,1-Trichloroethane	2019/03/13	<0.050		ug/g	
			1,1,2-Trichloroethane	2019/03/13	<0.050		ug/g	
			Trichloroethylene	2019/03/13	<0.050		ug/g	
			Trichlorofluoromethane (FREON 11)	2019/03/13	<0.050		ug/g	
			Vinyl Chloride	2019/03/13	<0.020		ug/g	
			p+m-Xylene	2019/03/13	<0.020		ug/g	
			o-Xylene	2019/03/13	<0.020		ug/g	
			Total Xylenes	2019/03/13	<0.020		ug/g	
			Acetone (2-Propanone)	2019/03/13	NC		%	50
			Benzene	2019/03/13	NC		%	50
			Bromodichloromethane	2019/03/13	NC		%	50
			Bromoform	2019/03/13	NC		%	50
			Bromomethane	2019/03/13	NC		%	50
			Carbon Tetrachloride	2019/03/13	NC		%	50
			Chlorobenzene	2019/03/13	NC		%	50
			Chloroform	2019/03/13	NC		%	50
			Dibromochloromethane	2019/03/13	NC		%	50
			1,2-Dichlorobenzene	2019/03/13	NC		%	50
			1,3-Dichlorobenzene	2019/03/13	NC		%	50
			1,4-Dichlorobenzene	2019/03/13	NC		%	50
			Dichlorodifluoromethane (FREON 12)	2019/03/13	NC		%	50
			1,1-Dichloroethane	2019/03/13	NC		%	50
			1,2-Dichloroethane	2019/03/13	NC		%	50
			1,1-Dichloroethylene	2019/03/13	NC		%	50
			cis-1,2-Dichloroethylene	2019/03/13	1.1		%	50
			trans-1,2-Dichloroethylene	2019/03/13	NC		%	50
			1,2-Dichloropropane	2019/03/13	NC		%	50
			cis-1,3-Dichloropropene	2019/03/13	NC		%	50
			trans-1,3-Dichloropropene	2019/03/13	NC		%	50
			Ethylbenzene	2019/03/13	NC		%	50
			Ethylene Dibromide	2019/03/13	NC		%	50
			Hexane	2019/03/13	NC		%	50

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Methylene Chloride(Dichloromethane)	2019/03/13	NC		%	50
			Methyl Ethyl Ketone (2-Butanone)	2019/03/13	NC		%	50
			Methyl Isobutyl Ketone	2019/03/13	NC		%	50
			Methyl t-butyl ether (MTBE)	2019/03/13	NC		%	50
			Styrene	2019/03/13	NC		%	50
			1,1,1,2-Tetrachloroethane	2019/03/13	NC		%	50
			1,1,2,2-Tetrachloroethane	2019/03/13	NC		%	50
			Tetrachloroethylene	2019/03/13	NC		%	50
			Toluene	2019/03/13	NC		%	50
			1,1,1-Trichloroethane	2019/03/13	NC		%	50
			1,1,2-Trichloroethane	2019/03/13	NC		%	50
			Trichloroethylene	2019/03/13	0.31		%	50
			Trichlorofluoromethane (FREON 11)	2019/03/13	NC		%	50
			Vinyl Chloride	2019/03/13	1.1		%	50
			p+m-Xylene	2019/03/13	NC		%	50
			o-Xylene	2019/03/13	NC		%	50
			Total Xylenes	2019/03/13	NC		%	50
6015864	BKE	Matrix Spike	WAD Cyanide (Free)	2019/03/14		91	%	75 - 125
6015864	BKE	Spiked Blank	WAD Cyanide (Free)	2019/03/14		99	%	80 - 120
6015864	BKE	Method Blank	WAD Cyanide (Free)	2019/03/14	<0.01		ug/g	
6015864	BKE	RPD	WAD Cyanide (Free)	2019/03/14	24		%	35
6016208	JOH	Matrix Spike	Hot Water Ext. Boron (B)	2019/03/14		103	%	75 - 125
6016208	JOH	Spiked Blank	Hot Water Ext. Boron (B)	2019/03/14		96	%	75 - 125
6016208	JOH	Method Blank	Hot Water Ext. Boron (B)	2019/03/14	<0.050		ug/g	
6016208	JOH	RPD	Hot Water Ext. Boron (B)	2019/03/14	0.50		%	40
6016474	SAC	Matrix Spike [JEA504-02]	Chromium (VI)	2019/03/14		19 (1)	%	70 - 130
6016474	SAC	Spiked Blank	Chromium (VI)	2019/03/14		90	%	80 - 120
6016474	SAC	Method Blank	Chromium (VI)	2019/03/14	<0.2		ug/g	
6016474	SAC	RPD [JEA504-02]	Chromium (VI)	2019/03/14	NC		%	35
6017887	DT1	Matrix Spike	Acid Extractable Antimony (Sb)	2019/03/14		91	%	75 - 125
			Acid Extractable Arsenic (As)	2019/03/14		93	%	75 - 125
			Acid Extractable Barium (Ba)	2019/03/14		NC	%	75 - 125
			Acid Extractable Beryllium (Be)	2019/03/14		95	%	75 - 125
			Acid Extractable Boron (B)	2019/03/14		95	%	75 - 125
			Acid Extractable Cadmium (Cd)	2019/03/14		98	%	75 - 125
			Acid Extractable Chromium (Cr)	2019/03/14		93	%	75 - 125
			Acid Extractable Cobalt (Co)	2019/03/14		95	%	75 - 125
			Acid Extractable Copper (Cu)	2019/03/14		91	%	75 - 125
			Acid Extractable Lead (Pb)	2019/03/14		96	%	75 - 125
			Acid Extractable Molybdenum (Mo)	2019/03/14		98	%	75 - 125
			Acid Extractable Nickel (Ni)	2019/03/14		92	%	75 - 125
			Acid Extractable Selenium (Se)	2019/03/14		99	%	75 - 125
			Acid Extractable Silver (Ag)	2019/03/14		98	%	75 - 125
			Acid Extractable Thallium (Tl)	2019/03/14		93	%	75 - 125
			Acid Extractable Uranium (U)	2019/03/14		92	%	75 - 125
			Acid Extractable Vanadium (V)	2019/03/14		NC	%	75 - 125
			Acid Extractable Zinc (Zn)	2019/03/14		NC	%	75 - 125
			Acid Extractable Mercury (Hg)	2019/03/14		80	%	75 - 125
6017887	DT1	Spiked Blank	Acid Extractable Antimony (Sb)	2019/03/14		99	%	80 - 120
			Acid Extractable Arsenic (As)	2019/03/14		98	%	80 - 120
			Acid Extractable Barium (Ba)	2019/03/14		98	%	80 - 120
			Acid Extractable Beryllium (Be)	2019/03/14		96	%	80 - 120
			Acid Extractable Boron (B)	2019/03/14		98	%	80 - 120

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
6017887	DT1	Method Blank	Acid Extractable Cadmium (Cd)	2019/03/14		97	%	80 - 120
			Acid Extractable Chromium (Cr)	2019/03/14		97	%	80 - 120
			Acid Extractable Cobalt (Co)	2019/03/14		100	%	80 - 120
			Acid Extractable Copper (Cu)	2019/03/14		99	%	80 - 120
			Acid Extractable Lead (Pb)	2019/03/14		99	%	80 - 120
			Acid Extractable Molybdenum (Mo)	2019/03/14		96	%	80 - 120
			Acid Extractable Nickel (Ni)	2019/03/14		101	%	80 - 120
			Acid Extractable Selenium (Se)	2019/03/14		103	%	80 - 120
			Acid Extractable Silver (Ag)	2019/03/14		101	%	80 - 120
			Acid Extractable Thallium (Tl)	2019/03/14		98	%	80 - 120
			Acid Extractable Uranium (U)	2019/03/14		96	%	80 - 120
			Acid Extractable Vanadium (V)	2019/03/14		99	%	80 - 120
			Acid Extractable Zinc (Zn)	2019/03/14		98	%	80 - 120
			Acid Extractable Mercury (Hg)	2019/03/14		92	%	80 - 120
			Acid Extractable Antimony (Sb)	2019/03/14	<0.20		ug/g	
			Acid Extractable Arsenic (As)	2019/03/14	<1.0		ug/g	
			Acid Extractable Barium (Ba)	2019/03/14	<0.50		ug/g	
			Acid Extractable Beryllium (Be)	2019/03/14	<0.20		ug/g	
			Acid Extractable Boron (B)	2019/03/14	<5.0		ug/g	
			Acid Extractable Cadmium (Cd)	2019/03/14	<0.10		ug/g	
			Acid Extractable Chromium (Cr)	2019/03/14	<1.0		ug/g	
			Acid Extractable Cobalt (Co)	2019/03/14	<0.10		ug/g	
			Acid Extractable Copper (Cu)	2019/03/14	<0.50		ug/g	
			Acid Extractable Lead (Pb)	2019/03/14	<1.0		ug/g	
			Acid Extractable Molybdenum (Mo)	2019/03/14	<0.50		ug/g	
			Acid Extractable Nickel (Ni)	2019/03/14	<0.50		ug/g	
			Acid Extractable Selenium (Se)	2019/03/14	<0.50		ug/g	
			Acid Extractable Silver (Ag)	2019/03/14	<0.20		ug/g	
			Acid Extractable Thallium (Tl)	2019/03/14	<0.050		ug/g	
			Acid Extractable Uranium (U)	2019/03/14	<0.050		ug/g	
			Acid Extractable Vanadium (V)	2019/03/14	<5.0		ug/g	
			Acid Extractable Zinc (Zn)	2019/03/14	<5.0		ug/g	
			Acid Extractable Mercury (Hg)	2019/03/14	<0.050		ug/g	
6017887	DT1	RPD	Acid Extractable Antimony (Sb)	2019/03/14	NC		%	30
			Acid Extractable Arsenic (As)	2019/03/14	7.9		%	30
			Acid Extractable Barium (Ba)	2019/03/14	0.77		%	30
			Acid Extractable Beryllium (Be)	2019/03/14	4.3		%	30
			Acid Extractable Boron (B)	2019/03/14	1.8		%	30
			Acid Extractable Cadmium (Cd)	2019/03/14	10		%	30
			Acid Extractable Chromium (Cr)	2019/03/14	3.7		%	30
			Acid Extractable Cobalt (Co)	2019/03/14	4.7		%	30
			Acid Extractable Copper (Cu)	2019/03/14	3.8		%	30
			Acid Extractable Lead (Pb)	2019/03/14	0.26		%	30
			Acid Extractable Molybdenum (Mo)	2019/03/14	NC		%	30
			Acid Extractable Nickel (Ni)	2019/03/14	3.6		%	30
			Acid Extractable Selenium (Se)	2019/03/14	NC		%	30
			Acid Extractable Silver (Ag)	2019/03/14	NC		%	30
			Acid Extractable Thallium (Tl)	2019/03/14	11		%	30
			Acid Extractable Uranium (U)	2019/03/14	0.61		%	30
			Acid Extractable Vanadium (V)	2019/03/14	4.2		%	30
			Acid Extractable Zinc (Zn)	2019/03/14	0.099		%	30
			Acid Extractable Mercury (Hg)	2019/03/14	5.6		%	30
			Conductivity	2019/03/14		104	%	90 - 110
6018215	KAD	Spiked Blank						

Maxxam Job #: B962914
Report Date: 2019/03/15

S2S Environmental Inc
Client Project #: 8674
Your P.O. #: PN19-8674.PT.09.17.A
Sampler Initials: GC

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
	6018215	KAD	Method Blank	Conductivity	2019/03/14	<0.002		mS/cm	
	6018215	KAD	RPD	Conductivity	2019/03/14	1.3		%	10
	6018238	ABD	Matrix Spike	1,4-Difluorobenzene	2019/03/14		99	%	60 - 140
				4-Bromofluorobenzene	2019/03/14		99	%	60 - 140
				D10-Ethylbenzene	2019/03/14		99	%	60 - 140
				D4-1,2-Dichloroethane	2019/03/14		103	%	60 - 140
				Benzene	2019/03/14		81	%	60 - 140
				Toluene	2019/03/14		83	%	60 - 140
				Ethylbenzene	2019/03/14		82	%	60 - 140
				o-Xylene	2019/03/14		82	%	60 - 140
				p+m-Xylene	2019/03/14		85	%	60 - 140
				F1 (C6-C10)	2019/03/14		89	%	60 - 140
	6018238	ABD	Spiked Blank	1,4-Difluorobenzene	2019/03/14		100	%	60 - 140
				4-Bromofluorobenzene	2019/03/14		98	%	60 - 140
				D10-Ethylbenzene	2019/03/14		90	%	60 - 140
				D4-1,2-Dichloroethane	2019/03/14		101	%	60 - 140
				Benzene	2019/03/14		87	%	60 - 140
				Toluene	2019/03/14		88	%	60 - 140
				Ethylbenzene	2019/03/14		89	%	60 - 140
				o-Xylene	2019/03/14		86	%	60 - 140
				p+m-Xylene	2019/03/14		90	%	60 - 140
				F1 (C6-C10)	2019/03/14		103	%	80 - 120
	6018238	ABD	Method Blank	1,4-Difluorobenzene	2019/03/14		98	%	60 - 140
				4-Bromofluorobenzene	2019/03/14		100	%	60 - 140
				D10-Ethylbenzene	2019/03/14		84	%	60 - 140
				D4-1,2-Dichloroethane	2019/03/14		99	%	60 - 140
				Benzene	2019/03/14	<0.020		ug/g	
				Toluene	2019/03/14	<0.020		ug/g	
				Ethylbenzene	2019/03/14	<0.020		ug/g	
				o-Xylene	2019/03/14	<0.020		ug/g	
				p+m-Xylene	2019/03/14	<0.040		ug/g	
				Total Xylenes	2019/03/14	<0.040		ug/g	
				F1 (C6-C10)	2019/03/14	<10		ug/g	
				F1 (C6-C10) - BTEX	2019/03/14	<10		ug/g	
	6018238	ABD	RPD	Benzene	2019/03/14	NC		%	50
				Toluene	2019/03/14	NC		%	50
				Ethylbenzene	2019/03/14	NC		%	50
				o-Xylene	2019/03/14	NC		%	50
				p+m-Xylene	2019/03/14	NC		%	50
				Total Xylenes	2019/03/14	NC		%	50
				F1 (C6-C10)	2019/03/14	NC		%	30
				F1 (C6-C10) - BTEX	2019/03/14	NC		%	30
	6018247	GTO	Spiked Blank	Available (CaCl2) pH	2019/03/14		100	%	97 - 103
	6018247	GTO	RPD	Available (CaCl2) pH	2019/03/14	0.54		%	N/A
	6018685	KLI	Matrix Spike	o-Terphenyl	2019/03/15		92	%	60 - 130
				F2 (C10-C16 Hydrocarbons)	2019/03/15		91	%	50 - 130
				F3 (C16-C34 Hydrocarbons)	2019/03/15		93	%	50 - 130
				F4 (C34-C50 Hydrocarbons)	2019/03/15		93	%	50 - 130
	6018685	KLI	Spiked Blank	o-Terphenyl	2019/03/15		93	%	60 - 130
				F2 (C10-C16 Hydrocarbons)	2019/03/15		92	%	80 - 120
				F3 (C16-C34 Hydrocarbons)	2019/03/15		94	%	80 - 120
				F4 (C34-C50 Hydrocarbons)	2019/03/15		94	%	80 - 120
	6018685	KLI	Method Blank	o-Terphenyl	2019/03/15		85	%	60 - 130

Maxxam Job #: B962914
Report Date: 2019/03/15

S2S Environmental Inc
Client Project #: 8674
Your P.O. #: PN19-8674.PT.09.17.A
Sampler Initials: GC

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
6018685	KLI	RPD	F2 (C10-C16 Hydrocarbons)	2019/03/15	<10		ug/g	
			F3 (C16-C34 Hydrocarbons)	2019/03/15	<200		ug/g	
			F4 (C34-C50 Hydrocarbons)	2019/03/15	<50		ug/g	
			F2 (C10-C16 Hydrocarbons)	2019/03/15	NC		%	30
			F3 (C16-C34 Hydrocarbons)	2019/03/15	NC		%	30
			F4 (C34-C50 Hydrocarbons)	2019/03/15	NC		%	30
6018770	RAJ	Matrix Spike	D10-Anthracene	2019/03/15		93	%	50 - 130
			D14-Terphenyl (FS)	2019/03/15		88	%	50 - 130
			D8-Acenaphthylene	2019/03/15		88	%	50 - 130
			Acenaphthene	2019/03/15		86	%	50 - 130
			Acenaphthylene	2019/03/15		88	%	50 - 130
			Anthracene	2019/03/15		83	%	50 - 130
			Benzo(a)anthracene	2019/03/15		92	%	50 - 130
			Benzo(a)pyrene	2019/03/15		87	%	50 - 130
			Benzo(b/j)fluoranthene	2019/03/15		88	%	50 - 130
			Benzo(g,h,i)perylene	2019/03/15		78	%	50 - 130
			Benzo(k)fluoranthene	2019/03/15		83	%	50 - 130
			Chrysene	2019/03/15		88	%	50 - 130
			Dibenz(a,h)anthracene	2019/03/15		76	%	50 - 130
			Fluoranthene	2019/03/15		93	%	50 - 130
			Fluorene	2019/03/15		85	%	50 - 130
			Indeno(1,2,3-cd)pyrene	2019/03/15		79	%	50 - 130
			1-Methylnaphthalene	2019/03/15		92	%	50 - 130
			2-Methylnaphthalene	2019/03/15		83	%	50 - 130
			Naphthalene	2019/03/15		83	%	50 - 130
			Phenanthrene	2019/03/15		86	%	50 - 130
			Pyrene	2019/03/15		91	%	50 - 130
6018770	RAJ	Spiked Blank	D10-Anthracene	2019/03/15		94	%	50 - 130
			D14-Terphenyl (FS)	2019/03/15		91	%	50 - 130
			D8-Acenaphthylene	2019/03/15		93	%	50 - 130
			Acenaphthene	2019/03/15		88	%	50 - 130
			Acenaphthylene	2019/03/15		90	%	50 - 130
			Anthracene	2019/03/15		85	%	50 - 130
			Benzo(a)anthracene	2019/03/15		93	%	50 - 130
			Benzo(a)pyrene	2019/03/15		88	%	50 - 130
			Benzo(b/j)fluoranthene	2019/03/15		91	%	50 - 130
			Benzo(g,h,i)perylene	2019/03/15		76	%	50 - 130
			Benzo(k)fluoranthene	2019/03/15		86	%	50 - 130
			Chrysene	2019/03/15		91	%	50 - 130
			Dibenz(a,h)anthracene	2019/03/15		70	%	50 - 130
			Fluoranthene	2019/03/15		95	%	50 - 130
			Fluorene	2019/03/15		87	%	50 - 130
			Indeno(1,2,3-cd)pyrene	2019/03/15		77	%	50 - 130
			1-Methylnaphthalene	2019/03/15		94	%	50 - 130
			2-Methylnaphthalene	2019/03/15		84	%	50 - 130
			Naphthalene	2019/03/15		85	%	50 - 130
			Phenanthrene	2019/03/15		88	%	50 - 130
			Pyrene	2019/03/15		93	%	50 - 130
6018770	RAJ	Method Blank	D10-Anthracene	2019/03/15		94	%	50 - 130
			D14-Terphenyl (FS)	2019/03/15		89	%	50 - 130
			D8-Acenaphthylene	2019/03/15		92	%	50 - 130
			Acenaphthene	2019/03/15	<0.0050		ug/g	
			Acenaphthylene	2019/03/15	<0.0050		ug/g	

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
6018770	RAJ	RPD	Anthracene	2019/03/15	<0.0050			ug/g	
			Benzo(a)anthracene	2019/03/15	<0.0050			ug/g	
			Benzo(a)pyrene	2019/03/15	<0.0050			ug/g	
			Benzo(b/j)fluoranthene	2019/03/15	<0.0050			ug/g	
			Benzo(g,h,i)perylene	2019/03/15	<0.0050			ug/g	
			Benzo(k)fluoranthene	2019/03/15	<0.0050			ug/g	
			Chrysene	2019/03/15	<0.0050			ug/g	
			Dibenz(a,h)anthracene	2019/03/15	<0.0050			ug/g	
			Fluoranthene	2019/03/15	<0.0050			ug/g	
			Fluorene	2019/03/15	<0.0050			ug/g	
			Indeno(1,2,3-cd)pyrene	2019/03/15	<0.0050			ug/g	
			1-Methylnaphthalene	2019/03/15	<0.0050			ug/g	
			2-Methylnaphthalene	2019/03/15	<0.0050			ug/g	
			Naphthalene	2019/03/15	<0.0050			ug/g	
			Phenanthrene	2019/03/15	<0.0050			ug/g	
			Pyrene	2019/03/15	<0.0050			ug/g	
			Acenaphthene	2019/03/15	NC			%	40
			Acenaphthylene	2019/03/15	NC			%	40
			Anthracene	2019/03/15	NC			%	40
			Benzo(a)anthracene	2019/03/15	NC			%	40
			Benzo(a)pyrene	2019/03/15	NC			%	40
			Benzo(b/j)fluoranthene	2019/03/15	NC			%	40
			Benzo(g,h,i)perylene	2019/03/15	NC			%	40
			Benzo(k)fluoranthene	2019/03/15	NC			%	40
			Chrysene	2019/03/15	NC			%	40
			Dibenz(a,h)anthracene	2019/03/15	NC			%	40
			Fluoranthene	2019/03/15	NC			%	40
			Fluorene	2019/03/15	NC			%	40
			Indeno(1,2,3-cd)pyrene	2019/03/15	NC			%	40
			1-Methylnaphthalene	2019/03/15	NC			%	40
			2-Methylnaphthalene	2019/03/15	NC			%	40
			Naphthalene	2019/03/15	NC			%	40
			Phenanthrene	2019/03/15	NC			%	40
			Pyrene	2019/03/15	NC			%	40
N/A = Not Applicable									
Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.									
Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.									
Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.									
Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.									
Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.									
NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)									
NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).									
(1) The matrix spike recovery was below the lower control limit. This may be due in part to the reducing environment of the sample. The sample was reanalyzed with the same results.									

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



Anastassia Hamanov, Scientific Specialist

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Your P.O. #: 8674.PT.09.17.A
Your Project #: 8674
Site Location: 5080 NINTH LINE, MILTON
Your C.O.C. #: 125062

Attention: Rachel Baldwin

S2S Environmental Inc
1099 Kingston Rd
Suite 260
Pickering, ON
CANADA L1V 1B5

Report Date: 2019/03/21
Report #: R5638484
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B964520

Received: 2019/03/12, 19:22

Sample Matrix: Soil
Samples Received: 6

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
Petroleum Hydro. CCME F1 & BTEX in Soil (1)	1	N/A	2019/03/14	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydrocarbons F2-F4 in Soil (2)	1	2019/03/14	2019/03/15	CAM SOP-00316	CCME CWS m
Moisture	6	N/A	2019/03/13	CAM SOP-00445	Carter 2nd ed 51.2 m
OC Pesticides (Selected) & PCB (3)	5	2019/03/13	2019/03/14	CAM SOP-00307	SW846 8081, 8082
OC Pesticides Summed Parameters	5	N/A	2019/03/14	CAM SOP-00307	EPA 8081/8082 m
Triazines	5	2019/03/14	2019/03/20	CAM SOP-00301	EPA 8270 m

Remarks:

Maxxam Analytics' laboratories are accredited to ISO/IEC 17025:2005 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Maxxam are based upon recognized Provincial, Federal or US method compendia such as CCME, MDDELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Maxxam's profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Maxxam in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Maxxam Analytics' liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Maxxam has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Maxxam, unless otherwise agreed in writing. Maxxam is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.

Results relate to samples tested. When sampling is not conducted by Maxxam, results relate to the supplied samples tested.

This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) No lab extraction date is given for F1BTEX & VOC samples that are field preserved with methanol. Extraction date is the date sampled unless otherwise stated.

(2) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Maxxam conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following "Alberta Environment's Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Validation of Performance-Based Alternative Methods September 2003". Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.

Your P.O. #: 8674.PT.09.17.A
Your Project #: 8674
Site Location: 5080 NINTH LINE, MILTON
Your C.O.C. #: 125062

Attention: Rachel Baldwin

S2S Environmental Inc
1099 Kingston Rd
Suite 260
Pickering, ON
CANADA L1V 1B5

Report Date: 2019/03/21
Report #: R5638484
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B964520

Received: 2019/03/12, 19:22

(3) Chlordane (Total) = Alpha Chlordane + Gamma Chlordane

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

Jolanta Goralczyk, Project Manager

Email: JGoralczyk@maxxam.ca

Phone# (905)817-5751

=====

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

O.REG 153 OC PESTICIDES (SOIL)

Maxxam ID		JEI584	JEI587		JEI588		JEI589	JEI590		
Sampling Date		2019/03/12 11:30	2019/03/12 09:45		2019/03/12 09:00		2019/03/12 11:30	2019/03/12 13:00		
COC Number		125062	125062		125062		125062	125062		
	UNITS	DUP-P	BH15-1	RDL	BH16-1	RDL	BH14-1	BH12-1	RDL	QC Batch
Inorganics										
Moisture	%	20	20	1.0	42	1.0	19	24	1.0	6015996
Calculated Parameters										
Chlordane (Total)	ug/g	<0.0020	<0.0020	0.0020	<0.0040	0.0040	<0.0020	<0.0020	0.0020	6015031
o,p-DDD + p,p-DDD	ug/g	<0.0020	<0.0020	0.0020	<0.0040	0.0040	<0.0020	<0.0020	0.0020	6015031
o,p-DDE + p,p-DDE	ug/g	<0.0020	<0.0020	0.0020	<0.0040	0.0040	<0.0020	<0.0020	0.0020	6015031
o,p-DDT + p,p-DDT	ug/g	<0.0020	<0.0020	0.0020	<0.0040	0.0040	<0.0020	<0.0020	0.0020	6015031
Total Endosulfan	ug/g	<0.0020	<0.0020	0.0020	<0.0040	0.0040	<0.0020	<0.0020	0.0020	6015031
Total PCB	ug/g	<0.015	<0.015	0.015	<0.030	0.030	<0.015	<0.015	0.015	6015031
Pesticides & Herbicides										
Aldrin	ug/g	<0.0020	<0.0020	0.0020	<0.0040	0.0040	<0.0020	<0.0020	0.0020	6015767
a-Chlordane	ug/g	<0.0020	<0.0020	0.0020	<0.0040	0.0040	<0.0020	<0.0020	0.0020	6015767
g-Chlordane	ug/g	<0.0020	<0.0020	0.0020	<0.0040	0.0040	<0.0020	<0.0020	0.0020	6015767
o,p-DDD	ug/g	<0.0020	<0.0020	0.0020	<0.0040	0.0040	<0.0020	<0.0020	0.0020	6015767
p,p-DDD	ug/g	<0.0020	<0.0020	0.0020	<0.0040	0.0040	<0.0020	<0.0020	0.0020	6015767
o,p-DDE	ug/g	<0.0020	<0.0020	0.0020	<0.0040	0.0040	<0.0020	<0.0020	0.0020	6015767
p,p-DDE	ug/g	<0.0020	<0.0020	0.0020	<0.0040	0.0040	<0.0020	<0.0020	0.0020	6015767
o,p-DDT	ug/g	<0.0020	<0.0020	0.0020	<0.0040	0.0040	<0.0020	<0.0020	0.0020	6015767
p,p-DDT	ug/g	<0.0020	<0.0020	0.0020	<0.0040	0.0040	<0.0020	<0.0020	0.0020	6015767
Dieldrin	ug/g	<0.0020	<0.0020	0.0020	<0.0040	0.0040	<0.0020	<0.0020	0.0020	6015767
Lindane	ug/g	<0.0020	<0.0020	0.0020	<0.0040	0.0040	<0.0020	<0.0020	0.0020	6015767
Endosulfan I (alpha)	ug/g	<0.0020	<0.0020	0.0020	<0.0040	0.0040	<0.0020	<0.0020	0.0020	6015767
Endosulfan II (beta)	ug/g	<0.0020	<0.0020	0.0020	<0.0040	0.0040	<0.0020	<0.0020	0.0020	6015767
Endrin	ug/g	<0.0020	<0.0020	0.0020	<0.0040	0.0040	<0.0020	<0.0020	0.0020	6015767
Heptachlor	ug/g	<0.0020	<0.0020	0.0020	<0.0040	0.0040	<0.0020	<0.0020	0.0020	6015767
Heptachlor epoxide	ug/g	<0.0020	<0.0020	0.0020	<0.0040	0.0040	<0.0020	<0.0020	0.0020	6015767
Hexachlorobenzene	ug/g	<0.0020	<0.0020	0.0020	<0.0040	0.0040	<0.0020	<0.0020	0.0020	6015767
Hexachlorobutadiene	ug/g	<0.0020	<0.0020	0.0020	<0.0040	0.0040	<0.0020	<0.0020	0.0020	6015767
Hexachloroethane	ug/g	<0.0020	<0.0020	0.0020	<0.0040	0.0040	<0.0020	<0.0020	0.0020	6015767
Methoxychlor	ug/g	<0.0050	<0.0050	0.0050	<0.010	0.010	<0.0050	<0.0050	0.0050	6015767
Aroclor 1242	ug/g	<0.015	<0.015	0.015	<0.030	0.030	<0.015	<0.015	0.015	6015767
RDL = Reportable Detection Limit										
QC Batch = Quality Control Batch										

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O.REG 153 OC PESTICIDES (SOIL)

Maxxam ID		JEI584	JEI587		JEI588		JEI589	JEI590		
Sampling Date		2019/03/12 11:30	2019/03/12 09:45		2019/03/12 09:00		2019/03/12 11:30	2019/03/12 13:00		
COC Number		125062	125062		125062		125062	125062		
	UNITS	DUP-P	BH15-1	RDL	BH16-1	RDL	BH14-1	BH12-1	RDL	QC Batch
Aroclor 1248	ug/g	<0.015	<0.015	0.015	<0.030	0.030	<0.015	<0.015	0.015	6015767
Aroclor 1254	ug/g	<0.015	<0.015	0.015	<0.030	0.030	<0.015	<0.015	0.015	6015767
Aroclor 1260	ug/g	<0.015	<0.015	0.015	<0.030	0.030	<0.015	<0.015	0.015	6015767
Surrogate Recovery (%)										
2,4,5,6-Tetrachloro-m-xylene	%	74	83		82		78	82		6015767
Decachlorobiphenyl	%	99	98		102		110	115		6015767
RDL = Reportable Detection Limit										
QC Batch = Quality Control Batch										

O.REG 153 PETROLEUM HYDROCARBONS (SOIL)

Maxxam ID		JEI585		
Sampling Date		2019/03/07 09:15		
COC Number		125062		
	UNITS	BH5-3	RDL	QC Batch
Inorganics				
Moisture	%	13	1.0	6015996
BTEX & F1 Hydrocarbons				
Benzene	ug/g	<0.020	0.020	6019203
Toluene	ug/g	<0.020	0.020	6019203
Ethylbenzene	ug/g	<0.020	0.020	6019203
o-Xylene	ug/g	<0.020	0.020	6019203
p+m-Xylene	ug/g	<0.040	0.040	6019203
Total Xylenes	ug/g	<0.040	0.040	6019203
F1 (C6-C10)	ug/g	<10	10	6019203
F1 (C6-C10) - BTEX	ug/g	<10	10	6019203
F2-F4 Hydrocarbons				
F2 (C10-C16 Hydrocarbons)	ug/g	<10	10	6019698
F3 (C16-C34 Hydrocarbons)	ug/g	<50	50	6019698
F4 (C34-C50 Hydrocarbons)	ug/g	<50	50	6019698
Reached Baseline at C50	ug/g	Yes		6019698
Hydrocarbon Resemblance	ug/g	NA (1)	N/A	6019698
Surrogate Recovery (%)				
1,4-Difluorobenzene	%	105		6019203
4-Bromofluorobenzene	%	96		6019203
D10-Ethylbenzene	%	110		6019203
D4-1,2-Dichloroethane	%	106		6019203
o-Terphenyl	%	98		6019698
RDL = Reportable Detection Limit QC Batch = Quality Control Batch N/A = Not Applicable (1) NA: Not Applicable				

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SEMI-VOLATILE ORGANICS BY GC-MS (SOIL)

Maxxam ID		JEI584	JEI587		JEI588		JEI589	JEI589	JEI590		
Sampling Date		2019/03/12 11:30	2019/03/12 09:45		2019/03/12 09:00		2019/03/12 11:30	2019/03/12 11:30	2019/03/12 13:00		
COC Number		125062	125062		125062		125062	125062	125062		
	UNITS	DUP-P	BH15-1	RDL	BH16-1	RDL	BH14-1	BH14-1 Lab-Dup	BH12-1	RDL	QC Batch
Pesticides & Herbicides											
Prometon	ug/g	<0.050	<0.050	0.050	<0.10	0.10	<0.050	<0.050	<0.050	0.050	6023938
Simazine	ug/g	<0.25	<0.25	0.25	<0.50	0.50	<0.25	<0.25	<0.25	0.25	6023938
Atrazine	ug/g	<0.10	<0.10	0.10	<0.20	0.20	<0.10	<0.10	<0.10	0.10	6023938
Propazine	ug/g	<0.25	<0.25	0.25	<0.50	0.50	<0.25	<0.25	<0.25	0.25	6023938
Metribuzin (Sencor)	ug/g	<0.10	<0.10	0.10	<0.20	0.20	<0.10	<0.10	<0.10	0.10	6023938
Simetryn	ug/g	<0.050	<0.050	0.050	<0.10	0.10	<0.050	<0.050	<0.050	0.050	6023938
Ametryn	ug/g	<0.25	<0.25	0.25	<0.50	0.50	<0.25	<0.25	<0.25	0.25	6023938
Prometryne	ug/g	<0.25	<0.25	0.25	<0.50	0.50	<0.25	<0.25	<0.25	0.25	6023938
Terbutryne	ug/g	<0.050	<0.050	0.050	<0.10	0.10	<0.050	<0.050	<0.050	0.050	6023938
Cyanazine (Bladex)	ug/g	<0.25	<0.25	0.25	<0.50	0.50	<0.25	<0.25	<0.25	0.25	6023938
Surrogate Recovery (%)											
2-Fluorobiphenyl	%	86	77		69		85	88	69		6023938
D14-Terphenyl (FS)	%	93	95		89		95	97	96		6023938
D5-Nitrobenzene	%	85	81		80		79	83	67		6023938
RDL = Reportable Detection Limit QC Batch = Quality Control Batch Lab-Dup = Laboratory Initiated Duplicate											

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TEST SUMMARY

Maxxam ID: JEI584
Sample ID: DUP-P
Matrix: Soil

Collected: 2019/03/12
Shipped:
Received: 2019/03/12

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	6015996	N/A	2019/03/13	Min Yang
OC Pesticides (Selected) & PCB	GC/ECD	6015767	2019/03/13	2019/03/14	Li Peng
OC Pesticides Summed Parameters	CALC	6015031	N/A	2019/03/14	Automated Statchk
Triazines	GC/MS	6023938	2019/03/14	2019/03/20	May Yin Mak

Maxxam ID: JEI585
Sample ID: BH5-3
Matrix: Soil

Collected: 2019/03/07
Shipped:
Received: 2019/03/12

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	6019203	N/A	2019/03/14	Shahram Lalehparvar
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	6019698	2019/03/14	2019/03/15	Prabhjot Gulati
Moisture	BAL	6015996	N/A	2019/03/13	Min Yang

Maxxam ID: JEI587
Sample ID: BH15-1
Matrix: Soil

Collected: 2019/03/12
Shipped:
Received: 2019/03/12

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	6015996	N/A	2019/03/13	Min Yang
OC Pesticides (Selected) & PCB	GC/ECD	6015767	2019/03/13	2019/03/14	Li Peng
OC Pesticides Summed Parameters	CALC	6015031	N/A	2019/03/14	Automated Statchk
Triazines	GC/MS	6023938	2019/03/14	2019/03/20	May Yin Mak

Maxxam ID: JEI588
Sample ID: BH16-1
Matrix: Soil

Collected: 2019/03/12
Shipped:
Received: 2019/03/12

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	6015996	N/A	2019/03/13	Min Yang
OC Pesticides (Selected) & PCB	GC/ECD	6015767	2019/03/13	2019/03/14	Li Peng
OC Pesticides Summed Parameters	CALC	6015031	N/A	2019/03/14	Automated Statchk
Triazines	GC/MS	6023938	2019/03/14	2019/03/20	May Yin Mak

Maxxam ID: JEI589
Sample ID: BH14-1
Matrix: Soil

Collected: 2019/03/12
Shipped:
Received: 2019/03/12

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	6015996	N/A	2019/03/13	Min Yang
OC Pesticides (Selected) & PCB	GC/ECD	6015767	2019/03/13	2019/03/14	Li Peng
OC Pesticides Summed Parameters	CALC	6015031	N/A	2019/03/14	Automated Statchk
Triazines	GC/MS	6023938	2019/03/14	2019/03/20	May Yin Mak

Maxxam Job #: B964520
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TEST SUMMARY

Maxxam ID: JEI589 Dup
Sample ID: BH14-1
Matrix: Soil

Collected: 2019/03/12
Shipped:
Received: 2019/03/12

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Triazines	GC/MS	6023938	2019/03/18	2019/03/20	May Yin Mak

Maxxam ID: JEI590
Sample ID: BH12-1
Matrix: Soil

Collected: 2019/03/12
Shipped:
Received: 2019/03/12

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	6015996	N/A	2019/03/13	Min Yang
OC Pesticides (Selected) & PCB	GC/ECD	6015767	2019/03/13	2019/03/14	Li Peng
OC Pesticides Summed Parameters	CALC	6015031	N/A	2019/03/14	Automated Statchk
Triazines	GC/MS	6023938	2019/03/14	2019/03/20	May Yin Mak

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	3.7°C
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Sample JEI588 [BH16-1] : OC Pesticide Analysis: Detection limits were adjusted for high moisture content.

TRIAZINE Analysis: Detection limits were adjusted for high moisture content.

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
6015767	LPG	Matrix Spike		2,4,5,6-Tetrachloro-m-xylene	2019/03/13		79	%	50 - 130
				Decachlorobiphenyl	2019/03/13		113	%	50 - 130
				Aldrin	2019/03/13		84	%	50 - 130
				a-Chlordane	2019/03/13		104	%	50 - 130
				g-Chlordane	2019/03/13		109	%	50 - 130
				o,p-DDD	2019/03/13		103	%	50 - 130
				p,p-DDD	2019/03/13		98	%	50 - 130
				o,p-DDE	2019/03/13		99	%	50 - 130
				p,p-DDE	2019/03/13		63	%	50 - 130
				o,p-DDT	2019/03/13		103	%	50 - 130
				p,p-DDT	2019/03/13		102	%	50 - 130
				Dieldrin	2019/03/13		79	%	50 - 130
				Lindane	2019/03/13		82	%	50 - 130
				Endosulfan I (alpha)	2019/03/13		68	%	50 - 130
				Endosulfan II (beta)	2019/03/13		55	%	50 - 130
				Endrin	2019/03/13		93	%	50 - 130
				Heptachlor	2019/03/13		88	%	50 - 130
				Heptachlor epoxide	2019/03/13		95	%	50 - 130
				Hexachlorobenzene	2019/03/13		100	%	50 - 130
				Hexachlorobutadiene	2019/03/13		75	%	50 - 130
				Hexachloroethane	2019/03/13		56	%	50 - 130
				Methoxychlor	2019/03/13		122	%	50 - 130
6015767	LPG	Spiked Blank		2,4,5,6-Tetrachloro-m-xylene	2019/03/13		70	%	50 - 130
				Decachlorobiphenyl	2019/03/13		116	%	50 - 130
				Aldrin	2019/03/13		74	%	50 - 130
				a-Chlordane	2019/03/13		100	%	50 - 130
				g-Chlordane	2019/03/13		95	%	50 - 130
				o,p-DDD	2019/03/13		104	%	50 - 130
				p,p-DDD	2019/03/13		101	%	50 - 130
				o,p-DDE	2019/03/13		82	%	50 - 130
				p,p-DDE	2019/03/13		89	%	50 - 130
				o,p-DDT	2019/03/13		94	%	50 - 130
				p,p-DDT	2019/03/13		109	%	50 - 130
				Dieldrin	2019/03/13		112	%	50 - 130
				Lindane	2019/03/13		88	%	50 - 130
				Endosulfan I (alpha)	2019/03/13		96	%	50 - 130
				Endosulfan II (beta)	2019/03/13		105	%	50 - 130
				Endrin	2019/03/13		101	%	50 - 130
				Heptachlor	2019/03/13		74	%	50 - 130
				Heptachlor epoxide	2019/03/13		102	%	50 - 130
				Hexachlorobenzene	2019/03/13		88	%	50 - 130
				Hexachlorobutadiene	2019/03/13		82	%	50 - 130
				Hexachloroethane	2019/03/13		68	%	50 - 130
				Methoxychlor	2019/03/13		141 (1)	%	50 - 130
6015767	LPG	RPD		Aroclor 1242	2019/03/13	200 (2)		%	40
				Aldrin	2019/03/13	NC		%	40
				a-Chlordane	2019/03/13	NC		%	40
				g-Chlordane	2019/03/13	NC		%	40
				o,p-DDD	2019/03/13	NC		%	40
				p,p-DDD	2019/03/13	NC		%	40
				o,p-DDE	2019/03/13	NC		%	40
				p,p-DDE	2019/03/13	NC		%	40

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
6015767	LPG	Method Blank	o,p-DDT	2019/03/13	NC		%	40
			p,p-DDT	2019/03/13	NC		%	40
			Dieldrin	2019/03/13	NC		%	40
			Lindane	2019/03/13	NC		%	40
			Endosulfan I (alpha)	2019/03/13	NC		%	40
			Endosulfan II (beta)	2019/03/13	NC		%	40
			Endrin	2019/03/13	NC		%	40
			Heptachlor	2019/03/13	NC		%	40
			Heptachlor epoxide	2019/03/13	NC		%	40
			Hexachlorobenzene	2019/03/13	NC		%	40
			Hexachlorobutadiene	2019/03/13	NC		%	40
			Hexachloroethane	2019/03/13	NC		%	40
			Methoxychlor	2019/03/13	NC		%	40
			Aroclor 1242	2019/03/13	NC		%	40
			Aroclor 1248	2019/03/13	NC		%	40
			Aroclor 1254	2019/03/13	NC		%	40
			Aroclor 1260	2019/03/13	NC		%	40
			2,4,5,6-Tetrachloro-m-xylene	2019/03/13		86	%	50 - 130
			Decachlorobiphenyl	2019/03/13		129	%	50 - 130
			Aldrin	2019/03/13	<0.0020		ug/g	
			a-Chlordane	2019/03/13	<0.0020		ug/g	
			g-Chlordane	2019/03/13	<0.0020		ug/g	
			o,p-DDD	2019/03/13	<0.0020		ug/g	
			p,p-DDD	2019/03/13	<0.0020		ug/g	
			o,p-DDE	2019/03/13	<0.0020		ug/g	
			p,p-DDE	2019/03/13	<0.0020		ug/g	
			o,p-DDT	2019/03/13	<0.0020		ug/g	
			p,p-DDT	2019/03/13	<0.0020		ug/g	
			Dieldrin	2019/03/13	<0.0020		ug/g	
			Lindane	2019/03/13	<0.0020		ug/g	
			Endosulfan I (alpha)	2019/03/13	<0.0020		ug/g	
			Endosulfan II (beta)	2019/03/13	<0.0020		ug/g	
			Endrin	2019/03/13	<0.0020		ug/g	
			Heptachlor	2019/03/13	<0.0020		ug/g	
			Heptachlor epoxide	2019/03/13	<0.0020		ug/g	
			Hexachlorobenzene	2019/03/13	<0.0020		ug/g	
			Hexachlorobutadiene	2019/03/13	<0.0020		ug/g	
			Hexachloroethane	2019/03/13	<0.0020		ug/g	
			Methoxychlor	2019/03/13	<0.0050		ug/g	
			Aroclor 1242	2019/03/13	<0.015		ug/g	
			Aroclor 1248	2019/03/13	<0.015		ug/g	
			Aroclor 1254	2019/03/13	<0.015		ug/g	
			Aroclor 1260	2019/03/13	<0.015		ug/g	
6015996	GYA	RPD	Moisture	2019/03/13	6.0		%	20
6019203	SL3	Matrix Spike	1,4-Difluorobenzene	2019/03/14		104	%	60 - 140
			4-Bromofluorobenzene	2019/03/14		99	%	60 - 140
			D10-Ethylbenzene	2019/03/14		112	%	60 - 140
			D4-1,2-Dichloroethane	2019/03/14		104	%	60 - 140
			Benzene	2019/03/14		87	%	60 - 140
			Toluene	2019/03/14		89	%	60 - 140
			Ethylbenzene	2019/03/14		87	%	60 - 140
			o-Xylene	2019/03/14		85	%	60 - 140

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
6019203	SL3	Spiked Blank	p+m-Xylene	2019/03/14		87	%	60 - 140
			F1 (C6-C10)	2019/03/14		92	%	60 - 140
			1,4-Difluorobenzene	2019/03/14		106	%	60 - 140
			4-Bromofluorobenzene	2019/03/14		99	%	60 - 140
			D10-Ethylbenzene	2019/03/14		100	%	60 - 140
			D4-1,2-Dichloroethane	2019/03/14		106	%	60 - 140
			Benzene	2019/03/14		96	%	60 - 140
			Toluene	2019/03/14		100	%	60 - 140
			Ethylbenzene	2019/03/14		98	%	60 - 140
			o-Xylene	2019/03/14		98	%	60 - 140
6019203	SL3	Method Blank	p+m-Xylene	2019/03/14		96	%	60 - 140
			F1 (C6-C10)	2019/03/14		102	%	80 - 120
			1,4-Difluorobenzene	2019/03/14		105	%	60 - 140
			4-Bromofluorobenzene	2019/03/14		96	%	60 - 140
			D10-Ethylbenzene	2019/03/14		90	%	60 - 140
			D4-1,2-Dichloroethane	2019/03/14		107	%	60 - 140
			Benzene	2019/03/14	<0.020		ug/g	
			Toluene	2019/03/14	<0.020		ug/g	
			Ethylbenzene	2019/03/14	<0.020		ug/g	
			o-Xylene	2019/03/14	<0.020		ug/g	
6019203	SL3	RPD	p+m-Xylene	2019/03/14	<0.040		ug/g	
			Total Xylenes	2019/03/14	<0.040		ug/g	
			F1 (C6-C10)	2019/03/14	<10		ug/g	
			F1 (C6-C10) - BTEX	2019/03/14	<10		ug/g	
			Benzene	2019/03/14	NC		%	50
			Toluene	2019/03/14	NC		%	50
			Ethylbenzene	2019/03/14	NC		%	50
			o-Xylene	2019/03/14	NC		%	50
			p+m-Xylene	2019/03/14	NC		%	50
			Total Xylenes	2019/03/14	NC		%	50
6019698	GUL	Matrix Spike	F1 (C6-C10)	2019/03/14	NC		%	30
			F1 (C6-C10) - BTEX	2019/03/14	NC		%	30
			o-Terphenyl	2019/03/14		98	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2019/03/14		94	%	50 - 130
			F3 (C16-C34 Hydrocarbons)	2019/03/14		99	%	50 - 130
			F4 (C34-C50 Hydrocarbons)	2019/03/14		105	%	50 - 130
			o-Terphenyl	2019/03/14		94	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2019/03/14		90	%	80 - 120
			F3 (C16-C34 Hydrocarbons)	2019/03/14		95	%	80 - 120
			F4 (C34-C50 Hydrocarbons)	2019/03/14		100	%	80 - 120
6019698	GUL	Method Blank	o-Terphenyl	2019/03/14		98	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2019/03/14	<10		ug/g	
			F3 (C16-C34 Hydrocarbons)	2019/03/14	<50		ug/g	
			F4 (C34-C50 Hydrocarbons)	2019/03/14	<50		ug/g	
			F2 (C10-C16 Hydrocarbons)	2019/03/15	NC		%	30
			F3 (C16-C34 Hydrocarbons)	2019/03/15	NC		%	30
			F4 (C34-C50 Hydrocarbons)	2019/03/15	NC		%	30
			2-Fluorobiphenyl	2019/03/20		85	%	30 - 130
			D14-Terphenyl (FS)	2019/03/20		91	%	30 - 130
			D5-Nitrobenzene	2019/03/20		80	%	30 - 130
6023938	MYI	Matrix Spike [JEI589-01]	Prometon	2019/03/20		97	%	40 - 130
			Simazine	2019/03/20		91	%	40 - 130

Maxxam Job #: B964520
Report Date: 2019/03/21

S2S Environmental Inc
Client Project #: 8674
Site Location: 5080 NINTH LINE, MILTON
Your P.O. #: 8674.PT.09.17.A
Sampler Initials: RB

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
6023938	MYI	Spiked Blank	Atrazine	2019/03/20		87	%	40 - 130
			Propazine	2019/03/20		90	%	40 - 130
			Metribuzin (Sencor)	2019/03/20		88	%	40 - 130
			Simetryn	2019/03/20		93	%	40 - 130
			Ametryn	2019/03/20		96	%	40 - 130
			Prometryne	2019/03/20		100	%	40 - 130
			Terbutryne	2019/03/20		99	%	40 - 130
			Cyanazine (Bladex)	2019/03/20		94	%	40 - 130
			2-Fluorobiphenyl	2019/03/20		87	%	30 - 130
			D14-Terphenyl (FS)	2019/03/20		103	%	30 - 130
			D5-Nitrobenzene	2019/03/20		89	%	30 - 130
			Prometon	2019/03/20		82	%	40 - 130
			Simazine	2019/03/20		90	%	40 - 130
			Atrazine	2019/03/20		88	%	40 - 130
			Propazine	2019/03/20		89	%	40 - 130
			Metribuzin (Sencor)	2019/03/20		98	%	40 - 130
			Simetryn	2019/03/20		104	%	40 - 130
			Ametryn	2019/03/20		107	%	40 - 130
6023938	MYI	Method Blank	Prometryne	2019/03/20		104	%	40 - 130
			Terbutryne	2019/03/20		93	%	40 - 130
			Cyanazine (Bladex)	2019/03/20		102	%	40 - 130
			2-Fluorobiphenyl	2019/03/20		95	%	30 - 130
			D14-Terphenyl (FS)	2019/03/20		97	%	30 - 130
			D5-Nitrobenzene	2019/03/20		89	%	30 - 130
			Prometon	2019/03/20	<0.050		ug/g	
			Simazine	2019/03/20	<0.25		ug/g	
			Atrazine	2019/03/20	<0.10		ug/g	
			Propazine	2019/03/20	<0.25		ug/g	
			Metribuzin (Sencor)	2019/03/20	<0.10		ug/g	
			Simetryn	2019/03/20	<0.050		ug/g	
			Ametryn	2019/03/20	<0.25		ug/g	
			Prometryne	2019/03/20	<0.25		ug/g	
			Terbutryne	2019/03/20	<0.050		ug/g	
			Cyanazine (Bladex)	2019/03/20	<0.25		ug/g	
			Prometon	2019/03/20	NC		%	50
			Simazine	2019/03/20	NC		%	50
6023938	MYI	RPD [JEI589-01]	Atrazine	2019/03/20	NC		%	50
			Propazine	2019/03/20	NC		%	50
			Metribuzin (Sencor)	2019/03/20	NC		%	50
			Simetryn	2019/03/20	NC		%	50
			Ametryn	2019/03/20	NC		%	50
			Prometryne	2019/03/20	NC		%	50
			Terbutryne	2019/03/20	NC		%	50

Maxxam Job #: B964520
Report Date: 2019/03/21

S2S Environmental Inc
Client Project #: 8674
Site Location: 5080 NINTH LINE, MILTON
Your P.O. #: 8674.PT.09.17.A
Sampler Initials: RB

QUALITY ASSURANCE REPORT(CONT'D)

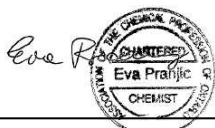
QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Cyanazine (Bladex)	2019/03/20	NC		%	50
Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement. Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference. Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy. Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination. Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency. NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference $\leq 2 \times$ RDL). (1) The recovery was above the upper control limit. This may represent a high bias in some results for flagged analytes. For results that were not detected (ND), this potential bias has no impact. (2) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.								

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



Anastassia Hamanov, Scientific Specialist



Ewa Pranjic, M.Sc., C.Chem, Scientific Specialist

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Your P.O. #: 8674.PT.09.17.A
Your Project #: 8674
Site Location: 5080 NINTH LINE, MILTON
Your C.O.C. #: na

Attention: Rachel Baldwin

S2S Environmental Inc
1099 Kingston Rd
Suite 260
Pickering, ON
CANADA L1V 1B5

Report Date: 2019/03/21
Report #: R5638478
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B968295

Received: 2019/03/15, 15:51

Sample Matrix: Soil
Samples Received: 3

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
Moisture	1	N/A	2019/03/18	CAM SOP-00445	Carter 2nd ed 51.2 m
OC Pesticides (Selected) & PCB (1)	1	2019/03/19	2019/03/20	CAM SOP-00307	SW846 8081, 8082
OC Pesticides Summed Parameters	1	N/A	2019/03/19	CAM SOP-00307	EPA 8081/8082 m
pH CaCl2 EXTRACT	2	2019/03/19	2019/03/19	CAM SOP-00413	EPA 9045 D m
Triazines	1	2019/03/18	2019/03/20	CAM SOP-00301	EPA 8270 m

Remarks:

Maxxam Analytics' laboratories are accredited to ISO/IEC 17025:2005 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Maxxam are based upon recognized Provincial, Federal or US method compendia such as CCME, MDDELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Maxxam's profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Maxxam in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Maxxam Analytics' liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Maxxam has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Maxxam, unless otherwise agreed in writing. Maxxam is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.

Results relate to samples tested. When sampling is not conducted by Maxxam, results relate to the supplied samples tested.

This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) Chlordane (Total) = Alpha Chlordane + Gamma Chlordane

Attention: Rachel Baldwin

S2S Environmental Inc
1099 Kingston Rd
Suite 260
Pickering, ON
CANADA L1V 1B5

Your P.O. #: 8674.PT.09.17.A
Your Project #: 8674
Site Location: 5080 NINTH LINE, MILTON
Your C.O.C. #: na

Report Date: 2019/03/21
Report #: R5638478
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B968295
Received: 2019/03/15, 15:51

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Jolanta Goralczyk, Project Manager
Email: JGoralczyk@maxxam.ca
Phone# (905)817-5751

=====

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

O.REG 153 OC PESTICIDES (SOIL)

Maxxam ID		JFC443			JFC443		
Sampling Date		2019/03/15 08:30			2019/03/15 08:30		
COC Number		na			na		
	UNITS	BH11-1	RDL	QC Batch	BH11-1 Lab-Dup	RDL	QC Batch
Inorganics							
Moisture	%	49	1.0	6023067			
Calculated Parameters							
Chlordane (Total)	ug/g	<0.0040	0.0040	6020556			
o,p-DDD + p,p-DDD	ug/g	<0.0040	0.0040	6020556			
o,p-DDE + p,p-DDE	ug/g	<0.0040	0.0040	6020556			
o,p-DDT + p,p-DDT	ug/g	<0.0040	0.0040	6020556			
Total Endosulfan	ug/g	<0.0040	0.0040	6020556			
Total PCB	ug/g	<0.030	0.030	6020556			
Pesticides & Herbicides							
Aldrin	ug/g	<0.0040	0.0040	6025298	<0.0040	0.0040	6025298
a-Chlordane	ug/g	<0.0040	0.0040	6025298	<0.0040	0.0040	6025298
g-Chlordane	ug/g	<0.0040	0.0040	6025298	<0.0040	0.0040	6025298
o,p-DDD	ug/g	<0.0040	0.0040	6025298	<0.0040	0.0040	6025298
p,p-DDD	ug/g	<0.0040	0.0040	6025298	<0.0040	0.0040	6025298
o,p-DDE	ug/g	<0.0040	0.0040	6025298	<0.0040	0.0040	6025298
p,p-DDE	ug/g	<0.0040	0.0040	6025298	<0.0040	0.0040	6025298
o,p-DDT	ug/g	<0.0040	0.0040	6025298	<0.0040	0.0040	6025298
p,p-DDT	ug/g	<0.0040	0.0040	6025298	<0.0040	0.0040	6025298
Dieldrin	ug/g	<0.0040	0.0040	6025298	<0.0040	0.0040	6025298
Lindane	ug/g	<0.0040	0.0040	6025298	<0.0040	0.0040	6025298
Endosulfan I (alpha)	ug/g	<0.0040	0.0040	6025298	<0.0040	0.0040	6025298
Endosulfan II (beta)	ug/g	<0.0040	0.0040	6025298	<0.0040	0.0040	6025298
Endrin	ug/g	<0.0040	0.0040	6025298	<0.0040	0.0040	6025298
Heptachlor	ug/g	<0.0040	0.0040	6025298	<0.0040	0.0040	6025298
Heptachlor epoxide	ug/g	<0.0040	0.0040	6025298	<0.0040	0.0040	6025298
Hexachlorobenzene	ug/g	<0.0040	0.0040	6025298	<0.0040	0.0040	6025298
Hexachlorobutadiene	ug/g	<0.0040	0.0040	6025298	<0.0040	0.0040	6025298
Hexachloroethane	ug/g	<0.0040	0.0040	6025298	<0.0040	0.0040	6025298
Methoxychlor	ug/g	<0.010	0.010	6025298	<0.010	0.010	6025298
RDL = Reportable Detection Limit							
QC Batch = Quality Control Batch							
Lab-Dup = Laboratory Initiated Duplicate							

Maxxam Job #: B968295
Report Date: 2019/03/21

S2S Environmental Inc
Client Project #: 8674
Site Location: 5080 NINTH LINE, MILTON
Your P.O. #: 8674.PT.09.17.A
Sampler Initials: RB

O.REG 153 OC PESTICIDES (SOIL)

Maxxam ID		JFC443			JFC443		
Sampling Date		2019/03/15 08:30			2019/03/15 08:30		
COC Number		na			na		
	UNITS	BH11-1	RDL	QC Batch	BH11-1 Lab-Dup	RDL	QC Batch
Aroclor 1242	ug/g	<0.030	0.030	6025298	<0.030	0.030	6025298
Aroclor 1248	ug/g	<0.030	0.030	6025298	<0.030	0.030	6025298
Aroclor 1254	ug/g	<0.030	0.030	6025298	<0.030	0.030	6025298
Aroclor 1260	ug/g	<0.030	0.030	6025298	<0.030	0.030	6025298
Surrogate Recovery (%)							
2,4,5,6-Tetrachloro-m-xylene	%	99		6025298	93		6025298
Decachlorobiphenyl	%	117		6025298	117		6025298
RDL = Reportable Detection Limit QC Batch = Quality Control Batch Lab-Dup = Laboratory Initiated Duplicate							

Maxxam Job #: B968295
Report Date: 2019/03/21

S2S Environmental Inc
Client Project #: 8674
Site Location: 5080 NINTH LINE, MILTON
Your P.O. #: 8674.PT.09.17.A
Sampler Initials: RB

RESULTS OF ANALYSES OF SOIL

Maxxam ID		JFC444	JFC445	
Sampling Date		2019/03/15 13:40	2019/03/15 09:30	
COC Number		na	na	
	UNITS	BH10-6	BH11-6	QC Batch
Inorganics				
Available (CaCl ₂) pH	pH	7.79	7.82	6023572
QC Batch = Quality Control Batch				

SEMI-VOLATILE ORGANICS BY GC-MS (SOIL)

Maxxam ID		JFC443		
Sampling Date		2019/03/15 08:30		
COC Number		na		
	UNITS	BH11-1	RDL	QC Batch
Pesticides & Herbicides				
Prometon	ug/g	<0.10	0.10	6023938
Simazine	ug/g	<0.50	0.50	6023938
Atrazine	ug/g	<0.20	0.20	6023938
Propazine	ug/g	<0.50	0.50	6023938
Metribuzin (Sencor)	ug/g	<0.20	0.20	6023938
Simetryn	ug/g	<0.10	0.10	6023938
Ametryn	ug/g	<0.50	0.50	6023938
Prometryne	ug/g	<0.50	0.50	6023938
Terbutryne	ug/g	<0.10	0.10	6023938
Cyanazine (Bladex)	ug/g	<0.50	0.50	6023938
Surrogate Recovery (%)				
2-Fluorobiphenyl	%	52		6023938
D14-Terphenyl (FS)	%	79		6023938
D5-Nitrobenzene	%	79		6023938
RDL = Reportable Detection Limit				
QC Batch = Quality Control Batch				

Maxxam Job #: B968295
Report Date: 2019/03/21

S2S Environmental Inc
Client Project #: 8674
Site Location: 5080 NINTH LINE, MILTON
Your P.O. #: 8674.PT.09.17.A
Sampler Initials: RB

TEST SUMMARY

Maxxam ID: JFC443
Sample ID: BH11-1
Matrix: Soil

Collected: 2019/03/15
Shipped:
Received: 2019/03/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	6023067	N/A	2019/03/18	Prgya Panchal
OC Pesticides (Selected) & PCB	GC/ECD	6025298	2019/03/19	2019/03/20	Li Peng
OC Pesticides Summed Parameters	CALC	6020556	N/A	2019/03/19	Automated Statchk
Triazines	GC/MS	6023938	2019/03/18	2019/03/20	May Yin Mak

Maxxam ID: JFC443 Dup
Sample ID: BH11-1
Matrix: Soil

Collected: 2019/03/15
Shipped:
Received: 2019/03/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
OC Pesticides (Selected) & PCB	GC/ECD	6025298	2019/03/19	2019/03/20	Li Peng

Maxxam ID: JFC444
Sample ID: BH10-6
Matrix: Soil

Collected: 2019/03/15
Shipped:
Received: 2019/03/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
pH CaCl2 EXTRACT	AT	6023572	2019/03/19	2019/03/19	Gnana Thomas

Maxxam ID: JFC445
Sample ID: BH11-6
Matrix: Soil

Collected: 2019/03/15
Shipped:
Received: 2019/03/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
pH CaCl2 EXTRACT	AT	6023572	2019/03/19	2019/03/19	Gnana Thomas

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	2.0°C
-----------	-------

Sample JFC443 [BH11-1] : OC Pesticide Analysis: Detection limits were adjusted for high moisture content.

TRIAZINE Analysis: Detection limits were adjusted for high moisture content.

Results relate only to the items tested.

Maxxam Job #: B968295
Report Date: 2019/03/21

S2S Environmental Inc
Client Project #: 8674
Site Location: 5080 NINTH LINE, MILTON
Your P.O. #: 8674.PT.09.17.A
Sampler Initials: RB

QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
6023067	GYA	RPD	Moisture	2019/03/18	2.2		%	20
6023572	GTO	Spiked Blank	Available (CaCl2) pH	2019/03/19		100	%	97 - 103
6023572	GTO	RPD	Available (CaCl2) pH	2019/03/19	1.3		%	N/A
6023938	MYI	Matrix Spike	2-Fluorobiphenyl	2019/03/20		85	%	30 - 130
			D14-Terphenyl (FS)	2019/03/20		91	%	30 - 130
			D5-Nitrobenzene	2019/03/20		80	%	30 - 130
			Prometon	2019/03/20		97	%	40 - 130
			Simazine	2019/03/20		91	%	40 - 130
			Atrazine	2019/03/20		87	%	40 - 130
			Propazine	2019/03/20		90	%	40 - 130
			Metribuzin (Sencor)	2019/03/20		88	%	40 - 130
			Simetryn	2019/03/20		93	%	40 - 130
			Ametryn	2019/03/20		96	%	40 - 130
			Prometryne	2019/03/20		100	%	40 - 130
			Terbutryne	2019/03/20		99	%	40 - 130
			Cyanazine (Bladex)	2019/03/20		94	%	40 - 130
6023938	MYI	Spiked Blank	2-Fluorobiphenyl	2019/03/20		87	%	30 - 130
			D14-Terphenyl (FS)	2019/03/20		103	%	30 - 130
			D5-Nitrobenzene	2019/03/20		89	%	30 - 130
			Prometon	2019/03/20		82	%	40 - 130
			Simazine	2019/03/20		90	%	40 - 130
			Atrazine	2019/03/20		88	%	40 - 130
			Propazine	2019/03/20		89	%	40 - 130
			Metribuzin (Sencor)	2019/03/20		98	%	40 - 130
			Simetryn	2019/03/20		104	%	40 - 130
			Ametryn	2019/03/20		107	%	40 - 130
			Prometryne	2019/03/20		104	%	40 - 130
			Terbutryne	2019/03/20		93	%	40 - 130
			Cyanazine (Bladex)	2019/03/20		102	%	40 - 130
6023938	MYI	Method Blank	2-Fluorobiphenyl	2019/03/20		95	%	30 - 130
			D14-Terphenyl (FS)	2019/03/20		97	%	30 - 130
			D5-Nitrobenzene	2019/03/20		89	%	30 - 130
			Prometon	2019/03/20	<0.050		ug/g	
			Simazine	2019/03/20	<0.25		ug/g	
			Atrazine	2019/03/20	<0.10		ug/g	
			Propazine	2019/03/20	<0.25		ug/g	
			Metribuzin (Sencor)	2019/03/20	<0.10		ug/g	
			Simetryn	2019/03/20	<0.050		ug/g	
			Ametryn	2019/03/20	<0.25		ug/g	
			Prometryne	2019/03/20	<0.25		ug/g	
			Terbutryne	2019/03/20	<0.050		ug/g	
			Cyanazine (Bladex)	2019/03/20	<0.25		ug/g	
6023938	MYI	RPD	Prometon	2019/03/20	NC		%	50
			Simazine	2019/03/20	NC		%	50
			Atrazine	2019/03/20	NC		%	50
			Propazine	2019/03/20	NC		%	50
			Metribuzin (Sencor)	2019/03/20	NC		%	50
			Simetryn	2019/03/20	NC		%	50
			Ametryn	2019/03/20	NC		%	50
			Prometryne	2019/03/20	NC		%	50
			Terbutryne	2019/03/20	NC		%	50
			Cyanazine (Bladex)	2019/03/20	NC		%	50

Maxxam Job #: B968295
Report Date: 2019/03/21

S2S Environmental Inc
Client Project #: 8674
Site Location: 5080 NINTH LINE, MILTON
Your P.O. #: 8674.PT.09.17.A
Sampler Initials: RB

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
6025298	LPG	Matrix Spike [JFC443-01]	2,4,5,6-Tetrachloro-m-xylene	2019/03/20		88	%	50 - 130
			Decachlorobiphenyl	2019/03/20		123	%	50 - 130
			Aldrin	2019/03/20		92	%	50 - 130
			a-Chlordane	2019/03/20		109	%	50 - 130
			g-Chlordane	2019/03/20		106	%	50 - 130
			o,p-DDD	2019/03/20		116	%	50 - 130
			p,p-DDD	2019/03/20		101	%	50 - 130
			o,p-DDE	2019/03/20		98	%	50 - 130
			p,p-DDE	2019/03/20		128	%	50 - 130
			o,p-DDT	2019/03/20		115	%	50 - 130
			p,p-DDT	2019/03/20		120	%	50 - 130
			Dieldrin	2019/03/20		117	%	50 - 130
			Lindane	2019/03/20		91	%	50 - 130
			Endosulfan I (alpha)	2019/03/20		110	%	50 - 130
			Endosulfan II (beta)	2019/03/20		113	%	50 - 130
			Endrin	2019/03/20		105	%	50 - 130
			Heptachlor	2019/03/20		93	%	50 - 130
			Heptachlor epoxide	2019/03/20		101	%	50 - 130
			Hexachlorobenzene	2019/03/20		97	%	50 - 130
			Hexachlorobutadiene	2019/03/20		83	%	50 - 130
			Hexachloroethane	2019/03/20		67	%	50 - 130
			Methoxychlor	2019/03/20		136 (1)	%	50 - 130
6025298	LPG	Spiked Blank	2,4,5,6-Tetrachloro-m-xylene	2019/03/20		80	%	50 - 130
			Decachlorobiphenyl	2019/03/20		112	%	50 - 130
			Aldrin	2019/03/20		83	%	50 - 130
			a-Chlordane	2019/03/20		98	%	50 - 130
			g-Chlordane	2019/03/20		99	%	50 - 130
			o,p-DDD	2019/03/20		118	%	50 - 130
			p,p-DDD	2019/03/20		99	%	50 - 130
			o,p-DDE	2019/03/20		87	%	50 - 130
			p,p-DDE	2019/03/20		101	%	50 - 130
			o,p-DDT	2019/03/20		97	%	50 - 130
			p,p-DDT	2019/03/20		102	%	50 - 130
			Dieldrin	2019/03/20		119	%	50 - 130
			Lindane	2019/03/20		98	%	50 - 130
			Endosulfan I (alpha)	2019/03/20		111	%	50 - 130
			Endosulfan II (beta)	2019/03/20		106	%	50 - 130
			Endrin	2019/03/20		104	%	50 - 130
			Heptachlor	2019/03/20		82	%	50 - 130
			Heptachlor epoxide	2019/03/20		97	%	50 - 130
			Hexachlorobenzene	2019/03/20		89	%	50 - 130
			Hexachlorobutadiene	2019/03/20		94	%	50 - 130
			Hexachloroethane	2019/03/20		84	%	50 - 130
			Methoxychlor	2019/03/20		145 (1)	%	50 - 130
6025298	LPG	RPD	Aroclor 1242	2019/03/20	200 (2)		%	40
6025298	LPG	Method Blank	2,4,5,6-Tetrachloro-m-xylene	2019/03/20		86	%	50 - 130
			Decachlorobiphenyl	2019/03/20		122	%	50 - 130
			Aldrin	2019/03/20	<0.0020		ug/g	
			a-Chlordane	2019/03/20	<0.0020		ug/g	
			g-Chlordane	2019/03/20	<0.0020		ug/g	
			o,p-DDD	2019/03/20	<0.0020		ug/g	
			p,p-DDD	2019/03/20	<0.0020		ug/g	

Maxxam Job #: B968295
Report Date: 2019/03/21

S2S Environmental Inc
Client Project #: 8674
Site Location: 5080 NINTH LINE, MILTON
Your P.O. #: 8674.PT.09.17.A
Sampler Initials: RB

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
6025298	LPG	RPD [JFC443-01]	o,p-DDE	2019/03/20	<0.0020		ug/g	
			p,p-DDE	2019/03/20	<0.0020		ug/g	
			o,p-DDT	2019/03/20	<0.0020		ug/g	
			p,p-DDT	2019/03/20	<0.0020		ug/g	
			Dieldrin	2019/03/20	<0.0020		ug/g	
			Lindane	2019/03/20	<0.0020		ug/g	
			Endosulfan I (alpha)	2019/03/20	<0.0020		ug/g	
			Endosulfan II (beta)	2019/03/20	<0.0020		ug/g	
			Endrin	2019/03/20	<0.0020		ug/g	
			Heptachlor	2019/03/20	<0.0020		ug/g	
			Heptachlor epoxide	2019/03/20	<0.0020		ug/g	
			Hexachlorobenzene	2019/03/20	<0.0020		ug/g	
			Hexachlorobutadiene	2019/03/20	<0.0020		ug/g	
			Hexachloroethane	2019/03/20	<0.0020		ug/g	
			Methoxychlor	2019/03/20	<0.0050		ug/g	
			Aroclor 1242	2019/03/20	<0.015		ug/g	
			Aroclor 1248	2019/03/20	<0.015		ug/g	
			Aroclor 1254	2019/03/20	<0.015		ug/g	
			Aroclor 1260	2019/03/20	<0.015		ug/g	
			Aldrin	2019/03/20	NC		%	40
			a-Chlordane	2019/03/20	NC		%	40
			g-Chlordane	2019/03/20	NC		%	40
			o,p-DDD	2019/03/20	NC		%	40
			p,p-DDD	2019/03/20	NC		%	40
			o,p-DDE	2019/03/20	NC		%	40
			p,p-DDE	2019/03/20	NC		%	40
			o,p-DDT	2019/03/20	NC		%	40
			p,p-DDT	2019/03/20	NC		%	40
			Dieldrin	2019/03/20	NC		%	40
			Lindane	2019/03/20	NC		%	40
			Endosulfan I (alpha)	2019/03/20	NC		%	40
			Endosulfan II (beta)	2019/03/20	NC		%	40
			Endrin	2019/03/20	NC		%	40
			Heptachlor	2019/03/20	NC		%	40
			Heptachlor epoxide	2019/03/20	NC		%	40
			Hexachlorobenzene	2019/03/20	NC		%	40
			Hexachlorobutadiene	2019/03/20	NC		%	40
			Hexachloroethane	2019/03/20	NC		%	40
			Methoxychlor	2019/03/20	NC		%	40
			Aroclor 1242	2019/03/20	NC		%	40
			Aroclor 1248	2019/03/20	NC		%	40
			Aroclor 1254	2019/03/20	NC		%	40

Maxxam Job #: B968295
Report Date: 2019/03/21

S2S Environmental Inc
Client Project #: 8674
Site Location: 5080 NINTH LINE, MILTON
Your P.O. #: 8674.PT.09.17.A
Sampler Initials: RB

QUALITY ASSURANCE REPORT(CONT'D)

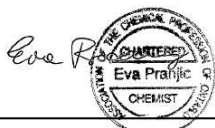
QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Aroclor 1260	2019/03/20	NC		%	40
N/A = Not Applicable Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement. Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference. Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy. Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination. Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency. NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference $\leq 2 \times$ RDL). (1) The recovery was above the upper control limit. This may represent a high bias in some results for this specific analyte. For results that were not detected (ND), this potential bias has no impact. (2) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.								

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



Anastassia Hamanov, Scientific Specialist



Ewa Pranjic, M.Sc., C.Chem, Scientific Specialist

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.



Your P.O. #: 8674.PT.09.17.E
Your Project #: 8674
Site Location: 5080 NINTH LINE, MISSISSAUGA
Your C.O.C. #: 132119

Attention: Laura Fitzgerald

S2S Environmental Inc
1099 Kingston Rd
Suite 260
Pickering, ON
CANADA L1V 1B5

Report Date: 2019/07/05
Report #: R5784232
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: B9I0163

Received: 2019/07/02, 12:30

Sample Matrix: Soil
Samples Received: 5

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
Strong Acid Leachable Metals by ICPMS	5	2019/07/04	2019/07/04	CAM SOP-00447	EPA 6020B m

Remarks:

Bureau Veritas Laboratories are accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by BV Labs are based upon recognized Provincial, Federal or US method compendia such as CCME, MDDELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in BV Labs profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and BV Labs in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

BV Labs liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. BV Labs has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by BV Labs, unless otherwise agreed in writing. BV Labs is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.

Results relate to samples tested. When sampling is not conducted by BV Labs, results relate to the supplied samples tested.

This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.



Your P.O. #: 8674.PT.09.17.E
Your Project #: 8674
Site Location: 5080 NINTH LINE, MISSISSAUGA
Your C.O.C. #: 132119

Attention: Laura Fitzgerald

S2S Environmental Inc
1099 Kingston Rd
Suite 260
Pickering, ON
CANADA L1V 1B5

Report Date: 2019/07/05
Report #: R5784232
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: B9I0163

Received: 2019/07/02, 12:30

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Keshani Vijh, Supervisor – Environmental Customer Service
Email: Keshani.Vijh@bvlabs.com
Phone# (905)817-5733

=====

This report has been generated and distributed using a secure automated process.

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VERITAS

BV Labs Job #: B9I0163

Report Date: 2019/07/05

S2S Environmental Inc

Client Project #: 8674

Site Location: 5080 NINTH LINE, MISSISSAUGA

Your P.O. #: 8674.PT.09.17.E

Sampler Initials: BG

O.REG 153 ICPMS METALS (SOIL)

BV Labs ID		KDS708	KDS708	KDS709	KDS710	KDS711	KDS712		
Sampling Date		2019/07/02 09:45	2019/07/02 09:45	2019/07/02 10:00	2019/07/02 10:15	2019/07/02 10:15	2019/07/02 10:45		
COC Number		132119	132119	132119	132119	132119	132119		
	UNITS	BH201-1	BH201-1 Lab-Dup	BH201-2	BH202-1	BH202-1-DUP	BH203-1	RDL	QC Batch

Metals									
Acid Extractable Antimony (Sb)	ug/g	0.40	0.35	<0.20	<0.20	<0.20	<0.20	0.20	6210740
Acid Extractable Arsenic (As)	ug/g	5.4	5.4	4.5	4.3	4.7	4.5	1.0	6210740
Acid Extractable Barium (Ba)	ug/g	40	40	130	84	94	85	0.50	6210740
Acid Extractable Beryllium (Be)	ug/g	0.24	0.25	0.99	0.70	0.64	0.73	0.20	6210740
Acid Extractable Boron (B)	ug/g	8.7	8.9	7.0	6.8	7.7	7.2	5.0	6210740
Acid Extractable Cadmium (Cd)	ug/g	0.65	0.81	0.18	0.32	0.27	0.29	0.10	6210740
Acid Extractable Chromium (Cr)	ug/g	21	18	30	23	23	24	1.0	6210740
Acid Extractable Cobalt (Co)	ug/g	4.6	4.7	12	9.2	9.3	10	0.10	6210740
Acid Extractable Copper (Cu)	ug/g	40	39	33	26	28	27	0.50	6210740
Acid Extractable Lead (Pb)	ug/g	110	120	15	25	26	21	1.0	6210740
Acid Extractable Molybdenum (Mo)	ug/g	1.0	1.1	<0.50	0.54	0.55	0.57	0.50	6210740
Acid Extractable Nickel (Ni)	ug/g	15	17	30	20	21	21	0.50	6210740
Acid Extractable Selenium (Se)	ug/g	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	6210740
Acid Extractable Silver (Ag)	ug/g	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	6210740
Acid Extractable Thallium (Tl)	ug/g	0.084	0.086	0.16	0.15	0.15	0.16	0.050	6210740
Acid Extractable Uranium (U)	ug/g	0.45	0.45	0.74	0.80	0.78	0.82	0.050	6210740
Acid Extractable Vanadium (V)	ug/g	15	16	40	33	32	34	5.0	6210740
Acid Extractable Zinc (Zn)	ug/g	220	310 (1)	110	80	87	82	5.0	6210740

RDL = Reportable Detection Limit

QC Batch = Quality Control Batch

Lab-Dup = Laboratory Initiated Duplicate

(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.



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VERITAS

BV Labs Job #: B9I0163
Report Date: 2019/07/05

S2S Environmental Inc
Client Project #: 8674
Site Location: 5080 NINTH LINE, MISSISSAUGA
Your P.O. #: 8674.PT.09.17.E
Sampler Initials: BG

TEST SUMMARY

BV Labs ID: KDS708
Sample ID: BH201-1
Matrix: Soil

Collected: 2019/07/02
Shipped:
Received: 2019/07/02

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Strong Acid Leachable Metals by ICPMS	ICP/MS	6210740	2019/07/04	2019/07/04	Daniel Teclu

BV Labs ID: KDS708 Dup
Sample ID: BH201-1
Matrix: Soil

Collected: 2019/07/02
Shipped:
Received: 2019/07/02

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Strong Acid Leachable Metals by ICPMS	ICP/MS	6210740	2019/07/04	2019/07/04	Daniel Teclu

BV Labs ID: KDS709
Sample ID: BH201-2
Matrix: Soil

Collected: 2019/07/02
Shipped:
Received: 2019/07/02

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Strong Acid Leachable Metals by ICPMS	ICP/MS	6210740	2019/07/04	2019/07/04	Daniel Teclu

BV Labs ID: KDS710
Sample ID: BH202-1
Matrix: Soil

Collected: 2019/07/02
Shipped:
Received: 2019/07/02

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Strong Acid Leachable Metals by ICPMS	ICP/MS	6210740	2019/07/04	2019/07/04	Daniel Teclu

BV Labs ID: KDS711
Sample ID: BH202-1-DUP
Matrix: Soil

Collected: 2019/07/02
Shipped:
Received: 2019/07/02

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Strong Acid Leachable Metals by ICPMS	ICP/MS	6210740	2019/07/04	2019/07/04	Daniel Teclu

BV Labs ID: KDS712
Sample ID: BH203-1
Matrix: Soil

Collected: 2019/07/02
Shipped:
Received: 2019/07/02

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Strong Acid Leachable Metals by ICPMS	ICP/MS	6210740	2019/07/04	2019/07/04	Daniel Teclu



BUREAU
VERITAS

BV Labs Job #: B9I0163

Report Date: 2019/07/05

S2S Environmental Inc

Client Project #: 8674

Site Location: 5080 NINTH LINE, MISSISSAUGA

Your P.O. #: 8674.PT.09.17.E

Sampler Initials: BG

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	17.0°C
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Results relate only to the items tested.



BUREAU
VERITAS

BV Labs Job #: B9I0163
Report Date: 2019/07/05

S2S Environmental Inc
Client Project #: 8674
Site Location: 5080 NINTH LINE, MISSISSAUGA
Your P.O. #: 8674.PT.09.17.E
Sampler Initials: BG

QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
6210740	DT1	Matrix Spike [KDS708-01]	Acid Extractable Antimony (Sb)	2019/07/04		108	%	75 - 125
			Acid Extractable Arsenic (As)	2019/07/04		108	%	75 - 125
			Acid Extractable Barium (Ba)	2019/07/04		NC	%	75 - 125
			Acid Extractable Beryllium (Be)	2019/07/04		107	%	75 - 125
			Acid Extractable Boron (B)	2019/07/04		107	%	75 - 125
			Acid Extractable Cadmium (Cd)	2019/07/04		109	%	75 - 125
			Acid Extractable Chromium (Cr)	2019/07/04		93	%	75 - 125
			Acid Extractable Cobalt (Co)	2019/07/04		108	%	75 - 125
			Acid Extractable Copper (Cu)	2019/07/04		NC	%	75 - 125
			Acid Extractable Lead (Pb)	2019/07/04		NC	%	75 - 125
			Acid Extractable Molybdenum (Mo)	2019/07/04		113	%	75 - 125
			Acid Extractable Nickel (Ni)	2019/07/04		115	%	75 - 125
			Acid Extractable Selenium (Se)	2019/07/04		111	%	75 - 125
			Acid Extractable Silver (Ag)	2019/07/04		109	%	75 - 125
			Acid Extractable Thallium (Tl)	2019/07/04		107	%	75 - 125
			Acid Extractable Uranium (U)	2019/07/04		106	%	75 - 125
			Acid Extractable Vanadium (V)	2019/07/04		115	%	75 - 125
			Acid Extractable Zinc (Zn)	2019/07/04		NC	%	75 - 125
6210740	DT1	Spiked Blank	Acid Extractable Antimony (Sb)	2019/07/04		101	%	80 - 120
			Acid Extractable Arsenic (As)	2019/07/04		103	%	80 - 120
			Acid Extractable Barium (Ba)	2019/07/04		101	%	80 - 120
			Acid Extractable Beryllium (Be)	2019/07/04		97	%	80 - 120
			Acid Extractable Boron (B)	2019/07/04		96	%	80 - 120
			Acid Extractable Cadmium (Cd)	2019/07/04		100	%	80 - 120
			Acid Extractable Chromium (Cr)	2019/07/04		103	%	80 - 120
			Acid Extractable Cobalt (Co)	2019/07/04		102	%	80 - 120
			Acid Extractable Copper (Cu)	2019/07/04		102	%	80 - 120
			Acid Extractable Lead (Pb)	2019/07/04		104	%	80 - 120
			Acid Extractable Molybdenum (Mo)	2019/07/04		100	%	80 - 120
			Acid Extractable Nickel (Ni)	2019/07/04		104	%	80 - 120
			Acid Extractable Selenium (Se)	2019/07/04		104	%	80 - 120
			Acid Extractable Silver (Ag)	2019/07/04		103	%	80 - 120
			Acid Extractable Thallium (Tl)	2019/07/04		103	%	80 - 120
			Acid Extractable Uranium (U)	2019/07/04		101	%	80 - 120
			Acid Extractable Vanadium (V)	2019/07/04		101	%	80 - 120
			Acid Extractable Zinc (Zn)	2019/07/04		102	%	80 - 120
6210740	DT1	Method Blank	Acid Extractable Antimony (Sb)	2019/07/04	<0.20		ug/g	
			Acid Extractable Arsenic (As)	2019/07/04	<1.0		ug/g	
			Acid Extractable Barium (Ba)	2019/07/04	<0.50		ug/g	
			Acid Extractable Beryllium (Be)	2019/07/04	<0.20		ug/g	
			Acid Extractable Boron (B)	2019/07/04	<5.0		ug/g	
			Acid Extractable Cadmium (Cd)	2019/07/04	<0.10		ug/g	
			Acid Extractable Chromium (Cr)	2019/07/04	<1.0		ug/g	
			Acid Extractable Cobalt (Co)	2019/07/04	<0.10		ug/g	
			Acid Extractable Copper (Cu)	2019/07/04	<0.50		ug/g	
			Acid Extractable Lead (Pb)	2019/07/04	<1.0		ug/g	
			Acid Extractable Molybdenum (Mo)	2019/07/04	<0.50		ug/g	
			Acid Extractable Nickel (Ni)	2019/07/04	<0.50		ug/g	
			Acid Extractable Selenium (Se)	2019/07/04	<0.50		ug/g	
			Acid Extractable Silver (Ag)	2019/07/04	<0.20		ug/g	
			Acid Extractable Thallium (Tl)	2019/07/04	<0.050		ug/g	
			Acid Extractable Uranium (U)	2019/07/04	<0.050		ug/g	



BUREAU
VERITAS

BV Labs Job #: B9I0163

Report Date: 2019/07/05

S2S Environmental Inc

Client Project #: 8674

Site Location: 5080 NINTH LINE, MISSISSAUGA

Your P.O. #: 8674.PT.09.17.E

Sampler Initials: BG

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
6210740	DT1	RPD [KDS708-01]	Acid Extractable Vanadium (V)	2019/07/04	<5.0		ug/g	
			Acid Extractable Zinc (Zn)	2019/07/04	<5.0		ug/g	
			Acid Extractable Antimony (Sb)	2019/07/04	14		%	30
			Acid Extractable Arsenic (As)	2019/07/04	0.98		%	30
			Acid Extractable Barium (Ba)	2019/07/04	0.73		%	30
			Acid Extractable Beryllium (Be)	2019/07/04	2.5		%	30
			Acid Extractable Boron (B)	2019/07/04	2.1		%	30
			Acid Extractable Cadmium (Cd)	2019/07/04	23		%	30
			Acid Extractable Chromium (Cr)	2019/07/04	16		%	30
			Acid Extractable Cobalt (Co)	2019/07/04	3.1		%	30
			Acid Extractable Copper (Cu)	2019/07/04	1.5		%	30
			Acid Extractable Lead (Pb)	2019/07/04	10		%	30
			Acid Extractable Molybdenum (Mo)	2019/07/04	11		%	30
			Acid Extractable Nickel (Ni)	2019/07/04	12		%	30
			Acid Extractable Selenium (Se)	2019/07/04	NC		%	30
			Acid Extractable Silver (Ag)	2019/07/04	NC		%	30
			Acid Extractable Thallium (Tl)	2019/07/04	2.2		%	30
			Acid Extractable Uranium (U)	2019/07/04	0.30		%	30
			Acid Extractable Vanadium (V)	2019/07/04	8.0		%	30
			Acid Extractable Zinc (Zn)	2019/07/04	35 (1)		%	30
Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.								
Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.								
Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.								
Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.								
NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)								
NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).								
(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.								



BUREAU
VERITAS

BV Labs Job #: B9I0163

Report Date: 2019/07/05

S2S Environmental Inc

Client Project #: 8674

Site Location: 5080 NINTH LINE, MISSISSAUGA

Your P.O. #: 8674.PT.09.17.E

Sampler Initials: BG

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Anastassia Hamanov, Scientific Specialist

BV Labs has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Your P.O. #: 8674.PT.09.08.B
Your Project #: 8674
Site Location: 5080 NINTH LINE, MILTON
Your C.O.C. #: 708837-01-01

Attention: Rachel Baldwin

S2S Environmental Inc
1099 Kingston Rd
Suite 260
Pickering, ON
CANADA L1V 1B5

Report Date: 2019/03/26
Report #: R5644999
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B971566

Received: 2019/03/19, 20:10

Sample Matrix: Water
Samples Received: 7

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
Methylnaphthalene Sum	2	N/A	2019/03/22	CAM SOP-00301	EPA 8270D m
1,3-Dichloropropene Sum	3	N/A	2019/03/25		EPA 8260C m
Chloride by Automated Colourimetry	2	N/A	2019/03/21	CAM SOP-00463	EPA 325.2 m
Chromium (VI) in Water	2	N/A	2019/03/25	CAM SOP-00436	EPA 7199 m
Free (WAD) Cyanide	2	N/A	2019/03/21	CAM SOP-00457	OMOE E3015 m
Petroleum Hydrocarbons F2-F4 in Water (1)	2	2019/03/21	2019/03/22	CAM SOP-00316	CCME PHC-CWS m
Petroleum Hydrocarbons F2-F4 in Water (1)	1	2019/03/25	2019/03/26	CAM SOP-00316	CCME PHC-CWS m
Mercury	2	2019/03/21	2019/03/22	CAM SOP-00453	EPA 7470A m
Dissolved Metals by ICPMS	2	N/A	2019/03/21	CAM SOP-00447	EPA 6020B m
OC Pesticides (Selected) & PCB (2)	4	2019/03/20	2019/03/22	CAM SOP-00307	EPA 8081A/8082B m
OC Pesticides Summed Parameters	4	N/A	2019/03/25	CAM SOP-00307	EPA 8081A/8082B m
PAH Compounds in Water by GC/MS (SIM)	2	2019/03/21	2019/03/21	CAM SOP-00318	EPA 8270D m
Triazine Herbicides	4	2019/03/22	2019/03/23	CAM SOP-00301	EPA 8270 m
Volatile Organic Compounds and F1 PHCs	3	N/A	2019/03/22	CAM SOP-00230	EPA 8260C m

Remarks:

Maxxam Analytics' laboratories are accredited to ISO/IEC 17025:2005 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Maxxam are based upon recognized Provincial, Federal or US method compendia such as CCME, MDDELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Maxxam's profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Maxxam in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Maxxam Analytics' liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Maxxam has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Maxxam, unless otherwise agreed in writing. Maxxam is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.

Your P.O. #: 8674.PT.09.08.B
Your Project #: 8674
Site Location: 5080 NINTH LINE, MILTON
Your C.O.C. #: 708837-01-01

Attention: Rachel Baldwin

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1099 Kingston Rd
Suite 260
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CANADA L1V 1B5

Report Date: 2019/03/26
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CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B971566

Received: 2019/03/19, 20:10

Results relate to samples tested. When sampling is not conducted by Maxxam, results relate to the supplied samples tested.

This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Maxxam conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following "Alberta Environment's Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Validation of Performance-Based Alternative Methods September 2003". Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.

(2) Chlordane (Total) = Alpha Chlordane + Gamma Chlordane

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

Jolanta Goralczyk, Project Manager

Email: JGoralczyk@maxxam.ca

Phone# (905)817-5751

=====

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Maxxam Job #: B971566
Report Date: 2019/03/26

S2S Environmental Inc
Client Project #: 8674
Site Location: 5080 NINTH LINE, MILTON
Your P.O. #: 8674.PT.09.08.B
Sampler Initials: RB

SEMI-VOLATILE ORGANICS BY GC-MS (WATER)

Maxxam ID		JFV163	JFV164	JFV165	JFV165	JFV166		
Sampling Date		2019/03/19 18:30	2019/03/19 14:30	2019/03/19 14:30	2019/03/19 14:30	2019/03/19 16:30		
COC Number		708837-01-01	708837-01-01	708837-01-01	708837-01-01	708837-01-01		
	UNITS	BH11	DUP1	BH15	BH15 Lab-Dup	BH12	RDL	QC Batch
Pesticides & Herbicides								
Prometon	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	6031855
Simazine	ug/L	<2.5	<2.5	<2.5	<2.5	<2.5	2.5	6031855
Atrazine	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	6031855
Propazine	ug/L	<2.5	<2.5	<2.5	<2.5	<2.5	2.5	6031855
Metribuzin (Sencor)	ug/L	<2.5	<2.5	<2.5	<2.5	<2.5	2.5	6031855
Simetryn	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	6031855
Ametryn	ug/L	<2.5	<2.5	<2.5	<2.5	<2.5	2.5	6031855
Prometryne	ug/L	<2.5	<2.5	<2.5	<2.5	<2.5	2.5	6031855
Terbutryne	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	6031855
Cyanazine (Bladex)	ug/L	<2.5	<2.5	<2.5	<2.5	<2.5	2.5	6031855
Surrogate Recovery (%)								
2-Fluorobiphenyl	%	60	46	58	58	67		6031855
D14-Terphenyl (FS)	%	96	90	90	82	93		6031855
D5-Nitrobenzene	%	55	49	62	64	62		6031855
RDL = Reportable Detection Limit QC Batch = Quality Control Batch Lab-Dup = Laboratory Initiated Duplicate								

O.REG 153 METALS & INORGANICS PKG (WTR)

Maxxam ID		JFV161	JFV162		
Sampling Date		2019/03/19 12:30	2019/03/19 12:30		
COC Number		708837-01-01	708837-01-01		
	UNITS	BH9	DUP	RDL	QC Batch
Inorganics					
WAD Cyanide (Free)	ug/L	<1	<1	1	6029919
Dissolved Chloride (Cl-)	mg/L	34	35	1.0	6028706
Metals					
Chromium (VI)	ug/L	<0.50	<0.50	0.50	6028257
Mercury (Hg)	ug/L	<0.1	<0.1	0.1	6029901
Dissolved Antimony (Sb)	ug/L	<0.50	<0.50	0.50	6028826
Dissolved Arsenic (As)	ug/L	1.0	1.1	1.0	6028826
Dissolved Barium (Ba)	ug/L	85	85	2.0	6028826
Dissolved Beryllium (Be)	ug/L	<0.50	<0.50	0.50	6028826
Dissolved Boron (B)	ug/L	95	96	10	6028826
Dissolved Cadmium (Cd)	ug/L	<0.10	<0.10	0.10	6028826
Dissolved Chromium (Cr)	ug/L	<5.0	<5.0	5.0	6028826
Dissolved Cobalt (Co)	ug/L	<0.50	<0.50	0.50	6028826
Dissolved Copper (Cu)	ug/L	1.0	1.5	1.0	6028826
Dissolved Lead (Pb)	ug/L	<0.50	<0.50	0.50	6028826
Dissolved Molybdenum (Mo)	ug/L	2.6	2.7	0.50	6028826
Dissolved Nickel (Ni)	ug/L	1.7	1.8	1.0	6028826
Dissolved Selenium (Se)	ug/L	<2.0	<2.0	2.0	6028826
Dissolved Silver (Ag)	ug/L	<0.10	<0.10	0.10	6028826
Dissolved Sodium (Na)	ug/L	26000	26000	100	6028826
Dissolved Thallium (Tl)	ug/L	<0.050	<0.050	0.050	6028826
Dissolved Uranium (U)	ug/L	6.3	6.3	0.10	6028826
Dissolved Vanadium (V)	ug/L	1.1	1.1	0.50	6028826
Dissolved Zinc (Zn)	ug/L	<5.0	<5.0	5.0	6028826
RDL = Reportable Detection Limit					
QC Batch = Quality Control Batch					

Maxxam Job #: B971566
Report Date: 2019/03/26

S2S Environmental Inc
Client Project #: 8674
Site Location: 5080 NINTH LINE, MILTON
Your P.O. #: 8674.PT.09.08.B
Sampler Initials: RB

O.REG 153 OC PESTICIDES (WATER)

Maxxam ID		JFV163	JFV164	JFV165	JFV166			JFV166		
Sampling Date		2019/03/19 18:30	2019/03/19 14:30	2019/03/19 14:30	2019/03/19 16:30			2019/03/19 16:30		
COC Number		708837-01-01	708837-01-01	708837-01-01	708837-01-01			708837-01-01		
	UNITS	BH11	DUP1	BH15	BH12	RDL	QC Batch	BH12 Lab-Dup	RDL	QC Batch

Calculated Parameters

Chlordane (Total)	ug/L	<0.005	<0.005	<0.005	<0.005	0.005	6025235			
o,p-DDD + p,p-DDD	ug/L	<0.005	<0.005	<0.005	<0.005	0.005	6025235			
o,p-DDE + p,p-DDE	ug/L	<0.005	<0.005	<0.005	<0.005	0.005	6025235			
o,p-DDT + p,p-DDT	ug/L	<0.005	<0.005	<0.005	<0.005	0.005	6025235			
Total Endosulfan	ug/L	<0.005	<0.005	<0.005	<0.005	0.005	6025235			
Total PCB	ug/L	<0.05	<0.05	<0.05	<0.05	0.05	6025235			

Pesticides & Herbicides

Aldrin	ug/L	<0.005	<0.005	<0.005	<0.005	0.005	6028433	<0.005	0.005	6028433
Dieldrin	ug/L	<0.005	<0.005	<0.005	<0.005	0.005	6028433	<0.005	0.005	6028433
a-Chlordane	ug/L	<0.005	<0.005	<0.005	<0.005	0.005	6028433	<0.005	0.005	6028433
g-Chlordane	ug/L	<0.005	<0.005	<0.005	<0.005	0.005	6028433	<0.005	0.005	6028433
o,p-DDD	ug/L	<0.005	<0.005	<0.005	<0.005	0.005	6028433	<0.005	0.005	6028433
p,p-DDD	ug/L	<0.005	<0.005	<0.005	<0.005	0.005	6028433	<0.005	0.005	6028433
o,p-DDE	ug/L	<0.005	<0.005	<0.005	<0.005	0.005	6028433	<0.005	0.005	6028433
p,p-DDE	ug/L	<0.005	<0.005	<0.005	<0.005	0.005	6028433	<0.005	0.005	6028433
o,p-DDT	ug/L	<0.005	<0.005	<0.005	<0.005	0.005	6028433	<0.005	0.005	6028433
p,p-DDT	ug/L	<0.005	<0.005	<0.005	<0.005	0.005	6028433	<0.005	0.005	6028433
Lindane	ug/L	<0.003	<0.003	<0.003	<0.003	0.003	6028433	<0.003	0.003	6028433
Endosulfan I (alpha)	ug/L	<0.005	<0.005	<0.005	<0.005	0.005	6028433	<0.005	0.005	6028433
Endosulfan II (beta)	ug/L	<0.005	<0.005	<0.005	<0.005	0.005	6028433	<0.005	0.005	6028433
Endrin	ug/L	<0.005	<0.005	<0.005	<0.005	0.005	6028433	<0.005	0.005	6028433
Heptachlor	ug/L	<0.005	<0.005	<0.005	<0.005	0.005	6028433	<0.005	0.005	6028433
Heptachlor epoxide	ug/L	<0.005	<0.005	<0.005	<0.005	0.005	6028433	<0.005	0.005	6028433
Hexachlorobenzene	ug/L	<0.005	<0.005	<0.005	<0.005	0.005	6028433	<0.005	0.005	6028433
Hexachlorobutadiene	ug/L	<0.009	<0.009	<0.009	<0.009	0.009	6028433	<0.009	0.009	6028433
Hexachloroethane	ug/L	<0.01	<0.01	<0.01	<0.01	0.01	6028433	<0.01	0.01	6028433
Methoxychlor	ug/L	<0.01	<0.01	<0.01	<0.01	0.01	6028433	<0.01	0.01	6028433
Aroclor 1242	ug/L	<0.05	<0.05	<0.05	<0.05	0.05	6028433	<0.05	0.05	6028433
Aroclor 1248	ug/L	<0.05	<0.05	<0.05	<0.05	0.05	6028433	<0.05	0.05	6028433

RDL = Reportable Detection Limit

QC Batch = Quality Control Batch

Lab-Dup = Laboratory Initiated Duplicate

Maxxam Job #: B971566
Report Date: 2019/03/26

S2S Environmental Inc
Client Project #: 8674
Site Location: 5080 NINTH LINE, MILTON
Your P.O. #: 8674.PT.09.08.B
Sampler Initials: RB

O.REG 153 OC PESTICIDES (WATER)

Maxxam ID		JFV163	JFV164	JFV165	JFV166			JFV166		
Sampling Date		2019/03/19 18:30	2019/03/19 14:30	2019/03/19 14:30	2019/03/19 16:30			2019/03/19 16:30		
COC Number		708837-01-01	708837-01-01	708837-01-01	708837-01-01			708837-01-01		
	UNITS	BH11	DUP1	BH15	BH12	RDL	QC Batch	BH12 Lab-Dup	RDL	QC Batch
Aroclor 1254	ug/L	<0.05	<0.05	<0.05	<0.05	0.05	6028433	<0.05	0.05	6028433
Aroclor 1260	ug/L	<0.05	<0.05	<0.05	<0.05	0.05	6028433	<0.05	0.05	6028433
Surrogate Recovery (%)										
2,4,5,6-Tetrachloro-m-xylene	%	78	83	75	85		6028433	79		6028433
Decachlorobiphenyl	%	62	98	94	92		6028433	81		6028433
RDL = Reportable Detection Limit QC Batch = Quality Control Batch Lab-Dup = Laboratory Initiated Duplicate										

O.REG 153 PAHS (WATER)

Maxxam ID		JFV161	JFV162		
Sampling Date		2019/03/19 12:30	2019/03/19 12:30		
COC Number		708837-01-01	708837-01-01		
	UNITS	BH9	DUP	RDL	QC Batch
Calculated Parameters					
Methylnaphthalene, 2-(1-)	ug/L	<0.071	<0.071	0.071	6024958
Polyaromatic Hydrocarbons					
Acenaphthene	ug/L	<0.050	<0.050	0.050	6030060
Acenaphthylene	ug/L	<0.050	<0.050	0.050	6030060
Anthracene	ug/L	<0.050	<0.050	0.050	6030060
Benzo(a)anthracene	ug/L	<0.050	<0.050	0.050	6030060
Benzo(a)pyrene	ug/L	<0.010	<0.010	0.010	6030060
Benzo(b/j)fluoranthene	ug/L	<0.050	<0.050	0.050	6030060
Benzo(g,h,i)perylene	ug/L	<0.050	<0.050	0.050	6030060
Benzo(k)fluoranthene	ug/L	<0.050	<0.050	0.050	6030060
Chrysene	ug/L	<0.050	<0.050	0.050	6030060
Dibenz(a,h)anthracene	ug/L	<0.050	<0.050	0.050	6030060
Fluoranthene	ug/L	<0.050	<0.050	0.050	6030060
Fluorene	ug/L	<0.050	<0.050	0.050	6030060
Indeno(1,2,3-cd)pyrene	ug/L	<0.050	<0.050	0.050	6030060
1-Methylnaphthalene	ug/L	<0.050	<0.050	0.050	6030060
2-Methylnaphthalene	ug/L	<0.050	<0.050	0.050	6030060
Naphthalene	ug/L	<0.050	<0.050	0.050	6030060
Phenanthrene	ug/L	<0.030	<0.030	0.030	6030060
Pyrene	ug/L	<0.050	<0.050	0.050	6030060
Surrogate Recovery (%)					
D10-Anthracene	%	103	101		6030060
D14-Terphenyl (FS)	%	98	95		6030060
D8-Acenaphthylene	%	101	98		6030060
RDL = Reportable Detection Limit					
QC Batch = Quality Control Batch					

O.REG 153 VOCs BY HS & F1-F4 (WATER)

Maxxam ID		JFV161	JFV162		JFV167		
Sampling Date		2019/03/19 12:30	2019/03/19 12:30		2019/03/19 12:30		
COC Number		708837-01-01	708837-01-01		708837-01-01		
	UNITS	BH9	DUP	QC Batch	TRIP BLANK	RDL	QC Batch
Calculated Parameters							
1,3-Dichloropropene (cis+trans)	ug/L	<0.50	<0.50	6026512	<0.50	0.50	6026512
Volatile Organics							
Acetone (2-Propanone)	ug/L	<10	<10	6028214	<10	10	6028214
Benzene	ug/L	<0.20	<0.20	6028214	<0.20	0.20	6028214
Bromodichloromethane	ug/L	<0.50	<0.50	6028214	<0.50	0.50	6028214
Bromoform	ug/L	<1.0	<1.0	6028214	<1.0	1.0	6028214
Bromomethane	ug/L	<0.50	<0.50	6028214	<0.50	0.50	6028214
Carbon Tetrachloride	ug/L	<0.20	<0.20	6028214	<0.20	0.20	6028214
Chlorobenzene	ug/L	<0.20	<0.20	6028214	<0.20	0.20	6028214
Chloroform	ug/L	<0.20	<0.20	6028214	<0.20	0.20	6028214
Dibromochloromethane	ug/L	<0.50	<0.50	6028214	<0.50	0.50	6028214
1,2-Dichlorobenzene	ug/L	<0.50	<0.50	6028214	<0.50	0.50	6028214
1,3-Dichlorobenzene	ug/L	<0.50	<0.50	6028214	<0.50	0.50	6028214
1,4-Dichlorobenzene	ug/L	<0.50	<0.50	6028214	<0.50	0.50	6028214
Dichlorodifluoromethane (FREON 12)	ug/L	<1.0	<1.0	6028214	<1.0	1.0	6028214
1,1-Dichloroethane	ug/L	<0.20	<0.20	6028214	<0.20	0.20	6028214
1,2-Dichloroethane	ug/L	<0.50	<0.50	6028214	<0.50	0.50	6028214
1,1-Dichloroethylene	ug/L	<0.20	<0.20	6028214	<0.20	0.20	6028214
cis-1,2-Dichloroethylene	ug/L	<0.50	<0.50	6028214	<0.50	0.50	6028214
trans-1,2-Dichloroethylene	ug/L	<0.50	<0.50	6028214	<0.50	0.50	6028214
1,2-Dichloropropane	ug/L	<0.20	<0.20	6028214	<0.20	0.20	6028214
cis-1,3-Dichloropropene	ug/L	<0.30	<0.30	6028214	<0.30	0.30	6028214
trans-1,3-Dichloropropene	ug/L	<0.40	<0.40	6028214	<0.40	0.40	6028214
Ethylbenzene	ug/L	<0.20	<0.20	6028214	<0.20	0.20	6028214
Ethylene Dibromide	ug/L	<0.20	<0.20	6028214	<0.20	0.20	6028214
Hexane	ug/L	<1.0	<1.0	6028214	<1.0	1.0	6028214
Methylene Chloride(Dichloromethane)	ug/L	<2.0	<2.0	6028214	<2.0	2.0	6028214
Methyl Ethyl Ketone (2-Butanone)	ug/L	<10	<10	6028214	<10	10	6028214
Methyl Isobutyl Ketone	ug/L	<5.0	<5.0	6028214	<5.0	5.0	6028214
Methyl t-butyl ether (MTBE)	ug/L	<0.50	<0.50	6028214	<0.50	0.50	6028214
RDL = Reportable Detection Limit							
QC Batch = Quality Control Batch							

O.REG 153 VOCs BY HS & F1-F4 (WATER)

Maxxam ID		JFV161	JFV162		JFV167		
Sampling Date		2019/03/19 12:30	2019/03/19 12:30		2019/03/19 12:30		
COC Number		708837-01-01	708837-01-01		708837-01-01		
	UNITS	BH9	DUP	QC Batch	TRIP BLANK	RDL	QC Batch
Styrene	ug/L	<0.50	<0.50	6028214	<0.50	0.50	6028214
1,1,1,2-Tetrachloroethane	ug/L	<0.50	<0.50	6028214	<0.50	0.50	6028214
1,1,2,2-Tetrachloroethane	ug/L	<0.50	<0.50	6028214	<0.50	0.50	6028214
Tetrachloroethylene	ug/L	<0.20	<0.20	6028214	<0.20	0.20	6028214
Toluene	ug/L	<0.20	<0.20	6028214	<0.20	0.20	6028214
1,1,1-Trichloroethane	ug/L	<0.20	<0.20	6028214	<0.20	0.20	6028214
1,1,2-Trichloroethane	ug/L	<0.50	<0.50	6028214	<0.50	0.50	6028214
Trichloroethylene	ug/L	<0.20	<0.20	6028214	<0.20	0.20	6028214
Trichlorofluoromethane (FREON 11)	ug/L	<0.50	<0.50	6028214	<0.50	0.50	6028214
Vinyl Chloride	ug/L	<0.20	<0.20	6028214	<0.20	0.20	6028214
p+m-Xylene	ug/L	<0.20	<0.20	6028214	<0.20	0.20	6028214
o-Xylene	ug/L	<0.20	<0.20	6028214	<0.20	0.20	6028214
Total Xylenes	ug/L	<0.20	<0.20	6028214	<0.20	0.20	6028214
F1 (C6-C10)	ug/L	<25	<25	6028214	<25	25	6028214
F1 (C6-C10) - BTEX	ug/L	<25	<25	6028214	<25	25	6028214
F2-F4 Hydrocarbons							
F2 (C10-C16 Hydrocarbons)	ug/L	<100	<100	6030061	<100	100	6035666
F3 (C16-C34 Hydrocarbons)	ug/L	<200	<200	6030061	<200	200	6035666
F4 (C34-C50 Hydrocarbons)	ug/L	<200	<200	6030061	<200	200	6035666
Reached Baseline at C50	ug/L	Yes	Yes	6030061	Yes		6035666
Hydrocarbon Resemblance	ug/L	NA (1)	NA (1)	6030061	NA (2)		6035666
Surrogate Recovery (%)							
o-Terphenyl	%	94	93	6030061	103		6035666
4-Bromofluorobenzene	%	88	87	6028214	89		6028214
D4-1,2-Dichloroethane	%	108	106	6028214	107		6028214
D8-Toluene	%	93	91	6028214	92		6028214
RDL = Reportable Detection Limit QC Batch = Quality Control Batch (1) NA: NOT APPLICABLE (2) NA: Not applicable.							

Maxxam Job #: B971566
Report Date: 2019/03/26

S2S Environmental Inc
Client Project #: 8674
Site Location: 5080 NINTH LINE, MILTON
Your P.O. #: 8674.PT.09.08.B
Sampler Initials: RB

TEST SUMMARY

Maxxam ID: JFV161
Sample ID: BH9
Matrix: Water

Collected: 2019/03/19
Shipped:
Received: 2019/03/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	6024958	N/A	2019/03/22	Automated Statchk
1,3-Dichloropropene Sum	CALC	6026512	N/A	2019/03/25	Automated Statchk
Chloride by Automated Colourimetry	KONE	6028706	N/A	2019/03/21	Alina Dobreanu
Chromium (VI) in Water	IC	6028257	N/A	2019/03/25	Lang Le
Free (WAD) Cyanide	SKAL/CN	6029919	N/A	2019/03/21	Xuanhong Qiu
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	6030061	2019/03/21	2019/03/22	Prabhjot Gulati
Mercury	CV/AA	6029901	2019/03/21	2019/03/22	Medhat Nasr
Dissolved Metals by ICPMS	ICP/MS	6028826	N/A	2019/03/21	Arefa Dabhad
PAH Compounds in Water by GC/MS (SIM)	GC/MS	6030060	2019/03/21	2019/03/21	Mitesh Raj
Volatile Organic Compounds and F1 PHCs	GC/MSFD	6028214	N/A	2019/03/22	Xueming Jiang

Maxxam ID: JFV162
Sample ID: DUP
Matrix: Water

Collected: 2019/03/19
Shipped:
Received: 2019/03/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	6024958	N/A	2019/03/22	Automated Statchk
1,3-Dichloropropene Sum	CALC	6026512	N/A	2019/03/25	Automated Statchk
Chloride by Automated Colourimetry	KONE	6028706	N/A	2019/03/21	Alina Dobreanu
Chromium (VI) in Water	IC	6028257	N/A	2019/03/25	Lang Le
Free (WAD) Cyanide	SKAL/CN	6029919	N/A	2019/03/21	Xuanhong Qiu
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	6030061	2019/03/21	2019/03/22	Prabhjot Gulati
Mercury	CV/AA	6029901	2019/03/21	2019/03/22	Medhat Nasr
Dissolved Metals by ICPMS	ICP/MS	6028826	N/A	2019/03/21	Arefa Dabhad
PAH Compounds in Water by GC/MS (SIM)	GC/MS	6030060	2019/03/21	2019/03/21	Mitesh Raj
Volatile Organic Compounds and F1 PHCs	GC/MSFD	6028214	N/A	2019/03/22	Xueming Jiang

Maxxam ID: JFV163
Sample ID: BH11
Matrix: Water

Collected: 2019/03/19
Shipped:
Received: 2019/03/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
OC Pesticides (Selected) & PCB	GC/ECD	6028433	2019/03/20	2019/03/22	Joy Zhang
OC Pesticides Summed Parameters	CALC	6025235	N/A	2019/03/25	Automated Statchk
Triazine Herbicides	GC/MS	6031855	2019/03/22	2019/03/23	May Yin Mak

Maxxam ID: JFV164
Sample ID: DUP1
Matrix: Water

Collected: 2019/03/19
Shipped:
Received: 2019/03/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
OC Pesticides (Selected) & PCB	GC/ECD	6028433	2019/03/20	2019/03/22	Joy Zhang
OC Pesticides Summed Parameters	CALC	6025235	N/A	2019/03/25	Automated Statchk
Triazine Herbicides	GC/MS	6031855	2019/03/22	2019/03/23	May Yin Mak

Maxxam Job #: B971566
Report Date: 2019/03/26

S2S Environmental Inc
Client Project #: 8674
Site Location: 5080 NINTH LINE, MILTON
Your P.O. #: 8674.PT.09.08.B
Sampler Initials: RB

TEST SUMMARY

Maxxam ID: JFV165
Sample ID: BH15
Matrix: Water

Collected: 2019/03/19
Shipped:
Received: 2019/03/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
OC Pesticides (Selected) & PCB	GC/ECD	6028433	2019/03/20	2019/03/22	Joy Zhang
OC Pesticides Summed Parameters	CALC	6025235	N/A	2019/03/25	Automated Statchk
Triazine Herbicides	GC/MS	6031855	2019/03/22	2019/03/23	May Yin Mak

Maxxam ID: JFV165 Dup
Sample ID: BH15
Matrix: Water

Collected: 2019/03/19
Shipped:
Received: 2019/03/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Triazine Herbicides	GC/MS	6031855	2019/03/22	2019/03/25	May Yin Mak

Maxxam ID: JFV166
Sample ID: BH12
Matrix: Water

Collected: 2019/03/19
Shipped:
Received: 2019/03/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
OC Pesticides (Selected) & PCB	GC/ECD	6028433	2019/03/20	2019/03/22	Joy Zhang
OC Pesticides Summed Parameters	CALC	6025235	N/A	2019/03/25	Automated Statchk
Triazine Herbicides	GC/MS	6031855	2019/03/22	2019/03/23	May Yin Mak

Maxxam ID: JFV166 Dup
Sample ID: BH12
Matrix: Water

Collected: 2019/03/19
Shipped:
Received: 2019/03/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
OC Pesticides (Selected) & PCB	GC/ECD	6028433	2019/03/20	2019/03/22	Joy Zhang

Maxxam ID: JFV167
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2019/03/19
Shipped:
Received: 2019/03/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	6026512	N/A	2019/03/25	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	6035666	2019/03/25	2019/03/26	Prabhjot Gulati
Volatile Organic Compounds and F1 PHCs	GC/MSFD	6028214	N/A	2019/03/22	Xueming Jiang

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	8.0°C
Package 2	4.7°C

Results relate only to the items tested.

Maxxam Job #: B971566
Report Date: 2019/03/26

S2S Environmental Inc
Client Project #: 8674
Site Location: 5080 NINTH LINE, MILTON
Your P.O. #: 8674.PT.09.08.B
Sampler Initials: RB

QUALITY ASSURANCE REPORT

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
6028214	XII	Matrix Spike		4-Bromofluorobenzene	2019/03/22		101	%	70 - 130
				D4-1,2-Dichloroethane	2019/03/22		98	%	70 - 130
				D8-Toluene	2019/03/22		110	%	70 - 130
				Acetone (2-Propanone)	2019/03/22		96	%	60 - 140
				Benzene	2019/03/22		96	%	70 - 130
				Bromodichloromethane	2019/03/22		95	%	70 - 130
				Bromoform	2019/03/22		95	%	70 - 130
				Bromomethane	2019/03/22		99	%	60 - 140
				Carbon Tetrachloride	2019/03/22		98	%	70 - 130
				Chlorobenzene	2019/03/22		99	%	70 - 130
				Chloroform	2019/03/22		98	%	70 - 130
				Dibromochloromethane	2019/03/22		126	%	70 - 130
				1,2-Dichlorobenzene	2019/03/22		99	%	70 - 130
				1,3-Dichlorobenzene	2019/03/22		102	%	70 - 130
				1,4-Dichlorobenzene	2019/03/22		103	%	70 - 130
				Dichlorodifluoromethane (FREON 12)	2019/03/22		95	%	60 - 140
				1,1-Dichloroethane	2019/03/22		98	%	70 - 130
				1,2-Dichloroethane	2019/03/22		96	%	70 - 130
				1,1-Dichloroethylene	2019/03/22		100	%	70 - 130
				cis-1,2-Dichloroethylene	2019/03/22		100	%	70 - 130
				trans-1,2-Dichloroethylene	2019/03/22		100	%	70 - 130
				1,2-Dichloropropane	2019/03/22		98	%	70 - 130
				cis-1,3-Dichloropropene	2019/03/22		85	%	70 - 130
				trans-1,3-Dichloropropene	2019/03/22		95	%	70 - 130
				Ethylbenzene	2019/03/22		98	%	70 - 130
				Ethylene Dibromide	2019/03/22		100	%	70 - 130
				Hexane	2019/03/22		103	%	70 - 130
				Methylene Chloride(Dichloromethane)	2019/03/22		105	%	70 - 130
				Methyl Ethyl Ketone (2-Butanone)	2019/03/22		100	%	60 - 140
				Methyl Isobutyl Ketone	2019/03/22		79	%	70 - 130
				Methyl t-butyl ether (MTBE)	2019/03/22		93	%	70 - 130
				Styrene	2019/03/22		78	%	70 - 130
				1,1,1,2-Tetrachloroethane	2019/03/22		101	%	70 - 130
				1,1,2,2-Tetrachloroethane	2019/03/22		96	%	70 - 130
				Tetrachloroethylene	2019/03/22		103	%	70 - 130
				Toluene	2019/03/22		104	%	70 - 130
				1,1,1-Trichloroethane	2019/03/22		97	%	70 - 130
				1,1,2-Trichloroethane	2019/03/22		103	%	70 - 130
				Trichloroethylene	2019/03/22		98	%	70 - 130
				Trichlorofluoromethane (FREON 11)	2019/03/22		102	%	70 - 130
				Vinyl Chloride	2019/03/22		100	%	70 - 130
				p+m-Xylene	2019/03/22		97	%	70 - 130
				o-Xylene	2019/03/22		97	%	70 - 130
				F1 (C6-C10)	2019/03/22		95	%	60 - 140
6028214	XII	Spiked Blank		4-Bromofluorobenzene	2019/03/22		102	%	70 - 130
				D4-1,2-Dichloroethane	2019/03/22		102	%	70 - 130
				D8-Toluene	2019/03/22		110	%	70 - 130
				Acetone (2-Propanone)	2019/03/22		106	%	60 - 140
				Benzene	2019/03/22		99	%	70 - 130
				Bromodichloromethane	2019/03/22		102	%	70 - 130
				Bromoform	2019/03/22		105	%	70 - 130
				Bromomethane	2019/03/22		102	%	60 - 140

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
6028214	XII	Method Blank	Carbon Tetrachloride	2019/03/22		100	%	70 - 130
			Chlorobenzene	2019/03/22		102	%	70 - 130
			Chloroform	2019/03/22		101	%	70 - 130
			Dibromochloromethane	2019/03/22		106	%	70 - 130
			1,2-Dichlorobenzene	2019/03/22		102	%	70 - 130
			1,3-Dichlorobenzene	2019/03/22		102	%	70 - 130
			1,4-Dichlorobenzene	2019/03/22		105	%	70 - 130
			Dichlorodifluoromethane (FREON 12)	2019/03/22		94	%	60 - 140
			1,1-Dichloroethane	2019/03/22		102	%	70 - 130
			1,2-Dichloroethane	2019/03/22		100	%	70 - 130
			1,1-Dichloroethylene	2019/03/22		102	%	70 - 130
			cis-1,2-Dichloroethylene	2019/03/22		105	%	70 - 130
			trans-1,2-Dichloroethylene	2019/03/22		101	%	70 - 130
			1,2-Dichloropropane	2019/03/22		103	%	70 - 130
			cis-1,3-Dichloropropene	2019/03/22		95	%	70 - 130
			trans-1,3-Dichloropropene	2019/03/22		106	%	70 - 130
			Ethylbenzene	2019/03/22		100	%	70 - 130
			Ethylene Dibromide	2019/03/22		106	%	70 - 130
			Hexane	2019/03/22		104	%	70 - 130
			Methylene Chloride(Dichloromethane)	2019/03/22		109	%	70 - 130
			Methyl Ethyl Ketone (2-Butanone)	2019/03/22		114	%	60 - 140
			Methyl Isobutyl Ketone	2019/03/22		94	%	70 - 130
			Methyl t-butyl ether (MTBE)	2019/03/22		97	%	70 - 130
			Styrene	2019/03/22		83	%	70 - 130
			1,1,1,2-Tetrachloroethane	2019/03/22		105	%	70 - 130
			1,1,2,2-Tetrachloroethane	2019/03/22		105	%	70 - 130
			Tetrachloroethylene	2019/03/22		103	%	70 - 130
			Toluene	2019/03/22		107	%	70 - 130
			1,1,1-Trichloroethane	2019/03/22		99	%	70 - 130
			1,1,2-Trichloroethane	2019/03/22		108	%	70 - 130
			Trichloroethylene	2019/03/22		100	%	70 - 130
			Trichlorofluoromethane (FREON 11)	2019/03/22		103	%	70 - 130
			Vinyl Chloride	2019/03/22		102	%	70 - 130
			p+m-Xylene	2019/03/22		100	%	70 - 130
			o-Xylene	2019/03/22		101	%	70 - 130
			F1 (C6-C10)	2019/03/22		93	%	60 - 140
			4-Bromofluorobenzene	2019/03/22		90	%	70 - 130
			D4-1,2-Dichloroethane	2019/03/22		102	%	70 - 130
			D8-Toluene	2019/03/22		93	%	70 - 130
			Acetone (2-Propanone)	2019/03/22	<10		ug/L	
			Benzene	2019/03/22	<0.20		ug/L	
			Bromodichloromethane	2019/03/22	<0.50		ug/L	
			Bromoform	2019/03/22	<1.0		ug/L	
			Bromomethane	2019/03/22	<0.50		ug/L	
			Carbon Tetrachloride	2019/03/22	<0.20		ug/L	
			Chlorobenzene	2019/03/22	<0.20		ug/L	
			Chloroform	2019/03/22	<0.20		ug/L	
			Dibromochloromethane	2019/03/22	<0.50		ug/L	
			1,2-Dichlorobenzene	2019/03/22	<0.50		ug/L	
			1,3-Dichlorobenzene	2019/03/22	<0.50		ug/L	
			1,4-Dichlorobenzene	2019/03/22	<0.50		ug/L	
			Dichlorodifluoromethane (FREON 12)	2019/03/22	<1.0		ug/L	

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S2S Environmental Inc
Client Project #: 8674
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Your P.O. #: 8674.PT.09.08.B
Sampler Initials: RB

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
6028214	XJI	RPD	1,1-Dichloroethane	2019/03/22	<0.20		ug/L	
			1,2-Dichloroethane	2019/03/22	<0.50		ug/L	
			1,1-Dichloroethylene	2019/03/22	<0.20		ug/L	
			cis-1,2-Dichloroethylene	2019/03/22	<0.50		ug/L	
			trans-1,2-Dichloroethylene	2019/03/22	<0.50		ug/L	
			1,2-Dichloropropane	2019/03/22	<0.20		ug/L	
			cis-1,3-Dichloropropene	2019/03/22	<0.30		ug/L	
			trans-1,3-Dichloropropene	2019/03/22	<0.40		ug/L	
			Ethylbenzene	2019/03/22	<0.20		ug/L	
			Ethylene Dibromide	2019/03/22	<0.20		ug/L	
			Hexane	2019/03/22	<1.0		ug/L	
			Methylene Chloride(Dichloromethane)	2019/03/22	<2.0		ug/L	
			Methyl Ethyl Ketone (2-Butanone)	2019/03/22	<10		ug/L	
			Methyl Isobutyl Ketone	2019/03/22	<5.0		ug/L	
			Methyl t-butyl ether (MTBE)	2019/03/22	<0.50		ug/L	
			Styrene	2019/03/22	<0.50		ug/L	
			1,1,1,2-Tetrachloroethane	2019/03/22	<0.50		ug/L	
			1,1,2,2-Tetrachloroethane	2019/03/22	<0.50		ug/L	
			Tetrachloroethylene	2019/03/22	<0.20		ug/L	
			Toluene	2019/03/22	<0.20		ug/L	
			1,1,1-Trichloroethane	2019/03/22	<0.20		ug/L	
			1,1,2-Trichloroethane	2019/03/22	<0.50		ug/L	
			Trichloroethylene	2019/03/22	<0.20		ug/L	
			Trichlorofluoromethane (FREON 11)	2019/03/22	<0.50		ug/L	
			Vinyl Chloride	2019/03/22	<0.20		ug/L	
			p+m-Xylene	2019/03/22	<0.20		ug/L	
			o-Xylene	2019/03/22	<0.20		ug/L	
			Total Xylenes	2019/03/22	<0.20		ug/L	
			F1 (C6-C10)	2019/03/22	<25		ug/L	
			F1 (C6-C10) - BTEX	2019/03/22	<25		ug/L	
			Acetone (2-Propanone)	2019/03/22	NC		%	30
			Benzene	2019/03/22	NC		%	30
			Bromodichloromethane	2019/03/22	NC		%	30
			Bromoform	2019/03/22	NC		%	30
			Bromomethane	2019/03/22	NC		%	30
			Carbon Tetrachloride	2019/03/22	NC		%	30
			Chlorobenzene	2019/03/22	NC		%	30
			Chloroform	2019/03/22	NC		%	30
			Dibromochloromethane	2019/03/22	NC		%	30
			1,2-Dichlorobenzene	2019/03/22	NC		%	30
			1,3-Dichlorobenzene	2019/03/22	NC		%	30
			1,4-Dichlorobenzene	2019/03/22	NC		%	30
			Dichlorodifluoromethane (FREON 12)	2019/03/22	NC		%	30
			1,1-Dichloroethane	2019/03/22	NC		%	30
			1,2-Dichloroethane	2019/03/22	NC		%	30
			1,1-Dichloroethylene	2019/03/22	NC		%	30
			cis-1,2-Dichloroethylene	2019/03/22	NC		%	30
			trans-1,2-Dichloroethylene	2019/03/22	NC		%	30
			1,2-Dichloropropane	2019/03/22	NC		%	30
			cis-1,3-Dichloropropene	2019/03/22	NC		%	30
			trans-1,3-Dichloropropene	2019/03/22	NC		%	30
			Ethylbenzene	2019/03/22	NC		%	30

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Ethylene Dibromide	2019/03/22	NC		%	30
			Hexane	2019/03/22	NC		%	30
			Methylene Chloride(Dichloromethane)	2019/03/22	NC		%	30
			Methyl Ethyl Ketone (2-Butanone)	2019/03/22	NC		%	30
			Methyl Isobutyl Ketone	2019/03/22	NC		%	30
			Methyl t-butyl ether (MTBE)	2019/03/22	NC		%	30
			Styrene	2019/03/22	NC		%	30
			1,1,1,2-Tetrachloroethane	2019/03/22	NC		%	30
			1,1,2,2-Tetrachloroethane	2019/03/22	NC		%	30
			Tetrachloroethylene	2019/03/22	NC		%	30
			Toluene	2019/03/22	NC		%	30
			1,1,1-Trichloroethane	2019/03/22	NC		%	30
			1,1,2-Trichloroethane	2019/03/22	NC		%	30
			Trichloroethylene	2019/03/22	NC		%	30
			Trichlorofluoromethane (FREON 11)	2019/03/22	NC		%	30
			Vinyl Chloride	2019/03/22	NC		%	30
			p+m-Xylene	2019/03/22	NC		%	30
			o-Xylene	2019/03/22	NC		%	30
			Total Xylenes	2019/03/22	NC		%	30
			F1 (C6-C10)	2019/03/22	NC		%	30
			F1 (C6-C10) - BTEX	2019/03/22	NC		%	30
6028257	LLE	Matrix Spike	Chromium (VI)	2019/03/25		87	%	80 - 120
6028257	LLE	Spiked Blank	Chromium (VI)	2019/03/25		101	%	80 - 120
6028257	LLE	Method Blank	Chromium (VI)	2019/03/25	<0.50		ug/L	
6028257	LLE	RPD	Chromium (VI)	2019/03/25	NC		%	20
6028433	JZ	Matrix Spike [JFV164-02]	2,4,5,6-Tetrachloro-m-xylene	2019/03/22		90	%	50 - 130
			Decachlorobiphenyl	2019/03/22		108	%	50 - 130
			Aldrin	2019/03/22		75	%	50 - 130
			Dieldrin	2019/03/22		97	%	50 - 130
			a-Chlordane	2019/03/22		86	%	50 - 130
			g-Chlordane	2019/03/22		83	%	50 - 130
			o,p-DDD	2019/03/22		94	%	50 - 130
			p,p-DDD	2019/03/22		88	%	50 - 130
			o,p-DDE	2019/03/22		86	%	50 - 130
			p,p-DDE	2019/03/22		87	%	50 - 130
			o,p-DDT	2019/03/22		98	%	50 - 130
			p,p-DDT	2019/03/22		75	%	50 - 130
			Lindane	2019/03/22		82	%	50 - 130
			Endosulfan I (alpha)	2019/03/22		78	%	50 - 130
			Endosulfan II (beta)	2019/03/22		90	%	50 - 130
			Endrin	2019/03/22		84	%	50 - 130
			Heptachlor	2019/03/22		82	%	50 - 130
			Heptachlor epoxide	2019/03/22		80	%	50 - 130
			Hexachlorobenzene	2019/03/22		83	%	50 - 130
			Hexachlorobutadiene	2019/03/22		85	%	50 - 130
			Hexachloroethane	2019/03/22		70	%	50 - 130
			Methoxychlor	2019/03/22		119	%	50 - 130
6028433	JZ	Spiked Blank	2,4,5,6-Tetrachloro-m-xylene	2019/03/22		84	%	50 - 130
			Decachlorobiphenyl	2019/03/22		120	%	50 - 130
			Aldrin	2019/03/22		86	%	50 - 130
			Dieldrin	2019/03/22		116	%	50 - 130
			a-Chlordane	2019/03/22		106	%	50 - 130

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			g-Chlordane	2019/03/22		98	%	50 - 130
			o,p-DDD	2019/03/22		113	%	50 - 130
			p,p-DDD	2019/03/22		100	%	50 - 130
			o,p-DDE	2019/03/22		107	%	50 - 130
			p,p-DDE	2019/03/22		111	%	50 - 130
			o,p-DDT	2019/03/22		112	%	50 - 130
			p,p-DDT	2019/03/22		107	%	50 - 130
			Lindane	2019/03/22		97	%	50 - 130
			Endosulfan I (alpha)	2019/03/22		99	%	50 - 130
			Endosulfan II (beta)	2019/03/22		102	%	50 - 130
			Endrin	2019/03/22		106	%	50 - 130
			Heptachlor	2019/03/22		93	%	50 - 130
			Heptachlor epoxide	2019/03/22		97	%	50 - 130
			Hexachlorobenzene	2019/03/22		98	%	50 - 130
			Hexachlorobutadiene	2019/03/22		94	%	50 - 130
			Hexachloroethane	2019/03/22		79	%	50 - 130
			Methoxychlor	2019/03/22		122	%	50 - 130
6028433	JZ	RPD	Aroclor 1242	2019/03/22	200 (1)		%	30
6028433	JZ	Method Blank	2,4,5,6-Tetrachloro-m-xylene	2019/03/22		80	%	50 - 130
			Decachlorobiphenyl	2019/03/22		121	%	50 - 130
			Aldrin	2019/03/22	<0.005		ug/L	
			Dieldrin	2019/03/22	<0.005		ug/L	
			a-Chlordane	2019/03/22	<0.005		ug/L	
			g-Chlordane	2019/03/22	<0.005		ug/L	
			o,p-DDD	2019/03/22	<0.005		ug/L	
			p,p-DDD	2019/03/22	<0.005		ug/L	
			o,p-DDE	2019/03/22	<0.005		ug/L	
			p,p-DDE	2019/03/22	<0.005		ug/L	
			o,p-DDT	2019/03/22	<0.005		ug/L	
			p,p-DDT	2019/03/22	<0.005		ug/L	
			Lindane	2019/03/22	<0.003		ug/L	
			Endosulfan I (alpha)	2019/03/22	<0.005		ug/L	
			Endosulfan II (beta)	2019/03/22	<0.005		ug/L	
			Endrin	2019/03/22	<0.005		ug/L	
			Heptachlor	2019/03/22	<0.005		ug/L	
			Heptachlor epoxide	2019/03/22	<0.005		ug/L	
			Hexachlorobenzene	2019/03/22	<0.005		ug/L	
			Hexachlorobutadiene	2019/03/22	<0.009		ug/L	
			Hexachloroethane	2019/03/22	<0.01		ug/L	
			Methoxychlor	2019/03/22	<0.01		ug/L	
			Aroclor 1242	2019/03/22	<0.05		ug/L	
			Aroclor 1248	2019/03/22	<0.05		ug/L	
			Aroclor 1254	2019/03/22	<0.05		ug/L	
			Aroclor 1260	2019/03/22	<0.05		ug/L	
6028433	JZ	RPD [JFV166-02]	Aldrin	2019/03/22	NC		%	30
			Dieldrin	2019/03/22	NC		%	30
			a-Chlordane	2019/03/22	NC		%	30
			g-Chlordane	2019/03/22	NC		%	30
			o,p-DDD	2019/03/22	NC		%	30
			p,p-DDD	2019/03/22	NC		%	30
			o,p-DDE	2019/03/22	NC		%	30
			p,p-DDE	2019/03/22	NC		%	30

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			o,p-DDT	2019/03/22	NC		%	30
			p,p-DDT	2019/03/22	NC		%	30
			Lindane	2019/03/22	NC		%	30
			Endosulfan I (alpha)	2019/03/22	NC		%	30
			Endosulfan II (beta)	2019/03/22	NC		%	30
			Endrin	2019/03/22	NC		%	30
			Heptachlor	2019/03/22	NC		%	30
			Heptachlor epoxide	2019/03/22	NC		%	30
			Hexachlorobenzene	2019/03/22	NC		%	30
			Hexachlorobutadiene	2019/03/22	NC		%	30
			Hexachloroethane	2019/03/22	NC		%	30
			Methoxychlor	2019/03/22	NC		%	30
			Aroclor 1242	2019/03/22	NC		%	30
			Aroclor 1248	2019/03/22	NC		%	30
			Aroclor 1254	2019/03/22	NC		%	30
			Aroclor 1260	2019/03/22	NC		%	30
6028706	ADB	Matrix Spike	Dissolved Chloride (Cl-)	2019/03/21		NC	%	80 - 120
6028706	ADB	Spiked Blank	Dissolved Chloride (Cl-)	2019/03/21		101	%	80 - 120
6028706	ADB	Method Blank	Dissolved Chloride (Cl-)	2019/03/21	<1.0		mg/L	
6028706	ADB	RPD	Dissolved Chloride (Cl-)	2019/03/21	0.035		%	20
6028826	ADA	Matrix Spike	Dissolved Antimony (Sb)	2019/03/21		107	%	80 - 120
			Dissolved Arsenic (As)	2019/03/21		100	%	80 - 120
			Dissolved Barium (Ba)	2019/03/21		101	%	80 - 120
			Dissolved Beryllium (Be)	2019/03/21		108	%	80 - 120
			Dissolved Boron (B)	2019/03/21		108	%	80 - 120
			Dissolved Cadmium (Cd)	2019/03/21		102	%	80 - 120
			Dissolved Chromium (Cr)	2019/03/21		99	%	80 - 120
			Dissolved Cobalt (Co)	2019/03/21		101	%	80 - 120
			Dissolved Copper (Cu)	2019/03/21		106	%	80 - 120
			Dissolved Lead (Pb)	2019/03/21		95	%	80 - 120
			Dissolved Molybdenum (Mo)	2019/03/21		107	%	80 - 120
			Dissolved Nickel (Ni)	2019/03/21		96	%	80 - 120
			Dissolved Selenium (Se)	2019/03/21		102	%	80 - 120
			Dissolved Silver (Ag)	2019/03/21		97	%	80 - 120
			Dissolved Sodium (Na)	2019/03/21		NC	%	80 - 120
			Dissolved Thallium (Tl)	2019/03/21		99	%	80 - 120
			Dissolved Uranium (U)	2019/03/21		103	%	80 - 120
			Dissolved Vanadium (V)	2019/03/21		102	%	80 - 120
			Dissolved Zinc (Zn)	2019/03/21		97	%	80 - 120
6028826	ADA	Spiked Blank	Dissolved Antimony (Sb)	2019/03/21		99	%	80 - 120
			Dissolved Arsenic (As)	2019/03/21		101	%	80 - 120
			Dissolved Barium (Ba)	2019/03/21		98	%	80 - 120
			Dissolved Beryllium (Be)	2019/03/21		103	%	80 - 120
			Dissolved Boron (B)	2019/03/21		104	%	80 - 120
			Dissolved Cadmium (Cd)	2019/03/21		101	%	80 - 120
			Dissolved Chromium (Cr)	2019/03/21		99	%	80 - 120
			Dissolved Cobalt (Co)	2019/03/21		106	%	80 - 120
			Dissolved Copper (Cu)	2019/03/21		103	%	80 - 120
			Dissolved Lead (Pb)	2019/03/21		102	%	80 - 120
			Dissolved Molybdenum (Mo)	2019/03/21		97	%	80 - 120
			Dissolved Nickel (Ni)	2019/03/21		101	%	80 - 120
			Dissolved Selenium (Se)	2019/03/21		103	%	80 - 120

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6028826	ADA	Method Blank	Dissolved Silver (Ag)	2019/03/21		98	%	80 - 120
			Dissolved Sodium (Na)	2019/03/21		104	%	80 - 120
			Dissolved Thallium (Tl)	2019/03/21		104	%	80 - 120
			Dissolved Uranium (U)	2019/03/21		102	%	80 - 120
			Dissolved Vanadium (V)	2019/03/21		101	%	80 - 120
			Dissolved Zinc (Zn)	2019/03/21		101	%	80 - 120
			Dissolved Antimony (Sb)	2019/03/21	<0.50		ug/L	
			Dissolved Arsenic (As)	2019/03/21	<1.0		ug/L	
			Dissolved Barium (Ba)	2019/03/21	<2.0		ug/L	
			Dissolved Beryllium (Be)	2019/03/21	<0.50		ug/L	
			Dissolved Boron (B)	2019/03/21	<10		ug/L	
			Dissolved Cadmium (Cd)	2019/03/21	<0.10		ug/L	
			Dissolved Chromium (Cr)	2019/03/21	<5.0		ug/L	
			Dissolved Cobalt (Co)	2019/03/21	<0.50		ug/L	
			Dissolved Copper (Cu)	2019/03/21	<1.0		ug/L	
			Dissolved Lead (Pb)	2019/03/21	<0.50		ug/L	
			Dissolved Molybdenum (Mo)	2019/03/21	<0.50		ug/L	
			Dissolved Nickel (Ni)	2019/03/21	<1.0		ug/L	
			Dissolved Selenium (Se)	2019/03/21	<2.0		ug/L	
			Dissolved Silver (Ag)	2019/03/21	<0.10		ug/L	
			Dissolved Sodium (Na)	2019/03/21	<100		ug/L	
			Dissolved Thallium (Tl)	2019/03/21	<0.050		ug/L	
			Dissolved Uranium (U)	2019/03/21	<0.10		ug/L	
			Dissolved Vanadium (V)	2019/03/21	<0.50		ug/L	
			Dissolved Zinc (Zn)	2019/03/21	<5.0		ug/L	
6028826	ADA	RPD	Dissolved Sodium (Na)	2019/03/21	0.32		%	20
6029901	MEN	Matrix Spike	Mercury (Hg)	2019/03/22		94	%	75 - 125
6029901	MEN	Spiked Blank	Mercury (Hg)	2019/03/22		93	%	80 - 120
6029901	MEN	Method Blank	Mercury (Hg)	2019/03/22	<0.1		ug/L	
6029901	MEN	RPD	Mercury (Hg)	2019/03/22	NC		%	20
6029919	XQI	Matrix Spike	WAD Cyanide (Free)	2019/03/21		107	%	80 - 120
6029919	XQI	Spiked Blank	WAD Cyanide (Free)	2019/03/21		100	%	80 - 120
6029919	XQI	Method Blank	WAD Cyanide (Free)	2019/03/21	<1		ug/L	
6029919	XQI	RPD	WAD Cyanide (Free)	2019/03/21	NC		%	20
6030060	RAJ	Matrix Spike	D10-Anthracene	2019/03/21		101	%	50 - 130
			D14-Terphenyl (FS)	2019/03/21		96	%	50 - 130
			D8-Acenaphthylene	2019/03/21		97	%	50 - 130
			Acenaphthene	2019/03/21		95	%	50 - 130
			Acenaphthylene	2019/03/21		123	%	50 - 130
			Anthracene	2019/03/21		87	%	50 - 130
			Benzo(a)anthracene	2019/03/21		94	%	50 - 130
			Benzo(a)pyrene	2019/03/21		92	%	50 - 130
			Benzo(b/j)fluoranthene	2019/03/21		96	%	50 - 130
			Benzo(g,h,i)perylene	2019/03/21		91	%	50 - 130
			Benzo(k)fluoranthene	2019/03/21		87	%	50 - 130
			Chrysene	2019/03/21		95	%	50 - 130
			Dibenz(a,h)anthracene	2019/03/21		85	%	50 - 130
			Fluoranthene	2019/03/21		99	%	50 - 130
			Fluorene	2019/03/21		95	%	50 - 130
			Indeno(1,2,3-cd)pyrene	2019/03/21		94	%	50 - 130
			1-Methylnaphthalene	2019/03/21		111	%	50 - 130
			2-Methylnaphthalene	2019/03/21		99	%	50 - 130

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6030060	RAJ	Spiked Blank	Naphthalene	2019/03/21		93	%	50 - 130
			Phenanthrene	2019/03/21		94	%	50 - 130
			Pyrene	2019/03/21		97	%	50 - 130
			D10-Anthracene	2019/03/21		103	%	50 - 130
			D14-Terphenyl (FS)	2019/03/21		99	%	50 - 130
			D8-Acenaphthylene	2019/03/21		97	%	50 - 130
			Acenaphthene	2019/03/21		96	%	50 - 130
			Acenaphthylene	2019/03/21		96	%	50 - 130
			Anthracene	2019/03/21		87	%	50 - 130
			Benzo(a)anthracene	2019/03/21		94	%	50 - 130
			Benzo(a)pyrene	2019/03/21		91	%	50 - 130
			Benzo(b/j)fluoranthene	2019/03/21		97	%	50 - 130
			Benzo(g,h,i)perylene	2019/03/21		90	%	50 - 130
			Benzo(k)fluoranthene	2019/03/21		87	%	50 - 130
			Chrysene	2019/03/21		94	%	50 - 130
			Dibenz(a,h)anthracene	2019/03/21		84	%	50 - 130
			Fluoranthene	2019/03/21		102	%	50 - 130
			Fluorene	2019/03/21		96	%	50 - 130
			Indeno(1,2,3-cd)pyrene	2019/03/21		94	%	50 - 130
			1-Methylnaphthalene	2019/03/21		112	%	50 - 130
			2-Methylnaphthalene	2019/03/21		100	%	50 - 130
			Naphthalene	2019/03/21		95	%	50 - 130
			Phenanthrene	2019/03/21		95	%	50 - 130
			Pyrene	2019/03/21		100	%	50 - 130
6030060	RAJ	RPD	Acenaphthene	2019/03/21	0.14		%	30
			Acenaphthylene	2019/03/21	1.2		%	30
			Anthracene	2019/03/21	0.23		%	30
			Benzo(a)anthracene	2019/03/21	2.8		%	30
			Benzo(a)pyrene	2019/03/21	2.7		%	30
			Benzo(b/j)fluoranthene	2019/03/21	2.4		%	30
			Benzo(g,h,i)perylene	2019/03/21	2.8		%	30
			Benzo(k)fluoranthene	2019/03/21	3.3		%	30
			Chrysene	2019/03/21	2.7		%	30
			Dibenz(a,h)anthracene	2019/03/21	3.3		%	30
			Fluoranthene	2019/03/21	0.46		%	30
			Fluorene	2019/03/21	1.5		%	30
			Indeno(1,2,3-cd)pyrene	2019/03/21	2.5		%	30
			1-Methylnaphthalene	2019/03/21	0.21		%	30
			2-Methylnaphthalene	2019/03/21	0.76		%	30
			Naphthalene	2019/03/21	0.49		%	30
			Phenanthrene	2019/03/21	0.36		%	30
			Pyrene	2019/03/21	1.4		%	30
			Acenaphthene	2019/03/21	NC		%	30
			Acenaphthylene	2019/03/21	NC		%	30
			Anthracene	2019/03/21	NC		%	30
			Benzo(a)anthracene	2019/03/21	NC		%	30
			Benzo(a)pyrene	2019/03/21	NC		%	30
			Benzo(b/j)fluoranthene	2019/03/21	NC		%	30
			Benzo(g,h,i)perylene	2019/03/21	NC		%	30
			Benzo(k)fluoranthene	2019/03/21	NC		%	30
			Chrysene	2019/03/21	NC		%	30
			Dibenz(a,h)anthracene	2019/03/21	NC		%	30

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6030060	RAJ	Method Blank	Fluoranthene	2019/03/21	NC		%	30
			Fluorene	2019/03/21	NC		%	30
			Indeno(1,2,3-cd)pyrene	2019/03/21	NC		%	30
			1-Methylnaphthalene	2019/03/21	NC		%	30
			2-Methylnaphthalene	2019/03/21	NC		%	30
			Naphthalene	2019/03/21	NC		%	30
			Phenanthrene	2019/03/21	NC		%	30
			Pyrene	2019/03/21	NC		%	30
			D10-Anthracene	2019/03/21		99	%	50 - 130
			D14-Terphenyl (FS)	2019/03/21		96	%	50 - 130
			D8-Acenaphthylene	2019/03/21		95	%	50 - 130
			Acenaphthene	2019/03/21	<0.050		ug/L	
			Acenaphthylene	2019/03/21	<0.050		ug/L	
			Anthracene	2019/03/21	<0.050		ug/L	
			Benzo(a)anthracene	2019/03/21	<0.050		ug/L	
			Benzo(a)pyrene	2019/03/21	<0.010		ug/L	
			Benzo(b/j)fluoranthene	2019/03/21	<0.050		ug/L	
			Benzo(g,h,i)perylene	2019/03/21	<0.050		ug/L	
			Benzo(k)fluoranthene	2019/03/21	<0.050		ug/L	
			Chrysene	2019/03/21	<0.050		ug/L	
			Dibenz(a,h)anthracene	2019/03/21	<0.050		ug/L	
			Fluoranthene	2019/03/21	<0.050		ug/L	
			Fluorene	2019/03/21	<0.050		ug/L	
			Indeno(1,2,3-cd)pyrene	2019/03/21	<0.050		ug/L	
			1-Methylnaphthalene	2019/03/21	<0.050		ug/L	
			2-Methylnaphthalene	2019/03/21	<0.050		ug/L	
			Naphthalene	2019/03/21	<0.050		ug/L	
			Phenanthrene	2019/03/21	<0.030		ug/L	
			Pyrene	2019/03/21	<0.050		ug/L	
6030061	GUL	Matrix Spike [JFV161-06]	o-Terphenyl	2019/03/21		101	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2019/03/21		112	%	50 - 130
			F3 (C16-C34 Hydrocarbons)	2019/03/21		108	%	50 - 130
			F4 (C34-C50 Hydrocarbons)	2019/03/21		99	%	50 - 130
6030061	GUL	Spiked Blank	o-Terphenyl	2019/03/21		101	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2019/03/21		111	%	60 - 130
			F3 (C16-C34 Hydrocarbons)	2019/03/21		110	%	60 - 130
			F4 (C34-C50 Hydrocarbons)	2019/03/21		98	%	60 - 130
6030061	GUL	RPD	F2 (C10-C16 Hydrocarbons)	2019/03/21	3.3		%	30
			F3 (C16-C34 Hydrocarbons)	2019/03/21	1.3		%	30
			F4 (C34-C50 Hydrocarbons)	2019/03/21	1.3		%	30
			F2 (C10-C16 Hydrocarbons)	2019/03/22	NC		%	30
			F3 (C16-C34 Hydrocarbons)	2019/03/22	NC		%	30
			F4 (C34-C50 Hydrocarbons)	2019/03/22	NC		%	30
6030061	GUL	Method Blank	o-Terphenyl	2019/03/21		96	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2019/03/21	<100		ug/L	
			F3 (C16-C34 Hydrocarbons)	2019/03/21	<200		ug/L	
			F4 (C34-C50 Hydrocarbons)	2019/03/21	<200		ug/L	
6031855	MYI	Matrix Spike [JFV164-01]	2-Fluorobiphenyl	2019/03/23		54	%	30 - 130
			D14-Terphenyl (FS)	2019/03/23		93	%	30 - 130
			D5-Nitrobenzene	2019/03/23		54	%	30 - 130
			Prometon	2019/03/23		95	%	40 - 130
			Simazine	2019/03/23		93	%	40 - 130

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
6031855	MYI	Spiked Blank	Atrazine	2019/03/23		89	%	40 - 130
			Propazine	2019/03/23		91	%	40 - 130
			Metribuzin (Sencor)	2019/03/23		85	%	40 - 130
			Simetryn	2019/03/23		92	%	40 - 130
			Ametryn	2019/03/23		94	%	40 - 130
			Prometryne	2019/03/23		92	%	40 - 130
			Terbutryne	2019/03/23		89	%	40 - 130
			Cyanazine (Bladex)	2019/03/23		102	%	40 - 130
			2-Fluorobiphenyl	2019/03/22		68	%	30 - 130
			D14-Terphenyl (FS)	2019/03/22		105	%	30 - 130
			D5-Nitrobenzene	2019/03/22		71	%	30 - 130
			Prometon	2019/03/22		94	%	40 - 130
			Simazine	2019/03/22		93	%	40 - 130
			Atrazine	2019/03/22		90	%	40 - 130
			Propazine	2019/03/22		91	%	40 - 130
			Metribuzin (Sencor)	2019/03/22		95	%	40 - 130
			Simetryn	2019/03/22		106	%	40 - 130
			Ametryn	2019/03/22		107	%	40 - 130
6031855	MYI	Method Blank	Prometryne	2019/03/22		108	%	40 - 130
			Terbutryne	2019/03/22		104	%	40 - 130
			Cyanazine (Bladex)	2019/03/22		104	%	40 - 130
			2-Fluorobiphenyl	2019/03/22		62	%	30 - 130
			D14-Terphenyl (FS)	2019/03/22		96	%	30 - 130
			D5-Nitrobenzene	2019/03/22		64	%	30 - 130
			Prometon	2019/03/22	<0.50		ug/L	
			Simazine	2019/03/22	<2.5		ug/L	
			Atrazine	2019/03/22	<1.0		ug/L	
			Propazine	2019/03/22	<2.5		ug/L	
			Metribuzin (Sencor)	2019/03/22	<2.5		ug/L	
			Simetryn	2019/03/22	<0.50		ug/L	
			Ametryn	2019/03/22	<2.5		ug/L	
			Prometryne	2019/03/22	<2.5		ug/L	
			Terbutryne	2019/03/22	<0.50		ug/L	
			Cyanazine (Bladex)	2019/03/22	<2.5		ug/L	
			Prometon	2019/03/25	NC			40
			Simazine	2019/03/25	NC			40
6031855	MYI	RPD [JFV165-01]	Atrazine	2019/03/25	NC			40
			Propazine	2019/03/25	NC			40
			Metribuzin (Sencor)	2019/03/25	NC			40
			Simetryn	2019/03/25	NC			40
			Ametryn	2019/03/25	NC			40
			Prometryne	2019/03/25	NC			40
			Terbutryne	2019/03/25	NC			40
			Cyanazine (Bladex)	2019/03/25	NC			40
			o-Terphenyl	2019/03/26		103	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2019/03/26		109	%	50 - 130
			F3 (C16-C34 Hydrocarbons)	2019/03/26		NC	%	50 - 130
			F4 (C34-C50 Hydrocarbons)	2019/03/26		91	%	50 - 130
			o-Terphenyl	2019/03/26		87	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2019/03/26		89	%	60 - 130
			F3 (C16-C34 Hydrocarbons)	2019/03/26		96	%	60 - 130
			F4 (C34-C50 Hydrocarbons)	2019/03/26		98	%	60 - 130
6035666	GUL	Matrix Spike						
6035666	GUL	Spiked Blank						

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
6035666	GUL	Method Blank	o-Terphenyl	2019/03/26		101	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2019/03/26	<100		ug/L	
			F3 (C16-C34 Hydrocarbons)	2019/03/26	<200		ug/L	
			F4 (C34-C50 Hydrocarbons)	2019/03/26	<200		ug/L	
6035666	GUL	RPD	F2 (C10-C16 Hydrocarbons)	2019/03/26	NC		%	30
			F3 (C16-C34 Hydrocarbons)	2019/03/26	22		%	30
			F4 (C34-C50 Hydrocarbons)	2019/03/26	NC		%	30

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference $\leq 2 \times$ RDL).

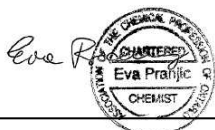
(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



Anastassia Hamanov, Scientific Specialist



Ewa Pranjić, M.Sc., C.Chem, Scientific Specialist

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.