Soil Characterization Report – St. Patrick's Home of Ottawa, 2865 Riverside Road, Ottawa, Ontario

Final Report

November 15, 2022

Prepared for:

Janet Morris
St. Patrick's Home of Ottawa
2865 Riverside Road
Ottawa ON K1V 8N5

Prepared by:

Stantec Consulting Ltd.
300-1331 Clyde Avenue
Ottawa ON K2C 3G4

Project No.: 121624271

Table of Contents

LIST OF TABLES

LIST OF APPENDICES

1.0 INTRODUCTION

St. Patrick's Home of Ottawa ("St. Patrick's") retained Stantec Consulting Ltd. ("Stantec") to complete soil characterization activities in order to evaluate options for excess soil management during upcoming development activities at the property located at 2865 Riverside Drive, Ottawa, Ontario. The Soil Characterization Report ("SCR") will support future planning for excess soil management in accordance with Ontario Regulation (O.Reg.) 406/19.

The project involves the replacement of the existing greenspace area on the north side of the property at 2865 Riverside Drive, hereinafter referred to as the "Project Area" (**Figure 1**, **Appendix A**), with a new 7-storey apartment building including a single below grade basement level. The footprint of the proposed development is located between the property driveways, parking lot and Riverside Drive. The south side of the property at 2865 Riverside Drive is not considered to be part of the Project Area.

The project will be located entirely on land owned by the Catholic Congregational Legacy Charity and leased to St. Patrick's Home of Ottawa. Based on the project design, the excavation depth is anticipated to be a maximum of 5 metres below ground surface (m bgs). Approximately 5,000 cubic metres (m^3) of excavated soil is anticipated to be excess soil that will require off-site management. It is anticipated that excess soil movement associated with this project will occur after to January 1, 2023.

The purpose of this SCR is to provide St. Patrick's with excess soil management guidance and to satisfy the requirements of O.Reg. 406/19. This report summarizes Stantec's characterization of soil within the Project Area that is anticipated to become excess soil, and provides potential management options. The Project Area is shown on **Figure 1, Appendix A** and the investigation locations are shown on **Figure 2, Appendix A**.

1.1 PROJECT AREA DESCRIPTION AND BACKGROUND

The Project Area is approximately 15,800 m^2 and located along the east side of Riverside Drive. The property currently includes an existing 5-storey care facility building (on the south side of the property), as well as surface parking and greenspace (on the north side of the property). There are two driveways allowing access to the facility, one running along the north of the property and one in the middle of the property between the greenspace and the southwest property line. The existing parking for the facility is situated along the east side of the property and runs from the northern boundary to the existing care facility. The footprint of the proposed development is located between the driveways, parking lot and Riverside Drive and currently consists of multiple pathways, trees, and a grassy area. The new 7-storey structure appears to be sited on top of a previously demolished structure and it is anticipated that fill materials are present in the area of the previous structure.

The Project Area is surrounded by a mix of residential, community, and commercial use properties. The Project Area is approximately 80 m above sea level (asl) and slopes down towards the northwest. The inferred direction of regional ground water flow is to the west toward the Rideau River, which is

approximately 450 m west of the Project Area. Based on a review of geological maps and a previous geotechnical investigation which were documented in a Phase One Environmental Site Assessment (ESA) report for the property (Gemtec, 2021), stratigraphy at the Project Area generally consists of topsoil overlaying silty clay followed by deposits of glacial till and limestone bedrock.

1.1.1 Areas of Potential Environmental Concern

The Phase One ESA (Gemtec, 2021) report identified two Areas of Potential Environmental Concern (APECs) within the Project Area, as described in the following table and as presented on **Figure 2, Appendix A**.

Table 1-1: Summary of Areas of Potential Environmental Concern

APEC #	Location of APEC	Description of Potential Contaminant Activities (PCA)	Approximate Distance from the Project Area	Contaminant(s) of Potential Concern
1	Entire Project Area	Other – Hospital with Hazardous Waste Generation (including PCBs, pathological wastes, oil skimmings and sludges, and pharmaceuticals)	On-Site	Metals and Inorganics, PHCs F1-F4, VOCs, PAHs, and PCBs
2	Entire Project Area	PCA 30 – Importation of Fill Material of Unknown Quality	On-site	PHCs F1-F4, BTEX, PAHs, Metals and Inorganics

Note(s):
PHCs - Petroleum hydrocarbons
BTEX – Benzene, Toluene, Ethylbenzene, and Xylene
PAHs - Polycyclic aromatic hydrocarbons
PCBs – Polychlorinated Biphenyls
VOCs – Volatile Organic Compounds

Gemtec's Phase One ESA identified a third APEC for the southern portion of 2865 Riverside Drive, which is considered to be outside of the Project Area. The APEC corresponded to the presence of five underground storage tanks (USTs) historically located at 753 Ridgewood Avenue, approximately 150 m south of 2865 Riverside Drive and approximately 250 m south of the Project Area. Phase I, II, and III ESAs were completed for 753 Ridgewood Drive that identified soil in the northwest corner of the property to be impacted. However due to the distance from the Project Area and the anticipated westward direction of groundwater flow, towards the Rideau River, the historical presence of USTs and impacted soil at 753 Ridgewood Drive were not considered an APEC for the Project Area.

1.2 REGULATORY FRAMEWORK

The movement of excess soil in Ontario is managed by the Ministry of Environment, Conservation and Parks (MECP) through Ontario Regulation (O.Reg.) 406/19 *On-Site and Excess Soil Management* made under the *Environmental Protection Act*, R.S.O. 1990, c.E.19 (EPA).

Introduction
November 15, 2022

In January 2021, most of O.Reg. 406/19 came into effect. Additional requirements of O.Reg. 406/19 are being phased in as follows:

- January 1, 2023: Testing, tracking and registration.
- January 1, 2025: Restrictions on landfilling soil.

O.Reg. 406/19 references an MECP document titled *Rules for Soil Management and Excess Soil Quality Standards*, herein referred to as the "Soil Rules" (MECP, 2022). The Soil Rules outline rules for excess soil characterization and management, and provide generic excess soil quality standards (henceforth the ESQS) that are to be applied to the excess soil to assess its suitability for placement at one or more reuse sites.

In addition to meeting the applicable ESQS, which are provided in Appendix 1 of the Soil Rules, the excess soil must also meet the Leachate Screening Levels (LSL) for selected parameters and as indicated in the applicable ESQS table. The LSL tables are provided in Appendix 2 of the Soil Rules.

The applicable ESQS and LSL are based on the characteristics of the reuse site, which has not yet been determined for the current construction project. It is anticipated that approximately 5,000 m^3 of excavated soil will be designated as excess and require off-site management local to the Ottawa Region; therefore, the results were compared with volume-independent ESQS and LSL, and the following standards were considered for preliminary review of soil management options:

- The Table 1 soil background site condition standards (SCS) referenced by O. Reg. 153/04 for residential/parkland/institutional (RPI) or industrial/commercial/community (ICC) property use, to evaluate the potential for soil to be placed without environmental restriction at a reuse site.
- The Table 2.1 ESQS for RPI and ICC property use to evaluate the potential for soil to be placed at a reuse site in a potable groundwater setting.
- The Table 3.1 ESQS for RPI and ICC property use to evaluate the potential for soil to be placed at a reuse site in a non-potable groundwater setting. The Table 3.1 ESQS for RPI use are also considered useful in the assessment of on-site soil quality, given the site setting.

Waste classification analyses were completed in accordance with Regulation (Reg.) 347 *General – Waste Management*, as amended, and compared to the leachate criteria provided in Schedule 4 of Reg. 347.

2.0 OBJECTIVES AND SCOPE OF INVESTIGATION

2.1 OBJECTIVES

The objectives of the investigation were to characterize excess soil anticipated to be generated at the Project Area in general accordance with O.Reg. 406/19. Based on the anticipated location of excess soil generation, approximately 5,000 m^3 of excess soil is expected to be generated from the Project Area, which was also identified as APEC 1 and 2 based on hazardous waste generation at the property and the potential for fill of unknown quality to be present.

Given that off-site soil movement is anticipated to occur after January 1, 2023, and based on the volume of excess soil anticipated to be generated, it is assumed that filing a notice on the excess soil registry and preparation of the supporting planning documents will be required. This report was intended to meet the objectives of a SCR for the purposes of the planning documentation. This report was not intended to meet the requirements of an Excess Soil Destination Assessment Report under O.Reg. 406/19.

2.2 SCOPE

The scope of work consisted of conducting a soil sampling program in conjunction with Stantec's geotechnical investigation (reported under a separate cover), comparing the analytical results to the ESQS that may apply to a potential reuse site, and providing options for potential reuse or offsite management of excess soil. The soil characterization was focused on determining the soil conditions in consideration of the excess soil to be generated as part of the construction project. The scope of work completed as part of this investigation is described as follows:

- Advance seven boreholes within the Project Area (refer to **Figure 2, Appendix A**) as follows:
  - Five boreholes surrounding the footprint of the proposed new building development.
  - One borehole located east of the proposed new building development.
  - One borehole located west proposed new building development.
- Advance six boreholes to a depth of approximately 9.0 m bgs (or bedrock refusal) and one borehole to 30 m bgs (or bedrock refusal). However, environmental soil sampling was limited to the maximum anticipated depth of excess soil generation of 5 m bgs.
- Field screen soil samples representative of potential excess soil at each of the boreholes in the Project Area.
- Collect and submit 27 soil samples (including two duplicate soil sample) for laboratory analysis of the contaminants of potential concern (COPC), which comprised selected metals and inorganic parameters, benzene, toluene, ethylbenzene, and xylenes (BTEX), polyaromatic hydrocarbons (PAHs) and petroleum hydrocarbons (PHCs) in addition to 13 soil samples (including one duplicate soil sample) for polychlorinated biphenyls (PCBs) and volatile organic compounds (VOCs) as identified in **Table 2-1** below.

- Analyze up to five representative soil samples for leachable metals and three soil samples for leachable VOC analysis using the Synthetic Precipitation Leaching Procedure (SPLP).
- Analyze one composite sample using the Toxicity Characteristic Leaching Procedure (TCLP) methods for waste characterization purposes.
- Prepare a report summarizing the methods and findings of the environmental field program.

2.3 SAMPLING AND ANALYSIS PLAN

Sampling locations were selected based on areas within the Project Area that were identified as APECs and where excess soil is anticipated to be generated. Sampling parameters were selected based on the COPCs associated with the relevant APECs and the minimum sampling requirements outlined in the Soil Rules.

Gemtec's Phase One ESA identified that APECs 1 and 2 cover the extent of the Project Area. Therefore, any excess soil generated within the Project Area would be subject to the sampling and analysis requirements of O.Reg. 406/19. The following Sampling and Analysis Plan (SAP) was created with the intent to assess soil quality within the APECs identified by the Phase One ESA and where excess soil is anticipated to be generated across the Project Area. Borehole locations are indicated on **Figure 2, Appendix A.**

Table 2-1: Sampling and Analysis Plan

Borehole	Sample Depths	Collected Samples	Parameters	Rationale
BH22-1	Up to 5 m bgs	Four	All samples: BTEX, PHCs, PAHs, metals and inorganics Select samples: PCBs and VOCs	Investigate APECs 1 and 2
BH22-2	Up to 5 m bgs	Four	All samples: BTEX, PHCs, PAHs, metals and inorganics Select samples: PCBs and VOCs	Investigate APECs 1 and 2
BH22-3	Up to 5 m bgs	Three	All samples: BTEX, PHCs, PAHs, metals and inorganics Select samples: PCBs and VOCs	Investigate APECs 1 and 2
BH22-4	Up to 5 m bgs	Four	All samples: BTEX, PHCs, PAHs, metals and inorganics Select samples: PCBs and VOCs	Investigate APECs 1 and 2
BH22-5	Up to 5 m bgs	Four	All samples: BTEX, PHCs, PAHs, metals and inorganics Select samples: PCBs and VOCs	Investigate APECs 1 and 2

Borehole	Sample Depths	Collected Samples	Parameters	Rationale
BH22-6	Up to 5 m bgs	Four	All samples: BTEX, PHCs, PAHs, metals and inorganics Select samples: PCBs and VOCs	Investigate APECs 1 and 2
BH22-7	Up to 5 m bgs	Two	All samples: BTEX, PHCs, PAHs, metals and inorganics Select samples: PCBs and VOCs	Investigate APECs 1 and 2

In addition, soil samples BH22-1-2, BH22-2-1, BH22-3-3, BH22-4-2, and BH22-7-1 were analyzed for SPLP metals, soil samples BH22-1-1, BH22-2-4, and BH22-5-2 were analyzed for SPLP VOCs, and one composite TCLP sample was collected and analyzed.

2.3.1 Variances to the Sampling and Analysis Plan

Due to limited soil recovery at BH22-5, only three samples for metals and inorganics were obtained from this borehole. As a result, an additional metals and inorganics sample was collected at BH22-7.

3.0 METHODS

Seven boreholes were advanced by drilling company George Downing Estate Drilling Ltd. (Downing) at locations BH22-1 through BH22-7. The borehole locations are shown on **Figure 2, Appendix A**. The boreholes were advanced to depths of 4.6 m to 13.7 m bgs for geotechnical purposes, however, environmental soil sample collection was limited to 5 m bgs. The borehole drilling program was completed from August 11 to 15, 2022. Boreholes were advanced using a track-mounted CME 55 drill rig equipped with a hollow stem auger and rock coring capabilities. Stantec field personnel recorded the conditions encountered in the boreholes. Borehole logs are included in **Appendix C**.

Vibrating wire piezometers were installed at BH22-1 and BH22-4 as part of the geotechnical investigation for groundwater monitoring purposes.

3.1 SOIL SAMPLING

Soil samples recovered from approximately 0.61 m intervals from each borehole were screened visually for soil texture, moisture content and presence or absence of indicators of contamination (e.g., odours, deleterious materials, or staining).

Each soil sample was split into two portions. One portion was placed into a sealable plastic bag for use in screening headspace soil vapour concentrations. The second portion of each sample was placed into laboratory-supplied jars and temporarily stored in a cooler on ice prior to transport to the analytical laboratory.

3.2 HEADSPACE VAPOUR SCREENING

Stantec screened the soil samples for headspace soil vapour concentrations in the field using an RKI Eagle 2 gas detector. The RKI Eagle 2 is equipped with a combustible gas detector to measure combustible vapour concentrations (CVC) and a photoionization detector (PID) to measure total organic vapours (TOV). The combustible gas detector was calibrated to hexane and operated in methane elimination mode for CVC measurements, and the PID was calibrated to isobutylene and equipped with a 10.6 eV lamp for TOV measurements. For CVC, the RKI Eagle 2 can display measurement in parts per million by volume (ppm_v), percent by volume (% volume), and percent of the lower explosive limit (% LEL). TOV measurements are reported in units of ppm_v. Field screening measurements were generally limited to samples collected to approximately 5 m bgs at each borehole and are presented on **Table B-1**, **Appendix B**.

Headspace vapour measurements were used to select apparent "worst-case" soil samples for PHC and VOC compounds. In some cases, professional judgment is required to select samples for analysis that are more consistent with the potential mode of contaminant release or contaminant type (e.g., metals) as the maximum field headspace reading may not be representative of some types of impacts.

3.3 ANALYTICAL TESTING

The soil samples were submitted for laboratory analyses of one or more of the following parameters: PHCs, BTEX, PAHs, metals and inorganics, PCBs, and VOCs. Five soil samples were submitted for analysis of leachable metals and three soil samples were submitted for leachable VOCs using the SPLP. Two duplicate soil samples were collected during the soil sampling program for analysis of PHCs, BTEX, PAHs, metals and inorganics and one duplicate soil sample was collected for analysis of PCBs and VOCs for quality assurance and quality control (QA/QC) purposes. One composite sample was submitted for TCLP analysis for waste characterization purposes.

Samples were submitted for laboratory analysis to Bureau Veritas North America Inc. (BV), of Mississauga, Ontario. Laboratory analyses completed by BV were in accordance with the content of the MECP document *Protocol for Analytical Methods Used in the Assessment of Properties under Environmental Protection Act*, March 9, 2004, amended as of July 1, 2011. BV is accredited in accordance with the International Standard *ISO/IEC 17025 – General Requirement for the Competence of Testing and Calibration Laboratories*; therefore, it was concluded that BV met the accreditation requirements outlined in Section 47 of O.Reg.153/04.

The bulk soil analytical results are summarized in **Table B-2, Appendix B** and on **Figure 3, Appendix A**. The SPLP analytical results are summarized in **Table B-3, Appendix B**. The TCLP analytical results are summarized in **Table B-4, Appendix B**.

Laboratory certificates of analysis and chain-of-custody forms are included as **Appendix D**. Included with the laboratory reports are the analytical methods used and the laboratory reporting limits (RLs).

3.4 DEPTH TO GROUNDWATER ASSESSMENT

Approximate depth to water table, including whether the depths of excavation for each area where soil excavation is planned are below the water table, is required as part of a full SCR per the Soil Rules referenced by O.Reg. 406/19. To address this, the results of a geotechnical investigation completed by Stantec in 2022 and reported under separate cover (Stantec, 2022) were used to assess the depth to groundwater. As part of that investigation, two vibrating wire piezometers were installed within the Project Area. One round of groundwater level readings at each of the wire piezometers was completed at least 10 days after installation. Groundwater levels were also recorded in the open boreholes (where water was not used for bedrock coring purposes) during drilling activities.

3.5 QUALITY ASSURANCE/QUALITY CONTROL

The overall data quality objective (DQO) for the investigation was to collect data that were precise, accurate, reproducible, complete, and suitable for comparison with the applicable guidelines. Samples were collected following strict sampling procedures. Samples were uniquely labeled, and tracking was maintained through use of chain of custody forms. Samples were collected in laboratory-supplied containers and preserved by packing with ice in insulated coolers.

To meet the DQO, quality assurance/quality control (QA/QC) procedures were incorporated into both field and laboratory methods. Efforts were made during sampling to reduce the potential for contamination so as to obtain representative samples.

BV employs in-house QA/QC programs to govern sample analysis, including the analyses of method blanks, spiked blanks, and the analyses of duplicates (10%) for each sample batch. The results of these tests are provided in the laboratory certificates of analysis included in **Appendix D**.

Potential cross-contamination of soil samples was mitigated by using cleaned drilling and sampling equipment. Loose soil was brushed from the stainless steel drive casings between sampling locations and the non-dedicated sampling equipment was washed using a detergent solution and water and rinsed with water between sample locations. Stantec's field technicians wore a new pair of disposable nitrile gloves for the collection of each sample.

Soil samples were placed into glass sample jars supplied by BV. Each sample was labeled with a unique identification number, packed into coolers with ice, and transported to BV under chain of custody documentation.

Calibration checks on field instruments were completed by Maxim Environmental and Safety Inc. prior to use.

Four duplicate soil samples (QC-01 to QC-04) were collected at boreholes BH22-6 and BH22-7. Sample QC-01 was collected from 0 to 1.4 m bgs at BH 22-7 and analyzed for BTEX, PHCs, PAHs and VOCs. Sample QC-02 was collected from 1.5 to 2.9 m bgs at BH22-7 and analyzed for metals and inorganics and PCBs. Sample QC-03 was collected from 0 to 1.4 m bgs at BH 22-6 and analyzed for BTEX, PHCs, and PAHs. Sample QC-04 was collected from 3.8 to 5.2 m bgs at BH22-6 and analyzed for metals and inorganics.

Blind duplicates were submitted for laboratory analysis to evaluate both laboratory precision and the implemented field sampling and handling procedures, in addition to the sample homogeneity. The relative percent difference (RPD) is defined as the absolute value of the variation between a sample and its duplicate, when compared to the average concentration of the original and the duplicate. It was used to assess the validity of the field and laboratory analytical procedures.

Based on the BV Ontario QA/QC Interpretation Guide, the RPD calculation is only applicable when concentrations in the sample and its field duplicate are greater than five times the laboratory RL.

Methods
November 15, 2022

Typically, parent and duplicate sample concentrations are concluded to have lowered precision if the RPD is greater than the soil acceptance criterion (10% for EC, 30% for metals and inorganics and PHCs, 35% for chromium VI and cyanide, 40% for PCBs and PAHs, and 50% for VOCs), as defined in BV's Ontario QA/QC Interpretation Guide (Maxxam, 2016).

As part of the QA/QC evaluation, Stantec reviewed the analytical laboratory's quality assurance report, which documented the laboratory's internal QA/QC protocols, including internal replicates, process blanks, and process recovery and matrix spike analyses.

4.0 REVIEW AND EVALUATION

4.1 STRATIGRAPHY

The ground surface at the Project Area at the time of borehole advancement consisted of a surficial layer of grass and topsoil. Generally, the borehole stratigraphy within the Project Area consisted of the topsoil layer to a maximum depth of 1.0 m overlying fill consisting of a variety of sand, silty clay/clayey silt, and/or gravel to depths of approximately 0.9 to 3.0 m bgs, underlain by silty clay/clayey silt to depths of approximately 4.5 to 6.0 m bgs, underlain by silty sand/sandy silt till to depths of approximately 5.2 to 9.0 m bgs, underlain by bedrock. Some wood and concrete debris was observed in the fill layer observed from approximately 0.7 to 3.0 m bgs at borehole BH22-5. Bedrock was encountered at boreholes BH22-2 and BH22-6 at depths of 11.9 m bgs and 5.2 m bgs, respectively. The bedrock consisted of shaley limestone and was cored to depths of approximately 13.7 m bgs at BH22-2 and 7.7 m bgs at BH22-6. The remaining boreholes were advanced until auger refusal at depths ranging from approximately 4.6 to 9.0 m bgs.

Further details are provided in borehole logs in **Appendix C**.

4.2 RESULTS

4.2.1 Soil Headspace Vapour Screening

CVC concentrations in the samples ranged between less than the detection limit of the instrument (various locations) to 35 parts per million by volume (ppm_v) at borehole BH22-1 (0 to 0.6 m bgs). TOV concentrations were less than the detection limit of the instrument at all borehole locations.

There are no regulatory criteria for soil vapours; however, elevated vapour concentrations are generally indicative of the presence of volatile parameters. Concentrations vary with parameter type, concentration, and age, and it should be noted that the readings are only intended to be used as a field screening tool to provide a qualitative measure of hydrocarbon levels within the subsurface. The readings do not provide a quantitative measure of analytical soil results.

4.2.2 Soil Contaminants of Concern, Quality, and Distribution

The soil analytical results from the bulk analysis of metals, inorganics, BTEX, PHCs, PAHs, VOCs, and PCBs are presented on **Figure 3, Appendix A** and in **Table B-2**, **Appendix B**. The analytical results from leachate analysis by SPLP are presented in **Table B-3**, **Appendix B**. The results were compared with the standards described in Section 1.2. Copies of the laboratory certificates of analysis are provided in **Appendix D**.

The measured concentrations in the soil samples were less than the Table 1 (background) SCS, with the exception of those parameters and samples presented in **Table 4-1** below.

Table 4-1: Summary of Soil Exceeding the Table 1 SCS

Parameter	Number of Boreholes with Measured Exceedance	Number of Samples with Measured Exceedance	Locations (Sample Depth)
Sodium Adsorption Ratio (SAR)	5	7	BH22-2 (1.5 to 2.9 m bgs and 3.1 to 3.7 m bgs), BH22-3 (3.1 to 3.7 m bgs), BH22-4 (3.1 to 3.7 m bgs and 4.6 to 5.2 m bgs), BH22-5 (2.3 to 3.7 m bgs) BH22-6 (0 to 1.4 m bgs).
Electrical Conductivity (EC)	2	4	BH22-3 (2.3 to 2.9 m bgs), BH22-6 (0 to 1.4 m bgs, 1.5 to 2.1 m bgs, and 2.3 to 2.9 m bgs).
Barium	2	2	BH22-1 (2.3 to 2.9 m bgs), BH22-3 (3.1 to 3.7 m bgs).
Mercury	1	1	BH22-5 (0.8 to 2.1 m bgs).
Hexane	1	1	BH22-5 (0.8 to 2.1 m bgs).
Various PAHs	2	2	BH22-2 (0 to 1.4 m bgs), BH22-3 (0 to 0.6 m bgs).

The observed mercury concentration exceeding the Table 1 SCS in the sample collected at BH22-5 and select PAHs exceeding the Table 1 SCSs in samples collected at BH22-2 and BH22-3 also exceeded the Table 2.1 and/or 3.1 ESQS (RPI and/or ICC). The observed barium concentration exceeding the Table 1 SCS in the samples collected at BH22-1 and BH22-3 and the hexane concentration exceeding the Table 1 SCSs in the sample collected at BH22-5 satisfied the Table 2.1 and 3.1 ESQS (RPI and ICC).

The elevated EC and SAR concentrations also exceeded the Table 2.1 and 3.1 ESQS (RPI) in select samples collected at BH22-2, BH22-3, BH22-4, and BH22-6. The elevated EC and SAR concentrations were generally observed in surficial soils at BH22-6 and at the fill/native soil horizon at BH22-2, BH22-3, BH22- 4, and BH22-6. The elevated EC and SAR concentrations were interpreted to be the result of de-icing salt application along nearby roadways, sidewalks, parking areas, and walking paths. These results suggest that salt-impacted soil may be present throughout the Project Area in surficial soils (i.e., fill material between surface and 1.5 m bgs) and in native soils (i.e., clay material below 1.5 m bgs) and have implications for excavated soil from across the Project Area.

The remaining soil samples did not exceed the Table 1 SCS, Table 2.1 ESQSs, or Table 3.1 ESQS for any of the COPCs analyzed.

The measured concentrations in the leachate soil samples analyzed were less than the Table 1 and Table 2.1 LSLs for both RPI and ICC property use.

4.2.3 Groundwater Monitoring

Groundwater level measurements were collected at the two vibrating wire piezometers installed at BH22-1 and BH22-4 on August 25, 2022. The depth to groundwater was approximately 4.4 m bgs at BH22-1 and approximately 4.5 m bgs at BH22-4. Depth to groundwater measured in the open boreholes upon completion of drilling activities at BH22-3 and BH22-5 was measured at 6.4 m bgs and 4.9 m bgs, respectively. Depending on final excavation depths during construction, groundwater may be encountered within the excavation.

4.2.4 Waste Characterization

A composite soil sample was prepared from soil collected from the boreholes advanced in the Project Area and submitted for laboratory analysis of waste classification parameters. Waste classification analyses of the soil sample was completed in accordance with the Ontario Environmental Protection Act, Regulation 347, *General – Waste Management*, as amended, and compared to the leachate criteria provided in Schedule 4 of the regulation. The analysis indicated that the soil would be considered non-hazardous waste for disposal purposes, if off-site management at an approved waste facility is being contemplated. Waste classification results are presented in **Table B-4, Appendix B**.

5.0 QUALITY ASSURANCE/QUALITY CONTROL RESULTS

5.1 FIELD QA/QC PROGRAM

The field duplicate and parent soil samples are identified as follows and were recovered at the following locations (submitted analyses are listed in parentheses):

- QC-01, parent sample BH22-7, at a depth of 0 to 1.4 m bgs (BTEX, PHCs, PAHs, and VOCs).
- QC-02, parent sample BH22-7, at a depth of 1.5 to 2.9 m bgs (metals and inorganics and PCBs).
- QC-03, parent sample BH22-6, at a depth of 0 to 1.4 m bgs (BTEX, PHCs, and PAHs).
- QC-04, parent sample BH22-6, at a depth of 3.8 to 5.2 m bgs (metals and inorganics).

RPDs were calculated for each parameter present where concentrations were greater than five times the laboratory RL in both the parent and duplicate samples.

Where calculable, the soil RPDs for QC-01, QC-02, QC-03, and their respective parent samples were less than the soil acceptance criterion (10% for EC, 30% for metals and inorganics and PHCs, 35% for chromium VI and cyanide, 40% for PCBs and PAHs, and 50% for VOCs) with the exception of the following:

- The RPD for EC (11%) between QC-02 and parent sample BH22-7-2 was above the RPD screening criteria.
- The RPD for EC (25%) and six metals parameters (44% to 72%) between QC-04 and parent sample BH22-6-4 was above the RPD screening criteria.

In both samples, where RPDs exceeded their respective screening criteria, the measured parameters did not exceed the Table 1 SCSs, Table 2.1 ESQS, or Table 3.1 ESQS; therefore, the decreased precision was not considered to affect the interpretation of soil data quality.

The laboratory RL for benzene and xylenes in soil sample BH22-7-2 were elevated above the Table 1 SCS, Table 2.1 ESQS, and/or Table 3.1 ESQS due to the sample weight. However, no other samples collected across the Project Area exhibited detectable concentrations of benzene or xylenes and there was no field evidence of impact in this sample. Therefore, the elevated detection limits are not considered to represent an exceedance of the regulatory standards and are not considered to affect the interpretation of soil data quality.

5.1.1 Laboratory QA/QC Program

In addition to the assessment of field duplicate samples, BV followed internal QA/QC protocols, which included method blank, matrix spike, spiked blank, QC standard, and laboratory duplicate analyses.

Quality Assurance/Quality Control Results
November 15, 2022

The laboratory reported that the overall QA/QC met their acceptability criteria. Based on the review of the field and laboratory data quality, Stantec concludes that the data were of acceptable quality and adequate for their intended use.

6.0 RECOMMENDATIONS FOR SOIL MANAGEMENT

6.1 EXCESS SOIL GENERATED FROM THE PROJECT AREA

Based on the analytical results summarized herein, Stantec can offer the following guidance for excess soil that may be generated:

Segregation and Disposal as Waste:

- Given the finding of mercury impacts exceeding both the Table 2.1 and 3.1 ESQS (RPI and ICC property use) at BH22-5 from 0.8 to 2.1 m bgs, soil excavated from this area that cannot remain on-site should be segregated and managed at an approved waste facility.
- Given the finding of various PAH impacts above the Table 2.1 and/or 3.1 ESQS (RPI and/or ICC property use) at BH22-2 from 0 to 1.4 m bgs and at BH22-3 from 0 to 0.6 m bgs, shallow soil excavated from these areas that cannot remain on-site should be segregated and managed at an approved waste facility.

Placement at a Reuse Site:

- Given the finding of barium concentrations above the Table 1 SCS at BH22-1 from 2.3 to 2.9 m bgs and at BH22-4 from 3.1 to 3.7 m bgs, deeper soil excavated from this area that cannot remain on-site is not suitable for reuse at environmentally sensitive sites. It is noted that soil collected at these locations meets the Table 2.1 and 3.1 ESQS for RPI and ICC property use; therefore, excess soil generated from these areas may be suitable for placement at a reuse site with RPI or ICC property use in potable or non-potable groundwater use settings.
- In general and with the exception of the areas noted above and below, excess soil generated at the Project Area may be considered for off-site management at a beneficial reuse site.

Special Consideration for Salt-Impacted Soil:

- Given the salt-impacted soil identified at numerous borehole locations and at varying depths across the Project Area, salt-impacted soil may be present throughout the Project Area and have implications for the excavated soil. Excess soil generated from across the Project Area should be considered salt-impacted soil.
- As salt-impacted soil was interpreted to be the result of de-icing salt application along nearby roadways, sidewalks, walking paths, and parking areas, there are specific management options/scenarios for this type of soil (see below) to be utilized at an RPI or ICC site. The following management scenarios could be considered, if reuse site options that meet these criteria become available:
  - Salt-impacted excess soil can be placed at one of the following locations:
    - Where it is reasonable to expect it will continue to be impacted by deicing materials (i.e., road infrastructure projects).

  - At an industrial or commercial site with non-potable groundwater condition.
  - At least 1.5 m BGS.
- Salt-impacted excess soil cannot be placed:
  - Within 30 m of a waterbody.
  - Within 100 m of a potable well or area where a potable well may be installed.
  - At a location used for growing crops and pasturing livestock (unless placed greater than 1.5 m BGS).
- Before placement of the salt-impacted excess soil, the reuse site owner/operator must be aware that the material may be salt-impacted. The reuse site owner/ operator must have received available sampling results and/or reports and had the potential risks to surface water and groundwater communicated.

Although the soil characterization provided above is considered to be generally representative of soil conditions within the anticipated excess soil generation horizon of the Project Area, it is possible that additional sampling and/or comparison of the analytical results to other ESQS for alternate types of re-use properties may be required, subject to the requirements of the proposed reuse site.

6.2 OTHER SOIL MANAGEMENT RECOMMENDATIONS

6.2.1 Soil Imported to the Project Area

Stantec is not aware of plans for excess soil to be transported to the Project Area for reuse. Importation of excess soil to the site should follow the requirements of O.Reg. 406/19.

6.2.2 Soil Management and Storage

It is recommended that the contractor comply with O.Reg. 406/19 for any storage, movement, transportation and/or disposal of any excess soil, whether suspected to be contaminated or not. Movement of soil materials within the Project Area must follow the storage and setback requirements of O.Reg. 406/19, as well as adhering to the requirements of site-specific instruments, if applicable.

6.2.3 Soil Hauling and Record Keeping

A tracking system, in accordance with the requirements of the Soil Rules, will be required to be implemented by the contractor for each load of excess soil removed from the Project Area. The contractor should keep haul records, bills of lading, and manifests, and submit them to the client or its contract administrator on a regular basis regarding the date and time of arrival of the soil at a receiving site, written confirmation from the receiving site that the materials were acceptable for receipt and documentation or certification confirming the materials were received, and the type, quality and quantity were appropriate for the receiving location in accordance with O.Reg. 406/19.

7.0 LIMITATIONS AND SIGNATURE OF QUALIFIED PERSON

This report documents work that was performed in accordance with generally accepted professional standards at the time and location in which the services were provided. No other representations, warranties or guarantees are made concerning the accuracy or completeness of the data or conclusions contained within this report, including no assurance that this work has uncovered all potential liabilities associated with the identified property.

This report provides an evaluation of selected environmental conditions associated with the identified portion of the property that was assessed at the time the work was conducted and is based on information obtained by and/or provided to Stantec at that time. There are no assurances regarding the accuracy and completeness of this information. All information received from the client or third parties in the preparation of this report has been assumed by Stantec to be correct. Stantec assumes no responsibility for any deficiency or inaccuracy in information received from others.

The opinions in this report can only be relied upon as they relate to the condition of the portion of the identified property that was reviewed at the time the work was conducted. Activities at the property subsequent to Stantec's review may have significantly altered the property's condition. Stantec cannot comment on other areas of the property that were not assessed.

Conclusions made within this report consist of Stantec's professional opinion as of the time of the writing of this report and are based solely on the scope of work described in the report, the limited data available and the results of the work. They are not a certification of the property's environmental condition. This report should not be construed as legal advice.

This report has been prepared for the exclusive use of the client identified herein and any use by any third party is prohibited. Stantec assumes no responsibility for losses, damages, liabilities or claims, howsoever arising, from third party use of this report.

The conclusions are based on the site conditions encountered at the time the work was performed at the specific testing and/or sampling locations, and conditions may vary among sampling locations. Analysis has been carried out for only 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, Stantec does not warrant against undiscovered environmental liabilities nor that the sampling results are indicative of the condition of the entire site. As the purpose of this report is to identify site conditions which may pose an environmental risk; the identification of non-environmental risks to structures or people on the site is beyond the scope of this assessment.

Limitations and Signature of Qualified Person
November 15, 2022

The locations of any utilities, buildings and structures, and property boundaries illustrated in or described within this report, if any, including pole lines, conduits, water mains, sewers and other surface or sub-surface utilities and structures are not guaranteed. Before starting work, the exact location of all such utilities and structures should be confirmed and Stantec assumes no liability for damage to them.

Should additional information become available which differs significantly from our understanding of conditions presented in this report, Stantec specifically disclaims any responsibility to update the conclusions in this report.

This report was prepared by Steve Hannington, B.Sc., EP and reviewed by Jill Peters Dechman, P.Eng.

STANTEC CONSULTING LTD.

Digitally signed by Steve Hannington
Date: 2022.11.15 11:30:05 -05'00'

Steve Hannington, B.Sc., EP
Environmental Scientist
Tel: 613 297 7472
Steve.Hannington@stantec.com

Digitally signed by Peters-Dechman, Jill
Date: 2022.11.15 12:36:23 -05'00'

Jill Peters Dechman, P.Eng.
Principal, Business Centre Practice Lead
Tel: 613 738 6073
Jill.Peters-Dechman@stantec.com

SH/JPD/

8.0 REFERENCES

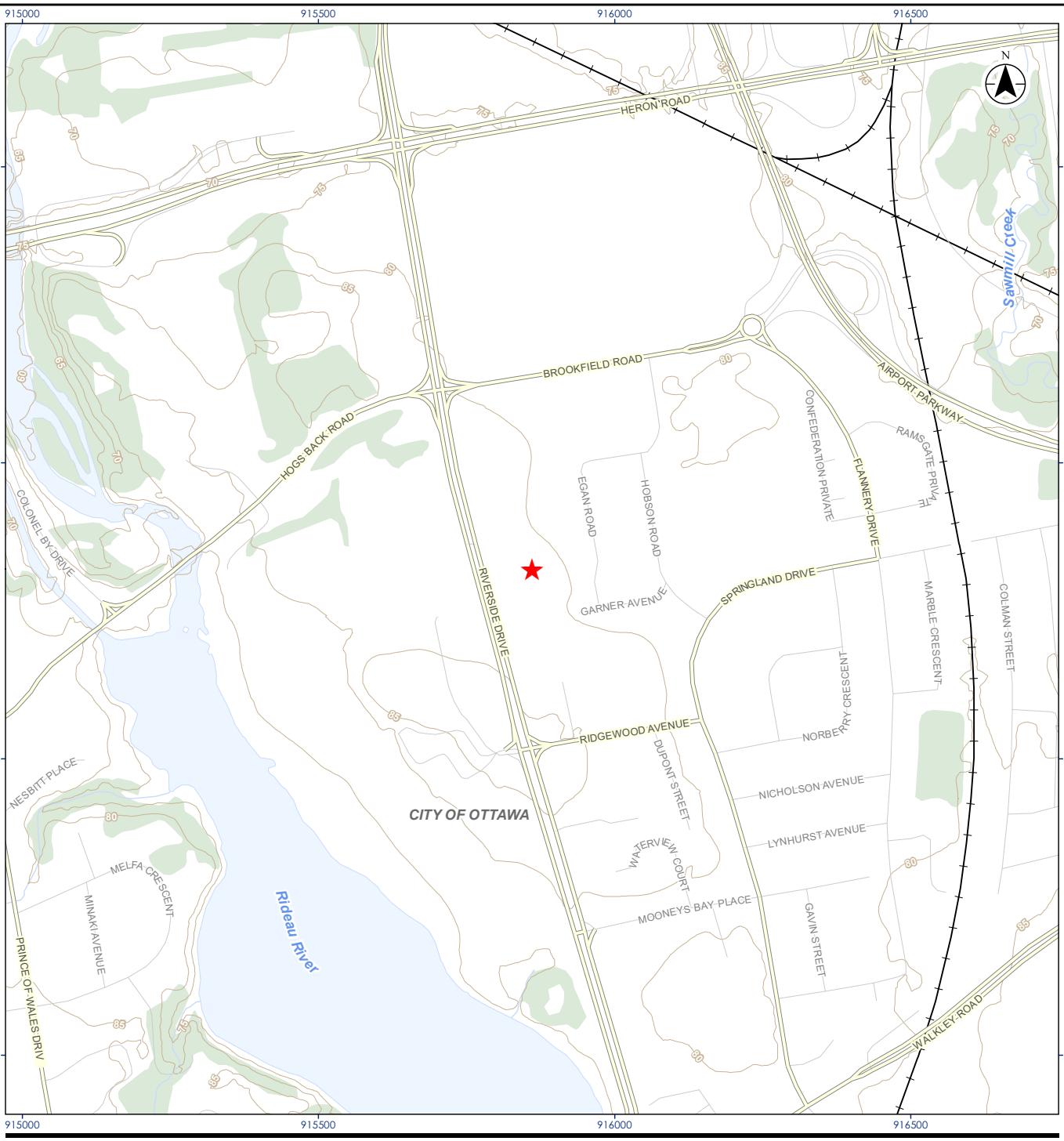
Maxxam Environmental (Maxxam), QA/QC Interpretation Guide Reference COR-FCD-0097 released July 18, 2016.

Gemtec Consulting Engineers and Scientists Ltd. (Gemtec), 2021. Phase One Environmental Site Assessment, 2865 Riverside Drive, Ottawa, ON, March 12, 2021.

Stantec Consulting Ltd. (Stantec), 2022. Geotechnical Investigation – Proposed Building, St. Patrick's Home of Ottawa, Ontario, November 15, 2022.

APPENDICES

APPENDIX A FIGURES



Notes
1. Coordinate System: NAD 1983 UTM Zone 17N
2. Base features produced under license with the Ontario Ministry of Natural Resources and Forestry © Queen's Printer for Ontario, 2020.
3. This figure is to be viewed in the context of the accompanying report and is subject to the limitations specified in that report.
4. m AMSL - metres above mean sea level.

Legend

- Site Location
- Major Road
- Minor Road
- Railway - Operational
- Topographic Contour (m AMSL)
- Watercourse
- Waterbody
- Wooded Area

0 200 400 metres

1:10,000 (at original document size of 8.5x11)

Stantec

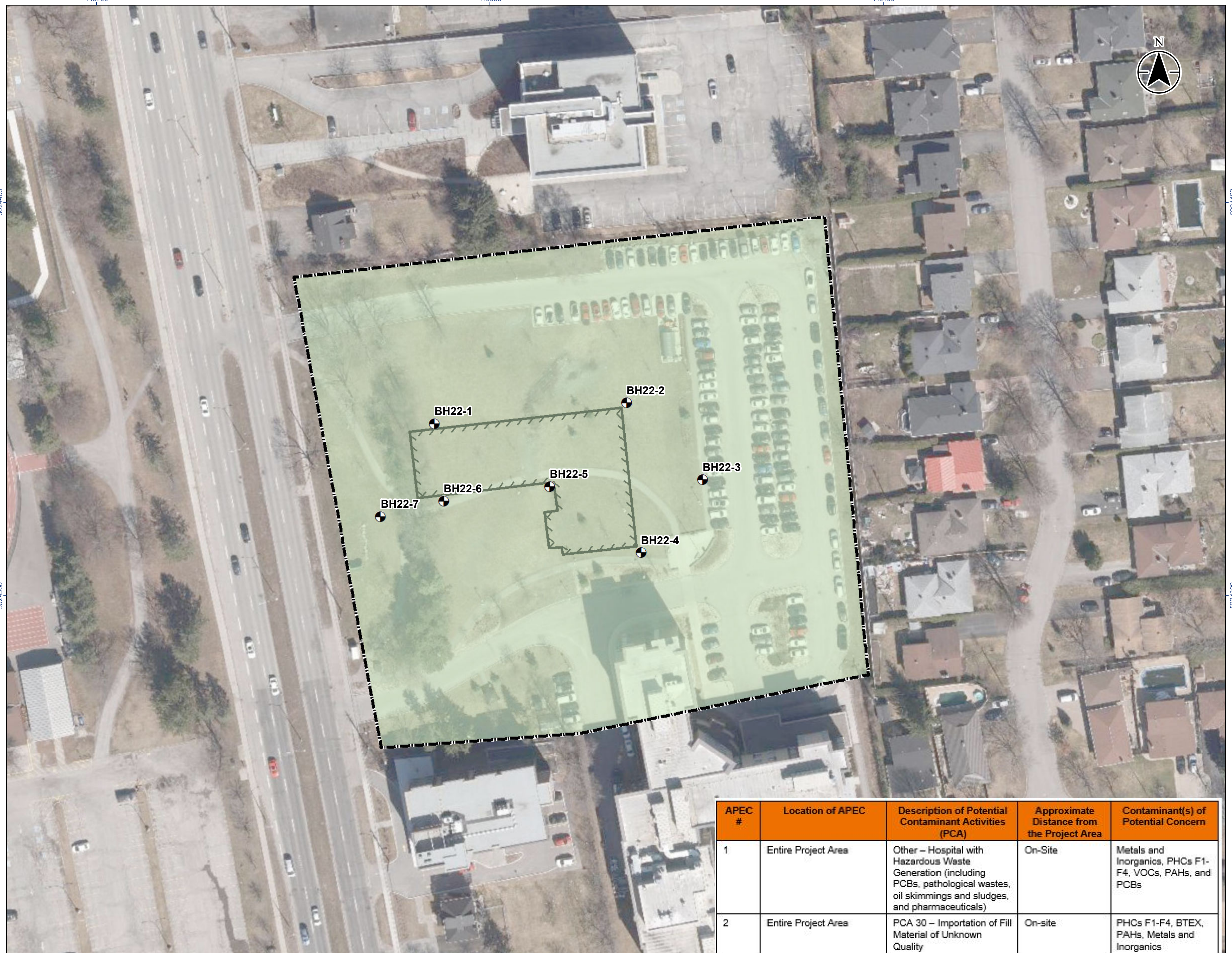
Project Location
Ottawa, Ontario

121624271
Prepared by IP on 9/9/2022

Client/Project
ST. PATRICK'S HOME OF OTTAWA
SOIL CHARACTERIZATION REPORT
2865 RIVERSIDE DRIVE, OTTAWA, ONTARIO

Figure No.
1

Title
Project Area Location



APEC #	Location of APEC	Description of Potential Contaminant Activities (PCA)	Approximate Distance from the Project Area	Contaminant(s) of Potential Concern
1	Entire Project Area	Other – Hospital with Hazardous Waste Generation (including PCBs, pathological wastes, oil skimmings and sludges, and pharmaceuticals)	On-Site	Metals and Inorganics, PHCs F1-F4, VOCs, PAHs, and PCBs
2	Entire Project Area	PCA 30 – Importation of Fill Material of Unknown Quality	On-site	PHCs F1-F4, BTEX, PAHs, Metals and Inorganics

Stantec

Legend

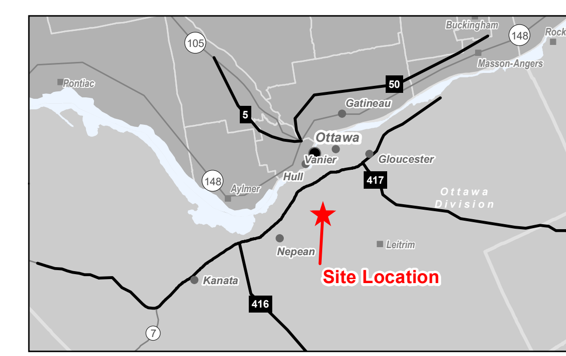
- Approximate Location of Borehole
- Proposed Building
- Approximate Project Area Boundary
- APEC-1 and APEC-2

0 10 20 metres

1:1,000 (At original document size of 11x17)

Notes

1. Coordinate System: NAD 1983 UTM Zone 18N
2. Base features produced under license with the Ontario Ministry of Natural Resources and Forestry © Queen's Printer for Ontario, 2020.
3. Orthoimagery: City of Ottawa. Imagery Date, 2021.
4. Site features are based on field observations and should be considered approximate.
5. This figure is to be viewed in the context of the accompanying report and is subject to the limitations specified in that report.
6. APEC - Areas of Potential Environmental Concern

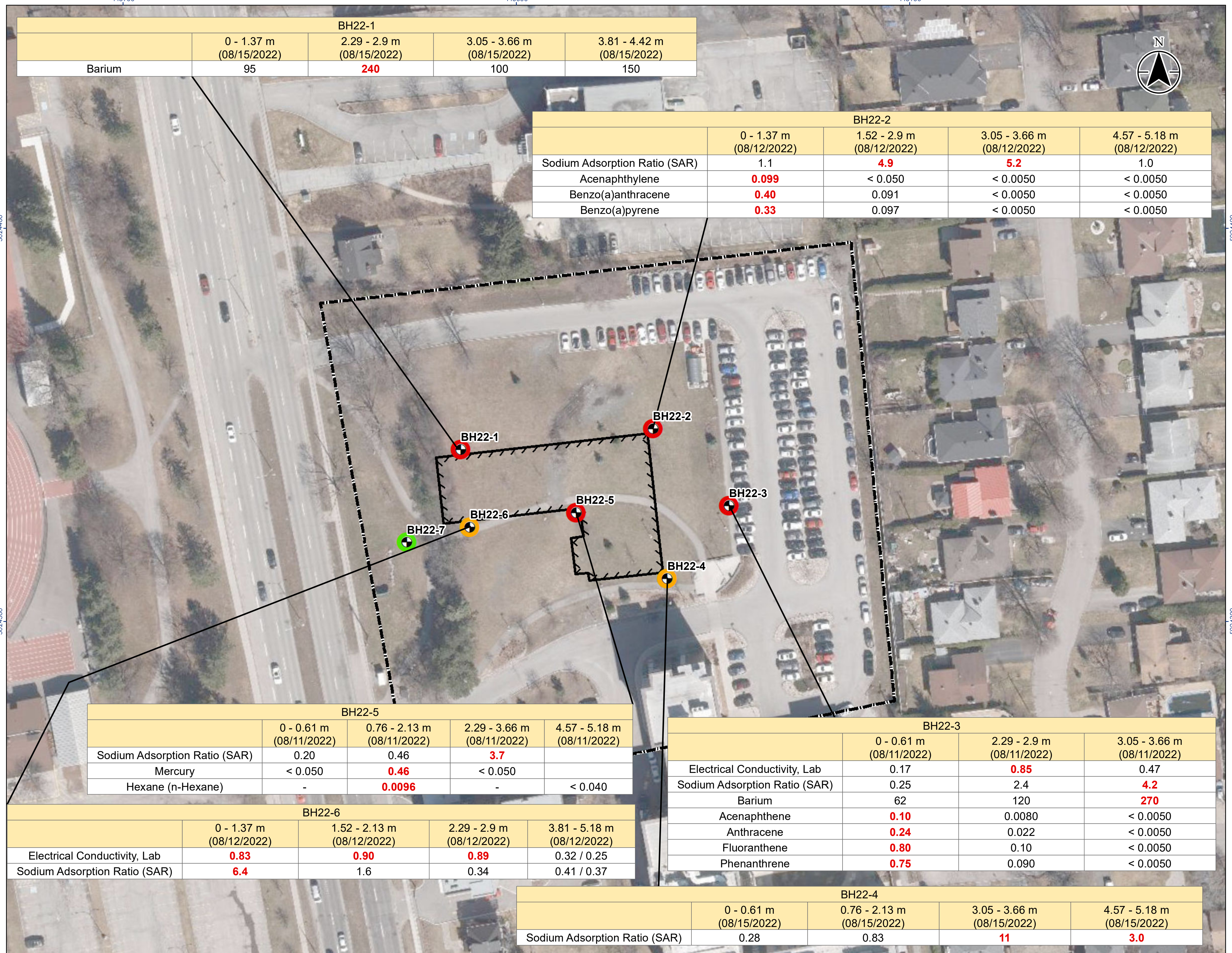


Project Location 121624271
Ottawa, Ontario Prepared by IP on 9/12/2022

Client/Project
ST. PATRICK'S HOME OF OTTAWA
SOIL CHARACTERIZATION REPORT
2865 RIVERSIDE DRIVE, OTTAWA, ONTARIO

Figure No.
2

Title
Project Area Layout



BH22-1				
	0 - 1.37 m (08/15/2022)	2.29 - 2.9 m (08/15/2022)	3.05 - 3.66 m (08/15/2022)	3.81 - 4.42 m (08/15/2022)
Barium	95	**240**	100	150

BH22-2				
	0 - 1.37 m (08/12/2022)	1.52 - 2.9 m (08/12/2022)	3.05 - 3.66 m (08/12/2022)	4.57 - 5.18 m (08/12/2022)
Sodium Adsorption Ratio (SAR)	1.1	**4.9**	**5.2**	1.0
Acenaphthylene	**0.099**	< 0.050	< 0.0050	< 0.0050
Benzo(a)anthracene	**0.40**	0.091	< 0.0050	< 0.0050
Benzo(a)pyrene	**0.33**	0.097	< 0.0050	< 0.0050

BH22-5				
	0 - 0.61 m (08/11/2022)	0.76 - 2.13 m (08/11/2022)	2.29 - 3.66 m (08/11/2022)	4.57 - 5.18 m (08/11/2022)
Sodium Adsorption Ratio (SAR)	0.20	0.46	**3.7**	
Mercury	< 0.050	**0.46**	< 0.050	
Hexane (n-Hexane)	-	**0.0096**	-	< 0.040

BH22-6				
	0 - 1.37 m (08/12/2022)	1.52 - 2.13 m (08/12/2022)	2.29 - 2.9 m (08/12/2022)	3.81 - 5.18 m (08/12/2022)
Electrical Conductivity, Lab	**0.83**	**0.90**	**0.89**	0.32 / 0.25
Sodium Adsorption Ratio (SAR)	**6.4**	1.6	0.34	0.41 / 0.37

BH22-3			
	0 - 0.61 m (08/11/2022)	2.29 - 2.9 m (08/11/2022)	3.05 - 3.66 m (08/11/2022)
Electrical Conductivity, Lab	0.17	**0.85**	0.47
Sodium Adsorption Ratio (SAR)	0.25	2.4	**4.2**
Barium	62	120	**270**
Acenaphthene	**0.10**	0.0080	< 0.0050
Anthracene	**0.24**	0.022	< 0.0050
Fluoranthene	**0.80**	0.10	< 0.0050
Phenanthrene	**0.75**	0.090	< 0.0050

BH22-4				
	0 - 0.61 m (08/15/2022)	0.76 - 2.13 m (08/15/2022)	3.05 - 3.66 m (08/15/2022)	4.57 - 5.18 m (08/15/2022)
Sodium Adsorption Ratio (SAR)	0.28	0.83	**11**	**3.0**

Disclaimer: Stantec assumes no responsibility for data supplied in electronic format. The recipient accepts full responsibility for verifying the accuracy and completeness of the data. The recipient releases Stantec, its officers, employees, consultants and agents, from any and all claims arising in any way from the content or provision of the data.

Stantec

Legend

- Approximate Location of Borehole
- Proposed Building
- Approximate Project Area Boundary
- Soil Parameters Tested Did Not Exceed Regulatory Guidelines
- Only Salt-related Parameters Exceed Regulatory Guidelines
- One or More Soil Parameters Exceed Regulatory Guidelines

Sample ID — Depth (m BGS)/ Date

BH22-5		
	0 - 0.61 m (08/11/2022)	0.76 - 2.13 m (08/11/2022)
Sodium Adsorption Ratio (SAR)	0.20	0.46
Mercury	< 0.050	**0.46**
Hexane (n-Hexane)	-	**0.0096**

Parameters — Value/Field Duplicate

MECP 2011						
Parameter	**A**	**B**	**C**	**D**	**E**	**Units**
Electrical Conductivity, Lab	0.57	0.7	1.4	0.7	1.4	mS/cm
Sodium Adsorption Ratio (SAR)	2.4	5	12	5	12	none
Barium	220	390	670	390	670	µg/g
Mercury	0.27	0.27	0.27	0.27	0.27	µg/g
Acenaphthene	0.072	2.5	2.5	14	15	µg/g
Acenaphthylene	0.093	0.093	0.093	0.093	0.093	µg/g
Anthracene	0.16	0.16	0.16	0.16	0.16	µg/g
Benzo(a)anthracene	0.36	0.5	0.92	0.5	1	µg/g
Benzo(a)pyrene	0.3	0.31	0.31	0.57	0.7	µg/g
Fluoranthene	0.56	0.69	2.8	0.69	70	µg/g
Phenanthrene	0.69	6.2	12	6.2	12	µg/g
Hexane (n-Hexane)	0.05	2.5	2.5	2.5	2.5	µg/g

A - Table 1 - Residential / Parkland / Institutional / Industrial / Commercial / Community Property Use
B - TABLE 2.1: Full Depth Excess Soil Quality Standards in a Potable Ground Water Condition, Volume Independent, Residential/ Parkland/ Institutional Property Use
C - TABLE 2.1: Full Depth Excess Soil Quality Standards in a Potable Ground Water Condition, Volume Independent, Industrial/ Commercial/ Community Property Use
D - TABLE 3.1: Full Depth Excess Soil Quality Standards in a Non-Potable Ground Water Condition, Volume Independent, Residential/ Parkland/ Institutional Property Use
E - TABLE 3.1: Full Depth Excess Soil Quality Standards in a Non-Potable Ground Water Condition, Volume Independent, Industrial/ Commercial/ Community Property Use

0 10 20 metres
1:1,000 (At original document size of 11x17)

Notes
1. Coordinate System: NAD 1983 UTM Zone 18N
2. Base features produced under license with the Ontario Ministry of Natural Resources and Forestry © Queen's Printer for Ontario, 2020.
3. Orthoimagery: City of Ottawa. Imagery Date, 2021.
4. Site features are based on field observations and should be considered approximate.
5. This figure is to be viewed in the context of the accompanying report and is subject to the limitations specified in that report.
6. m BGS - metres below ground surface
7. MECP - Ministry of the Environment, Conservation and Parks
8. SCS - site condition standards

Project Location 121624271
Ottawa, Ontario
Prepared by IP on 9/12/2022

Client/Project
ST. PATRICK'S HOME OF OTTAWA
SOIL CHARACTERIZATION REPORT
2865 RIVERSIDE DRIVE, OTTAWA, ONTARIO

Figure No.
3

Title
Summary of Soil Analytical Results

APPENDIX B TABLES

Table B-1
Summary of Soil Headspace Vapour Screening Results
St.Patrick's Home
2865 Riverside Road, Ottawa, ON

Borehole	Sample ID	Depth (m bgs)	CVC (ppm_v)	TOC (ppm_v)
BH22-1	BH22-1-1	0 - 0.6	35	<0.02
	BH22-1-2	0.8 -1.5	25	<0.02
	BH22-1-3	1.7 - 2.3	10	<0.02
	BH22-1-4	2.4 - 3.0	<5	<0.02
	BH22-1-5	3.2 - 3.8	<5	<0.02
	BH22-1-6	4.0 - 4.6	<5	<0.02
	BH22-1-7	4.7 - 5.3	<5	<0.02
BH22-2	BH22-2-1	0 - 0.6	15	<0.02
	BH22-2-2	0.8 -1.5	10	<0.02
	BH22-2-3	1.7 - 2.3	25	<0.02
	BH22-2-4	2.4 - 3.0	25	<0.02
	BH22-2-5	3.2 - 3.8	25	<0.02
	BH22-2-7	4.7 - 5.3	25	<0.02
	BH22-2-8	5.5 - 6.1	5	<0.02
BH22-3	BH22-3-1	0 - 0.6	<5	<0.02
	BH22-3-2	0.8 -1.5	<5	<0.02
	BH22-3-3	1.7 - 2.3	<5	<0.02
	BH22-3-4	2.4 - 3.0	<5	<0.02
	BH22-3-5	3.2 - 3.8	<5	<0.02
	BH22-3-6	4.0 - 4.6	<5	<0.02
	BH22-3-7	4.7 - 5.3	<5	<0.02
BH22-4	BH22-4-1	0 - 0.6	<5	<0.02
	BH22-4-2	0.8 -1.5	<5	<0.02
	BH22-4-3	1.7 - 2.3	<5	<0.02
	BH22-4-4	2.4 - 3.0	<5	<0.02
	BH22-4-5	3.2 - 3.8	<5	<0.02
	BH22-4-6	4.0 - 4.6	<5	<0.02
BH22-5	BH22-5-1	0 - 0.6	5	<0.02
	BH22-5-2	0.8 -1.5	5	<0.02
	BH22-5-3	1.7 - 2.3	5	<0.02
	BH22-5-4	2.4 - 3.0	<5	<0.02
	BH22-5-5	3.2 - 3.8	<5	<0.02
	BH22-5-7	4.7 - 5.3	<5	<0.02
BH22-6	BH22-6-1	0 - 0.6	<5	<0.02
	BH22-6-2	0.8 -1.5	<5	<0.02
	BH22-6-3	1.7 - 2.3	<5	<0.02
	BH22-6-4	2.4 - 3.0	<5	<0.02
	BH22-6-5	3.2 - 3.8	<5	<0.02
	BH22-6-6	4.0 - 4.6	<5	<0.02
	BH22-6-7	4.7 - 5.3	<5	<0.02
BH22-7	BH22-7-1	0 - 0.6	<5	<0.02
	BH22-7-2	0.8 -1.5	<5	<0.02
	BH22-7-3	1.7 - 2.3	<5	<0.02
	BH22-7-4	2.4 - 3.0	<5	<0.02
	BH22-7-5	3.2 - 3.8	<5	<0.02

Notes:

m bgs	metres below ground surface
CVC	combustible vapour concentrations
TOC	total organic vapours
ppmv	parts per million by volume
<0.02	less than the detection limit of the instrument

Table B-2
Summary of Soil Analytical Results
St.Patrick's Home
2865 Riverside Road, Ottawa, ON

Sample Location				BH22-1				BH22-2				BH22-3			BH22-4			
Sample Date				15-Aug-22	15-Aug-22	15-Aug-22	15-Aug-22	12-Aug-22	12-Aug-22	12-Aug-22	12-Aug-22	11-Aug-22	11-Aug-22	11-Aug-22	15-Aug-22	15-Aug-22	15-Aug-22	15-Aug-22
Sample ID				BH22-1-1	BH22-1-2	BH22-1-3	BH22-1-4	BH22-2-1	BH22-2-2	BH22-2-3	BH22-2-4	BH22-3-1	BH22-3-2	BH22-3-3	BH22-4-1	BH22-4-2	BH22-4-3	BH22-4-4
Sample Depth				0 - 1.37 m	2.29 - 2.9 m	3.05 - 3.66 m	3.81 - 4.42 m	0 - 1.37 m	1.52 - 2.9 m	3.05 - 3.66 m	4.57 - 5.18 m	0 - 0.61 m	2.29 - 2.9 m	3.05 - 3.66 m	0 - 0.61 m	0.76 - 2.13 m	3.05 - 3.66 m	4.57 - 5.18 m
Sampling Company				STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC
Laboratory				BV	BV	BV	BV	BV	BV	BV	BV	BV	BV	BV	BV	BV	BV	BV
Laboratory Work Order				C2N2739	C2N2739	C2N2739	C2N2739	C2N1170	C2N1170	C2N1170	C2N1170	C2M9490	C2M9490	C2M9490	C2N2739	C2N2739	C2N2739	C2N2739
Laboratory Sample ID				TLT679	TLT680	TLT681	TLT682	TLK878	TLK879	TLK880	TLK881	TLA818	TLA819	TLA820	TLT675	TLT676	TLT677	TLT678
Sample Type	Units	Ontario SCS	Ontario SQS - APP 1															
General Chemistry																		
Available (CaCl2) pH	S.U.	n/v	n/v	7.62	7.54	7.49	7.73	7.65	8.28	9.50	7.91	7.49	10.7	7.90	7.37	9.39	10.8	8.41
Cyanide (Free)	µg/g	0.051[A]	0.051[BCDE]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Electrical Conductivity, Lab	mS/cm	0.57[A]	0.7[BD] 1.4[CE]	0.21	0.55	0.53	0.48	0.35	0.41	0.49	0.27	0.17	**0.85[ABD]**	0.47	0.14	0.39	0.56	0.23
Moisture Content	%	n/v	n/v	9.7	20	24	20	26	20	23	12	22	14	33	11	7.9	17	17
Sodium Adsorption Ratio (SAR)	none	2.4[A]	5[BD] 12[CE]	0.23 SDC	1.3	0.89	0.63	1.1	**4.9[A]**	**5.2[ABD]**	1.0	0.25 SDC	2.4	**4.2[A]**	0.28 SDC	0.83	**11[ABD]**	**3.0[A]**
BTEX and Petroleum Hydrocarbons																		
Benzene	µg/g	0.02[A]	0.02[BCD] 0.034[E]	<0.0060	<0.020	<0.020	<0.0060	<0.020	<0.0060	<0.020	<0.0060	<0.020	<0.020	<0.0060	<0.020	<0.0060	<0.020	<0.0060
Toluene	µg/g	0.2[A]	0.2[BC] 0.99[D] 7.8[E]	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Ethylbenzene	µg/g	0.05[A]	0.05[BC] 1.9[DE]	<0.010	<0.020	<0.020	<0.010	<0.020	<0.010	<0.020	<0.010	<0.020	<0.020	<0.010	<0.020	<0.010	<0.020	<0.010
Xylene, o-	µg/g	[A]	[BCDE]	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Xylene, m & p-	µg/g	[A]	[BCDE]	<0.020	<0.040	<0.040	<0.020	<0.040	<0.020	<0.040	<0.020	<0.040	<0.040	<0.020	<0.040	<0.020	<0.040	<0.020
Xylenes, Total	µg/g	0.05[A]	0.091[BC] 0.9[D] 3[E]	<0.020	<0.040	<0.040	<0.020	<0.040	<0.020	<0.040	<0.020	<0.040	<0.040	<0.020	<0.040	<0.020	<0.040	<0.020
PHC F1 (C6-C10 range)	µg/g	[A]	[BCDE]	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
PHC F1 (C6-C10 range) minus BTEX	µg/g	25[A]	25[BCDE]	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
PHC F2 (>C10-C16 range)	µg/g	10[A]	10[BD] 26[CE]	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
PHC F3 (>C16-C34 range)	µg/g	240[A]	240[BC] 300[D] 1,700[E]	<50	<50	<50	<50	<50	53	<50	<50	52	56	<50	<50	<50	54	<50
PHC F4 (>C34-C50 range)	µg/g	120[A]	2,800[BD] 3,300[CE]	<50	<50	<50	<50	<50	120	<50	<50	<50	63	<50	<50	<50	<50	<50
Chromatogram to baseline at C50	none	n/v	n/v	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Metals																		
Antimony	µg/g	1.3[A]	7.5[BD] 40[CE]	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.23	0.39	<0.20	0.36	0.66	<0.20	<0.20
Arsenic	µg/g	18[A]	18[BCDE]	2.8	1.7	<1.0	<1.0	1.4	1.8	1.6	<1.0	1.5	2.1	1.6	2.4	2.3	1.6	<1.0
Barium	µg/g	220[A]	390[BD] 670[CE]	95	**240[A]**	100	150	120	110	180	110	62	120	**270[A]**	110	71	140	110
Beryllium	µg/g	2.5[A]	4[BD] 8[CE]	0.37	0.75	0.39	0.39	0.41	0.45	0.62	0.30	<0.20	0.42	0.71	0.30	0.22	0.45	0.36
Boron	µg/g	36[A]	120[BCDE]	5.2	<5.0	<5.0	<5.0	<5.0	<5.0	5.5	<5.0	<5.0	9.4	6.5	<5.0	<5.0	6.6	<5.0
Boron (Available)	µg/g	n/a[A]	1.5[BD] 2[CE]	0.20	0.058	0.052	<0.050	0.24	0.11	0.12	<0.050	0.15	1.1	0.11	0.16	0.17	0.29	0.051
Cadmium	µg/g	1.2[A]	1.2[BD] 1.9[CE]	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.12	<0.10	<0.10	0.12	<0.10	<0.10
Chromium	µg/g	70[A]	160[BCDE]	17	47	24	26	41	23	39	18	14	27	61	22	16	31	22
Chromium (Hexavalent)	µg/g	0.66[A]	8[BCDE]	<0.18	<0.18	0.20	<0.18	<0.18	<0.18	0.24	<0.18	<0.18	<0.18	0.29	<0.18	<0.18	0.25	<0.18
Cobalt	µg/g	21[A]	22[BD] 80[CE]	7.3	12	7.5	8.4	9.3	5.9	9.1	6.5	3.7	8.0	16	5.9	3.8	8.6	7.1
Copper	µg/g	92[A]	140[BD] 230[CE]	16	23	17	18	20	15	24	13	11	24	32	20	27	20	22
Lead	µg/g	120[A]	120[BCDE]	9.5	5.7	3.6	4.2	9.4	6.7	6.0	3.9	70	10	6.6	75	71	6.5	3.9
Mercury	µg/g	0.27[A]	0.27[BCDE]	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.22	<0.050	<0.050	0.16	0.20	<0.050	<0.050
Molybdenum	µg/g	2[A]	6.9[BD] 40[CE]	1.1	<0.50	<0.50	<0.50	0.83	<0.50	<0.50	<0.50	<0.50	0.93	<0.50	0.69	0.56	0.69	0.67
Nickel	µg/g	82[A]	100[BD] 270[CE]	16	26	13	16	23	15	22	11	9.4	18	34	14	9.2	18	13
Selenium	µg/g	1.5[A]	2.4[BD] 5.5[CE]	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Silver	µg/g	0.5[A]	20[BD] 40[CE]	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Thallium	µg/g	1[A]	1[BD] 3.3[CE]	0.13	0.19	0.12	0.16	0.18	0.13	0.21	0.12	0.077	0.16	0.33	0.11	0.060	0.18	0.12
Uranium	µg/g	2.5[A]	23[BD] 33[CE]	0.66	0.72	0.54	0.52	0.69	0.63	0.76	0.57	0.43	0.68	0.64	0.55	0.58	0.60	1.1
Vanadium	µg/g	86[A]	86[BCDE]	25	66	45	45	41	38	57	31	22	44	78	31	24	45	39
Zinc	µg/g	290[A]	340[BCDE]	34	68	36	40	50	36	61	27	48	60	91	62	66	65	33
Polycyclic Aromatic Hydrocarbons																		
Acenaphthene	µg/g	0.072[A]	2.5[BC] 14[D] 15[E]	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.0050	<0.0050	**0.10[A]**	0.0080	<0.0050	<0.0050	0.0068	<0.0050	<0.0050
Acenaphthylene	µg/g	0.093[A]	0.093[BCDE]	<0.0050	<0.0050	<0.0050	<0.0050	**0.099[ABCDE]**	<0.050	<0.0050	<0.0050	0.016	<0.0050	<0.0050	0.0061	0.021	<0.0050	<0.0050
Anthracene	µg/g	0.16[A]	0.16[BCDE]	<0.0050	<0.0050	<0.0050	<0.0050	0.10	<0.050	<0.0050	<0.0050	**0.24[ABCDE]**	0.022	<0.0050	0.018	0.029	0.0052	<0.0050
Benzo(a)anthracene	µg/g	0.36[A]	0.5[BD] 0.92[C] 1[E]	<0.0050	<0.0050	<0.0050	<0.0050	**0.40[A]**	0.091	<0.0050	<0.0050	0.35	0.043	<0.0050	0.062	0.15	0.015	<0.0050
Benzo(a)pyrene	µg/g	0.3[A]	0.31[BC] 0.57[D] 0.7[E]	<0.0050	<0.0050	<0.0050	<0.0050	**0.33[ABC]**	0.097	<0.0050	<0.0050	0.25	0.036	<0.0050	0.064	0.16	0.011	<0.0050
Benzo(b/j)fluoranthene	µg/g	0.47[A]	3.2[BC] 5.7[D] 7[E]	0.0073	<0.0050	<0.0050	<0.0050	0.40	0.13	<0.0050	<0.0050	0.33	0.048	<0.0050	0.083	0.21	0.015	<0.0050
Benzo(g,h,i)perylene	µg/g	0.68[A]	6.6[BD] 13[CE]	<0.0050	<0.0050	<0.0050	<0.0050	0.19	0.073	<0.0050	<0.0050	0.12	0.022	<0.0050	0.043	0.12	0.0075	<0.0050
Benzo(k)fluoranthene	µg/g	0.48[A]	3.1[BC] 5.7[D] 7[E]	<0.0050	<0.0050	<0.0050	<0.0050	0.16	<0.050	<0.0050	<0.0050	0.13	0.017	<0.0050	0.028	0.076	<0.0050	<0.0050
Biphenyl	µg/g	0.05[A]	0.05[BC] 0.3[D] 21[E]	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Chrysene	µg/g	2.8[A]	7[BD] 9.4[C] 14[E]	<0.0050	<0.0050	<0.0050	<0.0050	0.26	0.082	<0.0050	<0.0050	0.29	0.036	<0.0050	0.053	0.13	0.012	<0.0050
Dibenzo(a,h)anthracene	µg/g	0.1[A]	0.57[BD] 0.7[CE]	<0.0050	<0.0050	<0.0050	<0.0050	0.071	<0.050	<0.0050	<0.0050	0.035	0.0052	<0.0050	0.0098	0.027	<0.0050	<0.0050
Fluoranthene	µg/g	0.56[A]	0.69[BD] 2.8[C] 70[E]	0.010	<0.0050	<0.0050	<0.0050	0.55	0.19	<0.0050	<0.0050	**0.80[ABD]**	0.10	<0.0050	0.13	0.27	0.039	<0.0050
Fluorene	µg/g	0.12[A]	6.8[BCDE]	<0.0050	<0.0050	<0.0050	<0.0050	0.010	<0.050	<0.0050	<0.0050	0.079	0.0074	<0.0050	<0.0050	0.0060	<0.0050	<0.0050
Indeno(1,2,3-cd)pyrene	µg/g	0.23[A]	0.38[BD] 0.76[CE]	<0.0050	<0.0050	<0.0050	<0.0050	0.22	0.066	<0.0050	<0.0050	0.13	0.022	<0.0050	0.045	0.13	0.0072	<0.0050
Methylnaphthalene (Total)	µg/g	0.59[A]	0.59[BC] 0.92[D] 8.7[E]	<0.0071	<0.0071	<0.0071	<0.0071	<0.0071	<0.071	<0.0071	<0.0071	0.036	<0.0071	<0.0071	<0.0071	<0.0071	<0.0071	<0.0071
Methylnaphthalene, 1-	µg/g	0.59[A]	[BCDE]	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.0050	<0.0050	0.024	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Methylnaphthalene, 2-	µg/g	0.59[A]	[BCDE]	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.0050	<0.0050	0.011	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Naphthalene	µg/g	0.09[A]	0.2[BC] 0.59[D] 1.8[E]	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.0050	<0.0050	0.0060	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Phenanthrene	µg/g	0.69[A]	6.2[BD] 12[CE]	<0.0050	<0.0050	<0.0050	<0.0050	0.13	0.095	<0.0050	<0.0050	**0.75[A]**	0.090	<0.0050	0.072	0.11	0.020	<0.0050
Pyrene	µg/g	1[A]	28[BC] 70[DE]	0.0084	<0.0050	<0.0050	<0.0050	0.47	0.16	<0.0050	<0.0050	0.62	0.081	<0.0050	0.11	0.24	0.031	<0.0050

See notes on last page

Table B-2
Summary of Soil Analytical Results
St.Patrick's Home
2865 Riverside Road, Ottawa, ON

Sample Location				BH22-1				BH22-2				BH22-3			BH22-4			
Sample Date				15-Aug-22	15-Aug-22	15-Aug-22	15-Aug-22	12-Aug-22	12-Aug-22	12-Aug-22	12-Aug-22	11-Aug-22	11-Aug-22	11-Aug-22	15-Aug-22	15-Aug-22	15-Aug-22	15-Aug-22
Sample ID				BH22-1-1	BH22-1-2	BH22-1-3	BH22-1-4	BH22-2-1	BH22-2-2	BH22-2-3	BH22-2-4	BH22-3-1	BH22-3-2	BH22-3-3	BH22-4-1	BH22-4-2	BH22-4-3	BH22-4-4
Sample Depth				0 - 1.37 m	2.29 - 2.9 m	3.05 - 3.66 m	3.81 - 4.42 m	0 - 1.37 m	1.52 - 2.9 m	3.05 - 3.66 m	4.57 - 5.18 m	0 - 0.61 m	2.29 - 2.9 m	3.05 - 3.66 m	0 - 0.61 m	0.76 - 2.13 m	3.05 - 3.66 m	4.57 - 5.18 m
Sampling Company				STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC
Laboratory				BV	BV	BV	BV	BV	BV	BV	BV	BV	BV	BV	BV	BV	BV	BV
Laboratory Work Order				C2N2739	C2N2739	C2N2739	C2N2739	C2N1170	C2N1170	C2N1170	C2N1170	C2M9490	C2M9490	C2M9490	C2N2739	C2N2739	C2N2739	C2N2739
Laboratory Sample ID				TLT679	TLT680	TLT681	TLT682	TLK878	TLK879	TLK880	TLK881	TLA818	TLA819	TLA820	TLT675	TLT676	TLT677	TLT678
Sample Type	Units	Ontario SCS	Ontario SQS - APP 1															
Polychlorinated Biphenyls																		
Aroclor 1242	µg/g	$_{s14}^{A}$	$_{s14}^{BCDE}$	<0.010	-	-	<0.010	<0.010	-	<0.010	-	-	<0.010	-	<0.010	-	<0.010	-
Aroclor 1248	µg/g	$_{s14}^{A}$	$_{s14}^{BCDE}$	<0.010	-	-	<0.010	<0.010	-	<0.010	-	-	0.018	-	<0.010	-	<0.010	-
Aroclor 1254	µg/g	$_{s14}^{A}$	$_{s14}^{BCDE}$	<0.010	-	-	<0.010	<0.010	-	<0.010	-	-	0.030	-	0.031	-	0.013	-
Aroclor 1260	µg/g	$_{s14}^{A}$	$_{s14}^{BCDE}$	<0.010	-	-	<0.010	<0.010	-	<0.010	-	-	0.013	-	<0.010	-	0.022	-
Polychlorinated Biphenyls (PCBs)	µg/g	0.3_{s14}^{A}	0.35^{BD} 0.78^{CE}	<0.010	-	-	<0.010	<0.010	-	<0.010	-	-	0.061	-	0.031	-	0.036	-
Volatile Organic Compounds																		
Acetone	µg/g	0.5^{A}	0.5^{BC} 1.8^{DE}	<0.49	-	-	<0.49	-	<0.49	-	<0.49	-	-	<0.49	-	<0.49	-	<0.49
Bromodichloromethane	µg/g	0.05^{A}	0.05^{BC} 5.8^{DE}	<0.040	-	-	<0.040	-	<0.040	-	<0.040	-	-	<0.040	-	<0.040	-	<0.040
Bromoform (Tribromomethane)	µg/g	0.05^{A}	0.05^{BC} 2.5^{DE}	<0.040	-	-	<0.040	-	<0.040	-	<0.040	-	-	<0.040	-	<0.040	-	<0.040
Bromomethane (Methyl bromide)	µg/g	0.05^{A}	0.05_{a}^{BCDE}	<0.040	-	-	<0.040	-	<0.040	-	<0.040	-	-	<0.040	-	<0.040	-	<0.040
Carbon Tetrachloride (Tetrachloromethane)	µg/g	0.05^{A}	0.05_{a}^{BCDE}	<0.040	-	-	<0.040	-	<0.040	-	<0.040	-	-	<0.040	-	<0.040	-	<0.040
Chlorobenzene (Monochlorobenzene)	µg/g	0.05^{A}	0.083^{BC} 0.28^{DE}	<0.040	-	-	<0.040	-	<0.040	-	<0.040	-	-	<0.040	-	<0.040	-	<0.040
Chloroform (Trichloromethane)	µg/g	0.05^{A}	0.05^{BC} 0.08^{D} 0.26^{E}	<0.040	-	-	<0.040	-	<0.040	-	<0.040	-	-	<0.040	-	<0.040	-	<0.040
Dibromochloromethane	µg/g	0.05^{A}	0.05^{BC} 5.5^{DE}	<0.040	-	-	<0.040	-	<0.040	-	<0.040	-	-	<0.040	-	<0.040	-	<0.040
Dichlorobenzene, 1,2-	µg/g	0.05^{A}	3.4_{a}^{BD} 6.8_{a}^{CE}	<0.040	-	-	<0.040	-	<0.040	-	<0.040	-	-	<0.040	-	<0.040	-	<0.040
Dichlorobenzene, 1,3-	µg/g	0.05^{A}	0.26^{BC} 4.8^{D} 6.8^{E}	<0.040	-	-	<0.040	-	<0.040	-	<0.040	-	-	<0.040	-	<0.040	-	<0.040
Dichlorobenzene, 1,4-	µg/g	0.05^{A}	0.05_{a}^{BCDE}	<0.040	-	-	<0.040	-	<0.040	-	<0.040	-	-	<0.040	-	<0.040	-	<0.040
Dichlorodifluoromethane (Freon 12)	µg/g	0.05^{A}	1.5^{BC} 1.8^{DE}	<0.040	-	-	<0.040	-	<0.040	-	<0.040	-	-	<0.040	-	<0.040	-	<0.040
Dichloroethane, 1,1-	µg/g	0.05^{A}	0.05^{BC} 0.14^{D} 0.57^{E}	<0.040	-	-	<0.040	-	<0.040	-	<0.040	-	-	<0.040	-	<0.040	-	<0.040
Dichloroethane, 1,2-	µg/g	0.05^{A}	0.05_{a}^{BCDE}	<0.049	-	-	<0.049	-	<0.049	-	<0.049	-	-	<0.049	-	<0.049	-	<0.049
Dichloroethene, 1,1-	µg/g	0.05^{A}	0.05_{a}^{BCDE}	<0.040	-	-	<0.040	-	<0.040	-	<0.040	-	-	<0.040	-	<0.040	-	<0.040
Dichloroethene, cis-1,2-	µg/g	0.05^{A}	0.05_{a}^{BCDE}	<0.040	-	-	<0.040	-	<0.040	-	<0.040	-	-	<0.040	-	<0.040	-	<0.040
Dichloroethene, trans-1,2-	µg/g	0.05^{A}	0.05_{a}^{BCDE}	<0.040	-	-	<0.040	-	<0.040	-	<0.040	-	-	<0.040	-	<0.040	-	<0.040
Dichloropropane, 1,2-	µg/g	0.05^{A}	0.05_{a}^{BCDE}	<0.040	-	-	<0.040	-	<0.040	-	<0.040	-	-	<0.040	-	<0.040	-	<0.040
Dichloropropene, 1,3- (sum of isomers cis + trans)	µg/g	0.05_{s11}^{A}	0.05^{BCDE}	<0.050	-	-	<0.050	-	<0.050	-	<0.050	-	-	<0.050	-	<0.050	-	<0.050
Dichloropropene, cis-1,3-	µg/g	$_{s11}^{A}$	$_{s11}^{BCDE}$	<0.030	-	-	<0.030	-	<0.030	-	<0.030	-	-	<0.030	-	<0.030	-	<0.030
Dichloropropene, trans-1,3-	µg/g	$_{s11}^{A}$	$_{s11}^{BCDE}$	<0.040	-	-	<0.040	-	<0.040	-	<0.040	-	-	<0.040	-	<0.040	-	<0.040
Ethylene Dibromide (Dibromoethane, 1,2-)	µg/g	0.05^{A}	0.05_{a}^{BCDE}	<0.040	-	-	<0.040	-	<0.040	-	<0.040	-	-	<0.040	-	<0.040	-	<0.040
Hexane (n-Hexane)	µg/g	0.05^{A}	2.5^{BCDE}	<0.040	-	-	<0.040	-	<0.040	-	<0.040	-	-	<0.040	-	<0.040	-	<0.040
Methyl Ethyl Ketone (MEK) (2-Butanone)	µg/g	0.5^{A}	0.5^{BC} 14^{D} 26^{E}	<0.40	-	-	<0.40	-	<0.40	-	<0.40	-	-	<0.40	-	<0.40	-	<0.40
Methyl Isobutyl Ketone (MIBK)	µg/g	0.5^{A}	0.5^{BC} 0.89^{D} 17^{E}	<0.40	-	-	<0.40	-	<0.40	-	<0.40	-	-	<0.40	-	<0.40	-	<0.40
Methyl tert-butyl ether (MTBE)	µg/g	0.05^{A}	0.05^{BCDE}	<0.040	-	-	<0.040	-	<0.040	-	<0.040	-	-	<0.040	-	<0.040	-	<0.040
Methylene Chloride (Dichloromethane)	µg/g	0.05^{A}	0.05^{BC} 0.06^{D} 0.2^{E}	<0.049	-	-	<0.049	-	<0.049	-	<0.049	-	-	<0.049	-	<0.049	-	<0.049
Styrene	µg/g	0.05^{A}	0.05^{BC} 0.5^{D} 6.8^{E}	<0.040	-	-	<0.040	-	<0.040	-	<0.040	-	-	<0.040	-	<0.040	-	<0.040
Tetrachloroethane, 1,1,1,2-	µg/g	0.05^{A}	0.05^{BCDE}	<0.040	-	-	<0.040	-	<0.040	-	<0.040	-	-	<0.040	-	<0.040	-	<0.040
Tetrachloroethane, 1,1,2,2-	µg/g	0.05^{A}	0.05_{a}^{BCDE}	<0.040	-	-	<0.040	-	<0.040	-	<0.040	-	-	<0.040	-	<0.040	-	<0.040
Tetrachloroethene (PCE)	µg/g	0.05^{A}	0.05_{a}^{BCDE}	<0.040	-	-	<0.040	-	<0.040	-	<0.040	-	-	<0.040	-	<0.040	-	<0.040
Trichloroethane, 1,1,1-	µg/g	0.05^{A}	0.11^{BD} 0.12^{C} 0.4^{E}	<0.040	-	-	<0.040	-	<0.040	-	<0.040	-	-	<0.040	-	<0.040	-	<0.040
Trichloroethane, 1,1,2-	µg/g	0.05^{A}	0.05^{BCDE}	<0.040	-	-	<0.040	-	<0.040	-	<0.040	-	-	<0.040	-	<0.040	-	<0.040
Trichloroethene (TCE)	µg/g	0.05^{A}	0.05_{a}^{BCDE}	<0.010	-	-	<0.010	-	<0.010	-	<0.010	-	-	<0.010	-	<0.010	-	<0.010
Trichlorofluoromethane (Freon 11)	µg/g	0.25^{A}	0.25^{BC} 0.46^{DE}	<0.040	-	-	<0.040	-	<0.040	-	<0.040	-	-	<0.040	-	<0.040	-	<0.040
Vinyl Chloride	µg/g	0.02^{A}	0.02^{BCDE}	<0.019	-	-	<0.019	-	<0.019	-	<0.019	-	-	<0.019	-	<0.019	-	<0.019

See notes on last page

Table B-2
Summary of Soil Analytical Results
St.Patrick's Home
2865 Riverside Road, Ottawa, ON

Sample Location				BH22-5				BH22-6								BH22-7						
Sample Date				11-Aug-22	11-Aug-22	11-Aug-22	11-Aug-22	12-Aug-22	12-Aug-22		12-Aug-22	12-Aug-22	12-Aug-22	12-Aug-22		11-Aug-22	11-Aug-22		11-Aug-22	11-Aug-22		11-Aug-22
Sample ID				BH22-5-1	BH22-5-2	BH22-5-3	BH22-5-4	BH22-6-1	QC-03		BH22-6-2	BH22-6-3	BH22-6-4	QC-04		BH22-7-1	QC-01		BH22-7-2	QC-02		BH22-7-3
Sample Depth				0 - 0.61 m	0.76 - 2.13 m	2.29 - 3.66 m	4.57 - 5.18 m	0 - 1.37 m	0 - 1.37 m		1.52 - 2.13 m	2.29 - 2.9 m	3.81 - 5.18 m	3.81 - 5.18 m		0 - 1.37 m	0 - 1.37 m		1.52 - 2.9 m	1.52 - 2.9 m		3.05 - 3.66 m
Sampling Company				STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC		STANTEC	STANTEC	STANTEC	STANTEC		STANTEC	STANTEC		STANTEC	STANTEC		STANTEC
Laboratory				BV	BV	BV	BV	BV	BV		BV	BV	BV	BV		BV	BV		BV	BV		BV
Laboratory Work Order				C2M9490	C2M9490	C2M9490	C2M9490	C2N1170	C2N1170		C2N1170	C2N1170	C2N1170	C2N1170		C2M9490	C2M9490		C2M9490	C2M9490		C2M9490
Laboratory Sample ID				TLA821	TLA822	TLA823	TLA824	TLK872	TLK876		TLK873	TLK874	TLK875	TLK877		TLA825	TLA828		TLA826	TLA829		TLA827
Sample Type	Units	Ontario SCS	Ontario SQS - APP 1						Field Duplicate	RPD (%)				Field Duplicate	RPD (%)			RPD (%)			RPD (%)	
General Chemistry																						
Available (CaCl2) pH	S.U.	n/v	n/v	7.52	7.74	11.6	-	7.63	-	-	7.62	7.70	7.89	7.83	nc	7.29	-	-	7.08	7.65	nc	7.68
Cyanide (Free)	µg/g	0.051[A]	0.051[BCDE]	<0.01	<0.01	<0.01	-	<0.01	-	-	<0.01	<0.01	<0.01	<0.01	nc	<0.01	-	-	<0.01	<0.01	nc	<0.01
Electrical Conductivity, Lab	mS/cm	0.57[A]	0.7[BD] 1.4[CE]	0.25	0.19	0.49	-	**0.83[ABD]**	-	-	**0.90[ABD]**	**0.89[ABD]**	0.32	0.25	**25%**	0.30	-	-	0.26	0.29	**11%**	0.16
Moisture Content	%	n/v	n/v	12	13	20	-	6.3	6.6	5%	20	21	12	9.2	26%	14	20	35%	22	27	20%	14
Sodium Adsorption Ratio (SAR)	none	2.4[A]	5[BD] 12[CE]	0.20 SDC	0.46	**3.7[A]**	-	**6.4[ABD]**	-	-	1.6	0.34	0.41	0.37	nc	2.0	-	-	0.44	0.54	nc	0.29
BTEX and Petroleum Hydrocarbons																						
Benzene	µg/g	0.02[A]	0.02[BCD] 0.034[E]	<0.020	<0.0060	<0.020	<0.0060	<0.0060	<0.020	nc	<0.020	<0.0060	<0.020	-	-	<0.0060	<0.0060	nc	***<0.040***	-	-	-
Toluene	µg/g	0.2[A]	0.2[BC] 0.99[D] 7.8[E]	<0.020	<0.020	<0.020	<0.020	<0.020	0.060	nc	<0.020	<0.020	<0.020	-	-	<0.020	<0.020	nc	<0.040	-	-	-
Ethylbenzene	µg/g	0.05[A]	0.05[BC] 1.9[DE]	<0.020	<0.010	<0.020	<0.010	<0.010	<0.020	nc	<0.020	<0.010	<0.020	-	-	<0.010	<0.010	nc	<0.040	-	-	-
Xylene, o-	µg/g	[A]	[BCDE]	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	nc	<0.020	<0.020	<0.020	-	-	<0.020	<0.020	nc	<0.040	-	-	-
Xylene, m & p-	µg/g	[A]	[BCDE]	<0.040	<0.020	<0.040	<0.020	<0.020	<0.040	nc	<0.040	<0.020	<0.040	-	-	<0.020	<0.020	nc	<0.080	-	-	-
Xylenes, Total	µg/g	0.05[A]	0.091[BC] 0.9[D] 3[E]	<0.040	<0.020	<0.040	<0.020	<0.020	<0.040	nc	<0.040	<0.020	<0.040	-	-	<0.020	<0.020	nc	***<0.080***	-	-	-
PHC F1 (C6-C10 range)	µg/g	[A]	[BCDE]	<10	<10	<10	<10	<10	<10	nc	<10	<10	<10	-	-	<10	<10	nc	<20	-	-	-
PHC F1 (C6-C10 range) minus BTEX	µg/g	25[A]	25[BCDE]	<10	<10	<10	<10	<10	<10	nc	<10	<10	<10	-	-	<10	<10	nc	<20	-	-	-
PHC F2 (>C10-C16 range)	µg/g	10[A]	10[BD] 26[CE]	<10	<10	<10	<10	<10	<10	nc	<10	<10	<10	-	-	<10	<10	nc	<10	-	-	-
PHC F3 (>C16-C34 range)	µg/g	240[A]	240[BC] 300[D] 1,700[E]	60	62	<50	<50	<50	<50	nc	<50	<50	<50	-	-	57	<50	nc	<50	-	-	-
PHC F4 (>C34-C50 range)	µg/g	120[A]	2,800[BD] 3,300[CE]	84	<50	<50	<50	<50	<50	nc	<50	<50	<50	-	-	95	62	nc	<50	-	-	-
Chromatogram to baseline at C50	none	n/v	n/v	YES	YES	YES	YES	YES	YES	nc	YES	YES	YES	-	-	YES	YES	nc	YES	-	-	-
Metals																						
Antimony	µg/g	1.3[A]	7.5[BD] 40[CE]	<0.20	0.27	<0.20	-	<0.20	-	-	<0.20	<0.20	<0.20	<0.20	nc	<0.20	-	-	<0.20	<0.20	nc	<0.20
Arsenic	µg/g	18[A]	18[BCDE]	1.3	1.5	<1.0	-	1.2	-	-	1.0	1.5	1.7	<1.0	nc	1.0	-	-	1.3	1.2	nc	<1.0
Barium	µg/g	220[A]	390[BD] 670[CE]	56	40	130	-	180	-	-	160	160	160	80	**67%**	200	-	-	150	170	13%	84
Beryllium	µg/g	2.5[A]	4[BD] 8[CE]	<0.20	<0.20	0.38	-	0.45	-	-	0.40	0.46	0.46	0.26	nc	0.53	-	-	0.46	0.53	nc	0.29
Boron	µg/g	36[A]	120[BCDE]	<5.0	<5.0	<5.0	-	<5.0	-	-	<5.0	<5.0	<5.0	<5.0	nc	<5.0	-	-	<5.0	<5.0	nc	<5.0
Boron (Available)	µg/g	n/a[A]	1.5[BD] 2[CE]	0.22	0.19	0.20	-	0.25	-	-	0.16	0.11	0.069	<0.050	nc	0.15	-	-	0.055	0.074	nc	<0.050
Cadmium	µg/g	1.2[A]	1.2[BD] 1.9[CE]	<0.10	<0.10	<0.10	-	<0.10	-	-	<0.10	<0.10	<0.10	<0.10	nc	0.11	-	-	<0.10	<0.10	nc	<0.10
Chromium	µg/g	70[A]	160[BCDE]	15	11	26	-	33	-	-	29	33	32	15	**72%**	47	-	-	32	37	14%	19
Chromium (Hexavalent)	µg/g	0.66[A]	8[BCDE]	<0.18	<0.18	0.33	-	0.18	-	-	0.24	0.18	<0.18	<0.18	nc	<0.18	-	-	0.23	0.29	nc	<0.18
Cobalt	µg/g	21[A]	22[BD] 80[CE]	4.6	2.2	7.9	-	11	-	-	7.9	8.6	8.6	5.5	**44%**	12	-	-	10	11	10%	5.7
Copper	µg/g	92[A]	140[BD] 230[CE]	9.4	7.8	18	-	18	-	-	17	20	20	11	**58%**	22	-	-	20	22	10%	15
Lead	µg/g	120[A]	120[BCDE]	12	44	5.4	-	6.0	-	-	5.4	4.7	4.9	3.7	nc	10	-	-	5.2	6.1	16%	3.8
Mercury	µg/g	0.27[A]	0.27[BCDE]	<0.050	**0.46[ABCDE]**	<0.050	-	<0.050	-	-	<0.050	<0.050	<0.050	<0.050	nc	<0.050	-	-	<0.050	<0.050	nc	<0.050
Molybdenum	µg/g	2[A]	6.9[BD] 40[CE]	0.78	<0.50	<0.50	-	<0.50	-	-	<0.50	<0.50	<0.50	<0.50	nc	<0.50	-	-	<0.50	<0.50	nc	<0.50
Nickel	µg/g	82[A]	100[BD] 270[CE]	9.3	5.4	16	-	20	-	-	17	19	19	10	**62%**	26	-	-	19	22	15%	12
Selenium	µg/g	1.5[A]	2.4[BD] 5.5[CE]	<0.50	<0.50	<0.50	-	<0.50	-	-	<0.50	<0.50	<0.50	<0.50	nc	<0.50	-	-	<0.50	<0.50	nc	<0.50
Silver	µg/g	0.5[A]	20[BD] 40[CE]	<0.20	<0.20	<0.20	-	<0.20	-	-	<0.20	<0.20	<0.20	<0.20	nc	<0.20	-	-	<0.20	<0.20	nc	<0.20
Thallium	µg/g	1[A]	1[BD] 3.3[CE]	0.092	0.053	0.16	-	0.19	-	-	0.17	0.16	0.17	0.13	nc	0.22	-	-	0.18	0.21	nc	0.13
Uranium	µg/g	2.5[A]	23[BD] 33[CE]	0.52	0.36	0.56	-	0.56	-	-	0.59	0.52	0.52	0.47	10%	0.66	-	-	0.54	0.57	5%	0.58
Vanadium	µg/g	86[A]	86[BCDE]	23	14	47	-	44	-	-	40	49	50	25	**67%**	56	-	-	54	57	5%	36
Zinc	µg/g	290[A]	340[BCDE]	24	35	42	-	49	-	-	42	46	48	23	nc	70	-	-	50	59	17%	28
Polycyclic Aromatic Hydrocarbons																						
Acenaphthene	µg/g	0.072[A]	2.5[BC] 14[D] 15[E]	0.018	0.0096	<0.0050	<0.0050	<0.0050	<0.0050	nc	<0.0050	<0.0050	<0.0050	-	-	0.023	0.0066	nc	<0.0050	-	-	-
Acenaphthylene	µg/g	0.093[A]	0.093[BCDE]	0.021	0.025	<0.0050	<0.0050	<0.0050	<0.0050	nc	<0.0050	<0.0050	<0.0050	-	-	0.010	0.013	nc	<0.0050	-	-	-
Anthracene	µg/g	0.16[A]	0.16[BCDE]	0.056	0.036	<0.0050	<0.0050	0.0056	0.0057	nc	<0.0050	<0.0050	<0.0050	-	-	0.041	0.034	19%	<0.0050	-	-	-
Benzo(a)anthracene	µg/g	0.36[A]	0.5[BD] 0.92[C] 1[E]	0.17	0.22	<0.0050	<0.0050	0.014	0.013	nc	0.0099	<0.0050	<0.0050	-	-	0.11	0.11	0%	<0.0050	-	-	-
Benzo(a)pyrene	µg/g	0.3[A]	0.31[BC] 0.57[D] 0.7[E]	0.17	0.25	<0.0050	<0.0050	0.012	0.011	nc	0.011	<0.0050	<0.0050	-	-	0.11	0.11	0%	<0.0050	-	-	-
Benzo(b/j)fluoranthene	µg/g	0.47[A]	3.2[BC] 5.7[D] 7[E]	0.21	0.32	<0.0050	<0.0050	0.020	0.020	nc	0.016	<0.0050	<0.0050	-	-	0.14	0.13	7%	0.0061	-	-	-
Benzo(g,h,i)perylene	µg/g	0.68[A]	6.6[BD] 13[CE]	0.10	0.16	<0.0050	<0.0050	0.010	0.011	nc	0.0071	<0.0050	<0.0050	-	-	0.065	0.070	7%	<0.0050	-	-	-
Benzo(k)fluoranthene	µg/g	0.48[A]	3.1[BC] 5.7[D] 7[E]	0.081	0.11	<0.0050	<0.0050	0.0057	0.0053	nc	0.0056	<0.0050	<0.0050	-	-	0.050	0.048	4%	<0.0050	-	-	-
Biphenyl	µg/g	0.05[A]	0.05[BC] 0.3[D] 21[E]	<0.0050	<0.0050	<0.0050	<0.0050	0.013	0.016	nc	<0.0050	<0.0050	<0.0050	-	-	<0.0050	<0.0050	nc	<0.0050	-	-	-
Chrysene	µg/g	2.8[A]	7[BD] 9.4[C] 14[E]	0.14	0.18	<0.0050	<0.0050	0.014	0.013	nc	0.0089	<0.0050	<0.0050	-	-	0.097	0.096	1%	<0.0050	-	-	-
Dibenzo(a,h)anthracene	µg/g	0.1[A]	0.57[BD] 0.7[CE]	0.026	0.037	<0.0050	<0.0050	<0.0050	<0.0050	nc	<0.0050	<0.0050	<0.0050	-	-	0.014	0.016	nc	<0.0050	-	-	-
Fluoranthene	µg/g	0.56[A]	0.69[BD] 2.8[C] 70[E]	0.31	0.34	0.0096	<0.0050	0.027	0.026	4%	0.017	<0.0050	<0.0050	-	-	0.26	0.24	8%	0.0076	-	-	-
Fluorene	µg/g	0.12[A]	6.8[BCDE]	0.019	0.0068	<0.0050	<0.0050	0.0056	0.0060	nc	<0.0050	<0.0050	<0.0050	-	-	0.017	0.0089	nc	<0.0050	-	-	-
Indeno(1,2,3-cd)pyrene	µg/g	0.23[A]	0.38[BD] 0.76[CE]	0.10	0.16	<0.0050	<0.0050	0.0081	0.0081	nc	0.0083	<0.0050	<0.0050	-	-	0.067	0.073	9%	<0.0050	-	-	-
Methylnaphthalene (Total)	µg/g	0.59[A]	0.59[BC] 0.92[D] 8.7[E]	<0.0071	<0.0071	<0.0071	<0.0071	<0.0071	0.0078	nc	<0.0071	<0.0071	<0.0071	-	-	<0.0071	<0.0071	nc	<0.0071	-	-	-
Methylnaphthalene, 1-	µg/g	0.59[A]	[BCDE]	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	nc	<0.0050	<0.0050	<0.0050	-	-	<0.0050	<0.0050	nc	<0.0050	-	-	-
Methylnaphthalene, 2-	µg/g	0.59[A]	[BCDE]	<0.0050	<0.0050	<0.0050	<0.0050	0.0064	0.0078	nc	<0.0050	<0.0050	<0.0050	-	-	<0.0050	<0.0050	nc	<0.0050	-	-	-
Naphthalene	µg/g	0.09[A]	0.2[BC] 0.59[D] 1.8[E]	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	nc	<0.0050	<0.0050	<0.0050	-	-	<0.0050	<0.0050	nc	<0.0050	-	-	-
Phenanthrene	µg/g	0.69[A]	6.2[BD] 12[CE]	0.19	0.13	0.020	0.0068	0.031	0.033	6%	0.0056	<0.0050	<0.0050	-	-	0.18	0.12	40%	<0.0050	-	-	-
Pyrene	µg/g	1[A]	28[BC] 70[DE]	0.25	0.31	0.0081	<0.0050	0.021	0.021	nc	0.014	<0.0050	<0.0050	-	-	0.21	0.21	0%	0.0067	-	-	-

See notes on last page

Table B-2
Summary of Soil Analytical Results
St.Patrick's Home
2865 Riverside Road, Ottawa, ON

Sample Location				BH22-5				BH22-6								BH22-7					
Sample Date				11-Aug-22	11-Aug-22	11-Aug-22	11-Aug-22	12-Aug-22	12-Aug-22		12-Aug-22	12-Aug-22	12-Aug-22	12-Aug-22		11-Aug-22	11-Aug-22		11-Aug-22	11-Aug-22		11-Aug-22
Sample ID				BH22-5-1	BH22-5-2	BH22-5-3	BH22-5-4	BH22-6-1	QC-03		BH22-6-2	BH22-6-3	BH22-6-4	QC-04		BH22-7-1	QC-01		BH22-7-2	QC-02		BH22-7-3
Sample Depth				0 - 0.61 m	0.76 - 2.13 m	2.29 - 3.66 m	4.57 - 5.18 m	0 - 1.37 m	0 - 1.37 m		1.52 - 2.13 m	2.29 - 2.9 m	3.81 - 5.18 m	3.81 - 5.18 m		0 - 1.37 m	0 - 1.37 m		1.52 - 2.9 m	1.52 - 2.9 m		3.05 - 3.66 m
Sampling Company				STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC		STANTEC	STANTEC	STANTEC	STANTEC		STANTEC	STANTEC		STANTEC	STANTEC		STANTEC
Laboratory				BV	BV	BV	BV	BV	BV		BV	BV	BV	BV		BV	BV		BV	BV		BV
Laboratory Work Order				C2M9490	C2M9490	C2M9490	C2M9490	C2N1170	C2N1170		C2N1170	C2N1170	C2N1170	C2N1170		C2M9490	C2M9490		C2M9490	C2M9490		C2M9490
Laboratory Sample ID				TLA821	TLA822	TLA823	TLA824	TLK872	TLK876		TLK873	TLK874	TLK875	TLK877		TLA825	TLA828		TLA826	TLA829		TLA827
Sample Type	Units	Ontario SCS	Ontario SQS - APP 1						Field Duplicate	RPD (%)				Field Duplicate	RPD (%)			RPD (%)			RPD (%)	
Polychlorinated Biphenyls																						
Aroclor 1242	µg/g	[A,s14]	[BCDE,s14]	<0.010	-	<0.010	-	-	-	-	<0.010	-	<0.010	-	-	-	-	-	<0.010	<0.010	nc	-
Aroclor 1248	µg/g	[A,s14]	[BCDE,s14]	<0.010	-	<0.010	-	-	-	-	<0.010	-	<0.010	-	-	-	-	-	<0.010	<0.010	nc	-
Aroclor 1254	µg/g	[A,s14]	[BCDE,s14]	<0.010	-	<0.010	-	-	-	-	<0.010	-	<0.010	-	-	-	-	-	<0.010	<0.010	nc	-
Aroclor 1260	µg/g	[A,s14]	[BCDE,s14]	<0.010	-	<0.010	-	-	-	-	<0.010	-	<0.010	-	-	-	-	-	<0.010	<0.010	nc	-
Polychlorinated Biphenyls (PCBs)	µg/g	0.3[A,s14]	0.35[BD] 0.78[CE]	<0.010	-	<0.010	-	-	-	-	<0.010	-	<0.010	-	-	-	-	-	<0.010	<0.010	nc	-
Volatile Organic Compounds																						
Acetone	µg/g	0.5[A]	0.5[BC] 1.8[DE]	-	<0.49	-	<0.49	<0.49	-	-	-	<0.49	-	-	-	<0.49	<0.49	nc	-	-	-	-
Bromodichloromethane	µg/g	0.05[A]	0.05[BC] 5.8[DE]	-	<0.040	-	<0.040	<0.040	-	-	-	<0.040	-	-	-	<0.040	<0.040	nc	-	-	-	-
Bromoform (Tribromomethane)	µg/g	0.05[A]	0.05[BC] 2.5[DE]	-	<0.040	-	<0.040	<0.040	-	-	-	<0.040	-	-	-	<0.040	<0.040	nc	-	-	-	-
Bromomethane (Methyl bromide)	µg/g	0.05[A]	0.05[a,BCDE]	-	<0.040	-	<0.040	<0.040	-	-	-	<0.040	-	-	-	<0.040	<0.040	nc	-	-	-	-
Carbon Tetrachloride (Tetrachloromethane)	µg/g	0.05[A]	0.05[a,BCDE]	-	<0.040	-	<0.040	<0.040	-	-	-	<0.040	-	-	-	<0.040	<0.040	nc	-	-	-	-
Chlorobenzene (Monochlorobenzene)	µg/g	0.05[A]	0.083[BC] 0.28[DE]	-	<0.040	-	<0.040	<0.040	-	-	-	<0.040	-	-	-	<0.040	<0.040	nc	-	-	-	-
Chloroform (Trichloromethane)	µg/g	0.05[A]	0.05[BC] 0.08[D] 0.26[E]	-	<0.040	-	<0.040	<0.040	-	-	-	<0.040	-	-	-	<0.040	<0.040	nc	-	-	-	-
Dibromochloromethane	µg/g	0.05[A]	0.05[BC] 5.5[DE]	-	<0.040	-	<0.040	<0.040	-	-	-	<0.040	-	-	-	<0.040	<0.040	nc	-	-	-	-
Dichlorobenzene, 1,2-	µg/g	0.05[A]	3.4[a,BD] 6.8[a,CE]	-	<0.040	-	<0.040	<0.040	-	-	-	<0.040	-	-	-	<0.040	<0.040	nc	-	-	-	-
Dichlorobenzene, 1,3-	µg/g	0.05[A]	0.26[BC] 4.8[D] 6.8[E]	-	<0.040	-	<0.040	<0.040	-	-	-	<0.040	-	-	-	<0.040	<0.040	nc	-	-	-	-
Dichlorobenzene, 1,4-	µg/g	0.05[A]	0.05[a,BCDE]	-	<0.040	-	<0.040	<0.040	-	-	-	<0.040	-	-	-	<0.040	<0.040	nc	-	-	-	-
Dichlorodifluoromethane (Freon 12)	µg/g	0.05[A]	1.5[BC] 1.8[DE]	-	<0.040	-	<0.040	<0.040	-	-	-	<0.040	-	-	-	<0.040	<0.040	nc	-	-	-	-
Dichloroethane, 1,1-	µg/g	0.05[A]	0.05[BC] 0.14[D] 0.57[E]	-	<0.040	-	<0.040	<0.040	-	-	-	<0.040	-	-	-	<0.040	<0.040	nc	-	-	-	-
Dichloroethane, 1,2-	µg/g	0.05[A]	0.05[a,BCDE]	-	<0.049	-	<0.049	<0.049	-	-	-	<0.049	-	-	-	<0.049	<0.049	nc	-	-	-	-
Dichloroethene, 1,1-	µg/g	0.05[A]	0.05[a,BCDE]	-	<0.040	-	<0.040	<0.040	-	-	-	<0.040	-	-	-	<0.040	<0.040	nc	-	-	-	-
Dichloroethene, cis-1,2-	µg/g	0.05[A]	0.05[a,BCDE]	-	<0.040	-	<0.040	<0.040	-	-	-	<0.040	-	-	-	<0.040	<0.040	nc	-	-	-	-
Dichloroethene, trans-1,2-	µg/g	0.05[A]	0.05[a,BCDE]	-	<0.040	-	<0.040	<0.040	-	-	-	<0.040	-	-	-	<0.040	<0.040	nc	-	-	-	-
Dichloropropane, 1,2-	µg/g	0.05[A]	0.05[a,BCDE]	-	<0.040	-	<0.040	<0.040	-	-	-	<0.040	-	-	-	<0.040	<0.040	nc	-	-	-	-
Dichloropropene, 1,3- (sum of isomers cis + trans)	µg/g	0.05[s11,A]	0.05[BCDE]	-	<0.050	-	<0.050	<0.050	-	-	-	<0.050	-	-	-	<0.050	<0.050	nc	-	-	-	-
Dichloropropene, cis-1,3-	µg/g	[A,s11]	[BCDE,s11]	-	<0.030	-	<0.030	<0.030	-	-	-	<0.030	-	-	-	<0.030	<0.030	nc	-	-	-	-
Dichloropropene, trans-1,3-	µg/g	[A,s11]	[BCDE,s11]	-	<0.040	-	<0.040	<0.040	-	-	-	<0.040	-	-	-	<0.040	<0.040	nc	-	-	-	-
Ethylene Dibromide (Dibromoethane, 1,2-)	µg/g	0.05[A]	0.05[a,BCDE]	-	<0.040	-	<0.040	<0.040	-	-	-	<0.040	-	-	-	<0.040	<0.040	nc	-	-	-	-
Hexane (n-Hexane)	µg/g	0.05[A]	2.5[BCDE]	-	**0.099[A]**	-	<0.040	<0.040	-	-	-	<0.040	-	-	-	<0.040	<0.040	nc	-	-	-	-
Methyl Ethyl Ketone (MEK) (2-Butanone)	µg/g	0.5[A]	0.5[BC] 14[D] 26[E]	-	<0.40	-	<0.40	<0.40	-	-	-	<0.40	-	-	-	<0.40	<0.40	nc	-	-	-	-
Methyl Isobutyl Ketone (MIBK)	µg/g	0.5[A]	0.5[BC] 0.89[D] 17[E]	-	<0.40	-	<0.40	<0.40	-	-	-	<0.40	-	-	-	<0.40	<0.40	nc	-	-	-	-
Methyl tert-butyl ether (MTBE)	µg/g	0.05[A]	0.05[BCDE]	-	<0.040	-	<0.040	<0.040	-	-	-	<0.040	-	-	-	<0.040	<0.040	nc	-	-	-	-
Methylene Chloride (Dichloromethane)	µg/g	0.05[A]	0.05[BC] 0.06[D] 0.2[E]	-	<0.049	-	<0.049	<0.049	-	-	-	<0.049	-	-	-	<0.049	<0.049	nc	-	-	-	-
Styrene	µg/g	0.05[A]	0.05[BC] 0.5[D] 6.8[E]	-	<0.040	-	<0.040	<0.040	-	-	-	<0.040	-	-	-	<0.040	<0.040	nc	-	-	-	-
Tetrachloroethane, 1,1,1,2-	µg/g	0.05[A]	0.05[BCDE]	-	<0.040	-	<0.040	<0.040	-	-	-	<0.040	-	-	-	<0.040	<0.040	nc	-	-	-	-
Tetrachloroethane, 1,1,2,2-	µg/g	0.05[A]	0.05[a,BCDE]	-	<0.040	-	<0.040	<0.040	-	-	-	<0.040	-	-	-	<0.040	<0.040	nc	-	-	-	-
Tetrachloroethene (PCE)	µg/g	0.05[A]	0.05[a,BCDE]	-	<0.040	-	<0.040	<0.040	-	-	-	<0.040	-	-	-	<0.040	<0.040	nc	-	-	-	-
Trichloroethane, 1,1,1-	µg/g	0.05[A]	0.11[BD] 0.12[C] 0.4[E]	-	<0.040	-	<0.040	<0.040	-	-	-	<0.040	-	-	-	<0.040	<0.040	nc	-	-	-	-
Trichloroethane, 1,1,2-	µg/g	0.05[A]	0.05[BCDE]	-	<0.040	-	<0.040	<0.040	-	-	-	<0.040	-	-	-	<0.040	<0.040	nc	-	-	-	-
Trichloroethene (TCE)	µg/g	0.05[A]	0.05[a,BCDE]	-	<0.010	-	<0.010	<0.010	-	-	-	<0.010	-	-	-	<0.010	<0.010	nc	-	-	-	-
Trichlorofluoromethane (Freon 11)	µg/g	0.25[A]	0.25[BC] 0.46[DE]	-	<0.040	-	<0.040	<0.040	-	-	-	<0.040	-	-	-	<0.040	<0.040	nc	-	-	-	-
Vinyl Chloride	µg/g	0.02[A]	0.02[BCDE]	-	<0.019	-	<0.019	<0.019	-	-	-	<0.019	-	-	-	<0.019	<0.019	nc	-	-	-	-

See notes on last page

Table B-2
Summary of Soil Analytical Results
St.Patrick's Home
2865 Riverside Road, Ottawa, ON

Notes:

Ontario SCS	Soil, Ground Water and Sediment Standards for Use under Part XV.I of the Environmental Protection Act (MOE, 2011) Site Condition Standards (SCS)
A	Table 1 - Residential / Parkland / Institutional / Industrial / Commercial / Community Property Use
Ontario SQS - APP 1	Excess Soil Quality Standards, Ontario Ministry Of Environment, Conservation And Parks (2019), Appendix 1 - Generic Excess Soil Quality Standards
B	TABLE 2.1: Full Depth Excess Soil Quality Standards in a Potable Ground Water Condition, Volume Independent, Residential/ Parkland/ Institutional Property Use
C	TABLE 2.1: Full Depth Excess Soil Quality Standards in a Potable Ground Water Condition, Volume Independent, Industrial/ Commercial/ Community Property Use
D	TABLE 3.1: Full Depth Excess Soil Quality Standards in a Non-Potable Ground Water Condition, Volume Independent, Residential/ Parkland/ Institutional Property Use
E	TABLE 3.1: Full Depth Excess Soil Quality Standards in a Non-Potable Ground Water Condition, Volume Independent, Industrial/ Commercial/ Community Property Use
6.5^{A}	Concentration exceeds the indicated standard.
15.2	Measured concentration did not exceed the indicated standard.
<0.50	Laboratory reporting limit was greater than the applicable standard.
<0.03	Analyte was not detected at a concentration greater than the laboratory reporting limit.
n/v	No standard/guideline value.
-	Parameter not analyzed / not available.
a	Leachate analysis is required only for contaminants that are identified as contaminants of potential concern in excess soil (as specified in subsection 1 (7) in Section A of PART II of Ontario ESQS).
n/a	Not applicable.
s1	Standard is applicable to total xylenes, and m & p-xylenes and o-xylenes should be summed for comparison.
s2	Standard is for benzo(b)fluoranthene; however, the analytical laboratory can not distinguish between benzo(b)fluoranthene and benzo(j)fluoranthene, and therefore, the result is a combination of the two isomers, against which the standard has been compared.
s3	Standard is applicable to both 1-methylnaphthalene and 2-methylnaphthalene, with the provision that if both are detected the sum of the two must not exceed the standard.
s6	The criteria value for PHC F1 fraction does not include benzene, toluene, ethylbenzene and xylene (BTEX); however, the proponent has the choice as to whether or not to subtract BTEX from the analytical result.
s7 ^{A}	Standard is applicable to PHC in the F1 range minus BTEX.
s7 ^{BCDE}	Criterion applies to Cyanide.
s8	Standard is applicable to PHC in the F3 range, minus PAHs (other than naphthalene). If PAHs were not analyzed, the standard is applied to F3.
s10	If baseline is not reached during F4 analysis, then gravimetric analysis is to be performed, and the standard is applied to the higher of the two results.
s11	Standard is applicable to 1,3-Dichloropropene, and the individual isomers (cis + trans) should be added for comparison.
s14	Standard is applicable to total PCBs, and the individual Aroclors should be added for comparison.
s15	Standard is applicable to PHC in the F2 range minus naphthalene. If naphthalene was not analyzed, the standard is applied to F2.
SDC	Sodium was not detected. To report SAR the sodium detection limit was used in the calculation. This value represents a maximum ratio.
RPD	Relative Percent Difference.
61%	RPD exceeds data quality objective of 10% for EC, 30% for metals and inorganics and PHCs, 35% for chromium VI and cyanide, 40% for PCBs and PAHs, and 50% for VOCs (source: Bureau Veritas Ontario QA/QC Interpretation Guide - Environmental Services, COR FCD-01224/2)
nc	RPD is not calculated if one or more values is non detect or if one or more values is less than five times the reportable detection limit.

Table B-3
Summary of Leachate Results - SPLP
St.Patrick's Home
2865 Riverside Road, Ottawa, ON

Sample Location			BH22-1		BH22-2		BH22-3	BH22-4	BH22-5	BH22-7
Sample Date			15-Aug-22	15-Aug-22	12-Aug-22	12-Aug-22	11-Aug-22	15-Aug-22	11-Aug-22	11-Aug-22
Sample ID			BH22-1-1	BH22-1-2	BH22-2-3	BH22-2-4	BH22-3-3	BH22-4-2	BH22-5-2	BH22-7-1
Sample Depth			0 - 1.37 m	2.29 - 2.9 m	3.05 - 3.66 m	4.57 - 5.18 m	3.05 - 3.66 m	0.76 - 2.13 m	0.76 - 2.13 m	0 - 1.37 m
Sampling Company			STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC
Laboratory			BV	BV	BV	BV	BV	BV	BV	BV
Laboratory Work Order			C2N2739	C2N2739	C2N1170	C2N1170	C2M9490	C2N2739	C2M9490	C2M9490
Laboratory Sample ID			TLT679	TLT680	TLK880	TLK881	TLA820	TLT676	TLA822	TLA825
Sample Type	Units	Ontario SQS - APP 2								
Leachate Preparation										
Dry Weight	g	n/v	-	100	100	-	100	100	-	100
Volatile Organic Compounds - SPLP										
Bromomethane (Methyl bromide)	µg/L	0.5[ABCDE]	<0.40	-	-	<0.40	-	-	<0.40	-
Carbon Tetrachloride (Tetrachloromethane)	µg/L	0.2[ABCDE]	<0.19	-	-	<0.19	-	-	<0.19	-
Chloroform (Trichloromethane)	µg/L	1[A]	<0.90	-	-	<0.90	-	-	<0.90	-
Dichlorobenzene, 1,2-	µg/L	0.55[ABC]	<0.40	-	-	<0.40	-	-	<0.40	-
Dichlorobenzene, 1,4-	µg/L	0.5[ABC]	<0.40	-	-	<0.40	-	-	<0.40	-
Dichloroethane, 1,1-	µg/L	0.5[A]	<0.40	-	-	<0.40	-	-	<0.40	-
Dichloroethane, 1,2-	µg/L	0.5[ABC]	<0.40	-	-	<0.40	-	-	<0.40	-
Dichloroethene, 1,1-	µg/L	0.5[ABCDE]	<0.40	-	-	<0.40	-	-	<0.40	-
Dichloroethene, cis-1,2-	µg/L	0.5[ABC]	<0.40	-	-	<0.40	-	-	<0.40	-
Dichloroethene, trans-1,2-	µg/L	0.5[ABCDE]	<0.40	-	-	<0.40	-	-	<0.40	-
Dichloropropane, 1,2-	µg/L	0.5[ABC]	<0.40	-	-	<0.40	-	-	<0.40	-
Dichloropropene, cis-1,3-	µg/L	s11[A]	<0.30	-	-	<0.30	-	-	<0.30	-
Dichloropropene, trans-1,3-	µg/L	s11[A]	<0.30	-	-	<0.30	-	-	<0.30	-
Ethylene Dibromide (Dibromoethane, 1,2-)	µg/L	0.2[ABCDE]	<0.19	-	-	<0.19	-	-	<0.19	-
Tetrachloroethane, 1,1,1,2-	µg/L	0.5[A]	<0.40	-	-	<0.40	-	-	<0.40	-
Tetrachloroethane, 1,1,2,2-	µg/L	0.5[ABC]	<0.40	-	-	<0.40	-	-	<0.40	-
Tetrachloroethene (PCE)	µg/L	0.5[ABCDE]	<0.40	-	-	<0.40	-	-	<0.40	-
Trichloroethane, 1,1,2-	µg/L	0.5[A]	<0.40	-	-	<0.40	-	-	<0.40	-
Trichloroethene (TCE)	µg/L	0.5[ABCDE]	<0.40	-	-	<0.40	-	-	<0.40	-
Metals - SPLP										
Antimony	µg/L	6[BC]	-	<0.5	<0.5	-	<0.5	0.9	-	<0.5
Arsenic	µg/L	n/v	-	<1	2	-	2	4	-	<1
Barium	µg/L	1,000[BC] 4,600[DE]	-	12	68	-	17	<5	-	40
Beryllium	µg/L	4[BC] 11[DE]	-	<0.5	<0.5	-	<0.5	<0.5	-	<0.5
Boron	µg/L	5,000[BC]	-	<10	<10	-	<10	<10	-	<10
Cadmium	µg/L	0.5[CE]	-	<0.1	<0.1	-	<0.1	<0.1	-	<0.1
Chromium	µg/L	50[BC] 130[DE]	-	<5	11	-	<5	<5	-	<5
Cobalt	µg/L	3[BC] 10[DE]	-	<0.5	1.3	-	<0.5	<0.5	-	0.6
Copper	µg/L	14[BCDE]	-	2	10	-	2	4	-	4
Lead	µg/L	n/v	-	<0.5	2.0	-	<0.5	3.5	-	3.4
Molybdenum	µg/L	15[ABC] 1,500[E]	-	2	1	-	2	1	-	1
Nickel	µg/L	78[BCDE]	-	<1	6	-	1	<1	-	3
Selenium	µg/L	10[BCDE]	-	<2	<2	-	<2	<2	-	<2
Silver	µg/L	0.3[ABCDE]	-	<0.1	<0.1	-	<0.1	<0.1	-	<0.1
Thallium	µg/L	2[ABC] 80[E]	-	<0.05	<0.05	-	<0.05	<0.05	-	<0.05
Uranium	µg/L	20[BC] 66[DE]	-	<0.1	0.2	-	<0.1	<0.1	-	0.3
Vanadium	µg/L	n/v	-	8	36	-	32	16	-	6
Zinc	µg/L	180[BCDE]	-	<5	13	-	<5	<5	-	7

See notes on last page

Table B-3
Summary of Leachate Results - SPLP
St.Patrick's Home
2865 Riverside Road, Ottawa, ON

Notes:

Ontario SQS - APP 2	Excess Soil Quality Standards, Ontario Ministry Of Environment, Conservation And Parks (2019), Appendix 2 - Generic Leachate Screening Levels For Excess Soil Reuse
A	TABLE 1: Leachate Screening Levels for Excess Soil Reuse, Residential/Parkland/ Institutional/ Industrial/ Commercial/Community Property Use
B	TABLE 2.1: Leachate Screening Levels for Full Depth Excess Soil in a Potable Ground Water Condition, Volume Independent, Residential/ Parkland/ Institutional Property Use
C	TABLE 2.1: Leachate Screening Levels for Full Depth Excess Soil in a Potable Ground Water Condition, Volume Independent, Industrial/ Commercial/ Community Property Use
D	TABLE 3.1: Leachate Screening Levels for Full Depth Excess Soil in a Non- Potable Ground Water Condition, Volume Independent, Residential/ Parkland/ Institutional Property Use
E	TABLE 3.1: Leachate Screening Levels for Full Depth Excess Soil in a Non- Potable Ground Water Condition, Volume Independent, Industrial/ Commercial/ Community Property Use
6.5^{A}	Concentration exceeds the indicated standard.
15.2	Measured concentration did not exceed the indicated standard.
<0.50	Laboratory reporting limit was greater than the applicable standard.
<0.03	Analyte was not detected at a concentration greater than the laboratory reporting limit.
n/v	No standard/guideline value.
-	Parameter not analyzed / not available.
s11	Standard is applicable to 1,3-Dichloropropene, and the individual isomers (cis + trans) should be added for comparison.

Table B-4
Summary of Waste Characterization Results - TCLP
St.Patrick's Home
2865 Riverside Road, Ottawa, ON

Sample Location			TCLP
Sample Date			12-Aug-22
Sample ID			TCLP
Sampling Company			STANTEC
Laboratory			BV
Laboratory Work Order			C2N1170
Laboratory Sample ID			TLK882
Sample Type	Units	O.Reg. 347 Sch 4	
General Chemistry			
Amount Extracted (Wet Weight)	none	n/v	25
Cyanide (Free)	mg/L	20[A]	<0.010
Fluoride	mg/L	150[A]	0.27
Ignitability	none	n/v	NF/NI
Moisture Content	%	n/v	21
Nitrate (as N)	mg/L	n/v	<1.0
Nitrate + Nitrite (as N)	mg/L	1,000[A]	<1.0
Nitrite (as N)	mg/L	n/v	<0.10
Leachate Preparation			
Extraction Fluid	none	n/v	1 FLUID
pH Final	S.U.	n/v	5.93
pH Initial	S.U.	n/v	10.9
Total Solids	%	n/v	100
Metals - TCLP			
Arsenic	mg/L	2.5[A]	<0.2
Barium	mg/L	100[A]	0.6
Boron	mg/L	500[A]	<0.1
Cadmium	mg/L	0.5[A]	<0.05
Chromium	mg/L	5[A]	<0.1
Lead	mg/L	5[A]	<0.1
Mercury	mg/L	0.1[A]	<0.001
Selenium	mg/L	1[A]	<0.1
Silver	mg/L	5[A]	<0.01
Uranium	mg/L	10[A]	<0.01
Volatile Organic Compounds - TCLP			
Benzo(a)pyrene	µg/L	1.0[A]	<0.10
Carbon Tetrachloride (Tetrachloromethane)	mg/L	0.5[A]	<0.020
Chlorobenzene (Monochlorobenzene)	mg/L	8[A]	<0.020
Chloroform (Trichloromethane)	mg/L	10[A]	<0.020
Cresol, m & p- (Methylphenol, 3&4-)	µg/L	200,000[A]	<2.5
Cresol, o- (Methylphenol, 2-)	µg/L	200,000[A]	<2.5
Cresol, Total Leachable	µg/L	200,000[A]	<2.5
Dichlorobenzene, 1,2-	mg/L	20[A]	<0.050
Dichlorobenzene, 1,4-	mg/L	0.5[A]	<0.050
Dichloroethane, 1,2-	mg/L	0.5[A]	<0.050
Dichloroethene, 1,1-	mg/L	1.4[A]	<0.020
Dichlorophenol, 2,4-	µg/L	90,000[A]	<2.5
Dinitrotoluene, 2,4-	µg/L	130[A]	<10
Hexachlorobenzene	µg/L	130[A]	<10
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	µg/L	500[A]	<10
Hexachloroethane	µg/L	3,000[A]	<10
Methyl Ethyl Ketone (MEK) (2-Butanone)	mg/L	200[A]	<1.0
Methylene Chloride (Dichloromethane)	mg/L	5[A]	<0.20
Nitrobenzene	µg/L	2,000[A]	<10
Pentachlorophenol	µg/L	6,000[A]	<2.5
Pyridine	µg/L	5,000[A]	<10
Tetrachloroethene (PCE)	mg/L	3[A]	<0.020
Tetrachlorophenol, 2,3,4,6-	µg/L	10,000[A]	<2.5
Trichloroethene (TCE)	mg/L	5[A]	<0.020
Trichlorophenol, 2,4,5-	µg/L	400,000[A]	<0.50
Trichlorophenol, 2,4,6-	µg/L	500[A]	<2.5
Vinyl Chloride	mg/L	0.2[A]	<0.020

See notes on last page

Table B-3
Summary of Waste Characterization Results - TCLP
St.Patrick's Home
2865 Riverside Road, Ottawa, ON

Sample Location			TCLP
Sample Date			12-Aug-22
Sample ID			TCLP
Sampling Company			STANTEC
Laboratory			BV
Laboratory Work Order			C2N1170
Laboratory Sample ID			TLK882
Sample Type	Units	O.Reg. 347 Sch 4	
BTEX and Petroleum Hydrocarbons			
Benzene	µg/g	CF?(mg/l)[A]	<0.020
Benzene	mg/L	0.5[A]	<0.020
Toluene	µg/g	n/v	<0.020
Ethylbenzene	µg/g	n/v	<0.020
Xylene, o-	µg/g	n/v	<0.020
Xylene, m & p-	µg/g	n/v	<0.040
Xylenes, Total	µg/g	n/v	<0.040
PHC F1 (C6-C10 range)	µg/g	n/v	<10
PHC F1 (C6-C10 range) minus BTEX	µg/g	n/v	<10
PHC F2 (>C10-C16 range)	µg/g	n/v	<10
PHC F3 (>C16-C34 range)	µg/g	n/v	<50
PHC F4 (>C34-C50 range)	µg/g	n/v	<50
Chromatogram to baseline at C50	none	n/v	YES
Fuel Oil #2	µg/g	n/v	<50
Gasoline	µg/g	n/v	<10
Polychlorinated Biphenyls			
Polychlorinated Biphenyls (PCBs)	µg/L	300[A]	<3.0

See notes on last page

Table B-3
Summary of Waste Characterization Results - TCLP
St.Patrick's Home
2865 Riverside Road, Ottawa, ON

Notes:

O.Reg. 347 Sch 4	Ontario Ministry of the Environment
A	MOE O.Reg. 347 of R.R.O. 1990 - Schedule 4 – Leachate Quality Criteria
6.5[A]	Concentration exceeds the indicated standard.
15.2	Measured concentration did not exceed the indicated standard.
<0.50	Laboratory reporting limit was greater than the applicable standard.
<0.03	Analyte was not detected at a concentration greater than the laboratory reporting limit.
n/v	No standard/guideline value.
-	Parameter not analyzed / not available.
RPD	Relative Percent Difference.
61%	RPD exceeds data quality objective of 30%.
nc	RPD is not calculated if one or more values is non detect or if one or more values is less than five times the reportable detection limit.

APPENDIX C BOREHOLE LOGS

Stantec

BOREHOLE RECORD

N: 5 024 344 E: 445 986

BH22-1

CLIENT St. Patrick's Home of Ottawa — BOREHOLE No. BH22-1

LOCATION 2865 Riverside Drive, Ottawa, Ontario — PROJECT No. 121624271

DATES: BORING August 15, 2022 WATER LEVEL August 25, 2022 — DATUM Geodetic

DEPTH (m)	ELEVATION (m)	SOIL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (mm)	SAMPLES N-VALUE OR RQD
0	**81.36**							
		TOPSOIL - 700 mm			SS	1	360	8
	80.7							
1		FILL: Compact, Brown, Moist SAND (SP), trace gravel			SS	2	300	11
	80.1							
		Stiff, Brown, Moist SILTY CLAY/CLAYEY SILT (CL), trace gravel			SS	3	300	14
2								
					SS	4	560	11
3								
					SS	5	610	9
		*Undrained Strength>118 kPa						
4				▽	SS	6	540	9
	76.9							
		Dense to very dense, Brown, Moist SILTY SAND TILL (SM), trace gravel			SS	7	430	50
5								
					SS	8	410	36
6								

UNDRAINED SHEAR STRENGTH - kPa

50 100 150 200

WATER CONTENT & ATTERBERG LIMITS W_P W W_L

DYNAMIC PENETRATION TEST, BLOWS/0.3m ★

STANDARD PENETRATION TEST, BLOWS/0.3m ●

10 20 30 40 50 60 70 80 90

▽ Groundwater Level in Open Borehole

▼ Groundwater Level Measured in Standpipe

■ Field Vane Test, kPa

□ Remoulded Vane Test, kPa

△ Pocket Penetrometer Test, kPa

STN13-STAN-GEO 121624271 - ST.PATRICK'S_HOME_20220911.GPJ SMART.GDT 10/12/22

Stantec

BOREHOLE RECORD

N: 5 024 344 E: 445 986

BH22-1

CLIENT St. Patrick's Home of Ottawa — BOREHOLE No. BH22-1

LOCATION 2865 Riverside Drive, Ottawa, Ontario — PROJECT No. 121624271

DATES: BORING August 15, 2022 WATER LEVEL August 25, 2022 — DATUM Geodetic

DEPTH (m)	ELEVATION (m)	SOIL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (mm)	SAMPLES N-VALUE OR RQD
6								
		-Wet, grey below 6.1 m depth			SS	9	360	51
	74.6	End of Borehole - Augur Refusal Borehole was open and dry upon completion of drilling. A vibrating wire piezometer was installed at 6.1 m depth. Groundwater was measured to be at 4.3 m at the time of installation and at 4.4 m on August 25, 2022. *Implied from field vane test refusal at this depth.						
7								
8								
9								
10								
11								
12								

UNDRAINED SHEAR STRENGTH - kPa

50 100 150 200

WATER CONTENT & ATTERBERG LIMITS W_P W W_L

DYNAMIC PENETRATION TEST, BLOWS/0.3m ★

STANDARD PENETRATION TEST, BLOWS/0.3m ●

10 20 30 40 50 60 70 80 90

▽ Groundwater Level in Open Borehole

▼ Groundwater Level Measured in Standpipe

■ Field Vane Test, kPa

□ Remoulded Vane Test, kPa

△ Pocket Penetrometer Test, kPa

Stantec

BOREHOLE RECORD

N: 5 024 349 E: 446 036

BH22-2

CLIENT St. Patrick's Home of Ottawa — BOREHOLE No. BH22-2

LOCATION 2865 Riverside Drive, Ottawa, Ontario — PROJECT No. 121624271

DATES: BORING August 12, 2022 WATER LEVEL n/a — DATUM Geodetic

DEPTH (m)	ELEVATION (m)	SOIL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (mm)	SAMPLES N-VALUE OR RQD
0	**81.02**							
		TOPSOIL - 700 mm			SS	1	230	8
	80.3							
1		FILL: Stiff, Brown, Moist SILTY CLAY/CLAYEY SILT (CL), trace gravel			SS	2	280	14
	79.5							
2		FILL: Compact, Brown, Moist SAND (SP), trace gravel			SS	3	530	27
	78.5							
3		Stiff, Brown, Moist SILTY CLAY/CLAYEY SILT (CL), trace gravel			SS	4	530	11
					SS	5	610	7
4		*Undrained Strength>118 kPa						
		-Grey below 4.6 m depth			SS	6	560	10
5	75.5							
		Compact to very dense, Brown, Moist SILTY SAND TILL (SM), trace			SS	7	380	57
6								

UNDRAINED SHEAR STRENGTH - kPa

50 100 150 200

WATER CONTENT & ATTERBERG LIMITS W_P W W_L

DYNAMIC PENETRATION TEST, BLOWS/0.3m ★

STANDARD PENETRATION TEST, BLOWS/0.3m ●

10 20 30 40 50 60 70 80 90

▽ Groundwater Level in Open Borehole

▼ Groundwater Level Measured in Standpipe

■ Field Vane Test, kPa

□ Remoulded Vane Test, kPa

△ Pocket Penetrometer Test, kPa

Stantec

BOREHOLE RECORD

N: 5 024 349 E: 446 036

BH22-2

CLIENT St. Patrick's Home of Ottawa — BOREHOLE No. BH22-2

LOCATION 2865 Riverside Drive, Ottawa, Ontario — PROJECT No. 121624271

DATES: BORING August 12, 2022 WATER LEVEL n/a — DATUM Geodetic

DEPTH (m)	ELEVATION (m)	SOIL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (mm)	SAMPLES N-VALUE OR RQD
6		gravel -Wet below 6.1 m depth			SS	8	480	22
7					SS	9	200	13
8					SS	10	610	13
					SS	11	610	26
9					SS	12	610	47
	71.3							
10		Advanced through the deposit by coring upon refusal at 9.7 m depth						
11								
	69.2							
12		SHALEY LIMESTONE						

UNDRAINED SHEAR STRENGTH - kPa

50 100 150 200

WATER CONTENT & ATTERBERG LIMITS W_P W W_L

DYNAMIC PENETRATION TEST, BLOWS/0.3m ★

STANDARD PENETRATION TEST, BLOWS/0.3m ●

10 20 30 40 50 60 70 80 90

▽ Groundwater Level in Open Borehole

▼ Groundwater Level Measured in Standpipe

■ Field Vane Test, kPa

□ Remoulded Vane Test, kPa

△ Pocket Penetrometer Test, kPa

STN13-STAN-GEO 121624271 - ST.PATRICK'S_HOME_20220911.GPJ SMART.GDT 10/12/22

Stantec

BOREHOLE RECORD

N: 5 024 349 E: 446 036

BH22-2

CLIENT St. Patrick's Home of Ottawa — BOREHOLE No. BH22-2

LOCATION 2865 Riverside Drive, Ottawa, Ontario — PROJECT No. 121624271

DATES: BORING August 12, 2022 WATER LEVEL n/a — DATUM Geodetic

DEPTH (m)	ELEVATION (m)	SOIL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (mm)	SAMPLES N-VALUE OR RQD
12								
		BEDROCK Slightly weathered, very poor quality, strong, grey/black Recovered cores were entirely fractured (Refer to Bedrock Core Log for Details)			NQ	13	100%	0
13					NQ	14	100%	7%
		*UCS = 78.5 MPa						
	67.3							
		End of Borehole Borehole was open upon completion of drilling; Groundwater could not be measured due to use of water for coring. *Implied from field vane test refusal at this depth. *UCS = Uniaxial Compressive Strength						
14								
15								
16								
17								
18								

UNDRAINED SHEAR STRENGTH - kPa
50 100 150 200
WATER CONTENT & ATTERBERG LIMITS W_P W W_L
DYNAMIC PENETRATION TEST, BLOWS/0.3m ★
STANDARD PENETRATION TEST, BLOWS/0.3m ●
10 20 30 40 50 60 70 80 90

▽ Groundwater Level in Open Borehole
▼ Groundwater Level Measured in Standpipe

■ Field Vane Test, kPa
□ Remoulded Vane Test, kPa
△ Pocket Penetrometer Test, kPa

Stantec

BOREHOLE RECORD

N: 5 024 330 E: 446 049

BH22-3

CLIENT St. Patrick's Home of Ottawa — BOREHOLE No. BH22-3

LOCATION 2865 Riverside Drive, Ottawa, Ontario — PROJECT No. 121624271

DATES: BORING August 11, 2022 WATER LEVEL n/a — DATUM Geodetic

DEPTH (m)	ELEVATION (m)	SOIL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (mm)	SAMPLES N-VALUE OR RQD
0	**80.60**							
		TOPSOIL - 1000 mm			SS	1	360	12
1	79.6	FILL: Brown, Moist SAND & GRAVEL (SP/GP)			SS	2	300	5
					SS	3	330	83/280
2	78.4	Stiff to very stiff, Brown, Moist SILTY CLAY/CLAYEY SILT (CL), trace sand, trace gravel			SS	4	510	17
3					SS	5	610	5
4								
5		-Wet, grey below 4.9 m depth			SS	6	360	8
		*Undrained Strength>118 kPa						
6	74.6							

UNDRAINED SHEAR STRENGTH - kPa

50 100 150 200

WATER CONTENT & ATTERBERG LIMITS W_P W W_L

DYNAMIC PENETRATION TEST, BLOWS/0.3m ★

STANDARD PENETRATION TEST, BLOWS/0.3m ●

10 20 30 40 50 60 70 80 90

▽ Groundwater Level in Open Borehole

▼ Groundwater Level Measured in Standpipe

■ Field Vane Test, kPa

□ Remoulded Vane Test, kPa

△ Pocket Penetrometer Test, kPa

Stantec

BOREHOLE RECORD

N: 5 024 330 E: 446 049

BH22-3

CLIENT St. Patrick's Home of Ottawa — BOREHOLE No. BH22-3

LOCATION 2865 Riverside Drive, Ottawa, Ontario — PROJECT No. 121624271

DATES: BORING August 11, 2022 WATER LEVEL n/a — DATUM Geodetic

DEPTH (m)	ELEVATION (m)	SOIL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (mm)	SAMPLES N-VALUE OR RQD
6		Loose to compact, Brown, Wet SILTY SAND TILL (SM), trace gravel		▽	SS	7	250	10
7					SS	8	330	6
8					SS	9	560	23
	72.4	SPT refusal at 8.1 m depth (50 blows for 100 mm of penetration)						
		End of Borehole						
		Borehole caved in to 7.3 m depth and groundwater was measured at 6.4 m on completion of drilling.						
		*Implied from field vane test refusal at this depth.						
9								
10								
11								
12								

UNDRAINED SHEAR STRENGTH - kPa

50 100 150 200

WATER CONTENT & ATTERBERG LIMITS W_P W W_L

DYNAMIC PENETRATION TEST, BLOWS/0.3m ★

STANDARD PENETRATION TEST, BLOWS/0.3m ●

10 20 30 40 50 60 70 80 90

▽ Groundwater Level in Open Borehole

▼ Groundwater Level Measured in Standpipe

□ Field Vane Test, kPa

□ Remoulded Vane Test, kPa

△ Pocket Penetrometer Test, kPa

Stantec

BOREHOLE RECORD

N: 5 024 313 E: 446 038

BH22-4

CLIENT St. Patrick's Home of Ottawa — BOREHOLE No. BH22-4

LOCATION 2865 Riverside Drive, Ottawa, Ontario — PROJECT No. 121624271

DATES: BORING August 15, 2022 WATER LEVEL August 25, 2022 — DATUM Geodetic

DEPTH (m)	ELEVATION (m)	SOIL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (mm)	SAMPLES N-VALUE OR RQD
0	**81.04**							
	80.8	TOPSOIL - 200 mm						
		FILL: Loose to compact, Brown, Moist SAND (SP), some gravel			SS	1	480	11
1					SS	2	330	7
					SS	3	360	34
2	78.8							
		FILL: Stiff, Brown, Moist SILTY CLAY/CLAYEY SILT (CL), some sand			SS	4	360	13
3	78.0							
		Stiff to very stiff, Brown, Moist SILTY CLAY/CLAYEY SILT (CL), trace gravel			SS	5	410	6
		-Wet below 3.8 m depth			SS	6	130	17
4	76.5			▽				
		Loose to dense, Grey, Moist SILTY SAND/SANDY SILT TILL (SM/ML), trace clay		▼	SS	7	510	31
5					SS	8	410	6
6	75.0							

UNDRAINED SHEAR STRENGTH - kPa

50 100 150 200

WATER CONTENT & ATTERBERG LIMITS W_P W W_L

DYNAMIC PENETRATION TEST, BLOWS/0.3m ★

STANDARD PENETRATION TEST, BLOWS/0.3m ●

10 20 30 40 50 60 70 80 90

▽ Groundwater Level in Open Borehole

▼ Groundwater Level Measured in Standpipe

■ Field Vane Test, kPa

□ Remoulded Vane Test, kPa

△ Pocket Penetrometer Test, kPa

Stantec

BOREHOLE RECORD

N: 5 024 313 E: 446 038

BH22-4

CLIENT St. Patrick's Home of Ottawa — BOREHOLE No. BH22-4

LOCATION 2865 Riverside Drive, Ottawa, Ontario — PROJECT No. 121624271

DATES: BORING August 15, 2022 WATER LEVEL August 25, 2022 — DATUM Geodetic

DEPTH (m)	ELEVATION (m)	SOIL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (mm)	SAMPLES N-VALUE OR RQD
6		Loose to compact, Grey, Moist SILTY SAND with gravel TILL (SM)			SS	9	360	5
7					SS	10	300	15
8					SS	11	610	22
					SS	12	610	25
9	72.1	End of Borehole Borehole was open and dry upon completion of drilling. A vibrating wire piezometer was installed at 7.6 m depth. Groundwater was measured to be at 4.4 m at the time of installation and at 4.5 m on August 25, 2022.						
10								
11								
12								

UNDRAINED SHEAR STRENGTH - kPa

50 100 150 200

WATER CONTENT & ATTERBERG LIMITS W_P W W_L

DYNAMIC PENETRATION TEST, BLOWS/0.3m

STANDARD PENETRATION TEST, BLOWS/0.3m

10 20 30 40 50 60 70 80 90

▽ Groundwater Level in Open Borehole

▼ Groundwater Level Measured in Standpipe

□ Field Vane Test, kPa

□ Remoulded Vane Test, kPa

△ Pocket Penetrometer Test, kPa

STN13-STAN-GEO 121624271 - ST.PATRICK'S_HOME_20220911.GPJ SMART.GDT 10/12/22

Stantec

BOREHOLE RECORD

N: 5 024 328 E: 446 016

BH22-5

CLIENT St. Patrick's Home of Ottawa — BOREHOLE No. BH22-5

LOCATION 2865 Riverside Drive, Ottawa, Ontario — PROJECT No. 121624271

DATES: BORING August 11, 2022 WATER LEVEL n/a — DATUM Geodetic

DEPTH (m)	ELEVATION (m)	SOIL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (mm)	SAMPLES N-VALUE OR RQD
0	**80.75**							
	80.0	TOPSOIL - 700 mm			SS	1	410	14
1		FILL: Dense, Brown, Moist SAND (SP), some gravel			SS	2	230	43
		Wood and concrete pieces were observed in the sample taken from 1.5 m to 2.1 m depth (SS3)			SS	3	150	50/250
2		Wood and concrete pieces were observed in the sample taken from 2.3 to 2.9 m depth (SS4); the sample was wet possibly due perched water condition			SS	4	250	36
3	77.7	Stiff to very stiff, Brown, Moist SILTY CLAY/CLAYEY SILT (CL), trace gravel			SS	5	430	7
4		*Undrained Strength>118 kPa						
	76.2	Compact, Grey, Wet SILTY SAND/SANDY SILT TILL (SM/ML), trace gravel		▽	SS	6	430	12
5	75.4	Loose to compact, Grey, Wet SILTY SAND TILL (SM), trace gravel			SS	7	50	18
6								

UNDRAINED SHEAR STRENGTH - kPa

50 100 150 200

WATER CONTENT & ATTERBERG LIMITS W_P W W_L

DYNAMIC PENETRATION TEST, BLOWS/0.3m ★

STANDARD PENETRATION TEST, BLOWS/0.3m ●

10 20 30 40 50 60 70 80 90

▽ Groundwater Level in Open Borehole

▼ Groundwater Level Measured in Standpipe

■ Field Vane Test, kPa

□ Remoulded Vane Test, kPa

△ Pocket Penetrometer Test, kPa

STN13-STAN-GEO 121624271 - ST.PATRICK'S_HOME_20220911.GPJ SMART.GDT 10/12/22

Stantec

BOREHOLE RECORD

N: 5 024 328 E: 446 016

BH22-5

CLIENT St. Patrick's Home of Ottawa — BOREHOLE No. BH22-5

LOCATION 2865 Riverside Drive, Ottawa, Ontario — PROJECT No. 121624271

DATES: BORING August 11, 2022 WATER LEVEL n/a — DATUM Geodetic

DEPTH (m)	ELEVATION (m)	SOIL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (mm)	SAMPLES N-VALUE OR RQD
6					SS	8	150	4
7					SS	9	610	8
8					SS	10	360	23
	72.2	SPT refusal at 8.4 m depth (50 blows for 125 mm of penetration)			SS	11	130	50/130
		End of Borehole						
9		Borehole caved in to 6.7 m depth and groundwater was measured at 4.9 m on completion of drilling.						
10		*Implied from field vane test refusal at this depth.						
11								
12								

UNDRAINED SHEAR STRENGTH - kPa

50 100 150 200

WATER CONTENT & ATTERBERG LIMITS W_P W W_L

DYNAMIC PENETRATION TEST, BLOWS/0.3m

STANDARD PENETRATION TEST, BLOWS/0.3m

10 20 30 40 50 60 70 80 90

▽ Groundwater Level in Open Borehole

▼ Groundwater Level Measured in Standpipe

■ Field Vane Test, kPa

□ Remoulded Vane Test, kPa

△ Pocket Penetrometer Test, kPa

Stantec

BOREHOLE RECORD

N: 5 024 325 E: 445 990

BH22-6

CLIENT St. Patrick's Home of Ottawa — BOREHOLE No. BH22-6

LOCATION 2865 Riverside Drive, Ottawa, Ontario — PROJECT No. 121624271

DATES: BORING August 12, 2022 WATER LEVEL n/a — DATUM Geodetic

DEPTH (m)	ELEVATION (m)	SOIL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (mm)	SAMPLES N-VALUE OR RQD
0	**81.41**							
	81.1	TOPSOIL - 300 mm			SS	1	430	15
		FILL: Compact, Brown, Moist SAND & GRAVEL (SP/GP)						
	80.5				SS	2	360	15
1		Stiff to very stiff, Brown, Moist SILTY CLAY/CLAYEY SILT (CL)						
		100 mm thick sand seam at 1.1 m depth			SS	3	510	8
2					SS	4	610	11
3					SS	5	610	5
		*Undrained Strength>118 kPa						
4					SS	6	460	27
	76.9							
		Compact, Grey, Moist SILTY SAND/SANDY SILT TILL (SP/SM), trace gravel			SS	7	530	22
5	76.2							
		SHALEY LIMESTONE BEDROCK Moderately weathered, very poor quality, medium strong, grey Recovered cores were entirely fractured			NQ	8	61%	0
6								

UNDRAINED SHEAR STRENGTH - kPa

50 100 150 200

WATER CONTENT & ATTERBERG LIMITS W_P W W_L

DYNAMIC PENETRATION TEST, BLOWS/0.3m ★

STANDARD PENETRATION TEST, BLOWS/0.3m ●

10 20 30 40 50 60 70 80 90

▽ Groundwater Level in Open Borehole

▼ Groundwater Level Measured in Standpipe

■ Field Vane Test, kPa

□ Remoulded Vane Test, kPa

△ Pocket Penetrometer Test, kPa

Stantec

BOREHOLE RECORD

N: 5 024 325 E: 445 990

BH22-6

CLIENT St. Patrick's Home of Ottawa — BOREHOLE No. BH22-6

LOCATION 2865 Riverside Drive, Ottawa, Ontario — PROJECT No. 121624271

DATES: BORING August 12, 2022 WATER LEVEL n/a — DATUM Geodetic

DEPTH (m)	ELEVATION (m)	SOIL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (mm)	SAMPLES N-VALUE OR RQD
6	75.3							
		SHALEY LIMESTONE BEDROCK Slightly weathered, poor quality, very strong, grey/black Recovered cores were fractured to 6.9 m depth (Refer to Bedrock Core Log for Details)			NQ	9	96%	42%
7	73.8	*UCS = 122.2 MPa						
		End of Borehole - Augur Refusal Borehole was open upon completion of drilling; Groundwater could not be measured due to use of water for coring. *Implied from field vane test refusal at this depth. *UCS = Uniaxial Compressive Strength						
8								
9								
10								
11								
12								

UNDRAINED SHEAR STRENGTH - kPa
50 100 150 200
WATER CONTENT & ATTERBERG LIMITS W_P W W_L
DYNAMIC PENETRATION TEST, BLOWS/0.3m ★
STANDARD PENETRATION TEST, BLOWS/0.3m ●
10 20 30 40 50 60 70 80 90

▽ Groundwater Level in Open Borehole
▼ Groundwater Level Measured in Standpipe

■ Field Vane Test, kPa
□ Remoulded Vane Test, kPa
△ Pocket Penetrometer Test, kPa

Stantec

BOREHOLE RECORD

N: 5 024 322 E: 445 970

BH22-7

CLIENT St. Patrick's Home of Ottawa — BOREHOLE No. BH22-7

LOCATION 2865 Riverside Drive, Ottawa, Ontario — PROJECT No. 121624271

DATES: BORING August 11, 2022 WATER LEVEL n/a — DATUM Geodetic

DEPTH (m)	ELEVATION (m)	SOIL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	NUMBER	RECOVERY (mm)	N-VALUE OR RQD
0	**81.27**							
		TOPSOIL - 1000 mm			SS	1	330	10
1	80.3	FILL: Compact, Brown, Moist SAND (SP), some gravel			SS	2	380	18
	79.8	Stiff to very stiff, Brown, Moist SILTY CLAY/CLAYEY SILT (CL), trace gravel			SS	3	510	15
2					SS	4	610	6
3		*Undrained Strength>118 kPa		▽	SS	5	530	23
4					SS	6	30	29
	76.6	-Wet, grey below 4.5 m depth			SS	7	30	50/100
		End of Borehole - Auger refusal Borehole caved in to 4.0 m depth and groundwater was measured at 3.7 m on completion of drilling. Upon refusal, another borehole was advanced at about 1.5 m offset to the original borehole						
5								
6								

UNDRAINED SHEAR STRENGTH - kPa

50 100 150 200

WATER CONTENT & ATTERBERG LIMITS W_P W W_L

DYNAMIC PENETRATION TEST, BLOWS/0.3m ★

STANDARD PENETRATION TEST, BLOWS/0.3m ●

10 20 30 40 50 60 70 80 90

▽ Groundwater Level in Open Borehole

▼ Groundwater Level Measured in Standpipe

□ Field Vane Test, kPa

□ Remoulded Vane Test, kPa

△ Pocket Penetrometer Test, kPa

Stantec

BOREHOLE RECORD

N: 5 024 322 E: 445 970

BH22-7

CLIENT St. Patrick's Home of Ottawa — BOREHOLE No. BH22-7

LOCATION 2865 Riverside Drive, Ottawa, Ontario — PROJECT No. 121624271

DATES: BORING August 11, 2022 WATER LEVEL n/a — DATUM Geodetic

DEPTH (m)	ELEVATION (m)	SOIL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (mm)	SAMPLES N-VALUE OR RQD
6		location; auger refusal was encountered at 4.6 m depth. *Implied from field vane test refusal at this depth.						

UNDRAINED SHEAR STRENGTH - kPa
50 100 150 200
WATER CONTENT & ATTERBERG LIMITS W_P W W_L
DYNAMIC PENETRATION TEST, BLOWS/0.3m ★
STANDARD PENETRATION TEST, BLOWS/0.3m ●
10 20 30 40 50 60 70 80 90

7 8 9 10 11 12

▽ Groundwater Level in Open Borehole
▼ Groundwater Level Measured in Standpipe

■ Field Vane Test, kPa
□ Remoulded Vane Test, kPa
△ Pocket Penetrometer Test, kPa

APPENDIX D LABORATORY CERTIFICATE OF ANALYSIS

Your Project #: 121624271.600
Your C.O.C. #: n/a

Attention: Steve Hannington

Stantec Consulting Ltd
1331 Clyde Avenue
Suite 400
Ottawa, ON
CANADA K2C 3G4

Report Date: 2022/09/01
Report #: R7279597
Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C2M9490
Received: 2022/08/12, 08:30

Sample Matrix: Soil
Samples Received: 12

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Methylnaphthalene Sum (1)	10	N/A	2022/08/18	CAM SOP-00301	EPA 8270D m
Hot Water Extractable Boron (1)	10	2022/08/17	2022/08/19	CAM SOP-00408	R153 Ana. Prot. 2011
1,3-Dichloropropene Sum (1)	1	N/A	2022/09/01		EPA 8260D m
1,3-Dichloropropene Sum (1)	5	N/A	2022/08/18		EPA 8260C m
Free (WAD) Cyanide (1)	10	2022/08/15	2022/08/16	CAM SOP-00457	OMOE E3015 m
Conductivity (1)	10	2022/08/18	2022/08/18	CAM SOP-00414	OMOE E3530 v1 m
Hexavalent Chromium in Soil by IC (1, 2)	5	2022/08/16	2022/08/17	CAM SOP-00436	EPA 3060/7199 m
Hexavalent Chromium in Soil by IC (1, 2)	5	2022/08/16	2022/08/18	CAM SOP-00436	EPA 3060/7199 m
Petroleum Hydro. CCME F1 & BTEX in Soil (1, 3)	3	N/A	2022/08/19	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydro. CCME F1 & BTEX in Soil (1, 3)	2	N/A	2022/08/20	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydrocarbons F2-F4 in Soil (1, 4)	10	2022/08/17	2022/08/18	CAM SOP-00316	CCME CWS m
Acid Extractable Metals by ICPMS (1)	6	2022/08/17	2022/08/17	CAM SOP-00447	EPA 6020B m
Acid Extractable Metals by ICPMS (1)	4	2022/08/18	2022/08/18	CAM SOP-00447	EPA 6020B m
Total Metals in SPLP Leachate by ICPMS (1)	2	2022/08/30	2022/08/30	CAM SOP-00447	EPA 6020B m
Moisture (1)	11	N/A	2022/08/15	CAM SOP-00445	Carter 2nd ed 51.2 m
Modified SPLP extraction - Weight (1)	2	N/A	2022/08/30	CAM SOP-00941	OMOECP LaSB E9003 R3
PAH Compounds in Soil by GC/MS (SIM) (1)	10	2022/08/17	2022/08/18	CAM SOP-00318	EPA 8270D m
Polychlorinated Biphenyl in Soil (1)	5	2022/08/15	2022/08/16	CAM SOP-00309	EPA 8082A m
pH CaCl2 EXTRACT (1)	10	2022/08/17	2022/08/17	CAM SOP-00413	EPA 9045 D m
Sodium Adsorption Ratio (SAR) (1)	10	N/A	2022/08/22	CAM SOP-00102	EPA 6010C
SPLP Zero Headspace Extraction (1)	1	2022/08/30	2022/08/31	CAM SOP-00430	EPA 1312 m
Volatile Organic Compounds and F1 PHCs (1)	5	N/A	2022/08/17	CAM SOP-00230	EPA 8260C m
Volatile organics in SPLP leachates (1)	1	N/A	2022/08/31	CAM SOP-00228	EPA 8260D m

Remarks:

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

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas 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

Your Project #: 121624271.600
Your C.O.C. #: n/a

Attention: Steve Hannington

Stantec Consulting Ltd
1331 Clyde Avenue
Suite 400
Ottawa, ON
CANADA K2C 3G4

Report Date: 2022/09/01
Report #: R7279597
Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C2M9490
Received: 2022/08/12, 08:30

Uncertainty has not been accounted for when stating conformity to the referenced standard.

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 Bureau Veritas, results relate to the supplied samples tested.

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) This test was performed by Bureau Veritas Mississauga, 6740 Campobello Rd , Mississauga, ON, L5N 2L8

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

(3) 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.

(4) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Bureau Veritas 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.
Julie Clement, Technical Account Manager
Email: Julie.CLEMENT@bureauveritas.com
Phone# (613)868-6079

==========

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

O.REG 406 EXCESS SOIL BULK INORGANICS (SOIL)

Bureau Veritas ID		TLA818			TLA818			TLA819		
Sampling Date		2022/08/11 09:40			2022/08/11 09:40			2022/08/11 10:00		
COC Number		n/a			n/a			n/a		
	UNITS	BH22-3-1	RDL	QC Batch	BH22-3-1 Lab-Dup	RDL	QC Batch	BH22-3-2	RDL	QC Batch
Calculated Parameters										
Sodium Adsorption Ratio	N/A	0.25 (1)		8165789				2.4		8165789
Inorganics										
Conductivity	mS/cm	0.17	0.002	8172997				0.85	0.002	8172997
Moisture	%	22	1.0	8166441				14	1.0	8166441
Available (CaCl2) pH	pH	7.49		8170601				10.7		8170601
WAD Cyanide (Free)	ug/g	<0.01	0.01	8166916				<0.01	0.01	8166916
Chromium (VI)	ug/g	<0.18	0.18	8168227	<0.18	0.18	8168227	<0.18	0.18	8168227
Metals										
Hot Water Ext. Boron (B)	ug/g	0.15	0.050	8170680				1.1	0.050	8170680
Acid Extractable Antimony (Sb)	ug/g	0.23	0.20	8173026				0.39	0.20	8170792
Acid Extractable Arsenic (As)	ug/g	1.5	1.0	8173026				2.1	1.0	8170792
Acid Extractable Barium (Ba)	ug/g	62	0.50	8173026				120	0.50	8170792
Acid Extractable Beryllium (Be)	ug/g	<0.20	0.20	8173026				0.42	0.20	8170792
Acid Extractable Boron (B)	ug/g	<5.0	5.0	8173026				9.4	5.0	8170792
Acid Extractable Cadmium (Cd)	ug/g	<0.10	0.10	8173026				0.12	0.10	8170792
Acid Extractable Chromium (Cr)	ug/g	14	1.0	8173026				27	1.0	8170792
Acid Extractable Cobalt (Co)	ug/g	3.7	0.10	8173026				8.0	0.10	8170792
Acid Extractable Copper (Cu)	ug/g	11	0.50	8173026				24	0.50	8170792
Acid Extractable Lead (Pb)	ug/g	70	1.0	8173026				10	1.0	8170792
Acid Extractable Molybdenum (Mo)	ug/g	<0.50	0.50	8173026				0.93	0.50	8170792
Acid Extractable Nickel (Ni)	ug/g	9.4	0.50	8173026				18	0.50	8170792
Acid Extractable Selenium (Se)	ug/g	<0.50	0.50	8173026				<0.50	0.50	8170792
Acid Extractable Silver (Ag)	ug/g	<0.20	0.20	8173026				<0.20	0.20	8170792
Acid Extractable Thallium (Tl)	ug/g	0.077	0.050	8173026				0.16	0.050	8170792
Acid Extractable Uranium (U)	ug/g	0.43	0.050	8173026				0.68	0.050	8170792
Acid Extractable Vanadium (V)	ug/g	22	5.0	8173026				44	5.0	8170792
Acid Extractable Zinc (Zn)	ug/g	48	5.0	8173026				60	5.0	8170792
Acid Extractable Mercury (Hg)	ug/g	0.22	0.050	8173026				<0.050	0.050	8170792

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
(1) Sodium was not detected. To report SAR the sodium detection limit was used in the calculation. This value represents a maximum ratio.

O.REG 406 EXCESS SOIL BULK INORGANICS (SOIL)

Bureau Veritas ID		TLA819			TLA820			TLA820		
Sampling Date		2022/08/11 10:00			2022/08/11 10:10			2022/08/11 10:10		
COC Number		n/a			n/a			n/a		
	UNITS	BH22-3-2 Lab-Dup	RDL	QC Batch	BH22-3-3	RDL	QC Batch	BH22-3-3 Lab-Dup	RDL	QC Batch
Calculated Parameters										
Sodium Adsorption Ratio	N/A				4.2		8165789			
Inorganics										
Conductivity	mS/cm	0.85	0.002	8172997	0.47	0.002	8172997			
Moisture	%				33	1.0	8166441			
Available (CaCl2) pH	pH				7.90		8170601			
WAD Cyanide (Free)	ug/g				<0.01	0.01	8166916	<0.01	0.01	8166916
Chromium (VI)	ug/g				0.29	0.18	8168227			
Metals										
Hot Water Ext. Boron (B)	ug/g				0.11	0.050	8170680			
Acid Extractable Antimony (Sb)	ug/g				<0.20	0.20	8173026			
Acid Extractable Arsenic (As)	ug/g				1.6	1.0	8173026			
Acid Extractable Barium (Ba)	ug/g				270	0.50	8173026			
Acid Extractable Beryllium (Be)	ug/g				0.71	0.20	8173026			
Acid Extractable Boron (B)	ug/g				6.5	5.0	8173026			
Acid Extractable Cadmium (Cd)	ug/g				<0.10	0.10	8173026			
Acid Extractable Chromium (Cr)	ug/g				61	1.0	8173026			
Acid Extractable Cobalt (Co)	ug/g				16	0.10	8173026			
Acid Extractable Copper (Cu)	ug/g				32	0.50	8173026			
Acid Extractable Lead (Pb)	ug/g				6.6	1.0	8173026			
Acid Extractable Molybdenum (Mo)	ug/g				<0.50	0.50	8173026			
Acid Extractable Nickel (Ni)	ug/g				34	0.50	8173026			
Acid Extractable Selenium (Se)	ug/g				<0.50	0.50	8173026			
Acid Extractable Silver (Ag)	ug/g				<0.20	0.20	8173026			
Acid Extractable Thallium (Tl)	ug/g				0.33	0.050	8173026			
Acid Extractable Uranium (U)	ug/g				0.64	0.050	8173026			
Acid Extractable Vanadium (V)	ug/g				78	5.0	8173026			
Acid Extractable Zinc (Zn)	ug/g				91	5.0	8173026			
Acid Extractable Mercury (Hg)	ug/g				<0.050	0.050	8173026			

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

O.REG 406 EXCESS SOIL BULK INORGANICS (SOIL)

Bureau Veritas ID		TLA821		TLA822			TLA822		
Sampling Date		2022/08/11 12:40		2022/08/11 12:50			2022/08/11 12:50		
COC Number		n/a		n/a			n/a		
	UNITS	BH22-5-1	QC Batch	BH22-5-2	RDL	QC Batch	BH22-5-2 Lab-Dup	RDL	QC Batch
Calculated Parameters									
Sodium Adsorption Ratio	N/A	0.20 (1)	8165789	0.46		8165789			
Inorganics									
Conductivity	mS/cm	0.25	8172997	0.19	0.002	8172997			
Moisture	%	12	8166441	13	1.0	8166441			
Available (CaCl2) pH	pH	7.52	8170601	7.74		8170601			
WAD Cyanide (Free)	ug/g	<0.01	8166916	<0.01	0.01	8166916			
Chromium (VI)	ug/g	<0.18	8168227	<0.18	0.18	8168227			
Metals									
Hot Water Ext. Boron (B)	ug/g	0.22	8170680	0.19	0.050	8170680	0.17	0.050	8170680
Acid Extractable Antimony (Sb)	ug/g	<0.20	8170792	0.27	0.20	8173026	0.24	0.20	8173026
Acid Extractable Arsenic (As)	ug/g	1.3	8170792	1.5	1.0	8173026	1.6	1.0	8173026
Acid Extractable Barium (Ba)	ug/g	56	8170792	40	0.50	8173026	37	0.50	8173026
Acid Extractable Beryllium (Be)	ug/g	<0.20	8170792	<0.20	0.20	8173026	<0.20	0.20	8173026
Acid Extractable Boron (B)	ug/g	<5.0	8170792	<5.0	5.0	8173026	<5.0	5.0	8173026
Acid Extractable Cadmium (Cd)	ug/g	<0.10	8170792	<0.10	0.10	8173026	<0.10	0.10	8173026
Acid Extractable Chromium (Cr)	ug/g	15	8170792	11	1.0	8173026	10	1.0	8173026
Acid Extractable Cobalt (Co)	ug/g	4.6	8170792	2.2	0.10	8173026	2.0	0.10	8173026
Acid Extractable Copper (Cu)	ug/g	9.4	8170792	7.8	0.50	8173026	7.5	0.50	8173026
Acid Extractable Lead (Pb)	ug/g	12	8170792	44	1.0	8173026	41	1.0	8173026
Acid Extractable Molybdenum (Mo)	ug/g	0.78	8170792	<0.50	0.50	8173026	<0.50	0.50	8173026
Acid Extractable Nickel (Ni)	ug/g	9.3	8170792	5.4	0.50	8173026	4.9	0.50	8173026
Acid Extractable Selenium (Se)	ug/g	<0.50	8170792	<0.50	0.50	8173026	<0.50	0.50	8173026
Acid Extractable Silver (Ag)	ug/g	<0.20	8170792	<0.20	0.20	8173026	<0.20	0.20	8173026
Acid Extractable Thallium (Tl)	ug/g	0.092	8170792	0.053	0.050	8173026	<0.050	0.050	8173026
Acid Extractable Uranium (U)	ug/g	0.52	8170792	0.36	0.050	8173026	0.35	0.050	8173026
Acid Extractable Vanadium (V)	ug/g	23	8170792	14	5.0	8173026	13	5.0	8173026
Acid Extractable Zinc (Zn)	ug/g	24	8170792	35	5.0	8173026	34	5.0	8173026
Acid Extractable Mercury (Hg)	ug/g	<0.050	8170792	0.46	0.050	8173026	0.41	0.050	8173026

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
(1) Sodium was not detected. To report SAR the sodium detection limit was used in the calculation. This value represents a maximum ratio.

O.REG 406 EXCESS SOIL BULK INORGANICS (SOIL)

Bureau Veritas ID		TLA823	TLA825	TLA826			TLA826	
Sampling Date		2022/08/11 13:00	2022/08/11 14:30	2022/08/11 14:40			2022/08/11 14:40	
COC Number		n/a	n/a	n/a			n/a	
	UNITS	BH22-5-3	BH22-7-1	BH22-7-2	RDL	QC Batch	BH22-7-2 Lab-Dup	QC Batch
Calculated Parameters								
Sodium Adsorption Ratio	N/A	3.7	2.0	0.44		8165789		
Inorganics								
Conductivity	mS/cm	0.49	0.30	0.26	0.002	8172997		
Moisture	%	20	14	22	1.0	8166441		
Available (CaCl2) pH	pH	11.6	7.29	7.08		8170601	7.09	8170601
WAD Cyanide (Free)	ug/g	<0.01	<0.01	<0.01	0.01	8166916		
Chromium (VI)	ug/g	0.33	<0.18	0.23	0.18	8168227		
Metals								
Hot Water Ext. Boron (B)	ug/g	0.20	0.15	0.055	0.050	8170680		
Acid Extractable Antimony (Sb)	ug/g	<0.20	<0.20	<0.20	0.20	8170792		
Acid Extractable Arsenic (As)	ug/g	<1.0	1.0	1.3	1.0	8170792		
Acid Extractable Barium (Ba)	ug/g	130	200	150	0.50	8170792		
Acid Extractable Beryllium (Be)	ug/g	0.38	0.53	0.46	0.20	8170792		
Acid Extractable Boron (B)	ug/g	<5.0	<5.0	<5.0	5.0	8170792		
Acid Extractable Cadmium (Cd)	ug/g	<0.10	0.11	<0.10	0.10	8170792		
Acid Extractable Chromium (Cr)	ug/g	26	47	32	1.0	8170792		
Acid Extractable Cobalt (Co)	ug/g	7.9	12	10	0.10	8170792		
Acid Extractable Copper (Cu)	ug/g	18	22	20	0.50	8170792		
Acid Extractable Lead (Pb)	ug/g	5.4	10	5.2	1.0	8170792		
Acid Extractable Molybdenum (Mo)	ug/g	<0.50	<0.50	<0.50	0.50	8170792		
Acid Extractable Nickel (Ni)	ug/g	16	26	19	0.50	8170792		
Acid Extractable Selenium (Se)	ug/g	<0.50	<0.50	<0.50	0.50	8170792		
Acid Extractable Silver (Ag)	ug/g	<0.20	<0.20	<0.20	0.20	8170792		
Acid Extractable Thallium (Tl)	ug/g	0.16	0.22	0.18	0.050	8170792		
Acid Extractable Uranium (U)	ug/g	0.56	0.66	0.54	0.050	8170792		
Acid Extractable Vanadium (V)	ug/g	47	56	54	5.0	8170792		
Acid Extractable Zinc (Zn)	ug/g	42	70	50	5.0	8170792		
Acid Extractable Mercury (Hg)	ug/g	<0.050	<0.050	<0.050	0.050	8170792		

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

O.REG 406 EXCESS SOIL BULK INORGANICS (SOIL)

Bureau Veritas ID		TLA827		TLA829		
Sampling Date		2022/08/11 14:50		2022/08/11		
COC Number		n/a		n/a		
	UNITS	BH22-7-3	QC Batch	QC-02	RDL	QC Batch
Calculated Parameters						
Sodium Adsorption Ratio	N/A	0.29	8165789	0.54		8165789
Inorganics						
Conductivity	mS/cm	0.16	8172997	0.29	0.002	8172997
Moisture	%	14	8166441	27	1.0	8166441
Available (CaCl2) pH	pH	7.68	8170601	7.65		8170601
WAD Cyanide (Free)	ug/g	<0.01	8166916	<0.01	0.01	8166916
Chromium (VI)	ug/g	<0.18	8168227	0.29	0.18	8168227
Metals						
Hot Water Ext. Boron (B)	ug/g	<0.050	8170680	0.074	0.050	8170680
Acid Extractable Antimony (Sb)	ug/g	<0.20	8173026	<0.20	0.20	8170792
Acid Extractable Arsenic (As)	ug/g	<1.0	8173026	1.2	1.0	8170792
Acid Extractable Barium (Ba)	ug/g	84	8173026	170	0.50	8170792
Acid Extractable Beryllium (Be)	ug/g	0.29	8173026	0.53	0.20	8170792
Acid Extractable Boron (B)	ug/g	<5.0	8173026	<5.0	5.0	8170792
Acid Extractable Cadmium (Cd)	ug/g	<0.10	8173026	<0.10	0.10	8170792
Acid Extractable Chromium (Cr)	ug/g	19	8173026	37	1.0	8170792
Acid Extractable Cobalt (Co)	ug/g	5.7	8173026	11	0.10	8170792
Acid Extractable Copper (Cu)	ug/g	15	8173026	22	0.50	8170792
Acid Extractable Lead (Pb)	ug/g	3.8	8173026	6.1	1.0	8170792
Acid Extractable Molybdenum (Mo)	ug/g	<0.50	8173026	<0.50	0.50	8170792
Acid Extractable Nickel (Ni)	ug/g	12	8173026	22	0.50	8170792
Acid Extractable Selenium (Se)	ug/g	<0.50	8173026	<0.50	0.50	8170792
Acid Extractable Silver (Ag)	ug/g	<0.20	8173026	<0.20	0.20	8170792
Acid Extractable Thallium (Tl)	ug/g	0.13	8173026	0.21	0.050	8170792
Acid Extractable Uranium (U)	ug/g	0.58	8173026	0.57	0.050	8170792
Acid Extractable Vanadium (V)	ug/g	36	8173026	57	5.0	8170792
Acid Extractable Zinc (Zn)	ug/g	28	8173026	59	5.0	8170792
Acid Extractable Mercury (Hg)	ug/g	<0.050	8173026	<0.050	0.050	8170792

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

O.REG 406 EXCESS SOIL BULK PAHS (SOIL)

Bureau Veritas ID		TLA818	TLA819		TLA820		TLA821	TLA822		
Sampling Date		2022/08/11 09:40	2022/08/11 10:00		2022/08/11 10:10		2022/08/11 12:40	2022/08/11 12:50		
COC Number		n/a	n/a		n/a		n/a	n/a		
	UNITS	BH22-3-1	BH22-3-2	QC Batch	BH22-3-3	QC Batch	BH22-5-1	BH22-5-2	RDL	QC Batch
Calculated Parameters										
Methylnaphthalene, 2-(1-)	ug/g	0.036	<0.0071	8165787	<0.0071	8165787	<0.0071	<0.0071	0.0071	8165787
Polyaromatic Hydrocarbons										
Acenaphthene	ug/g	0.10	0.0080	8172380	<0.0050	8172792	0.018	0.0096	0.0050	8172380
Acenaphthylene	ug/g	0.016	<0.0050	8172380	<0.0050	8172792	0.021	0.025	0.0050	8172380
Anthracene	ug/g	0.24	0.022	8172380	<0.0050	8172792	0.056	0.036	0.0050	8172380
Benzo(a)anthracene	ug/g	0.35	0.043	8172380	<0.0050	8172792	0.17	0.22	0.0050	8172380
Benzo(a)pyrene	ug/g	0.25	0.036	8172380	<0.0050	8172792	0.17	0.25	0.0050	8172380
Benzo(b/j)fluoranthene	ug/g	0.33	0.048	8172380	<0.0050	8172792	0.21	0.32	0.0050	8172380
Benzo(g,h,i)perylene	ug/g	0.12	0.022	8172380	<0.0050	8172792	0.10	0.16	0.0050	8172380
Benzo(k)fluoranthene	ug/g	0.13	0.017	8172380	<0.0050	8172792	0.081	0.11	0.0050	8172380
Chrysene	ug/g	0.29	0.036	8172380	<0.0050	8172792	0.14	0.18	0.0050	8172380
Dibenzo(a,h)anthracene	ug/g	0.035	0.0052	8172380	<0.0050	8172792	0.026	0.037	0.0050	8172380
Fluoranthene	ug/g	0.80	0.10	8172380	<0.0050	8172792	0.31	0.34	0.0050	8172380
Fluorene	ug/g	0.079	0.0074	8172380	<0.0050	8172792	0.019	0.0068	0.0050	8172380
Indeno(1,2,3-cd)pyrene	ug/g	0.13	0.022	8172380	<0.0050	8172792	0.10	0.16	0.0050	8172380
1-Methylnaphthalene	ug/g	0.024	<0.0050	8172380	<0.0050	8172792	<0.0050	<0.0050	0.0050	8172380
2-Methylnaphthalene	ug/g	0.011	<0.0050	8172380	<0.0050	8172792	<0.0050	<0.0050	0.0050	8172380
Naphthalene	ug/g	0.0060	<0.0050	8172380	<0.0050	8172792	<0.0050	<0.0050	0.0050	8172380
Phenanthrene	ug/g	0.75	0.090	8172380	<0.0050	8172792	0.19	0.13	0.0050	8172380
Pyrene	ug/g	0.62	0.081	8172380	<0.0050	8172792	0.25	0.31	0.0050	8172380
Biphenyl	ug/g	<0.0050	<0.0050	8172380	<0.0050	8172792	<0.0050	<0.0050	0.0050	8172380
Surrogate Recovery (%)										
D10-Anthracene	%	96	95	8172380	104	8172792	95	95		8172380
D14-Terphenyl (FS)	%	87	83	8172380	104	8172792	85	86		8172380
D8-Acenaphthylene	%	76	73	8172380	83	8172792	79	81		8172380

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

O.REG 406 EXCESS SOIL BULK PAHS (SOIL)

Bureau Veritas ID		TLA823	TLA824	TLA825	TLA826		TLA828		
Sampling Date		2022/08/11 13:00	2022/08/11 13:10	2022/08/11 14:30	2022/08/11 14:40		2022/08/11		
COC Number		n/a	n/a	n/a	n/a		n/a		
	UNITS	BH22-5-3	BH22-5-4	BH22-7-1	BH22-7-2	QC Batch	QC-01	RDL	QC Batch
Calculated Parameters									
Methylnaphthalene, 2-(1-)	ug/g	<0.0071	<0.0071	<0.0071	<0.0071	8165787	<0.0071	0.0071	8165787
Polyaromatic Hydrocarbons									
Acenaphthene	ug/g	<0.0050	<0.0050	0.023	<0.0050	8172380	0.0066	0.0050	8172792
Acenaphthylene	ug/g	<0.0050	<0.0050	0.010	<0.0050	8172380	0.013	0.0050	8172792
Anthracene	ug/g	<0.0050	<0.0050	0.041	<0.0050	8172380	0.034	0.0050	8172792
Benzo(a)anthracene	ug/g	<0.0050	<0.0050	0.11	<0.0050	8172380	0.11	0.0050	8172792
Benzo(a)pyrene	ug/g	<0.0050	<0.0050	0.11	<0.0050	8172380	0.11	0.0050	8172792
Benzo(b/j)fluoranthene	ug/g	<0.0050	<0.0050	0.14	0.0061	8172380	0.13	0.0050	8172792
Benzo(g,h,i)perylene	ug/g	<0.0050	<0.0050	0.065	<0.0050	8172380	0.070	0.0050	8172792
Benzo(k)fluoranthene	ug/g	<0.0050	<0.0050	0.050	<0.0050	8172380	0.048	0.0050	8172792
Chrysene	ug/g	<0.0050	<0.0050	0.097	<0.0050	8172380	0.096	0.0050	8172792
Dibenzo(a,h)anthracene	ug/g	<0.0050	<0.0050	0.014	<0.0050	8172380	0.016	0.0050	8172792
Fluoranthene	ug/g	0.0096	<0.0050	0.26	0.0076	8172380	0.24	0.0050	8172792
Fluorene	ug/g	<0.0050	<0.0050	0.017	<0.0050	8172380	0.0089	0.0050	8172792
Indeno(1,2,3-cd)pyrene	ug/g	<0.0050	<0.0050	0.067	<0.0050	8172380	0.073	0.0050	8172792
1-Methylnaphthalene	ug/g	<0.0050	<0.0050	<0.0050	<0.0050	8172380	<0.0050	0.0050	8172792
2-Methylnaphthalene	ug/g	<0.0050	<0.0050	<0.0050	<0.0050	8172380	<0.0050	0.0050	8172792
Naphthalene	ug/g	<0.0050	<0.0050	<0.0050	<0.0050	8172380	<0.0050	0.0050	8172792
Phenanthrene	ug/g	0.020	0.0068	0.18	<0.0050	8172380	0.12	0.0050	8172792
Pyrene	ug/g	0.0081	<0.0050	0.21	0.0067	8172380	0.21	0.0050	8172792
Biphenyl	ug/g	<0.0050	<0.0050	<0.0050	<0.0050	8172380	<0.0050	0.0050	8172792
Surrogate Recovery (%)									
D10-Anthracene	%	97	108	95	101	8172380	97		8172792
D14-Terphenyl (FS)	%	84	98	86	91	8172380	101		8172792
D8-Acenaphthylene	%	72	89	83	81	8172380	85		8172792

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

O.REG 406 EXCESS SOIL BULK PCBS (SOIL)

Bureau Veritas ID		TLA819	TLA821	TLA823	TLA826	TLA829		
Sampling Date		2022/08/11 10:00	2022/08/11 12:40	2022/08/11 13:00	2022/08/11 14:40	2022/08/11		
COC Number		n/a	n/a	n/a	n/a	n/a		
	UNITS	BH22-3-2	BH22-5-1	BH22-5-3	BH22-7-2	QC-02	RDL	QC Batch
PCBs								
Aroclor 1242	ug/g	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8167215
Aroclor 1248	ug/g	0.018	<0.010	<0.010	<0.010	<0.010	0.010	8167215
Aroclor 1254	ug/g	0.030	<0.010	<0.010	<0.010	<0.010	0.010	8167215
Aroclor 1260	ug/g	0.013	<0.010	<0.010	<0.010	<0.010	0.010	8167215
Total PCB	ug/g	0.061	<0.010	<0.010	<0.010	<0.010	0.010	8167215
Surrogate Recovery (%)								
Decachlorobiphenyl	%	97	101	136 (1)	111	116		8167215

RDL = Reportable Detection Limit

QC Batch = Quality Control Batch

(1) Surrogate recovery was above the upper control limit due to matrix interference. This may represent a high bias in some results. For results that were not detected (ND), this potential bias has no impact.

O.REG 406 EXCESS SOIL BULK BTEX/F1-F4 (SOIL)

Bureau Veritas ID		TLA818	TLA819	TLA821	TLA823		TLA826		
Sampling Date		2022/08/11 09:40	2022/08/11 10:00	2022/08/11 12:40	2022/08/11 13:00		2022/08/11 14:40		
COC Number		n/a	n/a	n/a	n/a		n/a		
	UNITS	BH22-3-1	BH22-3-2	BH22-5-1	BH22-5-3	RDL	BH22-7-2	RDL	QC Batch
BTEX & F1 Hydrocarbons									
Benzene	ug/g	<0.020	<0.020	<0.020	<0.020	0.020	<0.040	0.040	8177362
Toluene	ug/g	<0.020	<0.020	<0.020	<0.020	0.020	<0.040	0.040	8177362
Ethylbenzene	ug/g	<0.020	<0.020	<0.020	<0.020	0.020	<0.040	0.040	8177362
o-Xylene	ug/g	<0.020	<0.020	<0.020	<0.020	0.020	<0.040	0.040	8177362
p+m-Xylene	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	<0.080	0.080	8177362
Total Xylenes	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	<0.080	0.080	8177362
F1 (C6-C10)	ug/g	<10	<10	<10	<10	10	<20	20	8177362
F1 (C6-C10) - BTEX	ug/g	<10	<10	<10	<10	10	<20	20	8177362
F2-F4 Hydrocarbons									
F2 (C10-C16 Hydrocarbons)	ug/g	<10	<10	<10	<10	10	<10	10	8172261
F3 (C16-C34 Hydrocarbons)	ug/g	52	56	60	<50	50	<50	50	8172261
F4 (C34-C50 Hydrocarbons)	ug/g	<50	63	84	<50	50	<50	50	8172261
Reached Baseline at C50	ug/g	Yes	Yes	Yes	Yes		Yes		8172261
Surrogate Recovery (%)									
1,4-Difluorobenzene	%	101	100	100	100		99		8177362
4-Bromofluorobenzene	%	98	98	98	95		96		8177362
D10-o-Xylene	%	106	94	107	108		104		8177362
D4-1,2-Dichloroethane	%	105	106	104	104		107		8177362
o-Terphenyl	%	91	91	92	89		92		8172261

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

O.REG 406 EXCESS SOIL BULK VOCS/F1-F4 (SOIL)

Bureau Veritas ID		TLA820	TLA822	TLA824	TLA825		
Sampling Date		2022/08/11 10:10	2022/08/11 12:50	2022/08/11 13:10	2022/08/11 14:30		
COC Number		n/a	n/a	n/a	n/a		
	UNITS	BH22-3-3	BH22-5-2	BH22-5-4	BH22-7-1	RDL	QC Batch
Calculated Parameters							
1,3-Dichloropropene (cis+trans)	ug/g	<0.050	<0.050	<0.050	<0.050	0.050	8165788
Volatile Organics							
Acetone (2-Propanone)	ug/g	<0.49	<0.49	<0.49	<0.49	0.49	8167324
Benzene	ug/g	<0.0060	<0.0060	<0.0060	<0.0060	0.0060	8167324
Bromodichloromethane	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	8167324
Bromoform	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	8167324
Bromomethane	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	8167324
Carbon Tetrachloride	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	8167324
Chlorobenzene	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	8167324
Chloroform	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	8167324
Dibromochloromethane	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	8167324
1,2-Dichlorobenzene	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	8167324
1,3-Dichlorobenzene	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	8167324
1,4-Dichlorobenzene	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	8167324
Dichlorodifluoromethane (FREON 12)	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	8167324
1,1-Dichloroethane	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	8167324
1,2-Dichloroethane	ug/g	<0.049	<0.049	<0.049	<0.049	0.049	8167324
1,1-Dichloroethylene	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	8167324
cis-1,2-Dichloroethylene	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	8167324
trans-1,2-Dichloroethylene	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	8167324
1,2-Dichloropropane	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	8167324
cis-1,3-Dichloropropene	ug/g	<0.030	<0.030	<0.030	<0.030	0.030	8167324
trans-1,3-Dichloropropene	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	8167324
Ethylbenzene	ug/g	<0.010	<0.010	<0.010	<0.010	0.010	8167324
Ethylene Dibromide	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	8167324
Hexane	ug/g	<0.040	0.099	<0.040	<0.040	0.040	8167324
Methylene Chloride(Dichloromethane)	ug/g	<0.049	<0.049	<0.049	<0.049	0.049	8167324
Methyl Ethyl Ketone (2-Butanone)	ug/g	<0.40	<0.40	<0.40	<0.40	0.40	8167324
Methyl Isobutyl Ketone	ug/g	<0.40	<0.40	<0.40	<0.40	0.40	8167324
Methyl t-butyl ether (MTBE)	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	8167324

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

O.REG 406 EXCESS SOIL BULK VOCS/F1-F4 (SOIL)

Bureau Veritas ID		TLA820	TLA822	TLA824	TLA825		
Sampling Date		2022/08/11 10:10	2022/08/11 12:50	2022/08/11 13:10	2022/08/11 14:30		
COC Number		n/a	n/a	n/a	n/a		
	UNITS	BH22-3-3	BH22-5-2	BH22-5-4	BH22-7-1	RDL	QC Batch
Styrene	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	8167324
1,1,1,2-Tetrachloroethane	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	8167324
1,1,2,2-Tetrachloroethane	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	8167324
Tetrachloroethylene	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	8167324
Toluene	ug/g	<0.020	<0.020	<0.020	<0.020	0.020	8167324
1,1,1-Trichloroethane	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	8167324
1,1,2-Trichloroethane	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	8167324
Trichloroethylene	ug/g	<0.010	<0.010	<0.010	<0.010	0.010	8167324
Trichlorofluoromethane (FREON 11)	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	8167324
Vinyl Chloride	ug/g	<0.019	<0.019	<0.019	<0.019	0.019	8167324
p+m-Xylene	ug/g	<0.020	<0.020	<0.020	<0.020	0.020	8167324
o-Xylene	ug/g	<0.020	<0.020	<0.020	<0.020	0.020	8167324
Total Xylenes	ug/g	<0.020	<0.020	<0.020	<0.020	0.020	8167324
F1 (C6-C10)	ug/g	<10	<10	<10	<10	10	8167324
F1 (C6-C10) - BTEX	ug/g	<10	<10	<10	<10	10	8167324
F2-F4 Hydrocarbons							
F2 (C10-C16 Hydrocarbons)	ug/g	<10	<10	<10	<10	10	8172261
F3 (C16-C34 Hydrocarbons)	ug/g	<50	62	<50	57	50	8172261
F4 (C34-C50 Hydrocarbons)	ug/g	<50	<50	<50	95	50	8172261
Reached Baseline at C50	ug/g	Yes	Yes	Yes	Yes		8172261
Surrogate Recovery (%)							
o-Terphenyl	%	93	93	94	90		8172261
4-Bromofluorobenzene	%	87	86	87	84		8167324
D10-o-Xylene	%	91	89	90	86		8167324
D4-1,2-Dichloroethane	%	107	107	108	108		8167324
D8-Toluene	%	92	93	92	91		8167324

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

O.REG 406 EXCESS SOIL BULK VOCS/F1-F4 (SOIL)

Bureau Veritas ID		TLA828		
Sampling Date		2022/08/11		
COC Number		n/a		
	UNITS	**QC-01**	**RDL**	**QC Batch**
Inorganics				
Moisture	%	20	1.0	8166372
Calculated Parameters				
1,3-Dichloropropene (cis+trans)	ug/g	<0.050	0.050	8165788
Volatile Organics				
Acetone (2-Propanone)	ug/g	<0.49	0.49	8167324
Benzene	ug/g	<0.0060	0.0060	8167324
Bromodichloromethane	ug/g	<0.040	0.040	8167324
Bromoform	ug/g	<0.040	0.040	8167324
Bromomethane	ug/g	<0.040	0.040	8167324
Carbon Tetrachloride	ug/g	<0.040	0.040	8167324
Chlorobenzene	ug/g	<0.040	0.040	8167324
Chloroform	ug/g	<0.040	0.040	8167324
Dibromochloromethane	ug/g	<0.040	0.040	8167324
1,2-Dichlorobenzene	ug/g	<0.040	0.040	8167324
1,3-Dichlorobenzene	ug/g	<0.040	0.040	8167324
1,4-Dichlorobenzene	ug/g	<0.040	0.040	8167324
Dichlorodifluoromethane (FREON 12)	ug/g	<0.040	0.040	8167324
1,1-Dichloroethane	ug/g	<0.040	0.040	8167324
1,2-Dichloroethane	ug/g	<0.049	0.049	8167324
1,1-Dichloroethylene	ug/g	<0.040	0.040	8167324
cis-1,2-Dichloroethylene	ug/g	<0.040	0.040	8167324
trans-1,2-Dichloroethylene	ug/g	<0.040	0.040	8167324
1,2-Dichloropropane	ug/g	<0.040	0.040	8167324
cis-1,3-Dichloropropene	ug/g	<0.030	0.030	8167324
trans-1,3-Dichloropropene	ug/g	<0.040	0.040	8167324
Ethylbenzene	ug/g	<0.010	0.010	8167324
Ethylene Dibromide	ug/g	<0.040	0.040	8167324
Hexane	ug/g	<0.040	0.040	8167324
Methylene Chloride(Dichloromethane)	ug/g	<0.049	0.049	8167324
Methyl Ethyl Ketone (2-Butanone)	ug/g	<0.40	0.40	8167324
Methyl Isobutyl Ketone	ug/g	<0.40	0.40	8167324

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

O.REG 406 EXCESS SOIL BULK VOCS/F1-F4 (SOIL)

Bureau Veritas ID		TLA828		
Sampling Date		2022/08/11		
COC Number		n/a		
	UNITS	**QC-01**	**RDL**	**QC Batch**
Methyl t-butyl ether (MTBE)	ug/g	<0.040	0.040	8167324
Styrene	ug/g	<0.040	0.040	8167324
1,1,1,2-Tetrachloroethane	ug/g	<0.040	0.040	8167324
1,1,2,2-Tetrachloroethane	ug/g	<0.040	0.040	8167324
Tetrachloroethylene	ug/g	<0.040	0.040	8167324
Toluene	ug/g	<0.020	0.020	8167324
1,1,1-Trichloroethane	ug/g	<0.040	0.040	8167324
1,1,2-Trichloroethane	ug/g	<0.040	0.040	8167324
Trichloroethylene	ug/g	<0.010	0.010	8167324
Trichlorofluoromethane (FREON 11)	ug/g	<0.040	0.040	8167324
Vinyl Chloride	ug/g	<0.019	0.019	8167324
p+m-Xylene	ug/g	<0.020	0.020	8167324
o-Xylene	ug/g	<0.020	0.020	8167324
Total Xylenes	ug/g	<0.020	0.020	8167324
F1 (C6-C10)	ug/g	<10	10	8167324
F1 (C6-C10) - BTEX	ug/g	<10	10	8167324
F2-F4 Hydrocarbons				
F2 (C10-C16 Hydrocarbons)	ug/g	<10	10	8172261
F3 (C16-C34 Hydrocarbons)	ug/g	<50	50	8172261
F4 (C34-C50 Hydrocarbons)	ug/g	62	50	8172261
Reached Baseline at C50	ug/g	Yes		8172261
Surrogate Recovery (%)				
o-Terphenyl	%	83		8172261
4-Bromofluorobenzene	%	86		8167324
D10-o-Xylene	%	86		8167324
D4-1,2-Dichloroethane	%	110		8167324
D8-Toluene	%	92		8167324

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

O.REG 406 EXCESS SOIL SPLP METALS (SOIL)

Bureau Veritas ID		TLA820	TLA825		
Sampling Date		2022/08/11 10:10	2022/08/11 14:30		
COC Number		n/a	n/a		
	UNITS	BH22-3-3	BH22-7-1	RDL	QC Batch
Metals					
Leachable (SPLP) Antimony (Sb)	ug/L	<0.5	<0.5	0.5	8196080
Leachable (SPLP) Arsenic (As)	ug/L	2	<1	1	8196080
Leachable (SPLP) Barium (Ba)	ug/L	17	40	5	8196080
Leachable (SPLP) Beryllium (Be)	ug/L	<0.5	<0.5	0.5	8196080
Leachable (SPLP) Boron (B)	ug/L	<10	<10	10	8196080
Leachable (SPLP) Cadmium (Cd)	ug/L	<0.1	<0.1	0.1	8196080
Leachable (SPLP) Chromium (Cr)	ug/L	<5	<5	5	8196080
Leachable (SPLP) Cobalt (Co)	ug/L	<0.5	0.6	0.5	8196080
Leachable (SPLP) Copper (Cu)	ug/L	2	4	1	8196080
Leachable (SPLP) Lead (Pb)	ug/L	<0.5	3.4	0.5	8196080
Leachable (SPLP) Molybdenum (Mo)	ug/L	2	1	1	8196080
Leachable (SPLP) Nickel (Ni)	ug/L	1	3	1	8196080
Leachable (SPLP) Selenium (Se)	ug/L	<2	<2	2	8196080
Leachable (SPLP) Silver (Ag)	ug/L	<0.1	<0.1	0.1	8196080
Leachable (SPLP) Thallium (Tl)	ug/L	<0.05	<0.05	0.05	8196080
Leachable (SPLP) Uranium (U)	ug/L	<0.1	0.3	0.1	8196080
Leachable (SPLP) Vanadium (V)	ug/L	32	6	1	8196080
Leachable (SPLP) Zinc (Zn)	ug/L	<5	7	5	8196080

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

O.REG 406 EXCESS SOIL SPLP PREP (SOIL)

Bureau Veritas ID		TLA820	TLA825	
Sampling Date		2022/08/11 10:10	2022/08/11 14:30	
COC Number		n/a	n/a	
	UNITS	**BH22-3-3**	**BH22-7-1**	**QC Batch**
Inorganics				
Dry Weight	g	100	100	8194151
QC Batch = Quality Control Batch				

O.REG 406 EXCESS SOIL SPLP VOCS (SOIL)

Bureau Veritas ID		TLA822		
Sampling Date		2022/08/11 12:50		
COC Number		n/a		
	UNITS	BH22-5-2	RDL	QC Batch
Charge/Prep Analysis				
Amount Extracted (Wet Weight) (g)	N/A	25	N/A	8196271
Calculated Parameters				
Leachable (ZHE) 1,3-Dichloropropene (cis+trans)	ug/L	<0.42	0.42	8190282
Volatile Organics				
Leachable (SPLP) Bromomethane	ug/L	<0.40	0.40	8198689
Leachable (SPLP) Carbon Tetrachloride	ug/L	<0.19	0.19	8198689
Leachable (SPLP) Chloroform	ug/L	<0.90	0.90	8198689
Leachable (SPLP) 1,2-Dichlorobenzene	ug/L	<0.40	0.40	8198689
Leachable (SPLP) 1,4-Dichlorobenzene	ug/L	<0.40	0.40	8198689
Leachable (SPLP) 1,1-Dichloroethane	ug/L	<0.40	0.40	8198689
Leachable (SPLP) 1,2-Dichloroethane	ug/L	<0.40	0.40	8198689
Leachable (SPLP) 1,1-Dichloroethylene	ug/L	<0.40	0.40	8198689
Leachable (SPLP) cis-1,2-Dichloroethylene	ug/L	<0.40	0.40	8198689
Leachable (SPLP) trans-1,2-Dichloroethylene	ug/L	<0.40	0.40	8198689
Leachable (SPLP) 1,2-Dichloropropane	ug/L	<0.40	0.40	8198689
Leachable (SPLP) cis-1,3-Dichloropropene	ug/L	<0.30	0.30	8198689
Leachable (SPLP) trans-1,3-Dichloropropene	ug/L	<0.30	0.30	8198689
Leachable (SPLP) Ethylene Dibromide	ug/L	<0.19	0.19	8198689
Leachable (SPLP) 1,1,1,2-Tetrachloroethane	ug/L	<0.40	0.40	8198689
Leachable (SPLP) 1,1,2,2-Tetrachloroethane	ug/L	<0.40	0.40	8198689
Leachable (SPLP) Tetrachloroethylene	ug/L	<0.40	0.40	8198689
Leachable (SPLP) 1,1,2-Trichloroethane	ug/L	<0.40	0.40	8198689
Leachable (SPLP) Trichloroethylene	ug/L	<0.40	0.40	8198689
Surrogate Recovery (%)				
Leachable (SPLP) 4-Bromofluorobenzene	%	101		8198689
Leachable (SPLP) D4-1,2-Dichloroethane	%	102		8198689
Leachable (SPLP) D8-Toluene	%	94		8198689

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

TEST SUMMARY

Bureau Veritas ID: TLA818 **Collected:** 2022/08/11
Sample ID: BH22-3-1 **Shipped:**
Matrix: Soil **Received:** 2022/08/12

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	8165787	N/A	2022/08/18	Automated Statchk
Hot Water Extractable Boron	ICP	8170680	2022/08/17	2022/08/19	Jaswinder Kaur
Free (WAD) Cyanide	TECH	8166916	2022/08/15	2022/08/16	Prgya Panchal
Conductivity	AT	8172997	2022/08/18	2022/08/18	Roya Fathitil
Hexavalent Chromium in Soil by IC	IC/SPEC	8168227	2022/08/16	2022/08/17	Sousan Besharatlou
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	8177362	N/A	2022/08/19	Georgeta Rusu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	8172261	2022/08/17	2022/08/18	Anna Stuglik-Rolland
Acid Extractable Metals by ICPMS	ICP/MS	8173026	2022/08/18	2022/08/18	Daniel Teclu
Moisture	BAL	8166441	N/A	2022/08/15	Mathew Bowles
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	8172380	2022/08/17	2022/08/18	Jonghan Yoon
pH CaCl2 EXTRACT	AT	8170601	2022/08/17	2022/08/17	Taslima Aktar
Sodium Adsorption Ratio (SAR)	CALC/MET	8165789	N/A	2022/08/22	Automated Statchk

Bureau Veritas ID: TLA818 Dup **Collected:** 2022/08/11
Sample ID: BH22-3-1 **Shipped:**
Matrix: Soil **Received:** 2022/08/12

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hexavalent Chromium in Soil by IC	IC/SPEC	8168227	2022/08/16	2022/08/17	Sousan Besharatlou

Bureau Veritas ID: TLA819 **Collected:** 2022/08/11
Sample ID: BH22-3-2 **Shipped:**
Matrix: Soil **Received:** 2022/08/12

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	8165787	N/A	2022/08/18	Automated Statchk
Hot Water Extractable Boron	ICP	8170680	2022/08/17	2022/08/19	Jaswinder Kaur
Free (WAD) Cyanide	TECH	8166916	2022/08/15	2022/08/16	Prgya Panchal
Conductivity	AT	8172997	2022/08/18	2022/08/18	Roya Fathitil
Hexavalent Chromium in Soil by IC	IC/SPEC	8168227	2022/08/16	2022/08/18	Sousan Besharatlou
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	8177362	N/A	2022/08/19	Georgeta Rusu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	8172261	2022/08/17	2022/08/18	Anna Stuglik-Rolland
Acid Extractable Metals by ICPMS	ICP/MS	8170792	2022/08/17	2022/08/17	Daniel Teclu
Moisture	BAL	8166441	N/A	2022/08/15	Mathew Bowles
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	8172380	2022/08/17	2022/08/18	Jonghan Yoon
Polychlorinated Biphenyl in Soil	GC/ECD	8167215	2022/08/15	2022/08/16	Svitlana Shaula
pH CaCl2 EXTRACT	AT	8170601	2022/08/17	2022/08/17	Taslima Aktar
Sodium Adsorption Ratio (SAR)	CALC/MET	8165789	N/A	2022/08/22	Automated Statchk

Bureau Veritas ID: TLA819 Dup **Collected:** 2022/08/11
Sample ID: BH22-3-2 **Shipped:**
Matrix: Soil **Received:** 2022/08/12

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Conductivity	AT	8172997	2022/08/18	2022/08/18	Roya Fathitil

TEST SUMMARY

Bureau Veritas ID: TLA820
Sample ID: BH22-3-3
Matrix: Soil

Collected: 2022/08/11
Shipped:
Received: 2022/08/12

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	8165787	N/A	2022/08/18	Automated Statchk
Hot Water Extractable Boron	ICP	8170680	2022/08/17	2022/08/19	Jaswinder Kaur
1,3-Dichloropropene Sum	CALC	8165788	N/A	2022/08/18	Automated Statchk
Free (WAD) Cyanide	TECH	8166916	2022/08/15	2022/08/16	Prgya Panchal
Conductivity	AT	8172997	2022/08/18	2022/08/18	Roya Fathitil
Hexavalent Chromium in Soil by IC	IC/SPEC	8168227	2022/08/16	2022/08/17	Sousan Besharatlou
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	8172261	2022/08/17	2022/08/18	Anna Stuglik-Rolland
Acid Extractable Metals by ICPMS	ICP/MS	8173026	2022/08/18	2022/08/18	Daniel Teclu
Total Metals in SPLP Leachate by ICPMS	ICP/MS	8196080	2022/08/30	2022/08/30	Azita Fazaeli
Moisture	BAL	8166441	N/A	2022/08/15	Mathew Bowles
Modified SPLP extraction - Weight		8194151	N/A	2022/08/30	Eddie On
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	8172792	2022/08/17	2022/08/18	Jonghan Yoon
pH CaCl2 EXTRACT	AT	8170601	2022/08/17	2022/08/17	Taslima Aktar
Sodium Adsorption Ratio (SAR)	CALC/MET	8165789	N/A	2022/08/22	Automated Statchk
Volatile Organic Compounds and F1 PHCs	GC/MSFD	8167324	N/A	2022/08/17	Juan Pangilinan

Bureau Veritas ID: TLA820 Dup
Sample ID: BH22-3-3
Matrix: Soil

Collected: 2022/08/11
Shipped:
Received: 2022/08/12

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Free (WAD) Cyanide	TECH	8166916	2022/08/15	2022/08/16	Prgya Panchal

Bureau Veritas ID: TLA821
Sample ID: BH22-5-1
Matrix: Soil

Collected: 2022/08/11
Shipped:
Received: 2022/08/12

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	8165787	N/A	2022/08/18	Automated Statchk
Hot Water Extractable Boron	ICP	8170680	2022/08/17	2022/08/19	Jaswinder Kaur
Free (WAD) Cyanide	TECH	8166916	2022/08/15	2022/08/16	Prgya Panchal
Conductivity	AT	8172997	2022/08/18	2022/08/18	Roya Fathitil
Hexavalent Chromium in Soil by IC	IC/SPEC	8168227	2022/08/16	2022/08/17	Sousan Besharatlou
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	8177362	N/A	2022/08/19	Georgeta Rusu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	8172261	2022/08/17	2022/08/18	Anna Stuglik-Rolland
Acid Extractable Metals by ICPMS	ICP/MS	8170792	2022/08/17	2022/08/17	Daniel Teclu
Moisture	BAL	8166441	N/A	2022/08/15	Mathew Bowles
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	8172380	2022/08/17	2022/08/18	Jonghan Yoon
Polychlorinated Biphenyl in Soil	GC/ECD	8167215	2022/08/15	2022/08/16	Svitlana Shaula
pH CaCl2 EXTRACT	AT	8170601	2022/08/17	2022/08/17	Taslima Aktar
Sodium Adsorption Ratio (SAR)	CALC/MET	8165789	N/A	2022/08/22	Automated Statchk

TEST SUMMARY

Bureau Veritas ID: TLA822
Sample ID: BH22-5-2
Matrix: Soil

Collected: 2022/08/11
Shipped:
Received: 2022/08/12

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	8165787	N/A	2022/08/18	Automated Statchk
Hot Water Extractable Boron	ICP	8170680	2022/08/17	2022/08/19	Jaswinder Kaur
1,3-Dichloropropene Sum	CALC	8190282	N/A	2022/09/01	Automated Statchk
1,3-Dichloropropene Sum	CALC	8165788	N/A	2022/08/18	Automated Statchk
Free (WAD) Cyanide	TECH	8166916	2022/08/15	2022/08/16	Prgya Panchal
Conductivity	AT	8172997	2022/08/18	2022/08/18	Roya Fathitil
Hexavalent Chromium in Soil by IC	IC/SPEC	8168227	2022/08/16	2022/08/18	Sousan Besharatlou
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	8172261	2022/08/17	2022/08/18	Anna Stuglik-Rolland
Acid Extractable Metals by ICPMS	ICP/MS	8173026	2022/08/18	2022/08/18	Daniel Teclu
Moisture	BAL	8166441	N/A	2022/08/15	Mathew Bowles
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	8172380	2022/08/17	2022/08/18	Jonghan Yoon
pH CaCl2 EXTRACT	AT	8170601	2022/08/17	2022/08/17	Taslima Aktar
Sodium Adsorption Ratio (SAR)	CALC/MET	8165789	N/A	2022/08/22	Automated Statchk
SPLP Zero Headspace Extraction		8196271	2022/08/30	2022/08/31	Mohammed Abdul Nafay Shoeb
Volatile Organic Compounds and F1 PHCs	GC/MSFD	8167324	N/A	2022/08/17	Juan Pangilinan
Volatile organics in SPLP leachates	HS/MS	8198689	N/A	2022/08/31	Dina Wang

Bureau Veritas ID: TLA822 Dup
Sample ID: BH22-5-2
Matrix: Soil

Collected: 2022/08/11
Shipped:
Received: 2022/08/12

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	8170680	2022/08/17	2022/08/19	Jaswinder Kaur
Acid Extractable Metals by ICPMS	ICP/MS	8173026	2022/08/18	2022/08/18	Daniel Teclu

Bureau Veritas ID: TLA823
Sample ID: BH22-5-3
Matrix: Soil

Collected: 2022/08/11
Shipped:
Received: 2022/08/12

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	8165787	N/A	2022/08/18	Automated Statchk
Hot Water Extractable Boron	ICP	8170680	2022/08/17	2022/08/19	Jaswinder Kaur
Free (WAD) Cyanide	TECH	8166916	2022/08/15	2022/08/16	Prgya Panchal
Conductivity	AT	8172997	2022/08/18	2022/08/18	Roya Fathitil
Hexavalent Chromium in Soil by IC	IC/SPEC	8168227	2022/08/16	2022/08/17	Sousan Besharatlou
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	8177362	N/A	2022/08/20	Georgeta Rusu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	8172261	2022/08/17	2022/08/18	Anna Stuglik-Rolland
Acid Extractable Metals by ICPMS	ICP/MS	8170792	2022/08/17	2022/08/17	Daniel Teclu
Moisture	BAL	8166441	N/A	2022/08/15	Mathew Bowles
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	8172380	2022/08/17	2022/08/18	Jonghan Yoon
Polychlorinated Biphenyl in Soil	GC/ECD	8167215	2022/08/15	2022/08/16	Svitlana Shaula
pH CaCl2 EXTRACT	AT	8170601	2022/08/17	2022/08/17	Taslima Aktar
Sodium Adsorption Ratio (SAR)	CALC/MET	8165789	N/A	2022/08/22	Automated Statchk

TEST SUMMARY

Bureau Veritas ID: TLA824 **Collected:** 2022/08/11
Sample ID: BH22-5-4 **Shipped:**
Matrix: Soil **Received:** 2022/08/12

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	8165787	N/A	2022/08/18	Automated Statchk
1,3-Dichloropropene Sum	CALC	8165788	N/A	2022/08/18	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	8172261	2022/08/17	2022/08/18	Anna Stuglik-Rolland
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	8172380	2022/08/17	2022/08/18	Jonghan Yoon
Volatile Organic Compounds and F1 PHCs	GC/MSFD	8167324	N/A	2022/08/17	Juan Pangilinan

Bureau Veritas ID: TLA825 **Collected:** 2022/08/11
Sample ID: BH22-7-1 **Shipped:**
Matrix: Soil **Received:** 2022/08/12

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	8165787	N/A	2022/08/18	Automated Statchk
Hot Water Extractable Boron	ICP	8170680	2022/08/17	2022/08/19	Jaswinder Kaur
1,3-Dichloropropene Sum	CALC	8165788	N/A	2022/08/18	Automated Statchk
Free (WAD) Cyanide	TECH	8166916	2022/08/15	2022/08/16	Prgya Panchal
Conductivity	AT	8172997	2022/08/18	2022/08/18	Roya Fathitil
Hexavalent Chromium in Soil by IC	IC/SPEC	8168227	2022/08/16	2022/08/18	Sousan Besharatlou
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	8172261	2022/08/17	2022/08/18	Anna Stuglik-Rolland
Acid Extractable Metals by ICPMS	ICP/MS	8170792	2022/08/17	2022/08/17	Daniel Teclu
Total Metals in SPLP Leachate by ICPMS	ICP/MS	8196080	2022/08/30	2022/08/30	Azita Fazaeli
Moisture	BAL	8166441	N/A	2022/08/15	Mathew Bowles
Modified SPLP extraction - Weight		8194151	N/A	2022/08/30	Eddie On
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	8172380	2022/08/17	2022/08/18	Jonghan Yoon
pH CaCl2 EXTRACT	AT	8170601	2022/08/17	2022/08/17	Taslima Aktar
Sodium Adsorption Ratio (SAR)	CALC/MET	8165789	N/A	2022/08/22	Automated Statchk
Volatile Organic Compounds and F1 PHCs	GC/MSFD	8167324	N/A	2022/08/17	Juan Pangilinan

Bureau Veritas ID: TLA826 **Collected:** 2022/08/11
Sample ID: BH22-7-2 **Shipped:**
Matrix: Soil **Received:** 2022/08/12

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	8165787	N/A	2022/08/18	Automated Statchk
Hot Water Extractable Boron	ICP	8170680	2022/08/17	2022/08/19	Jaswinder Kaur
Free (WAD) Cyanide	TECH	8166916	2022/08/15	2022/08/16	Prgya Panchal
Conductivity	AT	8172997	2022/08/18	2022/08/18	Roya Fathitil
Hexavalent Chromium in Soil by IC	IC/SPEC	8168227	2022/08/16	2022/08/18	Sousan Besharatlou
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	8177362	N/A	2022/08/20	Georgeta Rusu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	8172261	2022/08/17	2022/08/18	Anna Stuglik-Rolland
Acid Extractable Metals by ICPMS	ICP/MS	8170792	2022/08/17	2022/08/17	Daniel Teclu
Moisture	BAL	8166441	N/A	2022/08/15	Mathew Bowles
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	8172380	2022/08/17	2022/08/18	Jonghan Yoon
Polychlorinated Biphenyl in Soil	GC/ECD	8167215	2022/08/15	2022/08/16	Svitlana Shaula
pH CaCl2 EXTRACT	AT	8170601	2022/08/17	2022/08/17	Taslima Aktar
Sodium Adsorption Ratio (SAR)	CALC/MET	8165789	N/A	2022/08/22	Automated Statchk

TEST SUMMARY

Bureau Veritas ID: TLA826 Dup
Sample ID: BH22-7-2
Matrix: Soil

Collected: 2022/08/11
Shipped:
Received: 2022/08/12

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
pH CaCl2 EXTRACT	AT	8170601	2022/08/17	2022/08/17	Taslima Aktar

Bureau Veritas ID: TLA827
Sample ID: BH22-7-3
Matrix: Soil

Collected: 2022/08/11
Shipped:
Received: 2022/08/12

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	8170680	2022/08/17	2022/08/19	Jaswinder Kaur
Free (WAD) Cyanide	TECH	8166916	2022/08/15	2022/08/16	Prgya Panchal
Conductivity	AT	8172997	2022/08/18	2022/08/18	Roya Fathitil
Hexavalent Chromium in Soil by IC	IC/SPEC	8168227	2022/08/16	2022/08/18	Sousan Besharatlou
Acid Extractable Metals by ICPMS	ICP/MS	8173026	2022/08/18	2022/08/18	Daniel Teclu
Moisture	BAL	8166441	N/A	2022/08/15	Mathew Bowles
pH CaCl2 EXTRACT	AT	8170601	2022/08/17	2022/08/17	Taslima Aktar
Sodium Adsorption Ratio (SAR)	CALC/MET	8165789	N/A	2022/08/22	Automated Statchk

Bureau Veritas ID: TLA828
Sample ID: QC-01
Matrix: Soil

Collected: 2022/08/11
Shipped:
Received: 2022/08/12

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	8165787	N/A	2022/08/18	Automated Statchk
1,3-Dichloropropene Sum	CALC	8165788	N/A	2022/08/18	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	8172261	2022/08/17	2022/08/18	Anna Stuglik-Rolland
Moisture	BAL	8166372	N/A	2022/08/15	Mathew Bowles
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	8172792	2022/08/17	2022/08/18	Jonghan Yoon
Volatile Organic Compounds and F1 PHCs	GC/MSFD	8167324	N/A	2022/08/17	Juan Pangilinan

Bureau Veritas ID: TLA829
Sample ID: QC-02
Matrix: Soil

Collected: 2022/08/11
Shipped:
Received: 2022/08/12

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	8170680	2022/08/17	2022/08/19	Jaswinder Kaur
Free (WAD) Cyanide	TECH	8166916	2022/08/15	2022/08/16	Prgya Panchal
Conductivity	AT	8172997	2022/08/18	2022/08/18	Roya Fathitil
Hexavalent Chromium in Soil by IC	IC/SPEC	8168227	2022/08/16	2022/08/17	Sousan Besharatlou
Acid Extractable Metals by ICPMS	ICP/MS	8170792	2022/08/17	2022/08/17	Daniel Teclu
Moisture	BAL	8166441	N/A	2022/08/15	Mathew Bowles
Polychlorinated Biphenyl in Soil	GC/ECD	8167215	2022/08/15	2022/08/16	Svitlana Shaula
pH CaCl2 EXTRACT	AT	8170601	2022/08/17	2022/08/17	Taslima Aktar
Sodium Adsorption Ratio (SAR)	CALC/MET	8165789	N/A	2022/08/22	Automated Statchk

GENERAL COMMENTS

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

Package 1	1.3°C

Revised report [2022/08/25] Task order added

Sample TLA822 [BH22-5-2] : Sample extracted past holding time. Analysis was performed past sample holding time. This may increase the variability associated with these results. Reported result in a minimum concentration and is not acceptable for establishing that the waste does not exceed the regulatory level.

Sample TLA826 [BH22-7-2] : F1 BTEX analysis: Detection limits were adjusted for sample weight.

Results relate only to the items tested.

Bureau Veritas 100 – 36 Antares Dr. Nepean, ON, K2E 7W5 Phone: 613-274-0573 Website: www.bvna.com

QUALITY ASSURANCE REPORT

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		Leachate Blank	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	Value	UNITS
8167215	Decachlorobiphenyl	2022/08/16	102	60 - 130	97	60 - 130	99	%				
8167324	4-Bromofluorobenzene	2022/08/17	101	60 - 140	101	60 - 140	89	%				
8167324	D10-o-Xylene	2022/08/17	107	60 - 130	102	60 - 130	88	%				
8167324	D4-1,2-Dichloroethane	2022/08/17	103	60 - 140	104	60 - 140	106	%				
8167324	D8-Toluene	2022/08/17	106	60 - 140	106	60 - 140	92	%				
8172261	o-Terphenyl	2022/08/18	88	60 - 130	92	60 - 130	99	%				
8172380	D10-Anthracene	2022/08/18	111	50 - 130	105	50 - 130	110	%				
8172380	D14-Terphenyl (FS)	2022/08/18	98	50 - 130	89	50 - 130	90	%				
8172380	D8-Acenaphthylene	2022/08/18	94	50 - 130	94	50 - 130	92	%				
8172792	D10-Anthracene	2022/08/17	103	50 - 130	104	50 - 130	110	%				
8172792	D14-Terphenyl (FS)	2022/08/17	105	50 - 130	109	50 - 130	108	%				
8172792	D8-Acenaphthylene	2022/08/17	91	50 - 130	95	50 - 130	92	%				
8177362	1,4-Difluorobenzene	2022/08/19	98	60 - 140	98	60 - 140	100	%				
8177362	4-Bromofluorobenzene	2022/08/19	104	60 - 140	104	60 - 140	98	%				
8177362	D10-o-Xylene	2022/08/19	108	60 - 140	96	60 - 140	96	%				
8177362	D4-1,2-Dichloroethane	2022/08/19	99	60 - 140	100	60 - 140	108	%				
8198689	Leachable (SPLP) 4-Bromofluorobenzene	2022/08/31	106	70 - 130	105	70 - 130	101	%				
8198689	Leachable (SPLP) D4-1,2-Dichloroethane	2022/08/31	95	70 - 130	97	70 - 130	96	%				
8198689	Leachable (SPLP) D8-Toluene	2022/08/31	99	70 - 130	100	70 - 130	97	%				
8166372	Moisture	2022/08/15							1.8	20		
8166441	Moisture	2022/08/15							1.8	20		
8166916	WAD Cyanide (Free)	2022/08/16	98	75 - 125	93	80 - 120	<0.01	ug/g	NC	35		
8167215	Aroclor 1242	2022/08/16					<0.010	ug/g	NC	50		
8167215	Aroclor 1248	2022/08/16					<0.010	ug/g	NC	50		
8167215	Aroclor 1254	2022/08/16					<0.010	ug/g	NC	50		
8167215	Aroclor 1260	2022/08/16	118	30 - 130	111	30 - 130	<0.010	ug/g	NC	50		
8167215	Total PCB	2022/08/16	118	30 - 130	111	30 - 130	<0.010	ug/g	NC	50		
8167324	1,1,1,2-Tetrachloroethane	2022/08/17	101	60 - 140	100	60 - 130	<0.040	ug/g	NC	50		
8167324	1,1,1-Trichloroethane	2022/08/17	103	60 - 140	99	60 - 130	<0.040	ug/g	NC	50		
8167324	1,1,2,2-Tetrachloroethane	2022/08/17	101	60 - 140	105	60 - 130	<0.040	ug/g	NC	50		
8167324	1,1,2-Trichloroethane	2022/08/17	107	60 - 140	107	60 - 130	<0.040	ug/g	NC	50		
8167324	1,1-Dichloroethane	2022/08/17	102	60 - 140	98	60 - 130	<0.040	ug/g	NC	50		

QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		Leachate Blank	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	Value	UNITS
8167324	1,1-Dichloroethylene	2022/08/17	105	60 - 140	98	60 - 130	<0.040	ug/g	NC	50		
8167324	1,2-Dichlorobenzene	2022/08/17	100	60 - 140	97	60 - 130	<0.040	ug/g	NC	50		
8167324	1,2-Dichloroethane	2022/08/17	99	60 - 140	99	60 - 130	<0.049	ug/g	NC	50		
8167324	1,2-Dichloropropane	2022/08/17	102	60 - 140	101	60 - 130	<0.040	ug/g	NC	50		
8167324	1,3-Dichlorobenzene	2022/08/17	100	60 - 140	96	60 - 130	<0.040	ug/g	NC	50		
8167324	1,4-Dichlorobenzene	2022/08/17	116	60 - 140	112	60 - 130	<0.040	ug/g	NC	50		
8167324	Acetone (2-Propanone)	2022/08/17	106	60 - 140	94	60 - 140	<0.49	ug/g	NC	50		
8167324	Benzene	2022/08/17	96	60 - 140	93	60 - 130	<0.0060	ug/g	NC	50		
8167324	Bromodichloromethane	2022/08/17	104	60 - 140	103	60 - 130	<0.040	ug/g	NC	50		
8167324	Bromoform	2022/08/17	98	60 - 140	101	60 - 130	<0.040	ug/g	NC	50		
8167324	Bromomethane	2022/08/17	108	60 - 140	99	60 - 140	<0.040	ug/g	NC	50		
8167324	Carbon Tetrachloride	2022/08/17	100	60 - 140	96	60 - 130	<0.040	ug/g	NC	50		
8167324	Chlorobenzene	2022/08/17	100	60 - 140	98	60 - 130	<0.040	ug/g	NC	50		
8167324	Chloroform	2022/08/17	102	60 - 140	99	60 - 130	<0.040	ug/g	NC	50		
8167324	cis-1,2-Dichloroethylene	2022/08/17	106	60 - 140	103	60 - 130	<0.040	ug/g	NC	50		
8167324	cis-1,3-Dichloropropene	2022/08/17	104	60 - 140	97	60 - 130	<0.030	ug/g	NC	50		
8167324	Dibromochloromethane	2022/08/17	97	60 - 140	99	60 - 130	<0.040	ug/g	NC	50		
8167324	Dichlorodifluoromethane (FREON 12)	2022/08/17	123	60 - 140	117	60 - 140	<0.040	ug/g	NC	50		
8167324	Ethylbenzene	2022/08/17	96	60 - 140	92	60 - 130	<0.010	ug/g	NC	50		
8167324	Ethylene Dibromide	2022/08/17	98	60 - 140	99	60 - 130	<0.040	ug/g	NC	50		
8167324	F1 (C6-C10) - BTEX	2022/08/17					<10	ug/g	NC	30		
8167324	F1 (C6-C10)	2022/08/17	104	60 - 140	100	80 - 120	<10	ug/g	NC	30		
8167324	Hexane	2022/08/17	109	60 - 140	101	60 - 130	<0.040	ug/g	NC	50		
8167324	Methyl Ethyl Ketone (2-Butanone)	2022/08/17	99	60 - 140	94	60 - 140	<0.40	ug/g	NC	50		
8167324	Methyl Isobutyl Ketone	2022/08/17	88	60 - 140	89	60 - 130	<0.40	ug/g	NC	50		
8167324	Methyl t-butyl ether (MTBE)	2022/08/17	95	60 - 140	91	60 - 130	<0.040	ug/g	NC	50		
8167324	Methylene Chloride(Dichloromethane)	2022/08/17	114	60 - 140	112	60 - 130	<0.049	ug/g	NC	50		
8167324	o-Xylene	2022/08/17	99	60 - 140	96	60 - 130	<0.020	ug/g	NC	50		
8167324	p+m-Xylene	2022/08/17	102	60 - 140	97	60 - 130	<0.020	ug/g	NC	50		
8167324	Styrene	2022/08/17	93	60 - 140	91	60 - 130	<0.040	ug/g	NC	50		
8167324	Tetrachloroethylene	2022/08/17	94	60 - 140	89	60 - 130	<0.040	ug/g	NC	50		
8167324	Toluene	2022/08/17	98	60 - 140	94	60 - 130	<0.020	ug/g	NC	50		

QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		Leachate Blank	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	Value	UNITS
8167324	Total Xylenes	2022/08/17					<0.020	ug/g	NC	50		
8167324	trans-1,2-Dichloroethylene	2022/08/17	105	60 - 140	100	60 - 130	<0.040	ug/g	NC	50		
8167324	trans-1,3-Dichloropropene	2022/08/17	113	60 - 140	103	60 - 130	<0.040	ug/g	NC	50		
8167324	Trichloroethylene	2022/08/17	105	60 - 140	100	60 - 130	<0.010	ug/g	NC	50		
8167324	Trichlorofluoromethane (FREON 11)	2022/08/17	103	60 - 140	97	60 - 130	<0.040	ug/g	NC	50		
8167324	Vinyl Chloride	2022/08/17	98	60 - 140	95	60 - 130	<0.019	ug/g	NC	50		
8168227	Chromium (VI)	2022/08/17	36 (1)	70 - 130	91	80 - 120	<0.18	ug/g	NC	35		
8170601	Available (CaCl2) pH	2022/08/17			100	97 - 103			0.089	N/A		
8170680	Hot Water Ext. Boron (B)	2022/08/19	99	75 - 125	97	75 - 125	<0.050	ug/g	9.3	40		
8170792	Acid Extractable Antimony (Sb)	2022/08/18	101	75 - 125	98	80 - 120	<0.20	ug/g	8.6	30		
8170792	Acid Extractable Arsenic (As)	2022/08/18	102	75 - 125	93	80 - 120	<1.0	ug/g	6.1	30		
8170792	Acid Extractable Barium (Ba)	2022/08/18	NC	75 - 125	95	80 - 120	<0.50	ug/g	5.5	30		
8170792	Acid Extractable Beryllium (Be)	2022/08/18	105	75 - 125	95	80 - 120	<0.20	ug/g	6.3	30		
8170792	Acid Extractable Boron (B)	2022/08/18	93	75 - 125	96	80 - 120	<5.0	ug/g	15	30		
8170792	Acid Extractable Cadmium (Cd)	2022/08/18	105	75 - 125	96	80 - 120	<0.10	ug/g	22	30		
8170792	Acid Extractable Chromium (Cr)	2022/08/18	NC	75 - 125	96	80 - 120	<1.0	ug/g	6.9	30		
8170792	Acid Extractable Cobalt (Co)	2022/08/18	105	75 - 125	97	80 - 120	<0.10	ug/g	1.6	30		
8170792	Acid Extractable Copper (Cu)	2022/08/18	NC	75 - 125	96	80 - 120	<0.50	ug/g	11	30		
8170792	Acid Extractable Lead (Pb)	2022/08/18	NC	75 - 125	97	80 - 120	<1.0	ug/g	16	30		
8170792	Acid Extractable Mercury (Hg)	2022/08/18	99	75 - 125	85	80 - 120	<0.050	ug/g	1.1	30		
8170792	Acid Extractable Molybdenum (Mo)	2022/08/18	105	75 - 125	97	80 - 120	<0.50	ug/g	5.9	30		
8170792	Acid Extractable Nickel (Ni)	2022/08/18	NC	75 - 125	98	80 - 120	<0.50	ug/g	25	30		
8170792	Acid Extractable Selenium (Se)	2022/08/18	106	75 - 125	96	80 - 120	<0.50	ug/g	NC	30		
8170792	Acid Extractable Silver (Ag)	2022/08/18	110	75 - 125	98	80 - 120	<0.20	ug/g	149 (2)	30		
8170792	Acid Extractable Thallium (Tl)	2022/08/18	108	75 - 125	98	80 - 120	<0.050	ug/g	29	30		
8170792	Acid Extractable Uranium (U)	2022/08/18	110	75 - 125	93	80 - 120	<0.050	ug/g	3.2	30		
8170792	Acid Extractable Vanadium (V)	2022/08/18	111	75 - 125	96	80 - 120	<5.0	ug/g	4.8	30		
8170792	Acid Extractable Zinc (Zn)	2022/08/18	NC	75 - 125	101	80 - 120	<5.0	ug/g	0.0021	30		
8172261	F2 (C10-C16 Hydrocarbons)	2022/08/18	100	60 - 130	104	80 - 120	<10	ug/g	NC	30		
8172261	F3 (C16-C34 Hydrocarbons)	2022/08/18	99	60 - 130	105	80 - 120	<50	ug/g	NC	30		
8172261	F4 (C34-C50 Hydrocarbons)	2022/08/18	100	60 - 130	105	80 - 120	<50	ug/g	NC	30		
8172380	1-Methylnaphthalene	2022/08/18	104	50 - 130	100	50 - 130	<0.0050	ug/g	NC	40		

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		Leachate Blank	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	Value	UNITS
8172380	2-Methylnaphthalene	2022/08/18	100	50 - 130	96	50 - 130	<0.0050	ug/g	NC	40		
8172380	Acenaphthene	2022/08/18	107	50 - 130	101	50 - 130	<0.0050	ug/g	NC	40		
8172380	Acenaphthylene	2022/08/18	101	50 - 130	96	50 - 130	<0.0050	ug/g	NC	40		
8172380	Anthracene	2022/08/18	113	50 - 130	108	50 - 130	<0.0050	ug/g	NC	40		
8172380	Benzo(a)anthracene	2022/08/18	114	50 - 130	108	50 - 130	<0.0050	ug/g	NC	40		
8172380	Benzo(a)pyrene	2022/08/18	95	50 - 130	91	50 - 130	<0.0050	ug/g	NC	40		
8172380	Benzo(b/j)fluoranthene	2022/08/18	106	50 - 130	102	50 - 130	<0.0050	ug/g	NC	40		
8172380	Benzo(g,h,i)perylene	2022/08/18	100	50 - 130	96	50 - 130	<0.0050	ug/g	NC	40		
8172380	Benzo(k)fluoranthene	2022/08/18	101	50 - 130	95	50 - 130	<0.0050	ug/g	NC	40		
8172380	Biphenyl	2022/08/18	100	50 - 130	96	50 - 130	<0.0050	ug/g				
8172380	Chrysene	2022/08/18	114	50 - 130	109	50 - 130	<0.0050	ug/g	NC	40		
8172380	Dibenzo(a,h)anthracene	2022/08/18	98	50 - 130	91	50 - 130	<0.0050	ug/g	NC	40		
8172380	Fluoranthene	2022/08/18	112	50 - 130	104	50 - 130	<0.0050	ug/g	NC	40		
8172380	Fluorene	2022/08/18	104	50 - 130	100	50 - 130	<0.0050	ug/g	NC	40		
8172380	Indeno(1,2,3-cd)pyrene	2022/08/18	102	50 - 130	99	50 - 130	<0.0050	ug/g	NC	40		
8172380	Naphthalene	2022/08/18	99	50 - 130	96	50 - 130	<0.0050	ug/g	NC	40		
8172380	Phenanthrene	2022/08/18	109	50 - 130	103	50 - 130	<0.0050	ug/g	NC	40		
8172380	Pyrene	2022/08/18	113	50 - 130	104	50 - 130	<0.0050	ug/g	NC	40		
8172792	1-Methylnaphthalene	2022/08/18	97	50 - 130	99	50 - 130	<0.0050	ug/g	NC	40		
8172792	2-Methylnaphthalene	2022/08/18	94	50 - 130	96	50 - 130	<0.0050	ug/g	NC	40		
8172792	Acenaphthene	2022/08/18	100	50 - 130	100	50 - 130	<0.0050	ug/g	NC	40		
8172792	Acenaphthylene	2022/08/18	98	50 - 130	98	50 - 130	<0.0050	ug/g	NC	40		
8172792	Anthracene	2022/08/18	110	50 - 130	110	50 - 130	<0.0050	ug/g	NC	40		
8172792	Benzo(a)anthracene	2022/08/18	116	50 - 130	112	50 - 130	<0.0050	ug/g	24	40		
8172792	Benzo(a)pyrene	2022/08/18	95	50 - 130	93	50 - 130	<0.0050	ug/g	25	40		
8172792	Benzo(b/j)fluoranthene	2022/08/18	96	50 - 130	101	50 - 130	<0.0050	ug/g	23	40		
8172792	Benzo(g,h,i)perylene	2022/08/18	110	50 - 130	104	50 - 130	<0.0050	ug/g	22	40		
8172792	Benzo(k)fluoranthene	2022/08/18	93	50 - 130	97	50 - 130	<0.0050	ug/g	NC	40		
8172792	Biphenyl	2022/08/17	92	50 - 130	94	50 - 130	<0.0050	ug/g				
8172792	Chrysene	2022/08/18	111	50 - 130	108	50 - 130	<0.0050	ug/g	25	40		
8172792	Dibenzo(a,h)anthracene	2022/08/18	103	50 - 130	94	50 - 130	<0.0050	ug/g	NC	40		
8172792	Fluoranthene	2022/08/18	119	50 - 130	114	50 - 130	<0.0050	ug/g	33	40		

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		Leachate Blank	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	Value	UNITS
8172792	Fluorene	2022/08/18	101	50 - 130	101	50 - 130	<0.0050	ug/g	NC	40		
8172792	Indeno(1,2,3-cd)pyrene	2022/08/18	111	50 - 130	106	50 - 130	<0.0050	ug/g	19	40		
8172792	Naphthalene	2022/08/18	93	50 - 130	96	50 - 130	<0.0050	ug/g	NC	40		
8172792	Phenanthrene	2022/08/18	108	50 - 130	104	50 - 130	<0.0050	ug/g	NC	40		
8172792	Pyrene	2022/08/18	120	50 - 130	116	50 - 130	<0.0050	ug/g	32	40		
8172997	Conductivity	2022/08/18			99	90 - 110	<0.002	mS/cm	0	10		
8173026	Acid Extractable Antimony (Sb)	2022/08/18	100	75 - 125	98	80 - 120	<0.20	ug/g	13	30		
8173026	Acid Extractable Arsenic (As)	2022/08/18	104	75 - 125	95	80 - 120	<1.0	ug/g	2.6	30		
8173026	Acid Extractable Barium (Ba)	2022/08/18	NC	75 - 125	95	80 - 120	<0.50	ug/g	9.3	30		
8173026	Acid Extractable Beryllium (Be)	2022/08/18	108	75 - 125	94	80 - 120	<0.20	ug/g	NC	30		
8173026	Acid Extractable Boron (B)	2022/08/18	103	75 - 125	91	80 - 120	<5.0	ug/g	NC	30		
8173026	Acid Extractable Cadmium (Cd)	2022/08/18	105	75 - 125	94	80 - 120	<0.10	ug/g	NC	30		
8173026	Acid Extractable Chromium (Cr)	2022/08/18	106	75 - 125	95	80 - 120	<1.0	ug/g	7.1	30		
8173026	Acid Extractable Cobalt (Co)	2022/08/18	106	75 - 125	96	80 - 120	<0.10	ug/g	9.9	30		
8173026	Acid Extractable Copper (Cu)	2022/08/18	100	75 - 125	97	80 - 120	<0.50	ug/g	4.6	30		
8173026	Acid Extractable Lead (Pb)	2022/08/18	NC	75 - 125	95	80 - 120	<1.0	ug/g	8.8	30		
8173026	Acid Extractable Mercury (Hg)	2022/08/18	95	75 - 125	84	80 - 120	<0.050	ug/g	12	30		
8173026	Acid Extractable Molybdenum (Mo)	2022/08/18	105	75 - 125	95	80 - 120	<0.50	ug/g	NC	30		
8173026	Acid Extractable Nickel (Ni)	2022/08/18	106	75 - 125	96	80 - 120	<0.50	ug/g	9.1	30		
8173026	Acid Extractable Selenium (Se)	2022/08/18	103	75 - 125	96	80 - 120	<0.50	ug/g	NC	30		
8173026	Acid Extractable Silver (Ag)	2022/08/18	103	75 - 125	94	80 - 120	<0.20	ug/g	NC	30		
8173026	Acid Extractable Thallium (Tl)	2022/08/18	108	75 - 125	96	80 - 120	<0.050	ug/g	5.6	30		
8173026	Acid Extractable Uranium (U)	2022/08/18	106	75 - 125	94	80 - 120	<0.050	ug/g	2.4	30		
8173026	Acid Extractable Vanadium (V)	2022/08/18	105	75 - 125	96	80 - 120	<5.0	ug/g	6.1	30		
8173026	Acid Extractable Zinc (Zn)	2022/08/18	NC	75 - 125	95	80 - 120	<5.0	ug/g	1.5	30		
8177362	Benzene	2022/08/19	96	50 - 140	86	50 - 140	<0.020	ug/g	NC	50		
8177362	Ethylbenzene	2022/08/19	110	50 - 140	99	50 - 140	<0.020	ug/g	NC	50		
8177362	F1 (C6-C10) - BTEX	2022/08/19					<10	ug/g	NC	30		
8177362	F1 (C6-C10)	2022/08/19	112	60 - 140	99	80 - 120	<10	ug/g	NC	30		
8177362	o-Xylene	2022/08/19	109	50 - 140	97	50 - 140	<0.020	ug/g	NC	50		
8177362	p+m-Xylene	2022/08/19	108	50 - 140	96	50 - 140	<0.040	ug/g	NC	50		
8177362	Toluene	2022/08/19	102	50 - 140	90	50 - 140	<0.020	ug/g	NC	50		

QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		Leachate Blank	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	Value	UNITS
8177362	Total Xylenes	2022/08/19					<0.040	ug/g	NC	50		
8196080	Leachable (SPLP) Antimony (Sb)	2022/08/31	106	80 - 120	105	80 - 120	<0.5	ug/L	2.3	35	<0.5	ug/L
8196080	Leachable (SPLP) Arsenic (As)	2022/08/31	99	80 - 120	99	80 - 120	<1	ug/L	8.6	35	<1	ug/L
8196080	Leachable (SPLP) Barium (Ba)	2022/08/31	100	80 - 120	100	80 - 120	<5	ug/L	3.6	35	<5	ug/L
8196080	Leachable (SPLP) Beryllium (Be)	2022/08/31	105	80 - 120	104	80 - 120	<0.5	ug/L	NC	35	<0.5	ug/L
8196080	Leachable (SPLP) Boron (B)	2022/08/31	99	80 - 120	99	80 - 120	<10	ug/L	3.1	35	<10	ug/L
8196080	Leachable (SPLP) Cadmium (Cd)	2022/08/31	104	80 - 120	103	80 - 120	<0.1	ug/L	NC	35	<0.1	ug/L
8196080	Leachable (SPLP) Chromium (Cr)	2022/08/31	97	80 - 120	96	80 - 120	<5	ug/L	NC	35	<5	ug/L
8196080	Leachable (SPLP) Cobalt (Co)	2022/08/31	96	80 - 120	97	80 - 120	<0.5	ug/L	7.5	35	<0.5	ug/L
8196080	Leachable (SPLP) Copper (Cu)	2022/08/31	99	80 - 120	97	80 - 120	<1	ug/L	6.3	35	<1	ug/L
8196080	Leachable (SPLP) Lead (Pb)	2022/08/31	97	80 - 120	99	80 - 120	<0.5	ug/L	NC	35	<0.5	ug/L
8196080	Leachable (SPLP) Molybdenum (Mo)	2022/08/31	103	80 - 120	101	80 - 120	<1	ug/L	1.3	35	<1	ug/L
8196080	Leachable (SPLP) Nickel (Ni)	2022/08/31	97	80 - 120	98	80 - 120	<1	ug/L	8.8	35	<1	ug/L
8196080	Leachable (SPLP) Selenium (Se)	2022/08/31	105	80 - 120	109	80 - 120	<2	ug/L	NC	35	<2	ug/L
8196080	Leachable (SPLP) Silver (Ag)	2022/08/31	103	80 - 120	103	80 - 120	<0.1	ug/L	NC	35	<0.1	ug/L
8196080	Leachable (SPLP) Thallium (Tl)	2022/08/31	97	80 - 120	97	80 - 120	<0.05	ug/L	NC	35	<0.05	ug/L
8196080	Leachable (SPLP) Uranium (U)	2022/08/31	96	80 - 120	96	80 - 120	<0.1	ug/L	NC	35	<0.1	ug/L
8196080	Leachable (SPLP) Vanadium (V)	2022/08/31	98	80 - 120	97	80 - 120	<1	ug/L	2.4	35	<1	ug/L
8196080	Leachable (SPLP) Zinc (Zn)	2022/08/31	102	80 - 120	103	80 - 120	<5	ug/L	NC	35	<5	ug/L
8198689	Leachable (SPLP) 1,1,1,2-Tetrachloroethane	2022/08/31	99	70 - 130	102	70 - 130	<0.40	ug/L	NC	30		
8198689	Leachable (SPLP) 1,1,2,2-Tetrachloroethane	2022/08/31	91	70 - 130	100	70 - 130	<0.40	ug/L	NC	30		
8198689	Leachable (SPLP) 1,1,2-Trichloroethane	2022/08/31	95	70 - 130	101	70 - 130	<0.40	ug/L	NC	30		
8198689	Leachable (SPLP) 1,1-Dichloroethane	2022/08/31	100	70 - 130	100	70 - 130	<0.40	ug/L	NC	30		
8198689	Leachable (SPLP) 1,1-Dichloroethylene	2022/08/31	98	70 - 130	97	70 - 130	<0.40	ug/L	NC	30		
8198689	Leachable (SPLP) 1,2-Dichlorobenzene	2022/08/31	97	70 - 130	104	70 - 130	<0.40	ug/L	NC	30		
8198689	Leachable (SPLP) 1,2-Dichloroethane	2022/08/31	93	70 - 130	96	70 - 130	<0.40	ug/L	NC	30		
8198689	Leachable (SPLP) 1,2-Dichloropropane	2022/08/31	93	70 - 130	95	70 - 130	<0.40	ug/L	NC	30		
8198689	Leachable (SPLP) 1,4-Dichlorobenzene	2022/08/31	112	70 - 130	118	70 - 130	<0.40	ug/L	NC	30		
8198689	Leachable (SPLP) Bromomethane	2022/08/31	89	60 - 140	89	60 - 140	<0.40	ug/L	NC	30		
8198689	Leachable (SPLP) Carbon Tetrachloride	2022/08/31	98	70 - 130	96	70 - 130	<0.19	ug/L	NC	30		
8198689	Leachable (SPLP) Chloroform	2022/08/31	97	70 - 130	96	70 - 130	<0.90	ug/L	NC	30		
8198689	Leachable (SPLP) cis-1,2-Dichloroethylene	2022/08/31	103	70 - 130	103	70 - 130	<0.40	ug/L	NC	30		

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		Leachate Blank	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	Value	UNITS
8198689	Leachable (SPLP) cis-1,3-Dichloropropene	2022/08/31	95	70 - 130	98	70 - 130	<0.30	ug/L	NC	30		
8198689	Leachable (SPLP) Ethylene Dibromide	2022/08/31	94	70 - 130	100	70 - 130	<0.19	ug/L	NC	30		
8198689	Leachable (SPLP) Tetrachloroethylene	2022/08/31	95	70 - 130	93	70 - 130	<0.40	ug/L	NC	30		
8198689	Leachable (SPLP) trans-1,2-Dichloroethylene	2022/08/31	99	70 - 130	98	70 - 130	<0.40	ug/L	NC	30		
8198689	Leachable (SPLP) trans-1,3-Dichloropropene	2022/08/31	96	70 - 130	102	70 - 130	<0.30	ug/L	NC	30		
8198689	Leachable (SPLP) Trichloroethylene	2022/08/31	105	70 - 130	103	70 - 130	<0.40	ug/L	NC	30		

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.

Leachate Blank: A blank matrix containing all reagents used in the leaching procedure. Used to determine any process contamination.

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 re-analyzed 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:

Anastassia Hamanov, Scientific Specialist

Cristina Carriere, Senior Scientific Specialist

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Bureau Veritas 100 – 36 Antares Dr. Nepean, ON, K2E 7W5 Phone: 613-274-0573 Website: www.bvna.com

www.BVNA.com

6740 Campobello Road, Mississauga, Ontario L5N 2L8
Phone 905-817-5700 Fax 905-817-5779 Toll Free 800-563-6266

CHAIN OF CUSTODY RECORD
ENV COC - 00014v2

Page 1 of

12-Aug-22 08:30
Julie Clement
C2M9490
RJM ENV-1443

Invoice Information	Invoice to (requires report) ☐	Report Information (if differs from invoice)		Project Information	
Company:	Stantec	Company:		Quotation #:	
Contact Name:	Steve Hannington	Contact Name:		P.O. #/ AFE#:	
Street Address:	334 Clyde Ave	Street Address:		Project #:	121624271
City:	Ottawa Prov: Postal Code:	City: Prov: Postal Code:		Site #:	
Phone:		Phone:		Site Location:	
Email:	Steve.Hannington@Stantec.com	Email:	→	Site Location Province:	
Copies:		Copies:		Sampled By:	Josh PR

Regulatory Criteria

REG 153: ☒ Table 1 ☐ Table 2 ☐ Table 3 ☐ Table ___ ☐ Res/Park ☐ Ind/Comm ☐ Agri/other ☐ Med/Fine ☐ Course ☐ For RSC

OTHER: ☐ CCME ☐ Reg 558* *min 3 day TAT ☐ MISA ☐ PWQO ☒ Reg 406, Table: 3.1 ☐ Sanitary Sewer Bylaw ☐ Storm Sewer Bylaw Municipality ☐ Other:

Include Criteria on Certificate of Analysis (check if yes): ☐

SAMPLES MUST BE KEPT COOL (<10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

Analysis columns: 10 Metals/Inorganics 153 Reg; 11 BTEX/F1; 12 PHC F2-F4; 13 PAHs; 14 PCBs; 15 VOCs; 17 SPLP Metals; 18 SPLP VOCs

Regular Turnaround Time (TAT): ☒ 5 to 7 Day ☐ 10 Day
Rush Turnaround Time (TAT) Surcharges apply: ☐ Same Day ☐ 1 Day ☐ 2 Day ☐ 3 Day ☐ 4 Day
Date Required: YY MM DD

#	Sample Identification	YY	MM	DD	HH	MM	Matrix	Metals/Inorganics	BTEX/F1	PHC F2-F4	PAHs	PCBs	VOCs	SPLP Metals	SPLP VOCs	# of containers submitted	Comments
1	BH22-3-1	22	08	11	9	40	Soil	X	X	X	X	X (struck)		X		4	Hold for SPLP
2	BH22-3-2	↓	↓	↓	10	00	↓	X	X	X	X	X		X		4	↓
3	BH22-3-3				10	10		X	X	X	X	X (struck)	X	X	X	4	
4	BH22-5-1				12	40		X	X	X	X	X		X		4	
5	BH22-5-2				12	50		X	X	X	X	X (struck)	X	X	X	4	
6	BH22-5-3				13	00		X	X	X	X	X		X		4	
7	BH22-5-4				13	10			X	X	X	X (struck)	X		X	3	
8	BH22-7-1				14	20		X	X	X	X	X (struck)	X	X	X	4	(Analyze for PCBs)
9	BH22-7-2				14	40		X	X	X	X	X (struck)	X (struck)	X	X (struck)	4	
10	BH22-7-3				14	50		X				X (struck)		X		1	
11	QC-01								X	X	X	X (struck)	X		X	3	
12	QC-02							X				X		X		4	

*UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS AND CONDITIONS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/TERMS-AND-CONDITIONS OR BY CALLING THE LABORATORY LISTED ABOVE TO OBTAIN A COPY

LAB USE ONLY	Yes	No	°C				LAB USE ONLY	Yes	No	°C				LAB USE ONLY	Yes	No	°C				Temperature reading by:
Seal present			ice pack	2	1	1	Seal present	✓			2	3	5	Seal present	✓			2	2	1	
Seal intact							Seal intact	✓						Seal intact							
Cooling media present							Cooling media present	✓						Cooling media present	✓						Special instructions

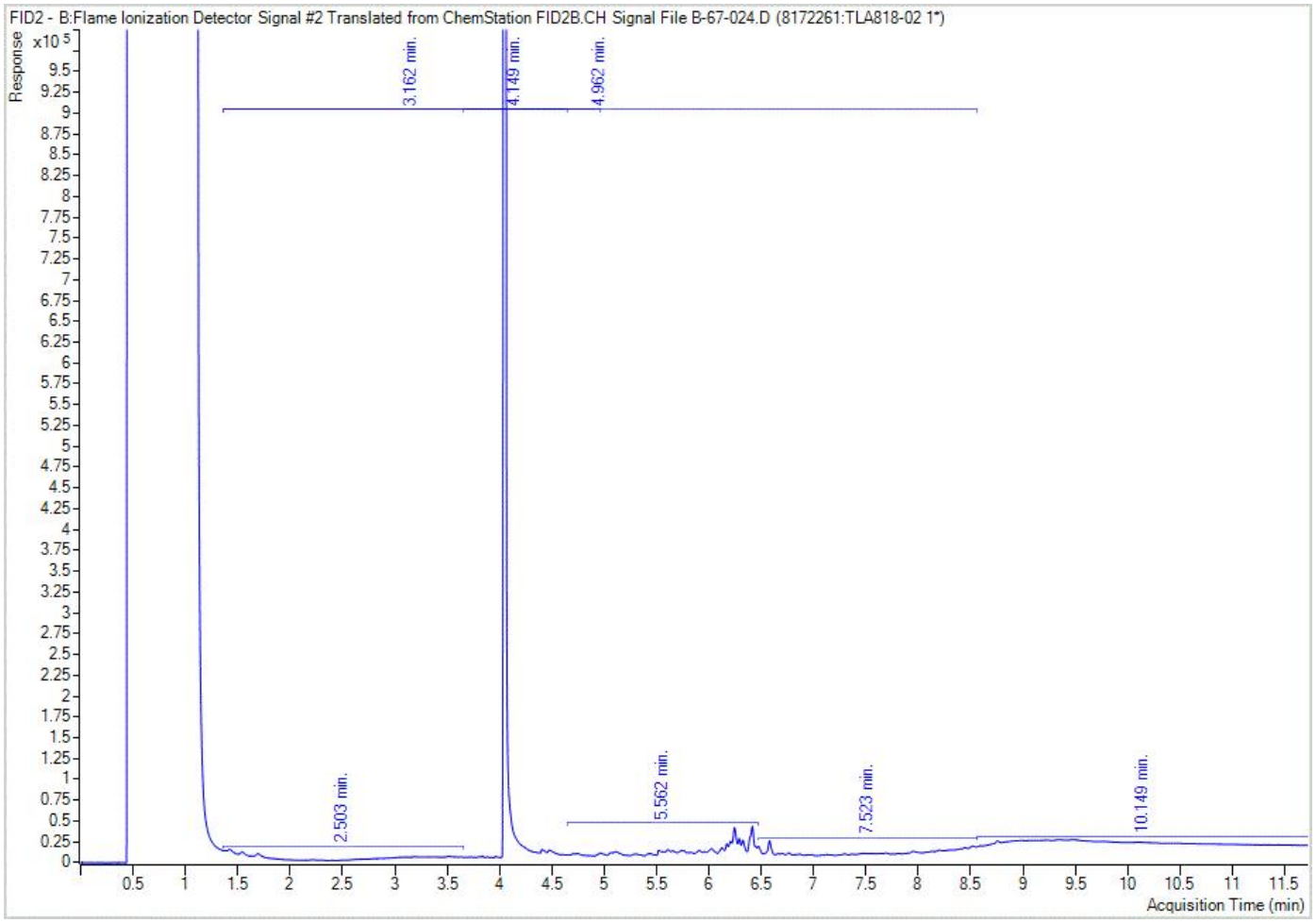
	Relinquished by: (Signature/ Print)	YY	MM	DD	HH	MM	Received by: (Signature/ Print)	YY	MM	DD	HH	MM
1	[signature]		08	11	17	20	Angelica Santiago ASA	2022	08	12	08	30
2							[signature] / ISABEL	2022	08	13	9	22

RECEIVED IN OTTAWA

Bureau Veritas Job #: C2M9490
Report Date: 2022/09/01
Bureau Veritas Sample: TLA818

Stantec Consulting Ltd
Client Project #: 121624271.600
Client ID: BH22-3-1

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

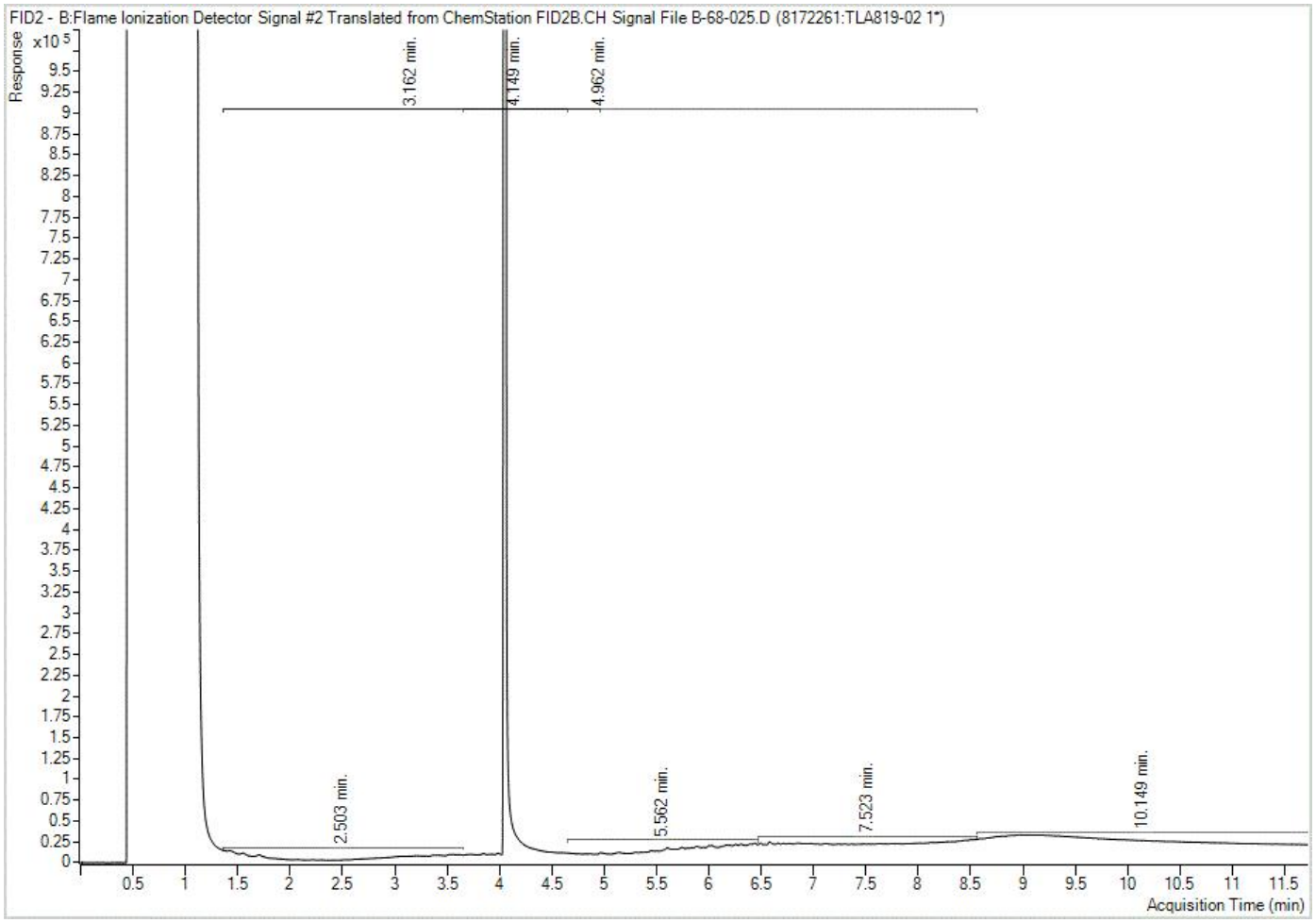


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C2M9490
Report Date: 2022/09/01
Bureau Veritas Sample: TLA819

Stantec Consulting Ltd
Client Project #: 121624271.600
Client ID: BH22-3-2

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

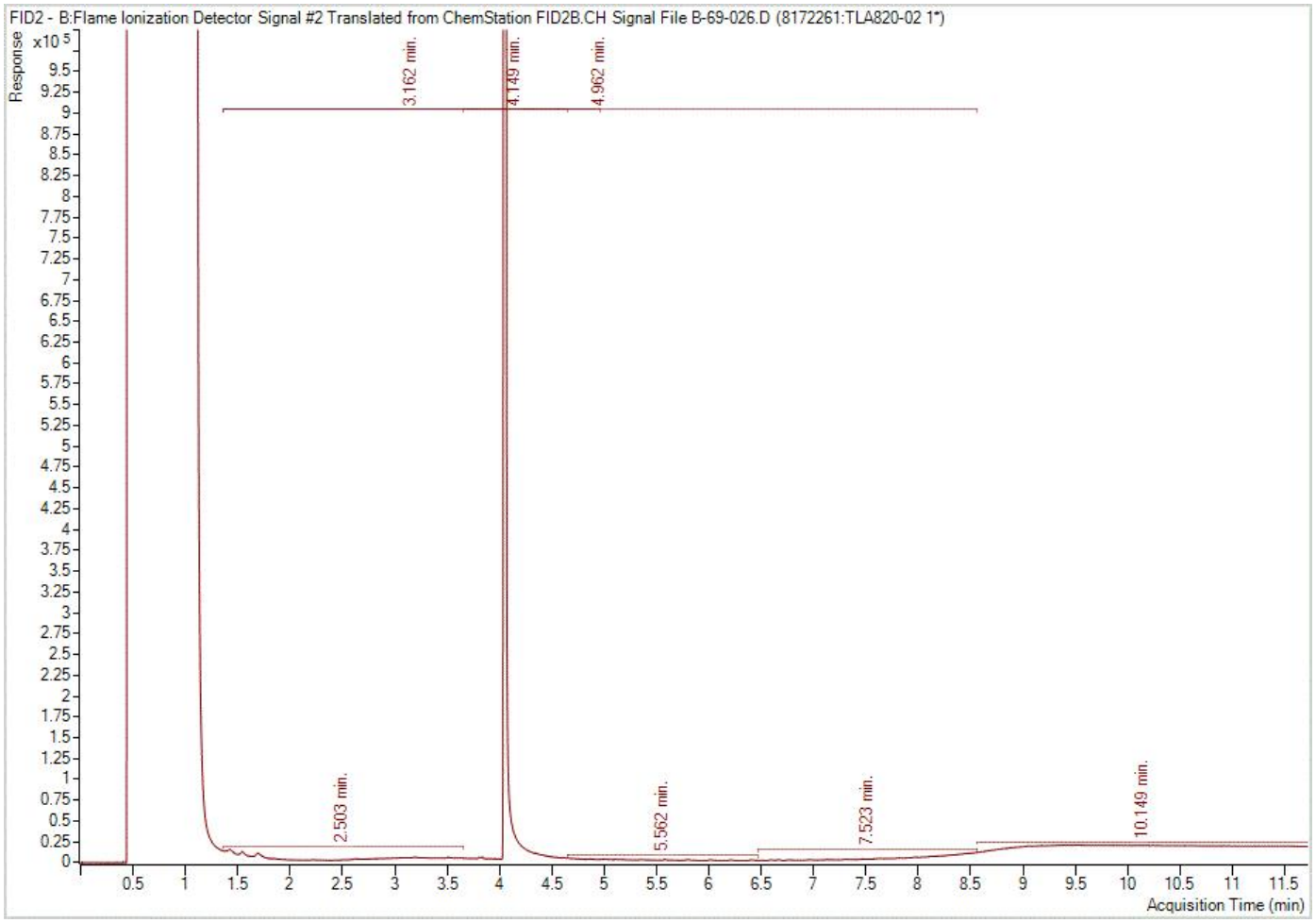


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C2M9490
Report Date: 2022/09/01
Bureau Veritas Sample: TLA820

Stantec Consulting Ltd
Client Project #: 121624271.600
Client ID: BH22-3-3

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

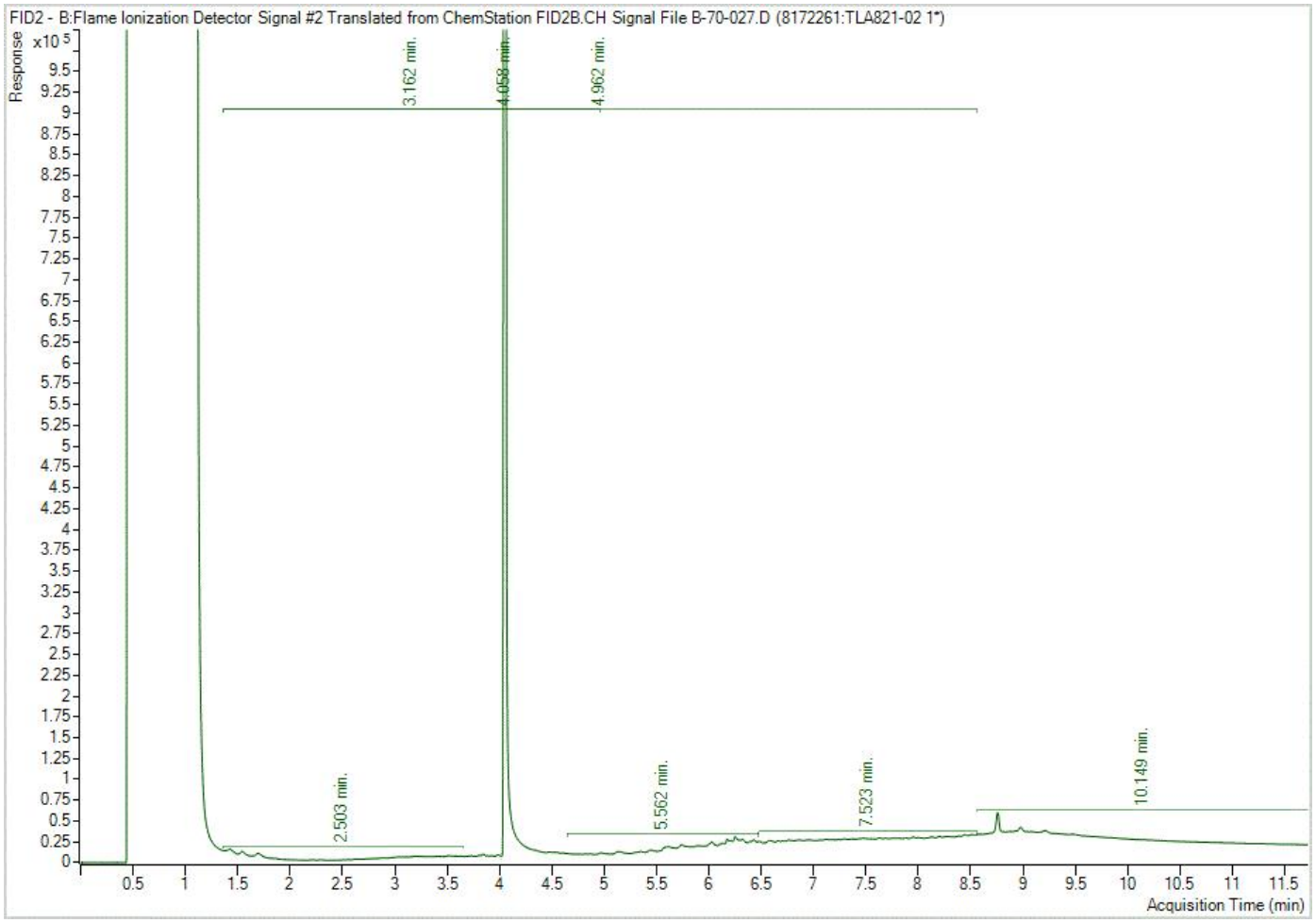


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C2M9490
Report Date: 2022/09/01
Bureau Veritas Sample: TLA821

Stantec Consulting Ltd
Client Project #: 121624271.600
Client ID: BH22-5-1

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

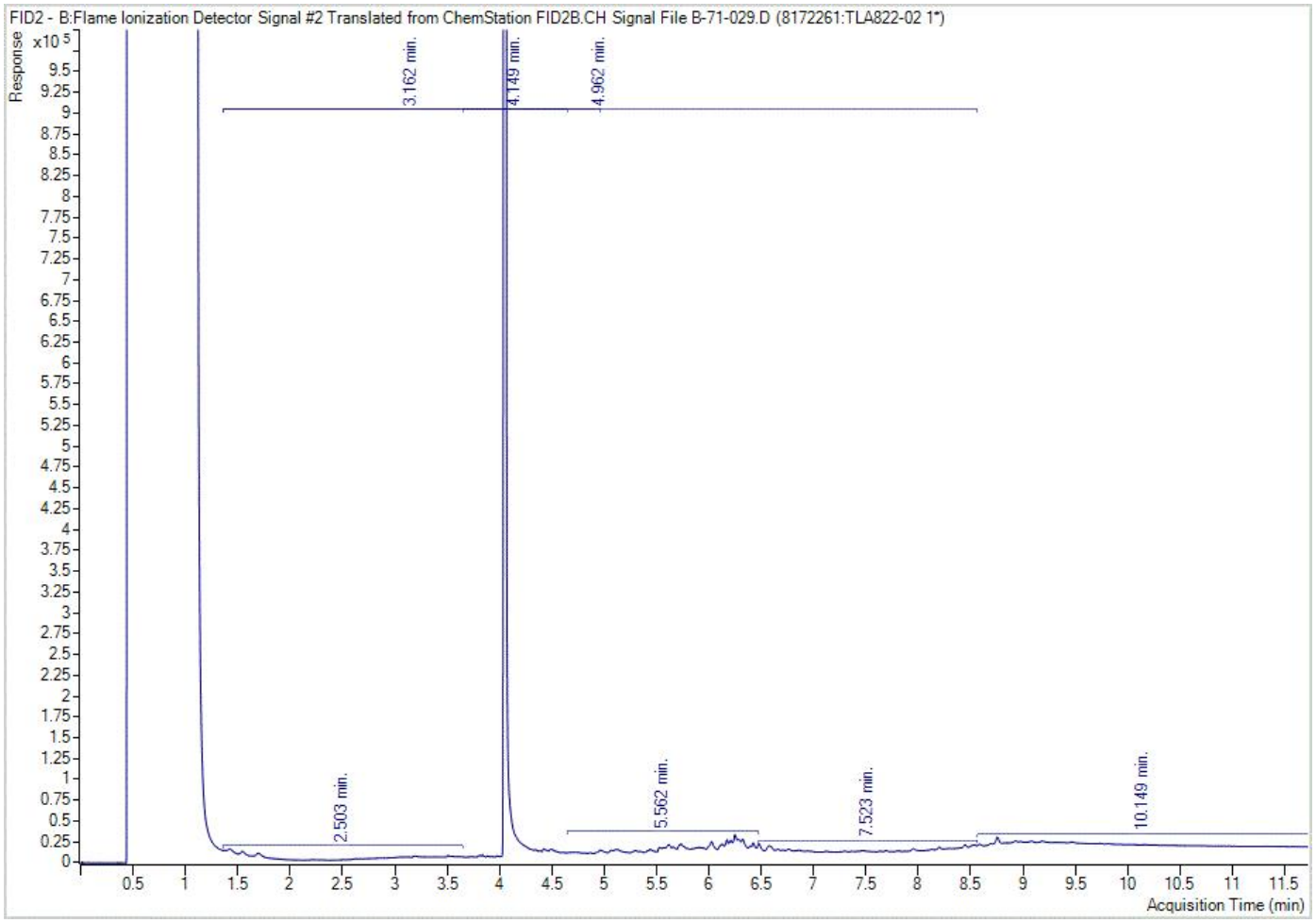


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C2M9490
Report Date: 2022/09/01
Bureau Veritas Sample: TLA822

Stantec Consulting Ltd
Client Project #: 121624271.600
Client ID: BH22-5-2

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

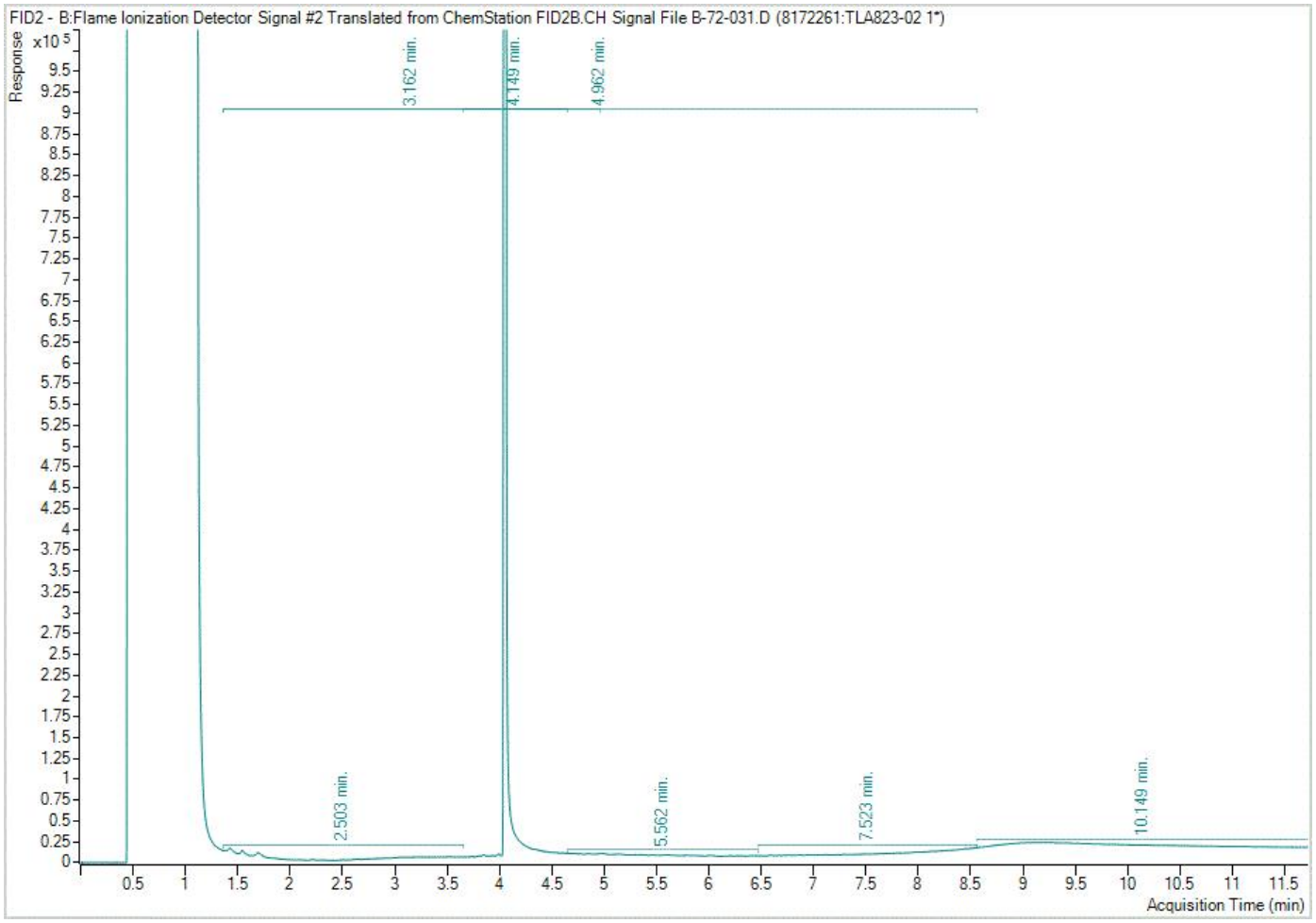


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C2M9490
Report Date: 2022/09/01
Bureau Veritas Sample: TLA823

Stantec Consulting Ltd
Client Project #: 121624271.600
Client ID: BH22-5-3

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

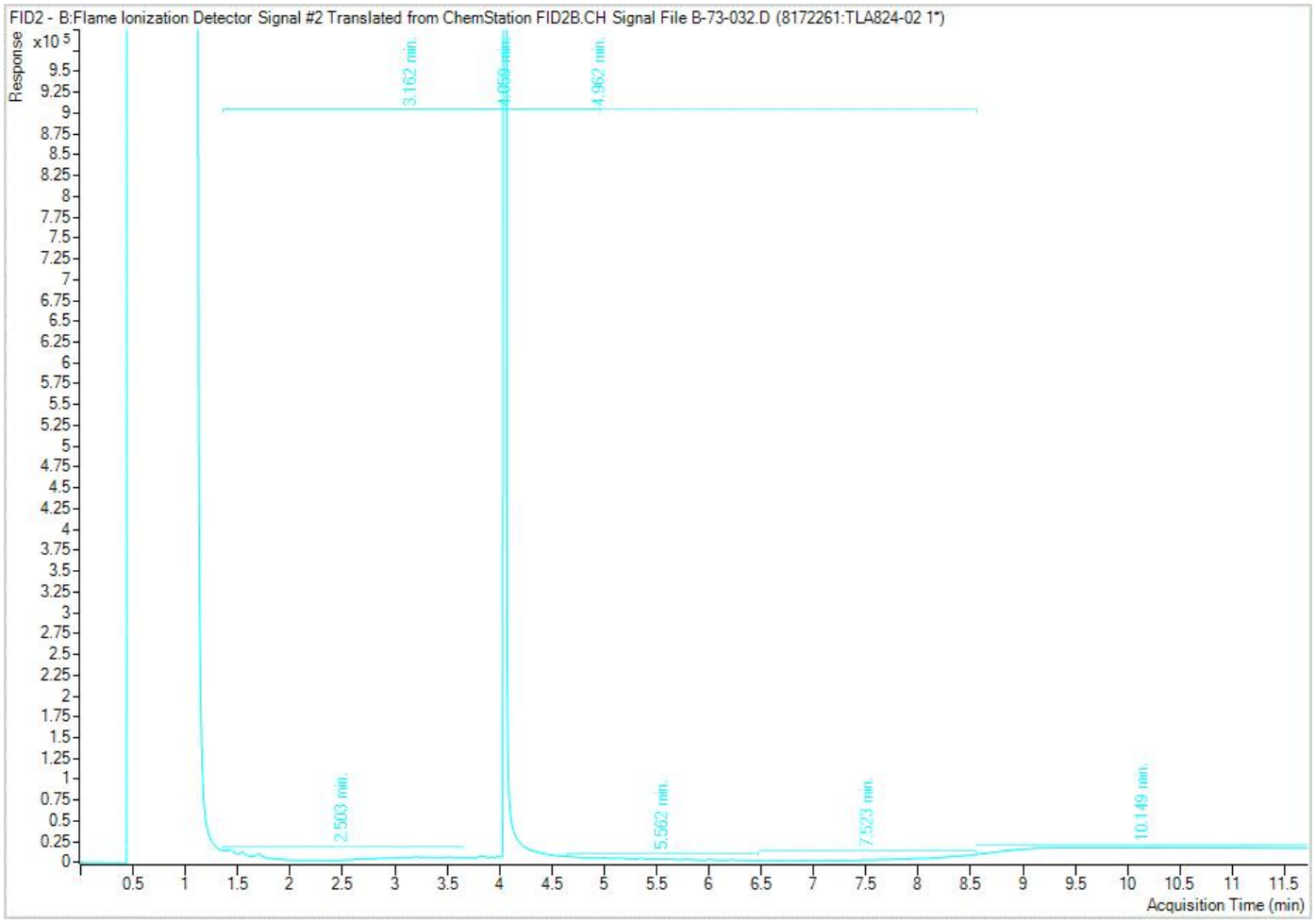


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C2M9490
Report Date: 2022/09/01
Bureau Veritas Sample: TLA824

Stantec Consulting Ltd
Client Project #: 121624271.600
Client ID: BH22-5-4

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

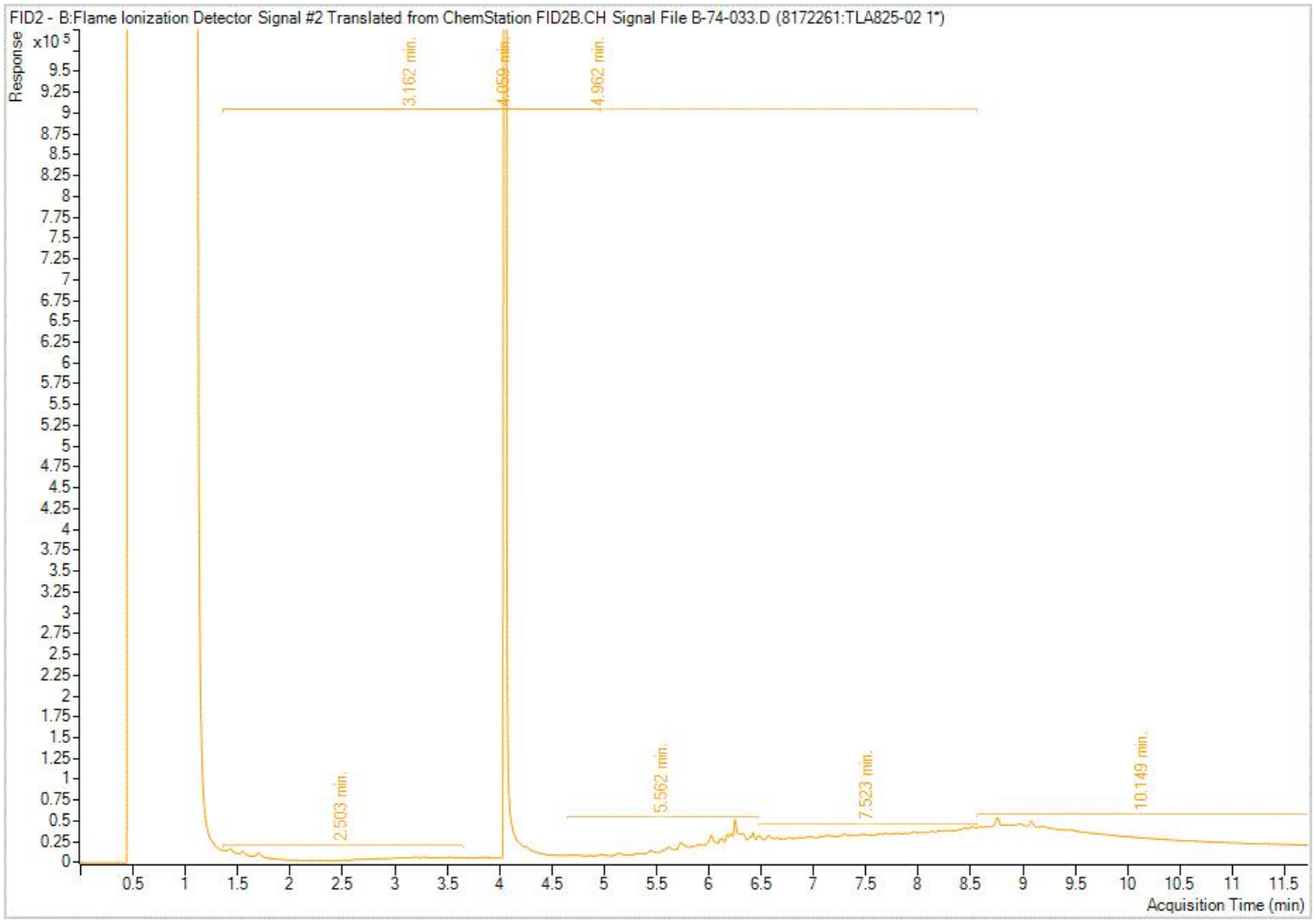


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C2M9490
Report Date: 2022/09/01
Bureau Veritas Sample: TLA825

Stantec Consulting Ltd
Client Project #: 121624271.600
Client ID: BH22-7-1

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

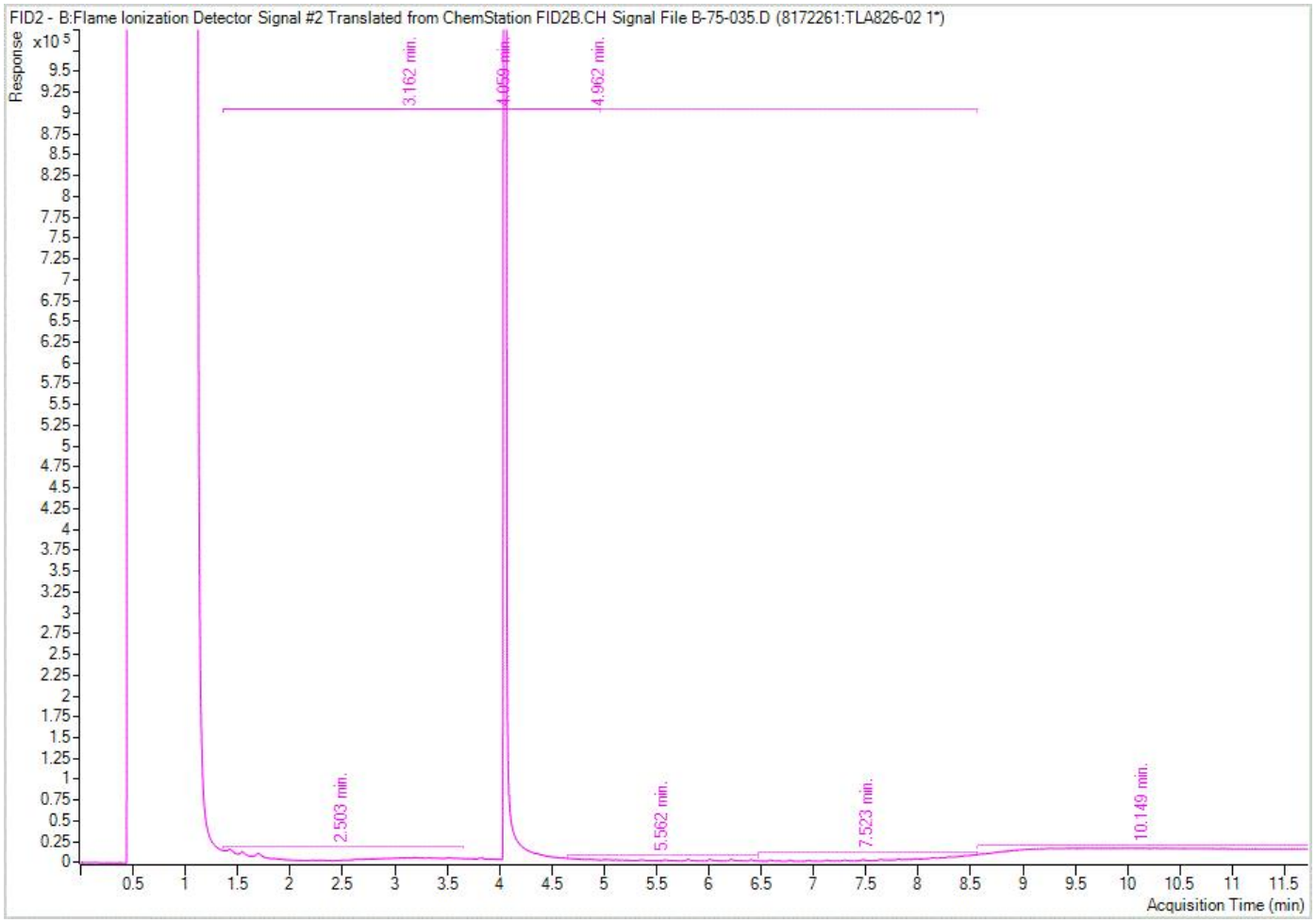


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C2M9490
Report Date: 2022/09/01
Bureau Veritas Sample: TLA826

Stantec Consulting Ltd
Client Project #: 121624271.600
Client ID: BH22-7-2

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

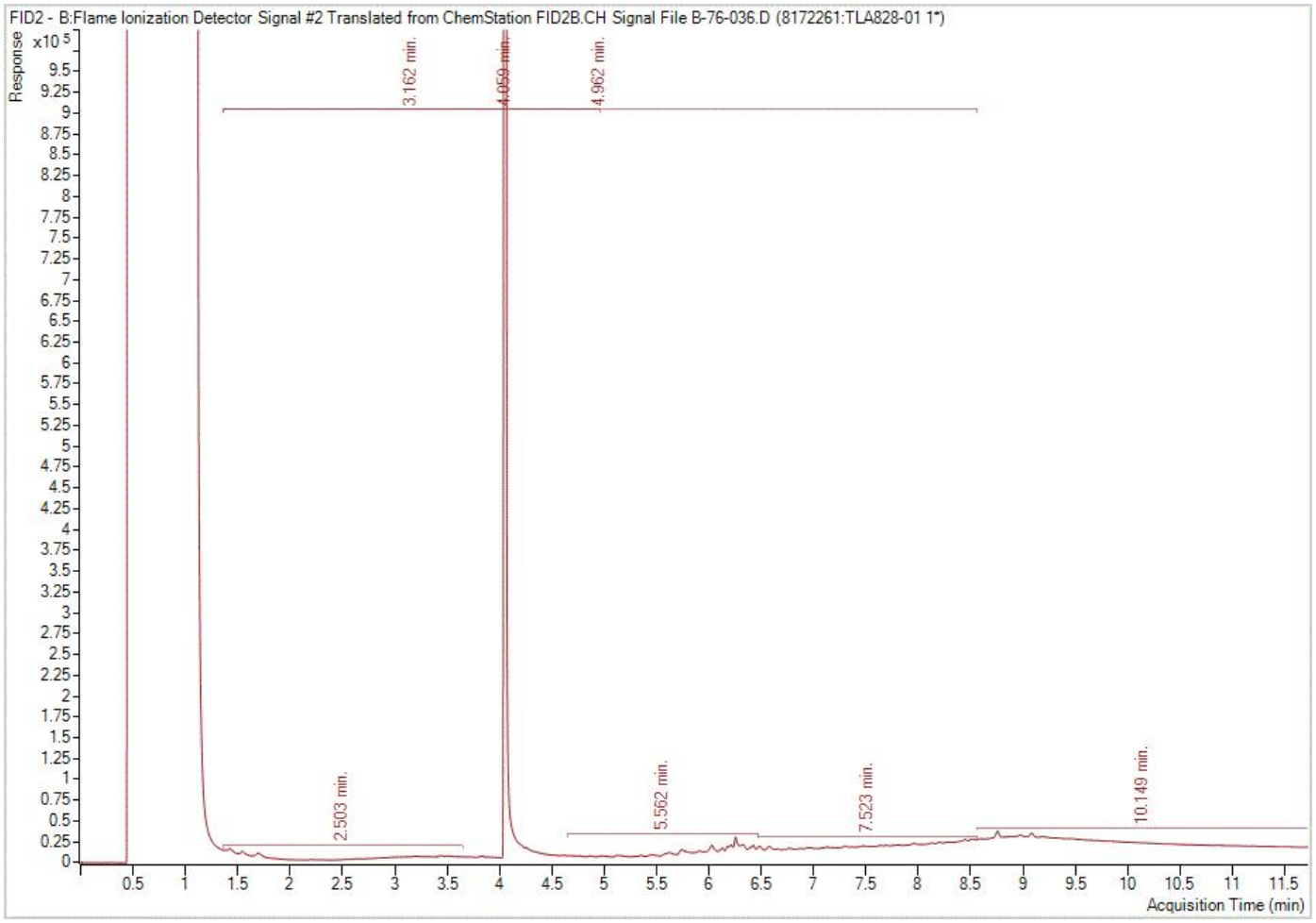


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C2M9490
Report Date: 2022/09/01
Bureau Veritas Sample: TLA828

Stantec Consulting Ltd
Client Project #: 121624271.600
Client ID: QC-01

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Your Project #: 121624271.600
Your C.O.C. #: 892340-01-01

Attention: Steve Hannington

Stantec Consulting Ltd
1331 Clyde Avenue
Suite 400
Ottawa, ON
CANADA K2C 3G4

Report Date: 2022/09/14
Report #: R7295708
Version: 4 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C2N1170
Received: 2022/08/15, 09:00

Sample Matrix: Soil
Samples Received: 11

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Methylnaphthalene Sum (1)	9	N/A	2022/08/22	CAM SOP-00301	EPA 8270D m
Semivolatile Organic Compounds (TCLP) (1)	1	2022/08/18	2022/08/19	CAM SOP-00301	EPA 8270D m
Hot Water Extractable Boron (1)	9	2022/08/18	2022/08/19	CAM SOP-00408	R153 Ana. Prot. 2011
1,3-Dichloropropene Sum (1)	1	N/A	2022/09/01		EPA 8260D m
1,3-Dichloropropene Sum (1)	4	N/A	2022/08/19		EPA 8260C m
Free (WAD) Cyanide (1)	9	2022/08/17	2022/08/19	CAM SOP-00457	OMOE E3015 m
Cyanide (WAD) in Leachates (1)	1	N/A	2022/08/22	CAM SOP-00457	OMOE 3015 m
Conductivity (1)	5	2022/08/18	2022/08/18	CAM SOP-00414	OMOE E3530 v1 m
Conductivity (1)	4	2022/08/19	2022/08/19	CAM SOP-00414	OMOE E3530 v1 m
Hexavalent Chromium in Soil by IC (1, 2)	9	2022/08/17	2022/08/18	CAM SOP-00436	EPA 3060/7199 m
Petroleum Hydro. CCME F1 & BTEX in Soil (1, 3)	4	N/A	2022/08/21	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydro. CCME F1 & BTEX in Soil (1, 3)	1	N/A	2022/08/22	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydro. CCME F1 & BTEX in Soil (1, 3)	1	N/A	2022/08/24	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydrocarbons F2-F4 in Soil (1, 4)	9	2022/08/19	2022/08/23	CAM SOP-00316	CCME CWS m
Petroleum Hydrocarbons F2-F4 in Soil (1, 4)	1	2022/08/22	2022/08/23	CAM SOP-00316	CCME CWS m
Fluoride by ISE in Leachates (1)	1	2022/08/18	2022/08/18	CAM SOP-00449	SM 23 4500-F- C m
Acid Extractable Metals by ICPMS (1)	8	2022/08/18	2022/08/19	CAM SOP-00447	EPA 6020B m
Acid Extractable Metals by ICPMS (1)	1	2022/08/19	2022/08/19	CAM SOP-00447	EPA 6020B m
Total Metals in TCLP Leachate by ICPMS (1)	1	2022/08/18	2022/08/18	CAM SOP-00447	EPA 6020B m
Total Metals in SPLP Leachate by ICPMS (1)	1	2022/08/30	2022/08/30	CAM SOP-00447	EPA 6020B m
Ignitability of a Sample (1)	1	2022/08/19	2022/08/19	CAM SOP-00432	EPA 1030 Rev. 1 m
Moisture (1)	1	N/A	2022/08/16	CAM SOP-00445	Carter 2nd ed 51.2 m
Moisture (1)	10	N/A	2022/08/17	CAM SOP-00445	Carter 2nd ed 51.2 m
Modified SPLP extraction - Weight (1)	1	N/A	2022/08/30	CAM SOP-00941	OMOECP LaSB E9003 R3
Nitrate& Nitrite as Nitrogen in Leachate (1)	1	N/A	2022/08/23	CAM SOP-00440	SM 23 4500-NO3I/NO2B
PAH Compounds in Soil by GC/MS (SIM) (1)	9	2022/08/19	2022/08/20	CAM SOP-00318	EPA 8270D m
Polychlorinated Biphenyl in Soil (1)	2	2022/08/17	2022/08/18	CAM SOP-00309	EPA 8082A m
Polychlorinated Biphenyl in Soil (1)	2	2022/08/18	2022/08/18	CAM SOP-00309	EPA 8082A m
Polychlorinated Biphenyl in Leachate (1)	1	2022/09/13	2022/09/14	CAM SOP-00309	EPA 8082A m
pH CaCl2 EXTRACT (1)	9	2022/08/17	2022/08/17	CAM SOP-00413	EPA 9045 D m
Sodium Adsorption Ratio (SAR) (1)	8	N/A	2022/08/23	CAM SOP-00102	EPA 6010C

Your Project #: 121624271.600
Your C.O.C. #: 892340-01-01

Attention: Steve Hannington

Stantec Consulting Ltd
1331 Clyde Avenue
Suite 400
Ottawa, ON
CANADA K2C 3G4

Report Date: 2022/09/14
Report #: R7295708
Version: 4 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C2N1170
Received: 2022/08/15, 09:00

Sample Matrix: Soil
Samples Received: 11

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Sodium Adsorption Ratio (SAR) (1)	1	N/A	2022/08/24	CAM SOP-00102	EPA 6010C
SPLP Zero Headspace Extraction (1)	1	2022/08/30	2022/08/31	CAM SOP-00430	EPA 1312 m
TCLP - % Solids (1)	1	2022/08/17	2022/08/18	CAM SOP-00401	EPA 1311 Update I m
TCLP - Extraction Fluid (1)	1	N/A	2022/08/18	CAM SOP-00401	EPA 1311 Update I m
TCLP - Initial and final pH (1)	1	N/A	2022/08/18	CAM SOP-00401	EPA 1311 Update I m
TCLP Zero Headspace Extraction (1)	1	2022/08/17	2022/08/18	CAM SOP-00430	EPA 1311 m
Volatile Organic Compounds and F1 PHCs (1)	4	N/A	2022/08/19	CAM SOP-00230	EPA 8260C m
VOCs in ZHE Leachates (1)	1	2022/08/18	2022/08/19	CAM SOP-00228	EPA 8260C m
Volatile organics in SPLP leachates (1)	1	N/A	2022/08/31	CAM SOP-00228	EPA 8260D m

Remarks:

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

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas 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.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas 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 Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas 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 Bureau Veritas, results relate to the supplied samples tested.

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) This test was performed by Bureau Veritas Mississauga, 6740 Campobello Rd , Mississauga, ON, L5N 2L8
(2) Soils are reported on a dry weight basis unless otherwise specified.

Your Project #: 121624271.600
Your C.O.C. #: 892340-01-01

Attention: Steve Hannington

Stantec Consulting Ltd
1331 Clyde Avenue
Suite 400
Ottawa, ON
CANADA K2C 3G4

Report Date: 2022/09/14
Report #: R7295708
Version: 4 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C2N1170

Received: 2022/08/15, 09:00

(3) 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.
(4) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Bureau Veritas 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.
Julie Clement, Technical Account Manager
Email: Julie.CLEMENT@bureauveritas.com
Phone# (613)868-6079

==========

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

O.REG 406 EXCESS SOIL SPLP METALS (SOIL)

Bureau Veritas ID		TLK880		
Sampling Date		2022/08/12 14:10		
COC Number		892340-01-01		
	UNITS	BH22-2-3	RDL	QC Batch
Metals				
Leachable (SPLP) Antimony (Sb)	ug/L	<0.5	0.5	8196080
Leachable (SPLP) Arsenic (As)	ug/L	2	1	8196080
Leachable (SPLP) Barium (Ba)	ug/L	68	5	8196080
Leachable (SPLP) Beryllium (Be)	ug/L	<0.5	0.5	8196080
Leachable (SPLP) Boron (B)	ug/L	<10	10	8196080
Leachable (SPLP) Cadmium (Cd)	ug/L	<0.1	0.1	8196080
Leachable (SPLP) Chromium (Cr)	ug/L	11	5	8196080
Leachable (SPLP) Cobalt (Co)	ug/L	1.3	0.5	8196080
Leachable (SPLP) Copper (Cu)	ug/L	10	1	8196080
Leachable (SPLP) Lead (Pb)	ug/L	2.0	0.5	8196080
Leachable (SPLP) Molybdenum (Mo)	ug/L	1	1	8196080
Leachable (SPLP) Nickel (Ni)	ug/L	6	1	8196080
Leachable (SPLP) Selenium (Se)	ug/L	<2	2	8196080
Leachable (SPLP) Silver (Ag)	ug/L	<0.1	0.1	8196080
Leachable (SPLP) Thallium (Tl)	ug/L	<0.05	0.05	8196080
Leachable (SPLP) Uranium (U)	ug/L	0.2	0.1	8196080
Leachable (SPLP) Vanadium (V)	ug/L	36	1	8196080
Leachable (SPLP) Zinc (Zn)	ug/L	13	5	8196080

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

O.REG 406 EXCESS SOIL SPLP PREP (SOIL)

Bureau Veritas ID		TLK880	
Sampling Date		2022/08/12 14:10	
COC Number		892340-01-01	
	UNITS	**BH22-2-3**	**QC Batch**
Inorganics			
Dry Weight	g	100	8194151
QC Batch = Quality Control Batch			

Bureau Veritas 100 – 36 Antares Dr. Nepean, ON, K2E 7W5 Phone: 613-274-0573 Website: www.bvna.com

O.REG 406 EXCESS SOIL SPLP VOCS (SOIL)

Bureau Veritas ID		TLK881		
Sampling Date		2022/08/12 14:20		
COC Number		892340-01-01		
	UNITS	BH22-2-4	RDL	QC Batch
Charge/Prep Analysis				
Amount Extracted (Wet Weight) (g)	N/A	25	N/A	8196271
Calculated Parameters				
Leachable (ZHE) 1,3-Dichloropropene (cis+trans)	ug/L	<0.42	0.42	8190282
Volatile Organics				
Leachable (SPLP) Bromomethane	ug/L	<0.40	0.40	8198689
Leachable (SPLP) Carbon Tetrachloride	ug/L	<0.19	0.19	8198689
Leachable (SPLP) Chloroform	ug/L	<0.90	0.90	8198689
Leachable (SPLP) 1,2-Dichlorobenzene	ug/L	<0.40	0.40	8198689
Leachable (SPLP) 1,4-Dichlorobenzene	ug/L	<0.40	0.40	8198689
Leachable (SPLP) 1,1-Dichloroethane	ug/L	<0.40	0.40	8198689
Leachable (SPLP) 1,2-Dichloroethane	ug/L	<0.40	0.40	8198689
Leachable (SPLP) 1,1-Dichloroethylene	ug/L	<0.40	0.40	8198689
Leachable (SPLP) cis-1,2-Dichloroethylene	ug/L	<0.40	0.40	8198689
Leachable (SPLP) trans-1,2-Dichloroethylene	ug/L	<0.40	0.40	8198689
Leachable (SPLP) 1,2-Dichloropropane	ug/L	<0.40	0.40	8198689
Leachable (SPLP) cis-1,3-Dichloropropene	ug/L	<0.30	0.30	8198689
Leachable (SPLP) trans-1,3-Dichloropropene	ug/L	<0.30	0.30	8198689
Leachable (SPLP) Ethylene Dibromide	ug/L	<0.19	0.19	8198689
Leachable (SPLP) 1,1,1,2-Tetrachloroethane	ug/L	<0.40	0.40	8198689
Leachable (SPLP) 1,1,2,2-Tetrachloroethane	ug/L	<0.40	0.40	8198689
Leachable (SPLP) Tetrachloroethylene	ug/L	<0.40	0.40	8198689
Leachable (SPLP) 1,1,2-Trichloroethane	ug/L	<0.40	0.40	8198689
Leachable (SPLP) Trichloroethylene	ug/L	<0.40	0.40	8198689
Surrogate Recovery (%)				
Leachable (SPLP) 4-Bromofluorobenzene	%	101		8198689
Leachable (SPLP) D4-1,2-Dichloroethane	%	102		8198689
Leachable (SPLP) D8-Toluene	%	94		8198689

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

O.REG 153 METALS & INORGANICS PKG (SOIL)

Bureau Veritas ID		TLK872		TLK873		TLK874		
Sampling Date		2022/08/12 10:10		2022/08/12 10:20		2022/08/12 10:30		
COC Number		892340-01-01		892340-01-01		892340-01-01		
	UNITS	**BH22-6-1**	**QC Batch**	**BH22-6-2**	**QC Batch**	**BH22-6-3**	**RDL**	**QC Batch**
Calculated Parameters								
Sodium Adsorption Ratio	N/A	6.4	8168223	1.6	8168223	0.34		8168223
Inorganics								
Conductivity	mS/cm	0.83	8175634	0.90	8173952	0.89	0.002	8175634
Available (CaCl2) pH	pH	7.63	8170962	7.62	8170962	7.70		8170962
WAD Cyanide (Free)	ug/g	<0.01	8171197	<0.01	8171197	<0.01	0.01	8171197
Chromium (VI)	ug/g	0.18	8171366	0.24	8171366	0.18	0.18	8171366
Metals								
Hot Water Ext. Boron (B)	ug/g	0.25	8174000	0.16	8174000	0.11	0.050	8174000
Acid Extractable Antimony (Sb)	ug/g	<0.20	8174096	<0.20	8174096	<0.20	0.20	8176537
Acid Extractable Arsenic (As)	ug/g	1.2	8174096	1.0	8174096	1.5	1.0	8176537
Acid Extractable Barium (Ba)	ug/g	180	8174096	160	8174096	160	0.50	8176537
Acid Extractable Beryllium (Be)	ug/g	0.45	8174096	0.40	8174096	0.46	0.20	8176537
Acid Extractable Boron (B)	ug/g	<5.0	8174096	<5.0	8174096	<5.0	5.0	8176537
Acid Extractable Cadmium (Cd)	ug/g	<0.10	8174096	<0.10	8174096	<0.10	0.10	8176537
Acid Extractable Chromium (Cr)	ug/g	33	8174096	29	8174096	33	1.0	8176537
Acid Extractable Cobalt (Co)	ug/g	11	8174096	7.9	8174096	8.6	0.10	8176537
Acid Extractable Copper (Cu)	ug/g	18	8174096	17	8174096	20	0.50	8176537
Acid Extractable Lead (Pb)	ug/g	6.0	8174096	5.4	8174096	4.7	1.0	8176537
Acid Extractable Molybdenum (Mo)	ug/g	<0.50	8174096	<0.50	8174096	<0.50	0.50	8176537
Acid Extractable Nickel (Ni)	ug/g	20	8174096	17	8174096	19	0.50	8176537
Acid Extractable Selenium (Se)	ug/g	<0.50	8174096	<0.50	8174096	<0.50	0.50	8176537
Acid Extractable Silver (Ag)	ug/g	<0.20	8174096	<0.20	8174096	<0.20	0.20	8176537
Acid Extractable Thallium (Tl)	ug/g	0.19	8174096	0.17	8174096	0.16	0.050	8176537
Acid Extractable Uranium (U)	ug/g	0.56	8174096	0.59	8174096	0.52	0.050	8176537
Acid Extractable Vanadium (V)	ug/g	44	8174096	40	8174096	49	5.0	8176537
Acid Extractable Zinc (Zn)	ug/g	49	8174096	42	8174096	46	5.0	8176537
Acid Extractable Mercury (Hg)	ug/g	<0.050	8174096	<0.050	8174096	<0.050	0.050	8176537

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

O.REG 153 METALS & INORGANICS PKG (SOIL)

Bureau Veritas ID		TLK875			TLK877			TLK877		
Sampling Date		2022/08/12 10:40			2022/08/12			2022/08/12		
COC Number		892340-01-01			892340-01-01			892340-01-01		
	UNITS	BH22-6-4	RDL	QC Batch	QC-04	RDL	QC Batch	QC-04 Lab-Dup	RDL	QC Batch
Calculated Parameters										
Sodium Adsorption Ratio	N/A	0.41		8168223	0.37		8168223			
Inorganics										
Conductivity	mS/cm	0.32	0.002	8173952	0.25	0.002	8173952			
Moisture	%				9.2	1.0	8170502			
Available (CaCl2) pH	pH	7.89		8170962	7.83		8170962			
WAD Cyanide (Free)	ug/g	<0.01	0.01	8171197	<0.01	0.01	8171197			
Chromium (VI)	ug/g	<0.18	0.18	8171366	<0.18	0.18	8171366			
Metals										
Hot Water Ext. Boron (B)	ug/g	0.069	0.050	8174000	<0.050	0.050	8174000	<0.050	0.050	8174000
Acid Extractable Antimony (Sb)	ug/g	<0.20	0.20	8174096	<0.20	0.20	8174096			
Acid Extractable Arsenic (As)	ug/g	1.7	1.0	8174096	<1.0	1.0	8174096			
Acid Extractable Barium (Ba)	ug/g	160	0.50	8174096	80	0.50	8174096			
Acid Extractable Beryllium (Be)	ug/g	0.46	0.20	8174096	0.26	0.20	8174096			
Acid Extractable Boron (B)	ug/g	<5.0	5.0	8174096	<5.0	5.0	8174096			
Acid Extractable Cadmium (Cd)	ug/g	<0.10	0.10	8174096	<0.10	0.10	8174096			
Acid Extractable Chromium (Cr)	ug/g	32	1.0	8174096	15	1.0	8174096			
Acid Extractable Cobalt (Co)	ug/g	8.6	0.10	8174096	5.5	0.10	8174096			
Acid Extractable Copper (Cu)	ug/g	20	0.50	8174096	11	0.50	8174096			
Acid Extractable Lead (Pb)	ug/g	4.9	1.0	8174096	3.7	1.0	8174096			
Acid Extractable Molybdenum (Mo)	ug/g	<0.50	0.50	8174096	<0.50	0.50	8174096			
Acid Extractable Nickel (Ni)	ug/g	19	0.50	8174096	10	0.50	8174096			
Acid Extractable Selenium (Se)	ug/g	<0.50	0.50	8174096	<0.50	0.50	8174096			
Acid Extractable Silver (Ag)	ug/g	<0.20	0.20	8174096	<0.20	0.20	8174096			
Acid Extractable Thallium (Tl)	ug/g	0.17	0.050	8174096	0.13	0.050	8174096			
Acid Extractable Uranium (U)	ug/g	0.52	0.050	8174096	0.47	0.050	8174096			
Acid Extractable Vanadium (V)	ug/g	50	5.0	8174096	25	5.0	8174096			
Acid Extractable Zinc (Zn)	ug/g	48	5.0	8174096	23	5.0	8174096			
Acid Extractable Mercury (Hg)	ug/g	<0.050	0.050	8174096	<0.050	0.050	8174096			

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

O.REG 153 METALS & INORGANICS PKG (SOIL)

Bureau Veritas ID		TLK878		TLK879		TLK880		
Sampling Date		2022/08/12 13:50		2022/08/12 14:00		2022/08/12 14:10		
COC Number		892340-01-01		892340-01-01		892340-01-01		
	UNITS	BH22-2-1	QC Batch	BH22-2-2	QC Batch	BH22-2-3	RDL	QC Batch
Calculated Parameters								
Sodium Adsorption Ratio	N/A	1.1	8168223	4.9	8168223	5.2		8168223
Inorganics								
Conductivity	mS/cm	0.35	8175634	0.41	8173952	0.49	0.002	8175634
Available (CaCl2) pH	pH	7.65	8170962	8.28	8170962	9.50		8170962
WAD Cyanide (Free)	ug/g	<0.01	8171197	<0.01	8171197	<0.01	0.01	8171197
Chromium (VI)	ug/g	<0.18	8171366	<0.18	8171366	0.24	0.18	8171366
Metals								
Hot Water Ext. Boron (B)	ug/g	0.24	8174000	0.11	8174000	0.12	0.050	8174000
Acid Extractable Antimony (Sb)	ug/g	<0.20	8174096	<0.20	8174096	<0.20	0.20	8174096
Acid Extractable Arsenic (As)	ug/g	1.4	8174096	1.8	8174096	1.6	1.0	8174096
Acid Extractable Barium (Ba)	ug/g	120	8174096	110	8174096	180	0.50	8174096
Acid Extractable Beryllium (Be)	ug/g	0.41	8174096	0.45	8174096	0.62	0.20	8174096
Acid Extractable Boron (B)	ug/g	<5.0	8174096	<5.0	8174096	5.5	5.0	8174096
Acid Extractable Cadmium (Cd)	ug/g	<0.10	8174096	<0.10	8174096	<0.10	0.10	8174096
Acid Extractable Chromium (Cr)	ug/g	41	8174096	23	8174096	39	1.0	8174096
Acid Extractable Cobalt (Co)	ug/g	9.3	8174096	5.9	8174096	9.1	0.10	8174096
Acid Extractable Copper (Cu)	ug/g	20	8174096	15	8174096	24	0.50	8174096
Acid Extractable Lead (Pb)	ug/g	9.4	8174096	6.7	8174096	6.0	1.0	8174096
Acid Extractable Molybdenum (Mo)	ug/g	0.83	8174096	<0.50	8174096	<0.50	0.50	8174096
Acid Extractable Nickel (Ni)	ug/g	23	8174096	15	8174096	22	0.50	8174096
Acid Extractable Selenium (Se)	ug/g	<0.50	8174096	<0.50	8174096	<0.50	0.50	8174096
Acid Extractable Silver (Ag)	ug/g	<0.20	8174096	<0.20	8174096	<0.20	0.20	8174096
Acid Extractable Thallium (Tl)	ug/g	0.18	8174096	0.13	8174096	0.21	0.050	8174096
Acid Extractable Uranium (U)	ug/g	0.69	8174096	0.63	8174096	0.76	0.050	8174096
Acid Extractable Vanadium (V)	ug/g	41	8174096	38	8174096	57	5.0	8174096
Acid Extractable Zinc (Zn)	ug/g	50	8174096	36	8174096	61	5.0	8174096
Acid Extractable Mercury (Hg)	ug/g	<0.050	8174096	<0.050	8174096	<0.050	0.050	8174096

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

O.REG 153 METALS & INORGANICS PKG (SOIL)

Bureau Veritas ID		TLK880			TLK881			TLK881		
Sampling Date		2022/08/12 14:10			2022/08/12 14:20			2022/08/12 14:20		
COC Number		892340-01-01			892340-01-01			892340-01-01		
	UNITS	BH22-2-3 Lab-Dup	RDL	QC Batch	BH22-2-4	RDL	QC Batch	BH22-2-4 Lab-Dup	RDL	QC Batch
Calculated Parameters										
Sodium Adsorption Ratio	N/A				1.0		8168223			
Inorganics										
Conductivity	mS/cm				0.27	0.002	8173952	0.27	0.002	8173952
Available (CaCl2) pH	pH				7.91		8170962			
WAD Cyanide (Free)	ug/g				<0.01	0.01	8171197			
Chromium (VI)	ug/g				<0.18	0.18	8171366			
Metals										
Hot Water Ext. Boron (B)	ug/g				<0.050	0.050	8174000			
Acid Extractable Antimony (Sb)	ug/g	<0.20	0.20	8174096	<0.20	0.20	8174096			
Acid Extractable Arsenic (As)	ug/g	1.5	1.0	8174096	<1.0	1.0	8174096			
Acid Extractable Barium (Ba)	ug/g	170	0.50	8174096	110	0.50	8174096			
Acid Extractable Beryllium (Be)	ug/g	0.55	0.20	8174096	0.30	0.20	8174096			
Acid Extractable Boron (B)	ug/g	5.0	5.0	8174096	<5.0	5.0	8174096			
Acid Extractable Cadmium (Cd)	ug/g	<0.10	0.10	8174096	<0.10	0.10	8174096			
Acid Extractable Chromium (Cr)	ug/g	37	1.0	8174096	18	1.0	8174096			
Acid Extractable Cobalt (Co)	ug/g	8.3	0.10	8174096	6.5	0.10	8174096			
Acid Extractable Copper (Cu)	ug/g	23	0.50	8174096	13	0.50	8174096			
Acid Extractable Lead (Pb)	ug/g	5.7	1.0	8174096	3.9	1.0	8174096			
Acid Extractable Molybdenum (Mo)	ug/g	<0.50	0.50	8174096	<0.50	0.50	8174096			
Acid Extractable Nickel (Ni)	ug/g	21	0.50	8174096	11	0.50	8174096			
Acid Extractable Selenium (Se)	ug/g	<0.50	0.50	8174096	<0.50	0.50	8174096			
Acid Extractable Silver (Ag)	ug/g	<0.20	0.20	8174096	<0.20	0.20	8174096			
Acid Extractable Thallium (Tl)	ug/g	0.19	0.050	8174096	0.12	0.050	8174096			
Acid Extractable Uranium (U)	ug/g	0.68	0.050	8174096	0.57	0.050	8174096			
Acid Extractable Vanadium (V)	ug/g	54	5.0	8174096	31	5.0	8174096			
Acid Extractable Zinc (Zn)	ug/g	58	5.0	8174096	27	5.0	8174096			
Acid Extractable Mercury (Hg)	ug/g	<0.050	0.050	8174096	<0.050	0.050	8174096			

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

O.REG 153 PAHS (SOIL)

Bureau Veritas ID		TLK872	TLK873	TLK874	TLK875			TLK876		
Sampling Date		2022/08/12 10:10	2022/08/12 10:20	2022/08/12 10:30	2022/08/12 10:40			2022/08/12		
COC Number		892340-01-01	892340-01-01	892340-01-01	892340-01-01			892340-01-01		
	UNITS	BH22-6-1	BH22-6-2	BH22-6-3	BH22-6-4	RDL	QC Batch	QC-03	RDL	QC Batch
Inorganics										
Moisture	%							6.6	1.0	8171274
Calculated Parameters										
Methylnaphthalene, 2-(1-)	ug/g	<0.0071	<0.0071	<0.0071	<0.0071	0.0071	8168372	0.0078	0.0071	8168372
Polyaromatic Hydrocarbons										
Acenaphthene	ug/g	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	8175599	<0.0050	0.0050	8175599
Acenaphthylene	ug/g	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	8175599	<0.0050	0.0050	8175599
Anthracene	ug/g	0.0056	<0.0050	<0.0050	<0.0050	0.0050	8175599	0.0057	0.0050	8175599
Benzo(a)anthracene	ug/g	0.014	0.0099	<0.0050	<0.0050	0.0050	8175599	0.013	0.0050	8175599
Benzo(a)pyrene	ug/g	0.012	0.011	<0.0050	<0.0050	0.0050	8175599	0.011	0.0050	8175599
Benzo(b/j)fluoranthene	ug/g	0.020	0.016	<0.0050	<0.0050	0.0050	8175599	0.020	0.0050	8175599
Benzo(g,h,i)perylene	ug/g	0.010	0.0071	<0.0050	<0.0050	0.0050	8175599	0.011	0.0050	8175599
Benzo(k)fluoranthene	ug/g	0.0057	0.0056	<0.0050	<0.0050	0.0050	8175599	0.0053	0.0050	8175599
Chrysene	ug/g	0.014	0.0089	<0.0050	<0.0050	0.0050	8175599	0.013	0.0050	8175599
Dibenzo(a,h)anthracene	ug/g	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	8175599	<0.0050	0.0050	8175599
Fluoranthene	ug/g	0.027	0.017	<0.0050	<0.0050	0.0050	8175599	0.026	0.0050	8175599
Fluorene	ug/g	0.0056	<0.0050	<0.0050	<0.0050	0.0050	8175599	0.0060	0.0050	8175599
Indeno(1,2,3-cd)pyrene	ug/g	0.0081	0.0083	<0.0050	<0.0050	0.0050	8175599	0.0081	0.0050	8175599
1-Methylnaphthalene	ug/g	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	8175599	<0.0050	0.0050	8175599
2-Methylnaphthalene	ug/g	0.0064	<0.0050	<0.0050	<0.0050	0.0050	8175599	0.0078	0.0050	8175599
Naphthalene	ug/g	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	8175599	<0.0050	0.0050	8175599
Phenanthrene	ug/g	0.031	0.0056	<0.0050	<0.0050	0.0050	8175599	0.033	0.0050	8175599
Pyrene	ug/g	0.021	0.014	<0.0050	<0.0050	0.0050	8175599	0.021	0.0050	8175599
Biphenyl	ug/g	0.013	<0.0050	<0.0050	<0.0050	0.0050	8175599	0.016	0.0050	8175599
Surrogate Recovery (%)										
D10-Anthracene	%	102	101	97	100		8175599	107		8175599
D14-Terphenyl (FS)	%	103	101	101	102		8175599	108		8175599
D8-Acenaphthylene	%	102	101	93	95		8175599	107		8175599

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

O.REG 153 PAHS (SOIL)

Bureau Veritas ID		TLK878		TLK879		TLK880	TLK881		
Sampling Date		2022/08/12 13:50		2022/08/12 14:00		2022/08/12 14:10	2022/08/12 14:20		
COC Number		892340-01-01		892340-01-01		892340-01-01	892340-01-01		
	UNITS	BH22-2-1	RDL	BH22-2-2	RDL	BH22-2-3	BH22-2-4	RDL	QC Batch
Calculated Parameters									
Methylnaphthalene, 2-(1-)	ug/g	<0.0071	0.0071	<0.071	0.071	<0.0071	<0.0071	0.0071	8168372
Polyaromatic Hydrocarbons									
Acenaphthene	ug/g	<0.0050	0.0050	<0.050	0.050	<0.0050	<0.0050	0.0050	8175599
Acenaphthylene	ug/g	0.099	0.0050	<0.050	0.050	<0.0050	<0.0050	0.0050	8175599
Anthracene	ug/g	0.10	0.0050	<0.050	0.050	<0.0050	<0.0050	0.0050	8175599
Benzo(a)anthracene	ug/g	0.40	0.0050	0.091	0.050	<0.0050	<0.0050	0.0050	8175599
Benzo(a)pyrene	ug/g	0.33	0.0050	0.097	0.050	<0.0050	<0.0050	0.0050	8175599
Benzo(b/j)fluoranthene	ug/g	0.40	0.0050	0.13	0.050	<0.0050	<0.0050	0.0050	8175599
Benzo(g,h,i)perylene	ug/g	0.19	0.0050	0.073	0.050	<0.0050	<0.0050	0.0050	8175599
Benzo(k)fluoranthene	ug/g	0.16	0.0050	<0.050	0.050	<0.0050	<0.0050	0.0050	8175599
Chrysene	ug/g	0.26	0.0050	0.082	0.050	<0.0050	<0.0050	0.0050	8175599
Dibenzo(a,h)anthracene	ug/g	0.071	0.0050	<0.050	0.050	<0.0050	<0.0050	0.0050	8175599
Fluoranthene	ug/g	0.55	0.0050	0.19	0.050	<0.0050	<0.0050	0.0050	8175599
Fluorene	ug/g	0.010	0.0050	<0.050	0.050	<0.0050	<0.0050	0.0050	8175599
Indeno(1,2,3-cd)pyrene	ug/g	0.22	0.0050	0.066	0.050	<0.0050	<0.0050	0.0050	8175599
1-Methylnaphthalene	ug/g	<0.0050	0.0050	<0.050	0.050	<0.0050	<0.0050	0.0050	8175599
2-Methylnaphthalene	ug/g	<0.0050	0.0050	<0.050	0.050	<0.0050	<0.0050	0.0050	8175599
Naphthalene	ug/g	<0.0050	0.0050	<0.050	0.050	<0.0050	<0.0050	0.0050	8175599
Phenanthrene	ug/g	0.13	0.0050	0.095	0.050	<0.0050	<0.0050	0.0050	8175599
Pyrene	ug/g	0.47	0.0050	0.16	0.050	<0.0050	<0.0050	0.0050	8175599
Biphenyl	ug/g	<0.0050	0.0050	<0.050	0.050	<0.0050	<0.0050	0.0050	8175599
Surrogate Recovery (%)									
D10-Anthracene	%	97		103		100	101		8175599
D14-Terphenyl (FS)	%	97		91		102	104		8175599
D8-Acenaphthylene	%	100		92		90	100		8175599

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

O.REG 153 PCBS (SOIL)

Bureau Veritas ID		TLK873	TLK875	TLK878	TLK880		
Sampling Date		2022/08/12 10:20	2022/08/12 10:40	2022/08/12 13:50	2022/08/12 14:10		
COC Number		892340-01-01	892340-01-01	892340-01-01	892340-01-01		
	UNITS	**BH22-6-2**	**BH22-6-4**	**BH22-2-1**	**BH22-2-3**	**RDL**	**QC Batch**
PCBs							
Aroclor 1242	ug/g	<0.010	<0.010	<0.010	<0.010	0.010	8173509
Aroclor 1248	ug/g	<0.010	<0.010	<0.010	<0.010	0.010	8173509
Aroclor 1254	ug/g	<0.010	<0.010	<0.010	<0.010	0.010	8173509
Aroclor 1260	ug/g	<0.010	<0.010	<0.010	<0.010	0.010	8173509
Total PCB	ug/g	<0.010	<0.010	<0.010	<0.010	0.010	8173509
Surrogate Recovery (%)							
Decachlorobiphenyl	%	104	100	99	96		8173509

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

O.REG 153 PHCS, BTEX/F1-F4 (SOIL)

Bureau Veritas ID		TLK873		TLK875			TLK876		
Sampling Date		2022/08/12 10:20		2022/08/12 10:40			2022/08/12		
COC Number		892340-01-01		892340-01-01			892340-01-01		
	UNITS	BH22-6-2	QC Batch	BH22-6-4	RDL	QC Batch	QC-03	RDL	QC Batch
Inorganics									
Moisture	%	20	8170993	12	1.0	8170845			
BTEX & F1 Hydrocarbons									
Benzene	ug/g	<0.020	8178895	<0.020	0.020	8178895	<0.020	0.020	8183312
Toluene	ug/g	<0.020	8178895	<0.020	0.020	8178895	0.060	0.020	8183312
Ethylbenzene	ug/g	<0.020	8178895	<0.020	0.020	8178895	<0.020	0.020	8183312
o-Xylene	ug/g	<0.020	8178895	<0.020	0.020	8178895	<0.020	0.020	8183312
p+m-Xylene	ug/g	<0.040	8178895	<0.040	0.040	8178895	<0.040	0.040	8183312
Total Xylenes	ug/g	<0.040	8178895	<0.040	0.040	8178895	<0.040	0.040	8183312
F1 (C6-C10)	ug/g	<10	8178895	<10	10	8178895	<10	10	8183312
F1 (C6-C10) - BTEX	ug/g	<10	8178895	<10	10	8178895	<10	10	8183312
F2-F4 Hydrocarbons									
F2 (C10-C16 Hydrocarbons)	ug/g	<10	8176518	<10	10	8176518	<10	10	8180313
F3 (C16-C34 Hydrocarbons)	ug/g	<50	8176518	<50	50	8176518	<50	50	8180313
F4 (C34-C50 Hydrocarbons)	ug/g	<50	8176518	<50	50	8176518	<50	50	8180313
Reached Baseline at C50	ug/g	Yes	8176518	Yes		8176518	Yes		8180313
Surrogate Recovery (%)									
1,4-Difluorobenzene	%	103	8178895	107		8178895	95		8183312
4-Bromofluorobenzene	%	96	8178895	99		8178895	98		8183312
D10-o-Xylene	%	113	8178895	118		8178895	107		8183312
D4-1,2-Dichloroethane	%	97	8178895	94		8178895	94		8183312
o-Terphenyl	%	84	8176518	88		8176518	94		8180313

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

O.REG 153 PHCS, BTEX/F1-F4 (SOIL)

Bureau Veritas ID		TLK878	TLK880			TLK882		
Sampling Date		2022/08/12 13:50	2022/08/12 14:10			2022/08/12 15:00		
COC Number		892340-01-01	892340-01-01			892340-01-01		
	UNITS	BH22-2-1	BH22-2-3	RDL	QC Batch	TCLP	RDL	QC Batch
Inorganics								
Moisture	%	26	23	1.0	8170993	21	1.0	8171274
BTEX & F1 Hydrocarbons								
Benzene	ug/g	<0.020	<0.020	0.020	8178895	<0.020	0.020	8178895
Toluene	ug/g	<0.020	<0.020	0.020	8178895	<0.020	0.020	8178895
Ethylbenzene	ug/g	<0.020	<0.020	0.020	8178895	<0.020	0.020	8178895
o-Xylene	ug/g	<0.020	<0.020	0.020	8178895	<0.020	0.020	8178895
p+m-Xylene	ug/g	<0.040	<0.040	0.040	8178895	<0.040	0.040	8178895
Total Xylenes	ug/g	<0.040	<0.040	0.040	8178895	<0.040	0.040	8178895
F1 (C6-C10)	ug/g	<10	<10	10	8178895	<10	10	8178895
F1 (C6-C10) - BTEX	ug/g	<10	<10	10	8178895	<10	10	8178895
Gasoline	ug/g					<10	10	8178895
F2-F4 Hydrocarbons								
F2 (C10-C16 Hydrocarbons)	ug/g	<10	<10	10	8176518	<10	10	8176518
F3 (C16-C34 Hydrocarbons)	ug/g	<50	<50	50	8176518	<50	50	8176518
F4 (C34-C50 Hydrocarbons)	ug/g	<50	<50	50	8176518	<50	50	8176518
Reached Baseline at C50	ug/g	Yes	Yes		8176518	Yes		8176518
Diesel (C10-C24)	ug/g					<50	50	8176518
Surrogate Recovery (%)								
1,4-Difluorobenzene	%	103	103		8178895	97		8178895
4-Bromofluorobenzene	%	98	100		8178895	102		8178895
D10-o-Xylene	%	104	94		8178895	109		8178895
D4-1,2-Dichloroethane	%	96	98		8178895	92		8178895
o-Terphenyl	%	90	88		8176518	86		8176518

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

O.REG 153 VOCS BY HS & F1-F4 (SOIL)

Bureau Veritas ID		TLK872		TLK874			TLK874		
Sampling Date		2022/08/12 10:10		2022/08/12 10:30			2022/08/12 10:30		
COC Number		892340-01-01		892340-01-01			892340-01-01		
	UNITS	BH22-6-1	QC Batch	BH22-6-3	RDL	QC Batch	BH22-6-3 Lab-Dup	RDL	QC Batch
Inorganics									
Moisture	%	6.3	8171274	21	1.0	8169280	21	1.0	8169280
Calculated Parameters									
1,3-Dichloropropene (cis+trans)	ug/g	<0.050	8168373	<0.050	0.050	8168373			
Volatile Organics									
Acetone (2-Propanone)	ug/g	<0.49	8171528	<0.49	0.49	8171528			
Benzene	ug/g	<0.0060	8171528	<0.0060	0.0060	8171528			
Bromodichloromethane	ug/g	<0.040	8171528	<0.040	0.040	8171528			
Bromoform	ug/g	<0.040	8171528	<0.040	0.040	8171528			
Bromomethane	ug/g	<0.040	8171528	<0.040	0.040	8171528			
Carbon Tetrachloride	ug/g	<0.040	8171528	<0.040	0.040	8171528			
Chlorobenzene	ug/g	<0.040	8171528	<0.040	0.040	8171528			
Chloroform	ug/g	<0.040	8171528	<0.040	0.040	8171528			
Dibromochloromethane	ug/g	<0.040	8171528	<0.040	0.040	8171528			
1,2-Dichlorobenzene	ug/g	<0.040	8171528	<0.040	0.040	8171528			
1,3-Dichlorobenzene	ug/g	<0.040	8171528	<0.040	0.040	8171528			
1,4-Dichlorobenzene	ug/g	<0.040	8171528	<0.040	0.040	8171528			
Dichlorodifluoromethane (FREON 12)	ug/g	<0.040	8171528	<0.040	0.040	8171528			
1,1-Dichloroethane	ug/g	<0.040	8171528	<0.040	0.040	8171528			
1,2-Dichloroethane	ug/g	<0.049	8171528	<0.049	0.049	8171528			
1,1-Dichloroethylene	ug/g	<0.040	8171528	<0.040	0.040	8171528			
cis-1,2-Dichloroethylene	ug/g	<0.040	8171528	<0.040	0.040	8171528			
trans-1,2-Dichloroethylene	ug/g	<0.040	8171528	<0.040	0.040	8171528			
1,2-Dichloropropane	ug/g	<0.040	8171528	<0.040	0.040	8171528			
cis-1,3-Dichloropropene	ug/g	<0.030	8171528	<0.030	0.030	8171528			
trans-1,3-Dichloropropene	ug/g	<0.040	8171528	<0.040	0.040	8171528			
Ethylbenzene	ug/g	<0.010	8171528	<0.010	0.010	8171528			
Ethylene Dibromide	ug/g	<0.040	8171528	<0.040	0.040	8171528			
Hexane	ug/g	<0.040	8171528	<0.040	0.040	8171528			
Methylene Chloride(Dichloromethane)	ug/g	<0.049	8171528	<0.049	0.049	8171528			
Methyl Ethyl Ketone (2-Butanone)	ug/g	<0.40	8171528	<0.40	0.40	8171528			
Methyl Isobutyl Ketone	ug/g	<0.40	8171528	<0.40	0.40	8171528			

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

O.REG 153 VOCS BY HS & F1-F4 (SOIL)

Bureau Veritas ID		TLK872		TLK874			TLK874		
Sampling Date		2022/08/12 10:10		2022/08/12 10:30			2022/08/12 10:30		
COC Number		892340-01-01		892340-01-01			892340-01-01		
	UNITS	BH22-6-1	QC Batch	BH22-6-3	RDL	QC Batch	BH22-6-3 Lab-Dup	RDL	QC Batch
Methyl t-butyl ether (MTBE)	ug/g	<0.040	8171528	<0.040	0.040	8171528			
Styrene	ug/g	<0.040	8171528	<0.040	0.040	8171528			
1,1,1,2-Tetrachloroethane	ug/g	<0.040	8171528	<0.040	0.040	8171528			
1,1,2,2-Tetrachloroethane	ug/g	<0.040	8171528	<0.040	0.040	8171528			
Tetrachloroethylene	ug/g	<0.040	8171528	<0.040	0.040	8171528			
Toluene	ug/g	<0.020	8171528	<0.020	0.020	8171528			
1,1,1-Trichloroethane	ug/g	<0.040	8171528	<0.040	0.040	8171528			
1,1,2-Trichloroethane	ug/g	<0.040	8171528	<0.040	0.040	8171528			
Trichloroethylene	ug/g	<0.010	8171528	<0.010	0.010	8171528			
Trichlorofluoromethane (FREON 11)	ug/g	<0.040	8171528	<0.040	0.040	8171528			
Vinyl Chloride	ug/g	<0.019	8171528	<0.019	0.019	8171528			
p+m-Xylene	ug/g	<0.020	8171528	<0.020	0.020	8171528			
o-Xylene	ug/g	<0.020	8171528	<0.020	0.020	8171528			
Total Xylenes	ug/g	<0.020	8171528	<0.020	0.020	8171528			
F1 (C6-C10)	ug/g	<10	8171528	<10	10	8171528			
F1 (C6-C10) - BTEX	ug/g	<10	8171528	<10	10	8171528			
F2-F4 Hydrocarbons									
F2 (C10-C16 Hydrocarbons)	ug/g	<10	8176518	<10	10	8176518			
F3 (C16-C34 Hydrocarbons)	ug/g	<50	8176518	<50	50	8176518			
F4 (C34-C50 Hydrocarbons)	ug/g	<50	8176518	<50	50	8176518			
Reached Baseline at C50	ug/g	Yes	8176518	Yes		8176518			
Surrogate Recovery (%)									
o-Terphenyl	%	89	8176518	89		8176518			
4-Bromofluorobenzene	%	92	8171528	92		8171528			
D10-o-Xylene	%	86	8171528	95		8171528			
D4-1,2-Dichloroethane	%	104	8171528	106		8171528			
D8-Toluene	%	93	8171528	92		8171528			

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

O.REG 153 VOCS BY HS & F1-F4 (SOIL)

Bureau Veritas ID		TLK879		TLK881		
Sampling Date		2022/08/12 14:00		2022/08/12 14:20		
COC Number		892340-01-01		892340-01-01		
	UNITS	BH22-2-2	QC Batch	BH22-2-4	RDL	QC Batch
Inorganics						
Moisture	%	20	8170845	12	1.0	8170993
Calculated Parameters						
1,3-Dichloropropene (cis+trans)	ug/g	<0.050	8168373	<0.050	0.050	8168373
Volatile Organics						
Acetone (2-Propanone)	ug/g	<0.49	8171528	<0.49	0.49	8171528
Benzene	ug/g	<0.0060	8171528	<0.0060	0.0060	8171528
Bromodichloromethane	ug/g	<0.040	8171528	<0.040	0.040	8171528
Bromoform	ug/g	<0.040	8171528	<0.040	0.040	8171528
Bromomethane	ug/g	<0.040	8171528	<0.040	0.040	8171528
Carbon Tetrachloride	ug/g	<0.040	8171528	<0.040	0.040	8171528
Chlorobenzene	ug/g	<0.040	8171528	<0.040	0.040	8171528
Chloroform	ug/g	<0.040	8171528	<0.040	0.040	8171528
Dibromochloromethane	ug/g	<0.040	8171528	<0.040	0.040	8171528
1,2-Dichlorobenzene	ug/g	<0.040	8171528	<0.040	0.040	8171528
1,3-Dichlorobenzene	ug/g	<0.040	8171528	<0.040	0.040	8171528
1,4-Dichlorobenzene	ug/g	<0.040	8171528	<0.040	0.040	8171528
Dichlorodifluoromethane (FREON 12)	ug/g	<0.040	8171528	<0.040	0.040	8171528
1,1-Dichloroethane	ug/g	<0.040	8171528	<0.040	0.040	8171528
1,2-Dichloroethane	ug/g	<0.049	8171528	<0.049	0.049	8171528
1,1-Dichloroethylene	ug/g	<0.040	8171528	<0.040	0.040	8171528
cis-1,2-Dichloroethylene	ug/g	<0.040	8171528	<0.040	0.040	8171528
trans-1,2-Dichloroethylene	ug/g	<0.040	8171528	<0.040	0.040	8171528
1,2-Dichloropropane	ug/g	<0.040	8171528	<0.040	0.040	8171528
cis-1,3-Dichloropropene	ug/g	<0.030	8171528	<0.030	0.030	8171528
trans-1,3-Dichloropropene	ug/g	<0.040	8171528	<0.040	0.040	8171528
Ethylbenzene	ug/g	<0.010	8171528	<0.010	0.010	8171528
Ethylene Dibromide	ug/g	<0.040	8171528	<0.040	0.040	8171528
Hexane	ug/g	<0.040	8171528	<0.040	0.040	8171528
Methylene Chloride(Dichloromethane)	ug/g	<0.049	8171528	<0.049	0.049	8171528
Methyl Ethyl Ketone (2-Butanone)	ug/g	<0.40	8171528	<0.40	0.40	8171528
Methyl Isobutyl Ketone	ug/g	<0.40	8171528	<0.40	0.40	8171528

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

O.REG 153 VOCS BY HS & F1-F4 (SOIL)

Bureau Veritas ID		TLK879		TLK881		
Sampling Date		2022/08/12 14:00		2022/08/12 14:20		
COC Number		892340-01-01		892340-01-01		
	UNITS	BH22-2-2	QC Batch	BH22-2-4	RDL	QC Batch
Methyl t-butyl ether (MTBE)	ug/g	<0.040	8171528	<0.040	0.040	8171528
Styrene	ug/g	<0.040	8171528	<0.040	0.040	8171528
1,1,1,2-Tetrachloroethane	ug/g	<0.040	8171528	<0.040	0.040	8171528
1,1,2,2-Tetrachloroethane	ug/g	<0.040	8171528	<0.040	0.040	8171528
Tetrachloroethylene	ug/g	<0.040	8171528	<0.040	0.040	8171528
Toluene	ug/g	<0.020	8171528	<0.020	0.020	8171528
1,1,1-Trichloroethane	ug/g	<0.040	8171528	<0.040	0.040	8171528
1,1,2-Trichloroethane	ug/g	<0.040	8171528	<0.040	0.040	8171528
Trichloroethylene	ug/g	<0.010	8171528	<0.010	0.010	8171528
Trichlorofluoromethane (FREON 11)	ug/g	<0.040	8171528	<0.040	0.040	8171528
Vinyl Chloride	ug/g	<0.019	8171528	<0.019	0.019	8171528
p+m-Xylene	ug/g	<0.020	8171528	<0.020	0.020	8171528
o-Xylene	ug/g	<0.020	8171528	<0.020	0.020	8171528
Total Xylenes	ug/g	<0.020	8171528	<0.020	0.020	8171528
F1 (C6-C10)	ug/g	<10	8171528	<10	10	8171528
F1 (C6-C10) - BTEX	ug/g	<10	8171528	<10	10	8171528
F2-F4 Hydrocarbons						
F2 (C10-C16 Hydrocarbons)	ug/g	<10	8176518	<10	10	8176518
F3 (C16-C34 Hydrocarbons)	ug/g	53	8176518	<50	50	8176518
F4 (C34-C50 Hydrocarbons)	ug/g	120	8176518	<50	50	8176518
Reached Baseline at C50	ug/g	Yes	8176518	Yes		8176518
Surrogate Recovery (%)						
o-Terphenyl	%	90	8176518	86		8176518
4-Bromofluorobenzene	%	93	8171528	92		8171528
D10-o-Xylene	%	101	8171528	91		8171528
D4-1,2-Dichloroethane	%	106	8171528	106		8171528
D8-Toluene	%	93	8171528	91		8171528

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

O.REG 558 TCLP INORGANICS PACKAGE (SOIL)

Bureau Veritas ID		TLK882		
Sampling Date		2022/08/12 15:00		
COC Number		892340-01-01		
	UNITS	TCLP	RDL	QC Batch
Inorganics				
Leachable Fluoride (F-)	mg/L	0.27	0.10	8173720
Leachable WAD Cyanide (Free)	mg/L	<0.010	0.010	8173713
Leachable Nitrite (N)	mg/L	<0.10	0.10	8173721
Leachable Nitrate (N)	mg/L	<1.0	1.0	8173721
Leachable Nitrate + Nitrite (N)	mg/L	<1.0	1.0	8173721
Metals				
Leachable Arsenic (As)	mg/L	<0.2	0.2	8173777
Leachable Barium (Ba)	mg/L	0.6	0.2	8173777
Leachable Boron (B)	mg/L	<0.1	0.1	8173777
Leachable Cadmium (Cd)	mg/L	<0.05	0.05	8173777
Leachable Chromium (Cr)	mg/L	<0.1	0.1	8173777
Leachable Lead (Pb)	mg/L	<0.1	0.1	8173777
Leachable Mercury (Hg)	mg/L	<0.001	0.001	8173777
Leachable Selenium (Se)	mg/L	<0.1	0.1	8173777
Leachable Silver (Ag)	mg/L	<0.01	0.01	8173777
Leachable Uranium (U)	mg/L	<0.01	0.01	8173777

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

TCLP LEACHATE PREPARATION (SOIL)

Bureau Veritas ID		TLK882		
Sampling Date		2022/08/12 15:00		
COC Number		892340-01-01		
	UNITS	**TCLP**	**RDL**	**QC Batch**
Inorganics				
Final pH	pH	5.93		8173836
Initial pH	pH	10.9		8173836
TCLP - % Solids	%	100	0.2	8171899
TCLP Extraction Fluid	N/A	FLUID 1		8173835

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

O.REG 558 TCLP PCBS (SOIL)

Bureau Veritas ID		TLK882		
Sampling Date		2022/08/12 15:00		
COC Number		892340-01-01		
	UNITS	**TCLP**	**RDL**	**QC Batch**
PCBs				
Leachable Total PCB	ug/L	<3.0	3.0	8222405
Surrogate Recovery (%)				
Leachable Decachlorobiphenyl	%	96		8222405

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

O.REG 558 TCLP SEMI-VOLATILE ORGANICS (SOIL)

Bureau Veritas ID		TLK882		
Sampling Date		2022/08/12 15:00		
COC Number		892340-01-01		
	UNITS	TCLP	RDL	QC Batch
Semivolatile Organics				
Leachable Benzo(a)pyrene	ug/L	<0.10	0.10	8174400
Leachable m/p-Cresol	ug/L	<2.5	2.5	8174400
Leachable o-Cresol	ug/L	<2.5	2.5	8174400
Leachable Cresol Total	ug/L	<2.5	2.5	8174400
Leachable 2,4-Dichlorophenol	ug/L	<2.5	2.5	8174400
Leachable 2,4-Dinitrotoluene	ug/L	<10	10	8174400
Leachable Hexachlorobenzene	ug/L	<10	10	8174400
Leachable Hexachlorobutadiene	ug/L	<10	10	8174400
Leachable Hexachloroethane	ug/L	<10	10	8174400
Leachable Nitrobenzene	ug/L	<10	10	8174400
Leachable Pentachlorophenol	ug/L	<2.5	2.5	8174400
Leachable Pyridine	ug/L	<10	10	8174400
Leachable 2,3,4,6-Tetrachlorophenol	ug/L	<2.5	2.5	8174400
Leachable 2,4,5-Trichlorophenol	ug/L	<0.50	0.50	8174400
Leachable 2,4,6-Trichlorophenol	ug/L	<2.5	2.5	8174400
Surrogate Recovery (%)				
Leachable 2,4,6-Tribromophenol	%	65		8174400
Leachable 2-Fluorobiphenyl	%	47		8174400
Leachable 2-Fluorophenol	%	51		8174400
Leachable D14-Terphenyl (FS)	%	81		8174400
Leachable D5-Nitrobenzene	%	62		8174400
Leachable D5-Phenol	%	36		8174400

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

O.REG 558 TCLP VOCS BY HS (SOIL)

Bureau Veritas ID		TLK882		
Sampling Date		2022/08/12 15:00		
COC Number		892340-01-01		
	UNITS	**TCLP**	**RDL**	**QC Batch**
Charge/Prep Analysis				
Amount Extracted (Wet Weight) (g)	N/A	25	N/A	8171803
Volatile Organics				
Leachable Benzene	mg/L	<0.020	0.020	8173955
Leachable Carbon Tetrachloride	mg/L	<0.020	0.020	8173955
Leachable Chlorobenzene	mg/L	<0.020	0.020	8173955
Leachable Chloroform	mg/L	<0.020	0.020	8173955
Leachable 1,2-Dichlorobenzene	mg/L	<0.050	0.050	8173955
Leachable 1,4-Dichlorobenzene	mg/L	<0.050	0.050	8173955
Leachable 1,2-Dichloroethane	mg/L	<0.050	0.050	8173955
Leachable 1,1-Dichloroethylene	mg/L	<0.020	0.020	8173955
Leachable Methylene Chloride(Dichloromethane)	mg/L	<0.20	0.20	8173955
Leachable Methyl Ethyl Ketone (2-Butanone)	mg/L	<1.0	1.0	8173955
Leachable Tetrachloroethylene	mg/L	<0.020	0.020	8173955
Leachable Trichloroethylene	mg/L	<0.020	0.020	8173955
Leachable Vinyl Chloride	mg/L	<0.020	0.020	8173955
Surrogate Recovery (%)				
Leachable 4-Bromofluorobenzene	%	87		8173955
Leachable D4-1,2-Dichloroethane	%	111		8173955
Leachable D8-Toluene	%	94		8173955

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

MISCELLANEOUS (SOIL)

Bureau Veritas ID		TLK882	
Sampling Date		2022/08/12 15:00	
COC Number		892340-01-01	
	UNITS	TCLP	QC Batch
Inorganics			
Ignitability	N/A	NF/NI	8176675
QC Batch = Quality Control Batch			

TEST SUMMARY

Bureau Veritas ID: TLK872
Sample ID: BH22-6-1
Matrix: Soil

Collected: 2022/08/12
Shipped:
Received: 2022/08/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	8168372	N/A	2022/08/22	Automated Statchk
Hot Water Extractable Boron	ICP	8174000	2022/08/18	2022/08/19	Jaswinder Kaur
1,3-Dichloropropene Sum	CALC	8168373	N/A	2022/08/19	Automated Statchk
Free (WAD) Cyanide	TECH	8171197	2022/08/17	2022/08/19	Prgya Panchal
Conductivity	AT	8175634	2022/08/19	2022/08/19	Roya Fathitil
Hexavalent Chromium in Soil by IC	IC/SPEC	8171366	2022/08/17	2022/08/18	Sousan Besharatlou
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	8176518	2022/08/19	2022/08/23	Dennis Ngondu
Acid Extractable Metals by ICPMS	ICP/MS	8174096	2022/08/18	2022/08/19	Daniel Teclu
Moisture	BAL	8171274	N/A	2022/08/17	Mathew Bowles
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	8175599	2022/08/19	2022/08/20	Mitesh Raj
pH CaCl2 EXTRACT	AT	8170962	2022/08/17	2022/08/17	Taslima Aktar
Sodium Adsorption Ratio (SAR)	CALC/MET	8168223	N/A	2022/08/23	Automated Statchk
Volatile Organic Compounds and F1 PHCs	GC/MSFD	8171528	N/A	2022/08/19	Juan Pangilinan

Bureau Veritas ID: TLK873
Sample ID: BH22-6-2
Matrix: Soil

Collected: 2022/08/12
Shipped:
Received: 2022/08/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	8168372	N/A	2022/08/22	Automated Statchk
Hot Water Extractable Boron	ICP	8174000	2022/08/18	2022/08/19	Jaswinder Kaur
Free (WAD) Cyanide	TECH	8171197	2022/08/17	2022/08/19	Prgya Panchal
Conductivity	AT	8173952	2022/08/18	2022/08/18	Roya Fathitil
Hexavalent Chromium in Soil by IC	IC/SPEC	8171366	2022/08/17	2022/08/18	Sousan Besharatlou
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	8178895	N/A	2022/08/21	Domnica Andronescu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	8176518	2022/08/19	2022/08/23	Dennis Ngondu
Acid Extractable Metals by ICPMS	ICP/MS	8174096	2022/08/18	2022/08/19	Daniel Teclu
Moisture	BAL	8170993	N/A	2022/08/17	Mathew Bowles
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	8175599	2022/08/19	2022/08/20	Mitesh Raj
Polychlorinated Biphenyl in Soil	GC/ECD	8173509	2022/08/17	2022/08/18	Li Peng
pH CaCl2 EXTRACT	AT	8170962	2022/08/17	2022/08/17	Taslima Aktar
Sodium Adsorption Ratio (SAR)	CALC/MET	8168223	N/A	2022/08/23	Automated Statchk

Bureau Veritas ID: TLK874
Sample ID: BH22-6-3
Matrix: Soil

Collected: 2022/08/12
Shipped:
Received: 2022/08/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	8168372	N/A	2022/08/22	Automated Statchk
Hot Water Extractable Boron	ICP	8174000	2022/08/18	2022/08/19	Jaswinder Kaur
1,3-Dichloropropene Sum	CALC	8168373	N/A	2022/08/19	Automated Statchk
Free (WAD) Cyanide	TECH	8171197	2022/08/17	2022/08/19	Prgya Panchal
Conductivity	AT	8175634	2022/08/19	2022/08/19	Roya Fathitil
Hexavalent Chromium in Soil by IC	IC/SPEC	8171366	2022/08/17	2022/08/18	Sousan Besharatlou
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	8176518	2022/08/19	2022/08/23	Dennis Ngondu
Acid Extractable Metals by ICPMS	ICP/MS	8176537	2022/08/19	2022/08/19	Medhat Nasr

TEST SUMMARY

Bureau Veritas ID: TLK874 **Collected:** 2022/08/12
Sample ID: BH22-6-3 **Shipped:**
Matrix: Soil **Received:** 2022/08/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	8169280	N/A	2022/08/16	Mathew Bowles
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	8175599	2022/08/19	2022/08/20	Mitesh Raj
pH CaCl2 EXTRACT	AT	8170962	2022/08/17	2022/08/17	Taslima Aktar
Sodium Adsorption Ratio (SAR)	CALC/MET	8168223	N/A	2022/08/23	Automated Statchk
Volatile Organic Compounds and F1 PHCs	GC/MSFD	8171528	N/A	2022/08/19	Juan Pangilinan

Bureau Veritas ID: TLK874 Dup **Collected:** 2022/08/12
Sample ID: BH22-6-3 **Shipped:**
Matrix: Soil **Received:** 2022/08/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	8169280	N/A	2022/08/16	Mathew Bowles

Bureau Veritas ID: TLK875 **Collected:** 2022/08/12
Sample ID: BH22-6-4 **Shipped:**
Matrix: Soil **Received:** 2022/08/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	8168372	N/A	2022/08/22	Automated Statchk
Hot Water Extractable Boron	ICP	8174000	2022/08/18	2022/08/19	Jaswinder Kaur
Free (WAD) Cyanide	TECH	8171197	2022/08/17	2022/08/19	Prgya Panchal
Conductivity	AT	8173952	2022/08/18	2022/08/18	Roya Fathitil
Hexavalent Chromium in Soil by IC	IC/SPEC	8171366	2022/08/17	2022/08/18	Sousan Besharatlou
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	8178895	N/A	2022/08/21	Domnica Andronescu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	8176518	2022/08/19	2022/08/23	Dennis Ngondu
Acid Extractable Metals by ICPMS	ICP/MS	8174096	2022/08/18	2022/08/19	Daniel Teclu
Moisture	BAL	8170845	N/A	2022/08/17	Mathew Bowles
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	8175599	2022/08/19	2022/08/20	Mitesh Raj
Polychlorinated Biphenyl in Soil	GC/ECD	8173509	2022/08/17	2022/08/18	Li Peng
pH CaCl2 EXTRACT	AT	8170962	2022/08/17	2022/08/17	Taslima Aktar
Sodium Adsorption Ratio (SAR)	CALC/MET	8168223	N/A	2022/08/23	Automated Statchk

Bureau Veritas ID: TLK876 **Collected:** 2022/08/12
Sample ID: QC-03 **Shipped:**
Matrix: Soil **Received:** 2022/08/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	8168372	N/A	2022/08/22	Automated Statchk
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	8183312	N/A	2022/08/24	Georgeta Rusu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	8180313	2022/08/22	2022/08/23	Suleeqa Nurr
Moisture	BAL	8171274	N/A	2022/08/17	Mathew Bowles
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	8175599	2022/08/19	2022/08/20	Mitesh Raj

TEST SUMMARY

Bureau Veritas ID: TLK877 **Collected:** 2022/08/12
Sample ID: QC-04 **Shipped:**
Matrix: Soil **Received:** 2022/08/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	8174000	2022/08/18	2022/08/19	Jaswinder Kaur
Free (WAD) Cyanide	TECH	8171197	2022/08/17	2022/08/19	Prgya Panchal
Conductivity	AT	8173952	2022/08/18	2022/08/18	Roya Fathitil
Hexavalent Chromium in Soil by IC	IC/SPEC	8171366	2022/08/17	2022/08/18	Sousan Besharatlou
Acid Extractable Metals by ICPMS	ICP/MS	8174096	2022/08/18	2022/08/19	Daniel Teclu
Moisture	BAL	8170502	N/A	2022/08/17	Mathew Bowles
pH CaCl2 EXTRACT	AT	8170962	2022/08/17	2022/08/17	Taslima Aktar
Sodium Adsorption Ratio (SAR)	CALC/MET	8168223	N/A	2022/08/23	Automated Statchk

Bureau Veritas ID: TLK877 Dup **Collected:** 2022/08/12
Sample ID: QC-04 **Shipped:**
Matrix: Soil **Received:** 2022/08/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	8174000	2022/08/18	2022/08/19	Jaswinder Kaur

Bureau Veritas ID: TLK878 **Collected:** 2022/08/12
Sample ID: BH22-2-1 **Shipped:**
Matrix: Soil **Received:** 2022/08/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	8168372	N/A	2022/08/22	Automated Statchk
Hot Water Extractable Boron	ICP	8174000	2022/08/18	2022/08/19	Jaswinder Kaur
Free (WAD) Cyanide	TECH	8171197	2022/08/17	2022/08/19	Prgya Panchal
Conductivity	AT	8175634	2022/08/19	2022/08/19	Roya Fathitil
Hexavalent Chromium in Soil by IC	IC/SPEC	8171366	2022/08/17	2022/08/18	Sousan Besharatlou
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	8178895	N/A	2022/08/21	Domnica Andronescu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	8176518	2022/08/19	2022/08/23	Dennis Ngondu
Acid Extractable Metals by ICPMS	ICP/MS	8174096	2022/08/18	2022/08/19	Daniel Teclu
Moisture	BAL	8170993	N/A	2022/08/17	Mathew Bowles
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	8175599	2022/08/19	2022/08/20	Mitesh Raj
Polychlorinated Biphenyl in Soil	GC/ECD	8173509	2022/08/18	2022/08/18	Li Peng
pH CaCl2 EXTRACT	AT	8170962	2022/08/17	2022/08/17	Taslima Aktar
Sodium Adsorption Ratio (SAR)	CALC/MET	8168223	N/A	2022/08/23	Automated Statchk

Bureau Veritas ID: TLK879 **Collected:** 2022/08/12
Sample ID: BH22-2-2 **Shipped:**
Matrix: Soil **Received:** 2022/08/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	8168372	N/A	2022/08/22	Automated Statchk
Hot Water Extractable Boron	ICP	8174000	2022/08/18	2022/08/19	Jaswinder Kaur
1,3-Dichloropropene Sum	CALC	8168373	N/A	2022/08/19	Automated Statchk
Free (WAD) Cyanide	TECH	8171197	2022/08/17	2022/08/19	Prgya Panchal
Conductivity	AT	8173952	2022/08/18	2022/08/18	Roya Fathitil
Hexavalent Chromium in Soil by IC	IC/SPEC	8171366	2022/08/17	2022/08/18	Sousan Besharatlou

TEST SUMMARY

Bureau Veritas ID: TLK879 **Collected:** 2022/08/12
Sample ID: BH22-2-2 **Shipped:**
Matrix: Soil **Received:** 2022/08/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	8176518	2022/08/19	2022/08/23	Dennis Ngondu
Acid Extractable Metals by ICPMS	ICP/MS	8174096	2022/08/18	2022/08/19	Daniel Teclu
Moisture	BAL	8170845	N/A	2022/08/17	Mathew Bowles
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	8175599	2022/08/19	2022/08/20	Mitesh Raj
pH CaCl2 EXTRACT	AT	8170962	2022/08/17	2022/08/17	Taslima Aktar
Sodium Adsorption Ratio (SAR)	CALC/MET	8168223	N/A	2022/08/23	Automated Statchk
Volatile Organic Compounds and F1 PHCs	GC/MSFD	8171528	N/A	2022/08/19	Juan Pangilinan

Bureau Veritas ID: TLK880 **Collected:** 2022/08/12
Sample ID: BH22-2-3 **Shipped:**
Matrix: Soil **Received:** 2022/08/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	8168372	N/A	2022/08/22	Automated Statchk
Hot Water Extractable Boron	ICP	8174000	2022/08/18	2022/08/19	Jaswinder Kaur
Free (WAD) Cyanide	TECH	8171197	2022/08/17	2022/08/19	Prgya Panchal
Conductivity	AT	8175634	2022/08/19	2022/08/19	Roya Fathitil
Hexavalent Chromium in Soil by IC	IC/SPEC	8171366	2022/08/17	2022/08/18	Sousan Besharatlou
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	8178895	N/A	2022/08/21	Domnica Andronescu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	8176518	2022/08/19	2022/08/23	Dennis Ngondu
Acid Extractable Metals by ICPMS	ICP/MS	8174096	2022/08/18	2022/08/19	Daniel Teclu
Total Metals in SPLP Leachate by ICPMS	ICP/MS	8196080	2022/08/30	2022/08/30	Azita Fazaeli
Moisture	BAL	8170993	N/A	2022/08/17	Mathew Bowles
Modified SPLP extraction - Weight		8194151	N/A	2022/08/30	Eddie On
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	8175599	2022/08/19	2022/08/20	Mitesh Raj
Polychlorinated Biphenyl in Soil	GC/ECD	8173509	2022/08/18	2022/08/18	Li Peng
pH CaCl2 EXTRACT	AT	8170962	2022/08/17	2022/08/17	Taslima Aktar
Sodium Adsorption Ratio (SAR)	CALC/MET	8168223	N/A	2022/08/24	Automated Statchk

Bureau Veritas ID: TLK880 Dup **Collected:** 2022/08/12
Sample ID: BH22-2-3 **Shipped:**
Matrix: Soil **Received:** 2022/08/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8174096	2022/08/18	2022/08/19	Daniel Teclu

Bureau Veritas ID: TLK881 **Collected:** 2022/08/12
Sample ID: BH22-2-4 **Shipped:**
Matrix: Soil **Received:** 2022/08/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	8168372	N/A	2022/08/22	Automated Statchk
Hot Water Extractable Boron	ICP	8174000	2022/08/18	2022/08/19	Jaswinder Kaur
1,3-Dichloropropene Sum	CALC	8190282	N/A	2022/09/01	Automated Statchk
1,3-Dichloropropene Sum	CALC	8168373	N/A	2022/08/19	Automated Statchk
Free (WAD) Cyanide	TECH	8171197	2022/08/17	2022/08/19	Prgya Panchal

TEST SUMMARY

Bureau Veritas ID: TLK881
Sample ID: BH22-2-4
Matrix: Soil

Collected: 2022/08/12
Shipped:
Received: 2022/08/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Conductivity	AT	8173952	2022/08/18	2022/08/18	Roya Fathitil
Hexavalent Chromium in Soil by IC	IC/SPEC	8171366	2022/08/17	2022/08/18	Sousan Besharatlou
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	8176518	2022/08/19	2022/08/23	Dennis Ngondu
Acid Extractable Metals by ICPMS	ICP/MS	8174096	2022/08/18	2022/08/19	Daniel Teclu
Moisture	BAL	8170993	N/A	2022/08/17	Mathew Bowles
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	8175599	2022/08/19	2022/08/20	Mitesh Raj
pH CaCl2 EXTRACT	AT	8170962	2022/08/17	2022/08/17	Taslima Aktar
Sodium Adsorption Ratio (SAR)	CALC/MET	8168223	N/A	2022/08/23	Automated Statchk
SPLP Zero Headspace Extraction		8196271	2022/08/30	2022/08/31	Mohammed Abdul Nafay Shoeb
Volatile Organic Compounds and F1 PHCs	GC/MSFD	8171528	N/A	2022/08/19	Juan Pangilinan
Volatile organics in SPLP leachates	HS/MS	8198689	N/A	2022/08/31	Dina Wang

Bureau Veritas ID: TLK881 Dup
Sample ID: BH22-2-4
Matrix: Soil

Collected: 2022/08/12
Shipped:
Received: 2022/08/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Conductivity	AT	8173952	2022/08/18	2022/08/18	Roya Fathitil

Bureau Veritas ID: TLK882
Sample ID: TCLP
Matrix: Soil

Collected: 2022/08/12
Shipped:
Received: 2022/08/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Semivolatile Organic Compounds (TCLP)	GC/MS	8174400	2022/08/18	2022/08/19	Wendy Zhao
Cyanide (WAD) in Leachates	SKAL/CN	8173713	N/A	2022/08/22	Kruti Jitesh Patel
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	8178895	N/A	2022/08/22	Domnica Andronescu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	8176518	2022/08/19	2022/08/23	Dennis Ngondu
Fluoride by ISE in Leachates	ISE	8173720	2022/08/18	2022/08/18	Kien Tran
Total Metals in TCLP Leachate by ICPMS	ICP1/MS	8173777	2022/08/18	2022/08/18	Azita Fazaeli
Ignitability of a Sample	BAL	8176675	2022/08/19	2022/08/19	Min Yang
Moisture	BAL	8171274	N/A	2022/08/17	Mathew Bowles
Nitrate& Nitrite as Nitrogen in Leachate	LACH	8173721	N/A	2022/08/23	Raiq Kashif
Polychlorinated Biphenyl in Leachate	GC/ECD	8222405	2022/09/13	2022/09/14	Farag Mansour
TCLP - % Solids	BAL	8171899	2022/08/17	2022/08/18	Omer Imtiaz Uddin
TCLP - Extraction Fluid		8173835	N/A	2022/08/18	Omer Imtiaz Uddin
TCLP - Initial and final pH	PH	8173836	N/A	2022/08/18	Omer Imtiaz Uddin
TCLP Zero Headspace Extraction		8171803	2022/08/17	2022/08/18	Abdul Rahman Mohammed
VOCs in ZHE Leachates	GC/MS	8173955	2022/08/18	2022/08/19	Gladys Guerrero

GENERAL COMMENTS

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

Package 1	2.7°C

Revised report [2022/09/16] PCB added to leachate
Revised report [2022/08/25] Split report
Revides report [2022/08/25]Project number updated

Sample TLK879 [BH22-2-2] : PAH Analysis: Due to the sample matrix, sample required dilution. Detection limits were adjusted accordingly.

Sample TLK881 [BH22-2-4] : Sample extracted past holding time. Analysis was performed past sample holding time. This may increase the variability associated with these results. Reported result in a minimum concentration and is not acceptable for establishing that the waste does not exceed the regulatory level.

Sample TLK882 [TCLP] : NF/NI=Non Flammable and Non Ignitable

Results relate only to the items tested.

QUALITY ASSURANCE REPORT

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		Leachate Blank	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	Value	UNITS
8171528	4-Bromofluorobenzene	2022/08/18	98	60 - 140	98	60 - 140	87	%				
8171528	D10-o-Xylene	2022/08/18	99	60 - 130	99	60 - 130	84	%				
8171528	D4-1,2-Dichloroethane	2022/08/18	112	60 - 140	111	60 - 140	117	%				
8171528	D8-Toluene	2022/08/18	104	60 - 140	104	60 - 140	92	%				
8173509	Decachlorobiphenyl	2022/08/18	102	60 - 130	101	60 - 130	99	%				
8173955	Leachable 4-Bromofluorobenzene	2022/08/18	95	70 - 130	96	70 - 130	87	%				
8173955	Leachable D4-1,2-Dichloroethane	2022/08/18	94	70 - 130	103	70 - 130	107	%				
8173955	Leachable D8-Toluene	2022/08/18	108	70 - 130	108	70 - 130	96	%				
8174400	Leachable 2,4,6-Tribromophenol	2022/08/19	94	10 - 130	88	10 - 130	83	%				
8174400	Leachable 2-Fluorobiphenyl	2022/08/19	81	30 - 130	79	30 - 130	78	%				
8174400	Leachable 2-Fluorophenol	2022/08/19	62	10 - 130	57	10 - 130	60	%				
8174400	Leachable D14-Terphenyl (FS)	2022/08/19	94	30 - 130	89	30 - 130	95	%				
8174400	Leachable D5-Nitrobenzene	2022/08/19	92	30 - 130	87	30 - 130	87	%				
8174400	Leachable D5-Phenol	2022/08/19	55	10 - 130	52	10 - 130	50	%				
8175599	D10-Anthracene	2022/08/19	98	50 - 130	94	50 - 130	103	%				
8175599	D14-Terphenyl (FS)	2022/08/19	103	50 - 130	96	50 - 130	104	%				
8175599	D8-Acenaphthylene	2022/08/19	107	50 - 130	99	50 - 130	102	%				
8176518	o-Terphenyl	2022/08/23	94	60 - 130	91	60 - 130	87	%				
8178895	1,4-Difluorobenzene	2022/08/21	98	60 - 140	98	60 - 140	103	%				
8178895	4-Bromofluorobenzene	2022/08/21	101	60 - 140	101	60 - 140	100	%				
8178895	D10-o-Xylene	2022/08/21	102	60 - 140	98	60 - 140	101	%				
8178895	D4-1,2-Dichloroethane	2022/08/21	97	60 - 140	98	60 - 140	100	%				
8180313	o-Terphenyl	2022/08/23	89	60 - 130	90	60 - 130	89	%				
8183312	1,4-Difluorobenzene	2022/08/24	95	60 - 140	95	60 - 140	97	%				
8183312	4-Bromofluorobenzene	2022/08/24	102	60 - 140	103	60 - 140	94	%				
8183312	D10-o-Xylene	2022/08/24	101	60 - 140	99	60 - 140	101	%				
8183312	D4-1,2-Dichloroethane	2022/08/24	87	60 - 140	88	60 - 140	93	%				
8198689	Leachable (SPLP) 4-Bromofluorobenzene	2022/08/31	106	70 - 130	105	70 - 130	101	%				
8198689	Leachable (SPLP) D4-1,2-Dichloroethane	2022/08/31	95	70 - 130	97	70 - 130	96	%				
8198689	Leachable (SPLP) D8-Toluene	2022/08/31	99	70 - 130	100	70 - 130	97	%				
8222405	Leachable Decachlorobiphenyl	2022/09/14	111	30 - 130	90	30 - 130	91	%				
8169280	Moisture	2022/08/16							0.94	20		

QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		Leachate Blank	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	Value	UNITS
8170502	Moisture	2022/08/17							8.1	20		
8170845	Moisture	2022/08/17							3.5	20		
8170962	Available (CaCl2) pH	2022/08/17			100	97 - 103			0.14	N/A		
8170993	Moisture	2022/08/17							1.9	20		
8171197	WAD Cyanide (Free)	2022/08/19	94	75 - 125	96	80 - 120	<0.01	ug/g	NC	35		
8171274	Moisture	2022/08/17							2.5	20		
8171366	Chromium (VI)	2022/08/18	61 (1)	70 - 130	91	80 - 120	<0.18	ug/g	NC	35		
8171528	1,1,1,2-Tetrachloroethane	2022/08/18	112	60 - 140	109	60 - 130	<0.040	ug/g	NC	50		
8171528	1,1,1-Trichloroethane	2022/08/18	115	60 - 140	114	60 - 130	<0.040	ug/g	NC	50		
8171528	1,1,2,2-Tetrachloroethane	2022/08/18	106	60 - 140	103	60 - 130	<0.040	ug/g	NC	50		
8171528	1,1,2-Trichloroethane	2022/08/18	122	60 - 140	119	60 - 130	<0.040	ug/g	NC	50		
8171528	1,1-Dichloroethane	2022/08/18	109	60 - 140	107	60 - 130	<0.040	ug/g	NC	50		
8171528	1,1-Dichloroethylene	2022/08/18	111	60 - 140	111	60 - 130	<0.040	ug/g	NC	50		
8171528	1,2-Dichlorobenzene	2022/08/18	104	60 - 140	102	60 - 130	<0.040	ug/g	NC	50		
8171528	1,2-Dichloroethane	2022/08/18	112	60 - 140	109	60 - 130	<0.049	ug/g	NC	50		
8171528	1,2-Dichloropropane	2022/08/18	111	60 - 140	109	60 - 130	<0.040	ug/g	NC	50		
8171528	1,3-Dichlorobenzene	2022/08/18	105	60 - 140	101	60 - 130	<0.040	ug/g	NC	50		
8171528	1,4-Dichlorobenzene	2022/08/18	114	60 - 140	112	60 - 130	<0.040	ug/g	NC	50		
8171528	Acetone (2-Propanone)	2022/08/18	117	60 - 140	115	60 - 140	<0.49	ug/g	NC	50		
8171528	Benzene	2022/08/18	104	60 - 140	103	60 - 130	<0.0060	ug/g	NC	50		
8171528	Bromodichloromethane	2022/08/18	116	60 - 140	113	60 - 130	<0.040	ug/g	NC	50		
8171528	Bromoform	2022/08/18	108	60 - 140	105	60 - 130	<0.040	ug/g	NC	50		
8171528	Bromomethane	2022/08/18	111	60 - 140	110	60 - 140	<0.040	ug/g	NC	50		
8171528	Carbon Tetrachloride	2022/08/18	112	60 - 140	111	60 - 130	<0.040	ug/g	NC	50		
8171528	Chlorobenzene	2022/08/18	107	60 - 140	104	60 - 130	<0.040	ug/g	NC	50		
8171528	Chloroform	2022/08/18	113	60 - 140	110	60 - 130	<0.040	ug/g	NC	50		
8171528	cis-1,2-Dichloroethylene	2022/08/18	108	60 - 140	107	60 - 130	<0.040	ug/g	NC	50		
8171528	cis-1,3-Dichloropropene	2022/08/18	120	60 - 140	119	60 - 130	<0.030	ug/g	NC	50		
8171528	Dibromochloromethane	2022/08/18	107	60 - 140	105	60 - 130	<0.040	ug/g	NC	50		
8171528	Dichlorodifluoromethane (FREON 12)	2022/08/18	128	60 - 140	132	60 - 140	<0.040	ug/g	NC	50		
8171528	Ethylbenzene	2022/08/18	96	60 - 140	94	60 - 130	<0.010	ug/g	NC	50		
8171528	Ethylene Dibromide	2022/08/18	106	60 - 140	104	60 - 130	<0.040	ug/g	NC	50		

QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		Leachate Blank	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	Value	UNITS
8171528	F1 (C6-C10) - BTEX	2022/08/18					<10	ug/g	NC	30		
8171528	F1 (C6-C10)	2022/08/18	90	60 - 140	98	80 - 120	<10	ug/g	NC	30		
8171528	Hexane	2022/08/18	115	60 - 140	114	60 - 130	<0.040	ug/g	NC	50		
8171528	Methyl Ethyl Ketone (2-Butanone)	2022/08/18	106	60 - 140	105	60 - 140	<0.40	ug/g	NC	50		
8171528	Methyl Isobutyl Ketone	2022/08/18	118	60 - 140	117	60 - 130	<0.40	ug/g	NC	50		
8171528	Methyl t-butyl ether (MTBE)	2022/08/18	99	60 - 140	99	60 - 130	<0.040	ug/g	NC	50		
8171528	Methylene Chloride(Dichloromethane)	2022/08/18	111	60 - 140	107	60 - 130	<0.049	ug/g	NC	50		
8171528	o-Xylene	2022/08/18	98	60 - 140	96	60 - 130	<0.020	ug/g	NC	50		
8171528	p+m-Xylene	2022/08/18	100	60 - 140	98	60 - 130	<0.020	ug/g	NC	50		
8171528	Styrene	2022/08/18	112	60 - 140	110	60 - 130	<0.040	ug/g	NC	50		
8171528	Tetrachloroethylene	2022/08/18	98	60 - 140	97	60 - 130	<0.040	ug/g	NC	50		
8171528	Toluene	2022/08/18	104	60 - 140	103	60 - 130	<0.020	ug/g	NC	50		
8171528	Total Xylenes	2022/08/18					<0.020	ug/g	NC	50		
8171528	trans-1,2-Dichloroethylene	2022/08/18	108	60 - 140	107	60 - 130	<0.040	ug/g	NC	50		
8171528	trans-1,3-Dichloropropene	2022/08/18	135	60 - 140	132 (2)	60 - 130	<0.040	ug/g	NC	50		
8171528	Trichloroethylene	2022/08/18	110	60 - 140	110	60 - 130	<0.010	ug/g	NC	50		
8171528	Trichlorofluoromethane (FREON 11)	2022/08/18	110	60 - 140	110	60 - 130	<0.040	ug/g	NC	50		
8171528	Vinyl Chloride	2022/08/18	101	60 - 140	101	60 - 130	<0.019	ug/g	NC	50		
8173509	Aroclor 1242	2022/08/18					<0.010	ug/g	NC	50		
8173509	Aroclor 1248	2022/08/18					<0.010	ug/g	NC	50		
8173509	Aroclor 1254	2022/08/18					<0.010	ug/g	NC	50		
8173509	Aroclor 1260	2022/08/18	117	30 - 130	110	30 - 130	<0.010	ug/g	NC	50		
8173509	Total PCB	2022/08/18	117	30 - 130	110	30 - 130	<0.010	ug/g	NC	50		
8173713	Leachable WAD Cyanide (Free)	2022/08/22	85	80 - 120	103	80 - 120	<0.0020	mg/L	NC	20	<0.010	mg/L
8173720	Leachable Fluoride (F-)	2022/08/18	93	80 - 120	103	80 - 120	<0.10	mg/L	2.4	25	<0.10	mg/L
8173721	Leachable Nitrate (N)	2022/08/23	73 (3)	80 - 120	105	80 - 120	<1.0	mg/L	NC	25	<1.0	mg/L
8173721	Leachable Nitrate + Nitrite (N)	2022/08/23	80	80 - 120	104	80 - 120	<1.0	mg/L	NC	25	<1.0	mg/L
8173721	Leachable Nitrite (N)	2022/08/23	111	80 - 120	104	80 - 120	<0.10	mg/L	NC	25	<0.10	mg/L
8173777	Leachable Arsenic (As)	2022/08/18	99	80 - 120	98	80 - 120	<0.2	mg/L	NC	35	<0.2	mg/L
8173777	Leachable Barium (Ba)	2022/08/18	NC	80 - 120	100	80 - 120	<0.2	mg/L	1.3	35	<0.2	mg/L
8173777	Leachable Boron (B)	2022/08/18	103	80 - 120	102	80 - 120	<0.1	mg/L	NC	35	<0.1	mg/L
8173777	Leachable Cadmium (Cd)	2022/08/18	101	80 - 120	98	80 - 120	<0.05	mg/L	NC	35	<0.05	mg/L

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		Leachate Blank	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	Value	UNITS
8173777	Leachable Chromium (Cr)	2022/08/18	102	80 - 120	97	80 - 120	<0.1	mg/L	NC	35	<0.1	mg/L
8173777	Leachable Lead (Pb)	2022/08/18	95	80 - 120	94	80 - 120	<0.1	mg/L	NC	35	<0.1	mg/L
8173777	Leachable Mercury (Hg)	2022/08/18	103	80 - 120	94	80 - 120	<0.001	mg/L	NC	35	<0.001	mg/L
8173777	Leachable Selenium (Se)	2022/08/18	100	80 - 120	100	80 - 120	<0.1	mg/L	NC	35	<0.1	mg/L
8173777	Leachable Silver (Ag)	2022/08/18	101	80 - 120	98	80 - 120	<0.01	mg/L	NC	35	<0.01	mg/L
8173777	Leachable Uranium (U)	2022/08/18	98	80 - 120	94	80 - 120	<0.01	mg/L	NC	35	<0.01	mg/L
8173952	Conductivity	2022/08/18			97	90 - 110	<0.002	mS/cm	1.1	10		
8173955	Leachable 1,1-Dichloroethylene	2022/08/18	108	70 - 130	105	70 - 130	<0.020	mg/L	NC	30		
8173955	Leachable 1,2-Dichlorobenzene	2022/08/18	92	70 - 130	97	70 - 130	<0.050	mg/L	NC	30		
8173955	Leachable 1,2-Dichloroethane	2022/08/18	88	70 - 130	100	70 - 130	<0.050	mg/L	NC	30		
8173955	Leachable 1,4-Dichlorobenzene	2022/08/18	113	70 - 130	115	70 - 130	<0.050	mg/L	NC	30		
8173955	Leachable Benzene	2022/08/18	93	70 - 130	97	70 - 130	<0.020	mg/L	NC	30		
8173955	Leachable Carbon Tetrachloride	2022/08/18	103	70 - 130	98	70 - 130	<0.020	mg/L	NC	30		
8173955	Leachable Chlorobenzene	2022/08/18	98	70 - 130	102	70 - 130	<0.020	mg/L	NC	30		
8173955	Leachable Chloroform	2022/08/18	95	70 - 130	101	70 - 130	<0.020	mg/L	NC	30		
8173955	Leachable Methyl Ethyl Ketone (2-Butanone)	2022/08/18	97	60 - 140	129	60 - 140	<1.0	mg/L	NC	30		
8173955	Leachable Methylene Chloride (Dichloromethane)	2022/08/18	98	70 - 130	105	70 - 130	<0.20	mg/L	NC	30		
8173955	Leachable Tetrachloroethylene	2022/08/18	95	70 - 130	91	70 - 130	<0.020	mg/L	NC	30		
8173955	Leachable Trichloroethylene	2022/08/18	101	70 - 130	101	70 - 130	<0.020	mg/L	NC	30		
8173955	Leachable Vinyl Chloride	2022/08/18	99	70 - 130	97	70 - 130	<0.020	mg/L	NC	30		
8174000	Hot Water Ext. Boron (B)	2022/08/19	103	75 - 125	99	75 - 125	<0.050	ug/g	NC	40		
8174096	Acid Extractable Antimony (Sb)	2022/08/19	94	75 - 125	98	80 - 120	<0.20	ug/g	NC	30		
8174096	Acid Extractable Arsenic (As)	2022/08/19	101	75 - 125	96	80 - 120	<1.0	ug/g	8.9	30		
8174096	Acid Extractable Barium (Ba)	2022/08/19	NC	75 - 125	100	80 - 120	<0.50	ug/g	3.3	30		
8174096	Acid Extractable Beryllium (Be)	2022/08/19	103	75 - 125	96	80 - 120	<0.20	ug/g	11	30		
8174096	Acid Extractable Boron (B)	2022/08/19	97	75 - 125	94	80 - 120	<5.0	ug/g	8.3	30		
8174096	Acid Extractable Cadmium (Cd)	2022/08/19	106	75 - 125	98	80 - 120	<0.10	ug/g	NC	30		
8174096	Acid Extractable Chromium (Cr)	2022/08/19	NC	75 - 125	100	80 - 120	<1.0	ug/g	7.7	30		
8174096	Acid Extractable Cobalt (Co)	2022/08/19	100	75 - 125	100	80 - 120	<0.10	ug/g	8.5	30		
8174096	Acid Extractable Copper (Cu)	2022/08/19	96	75 - 125	99	80 - 120	<0.50	ug/g	1.7	30		
8174096	Acid Extractable Lead (Pb)	2022/08/19	104	75 - 125	100	80 - 120	<1.0	ug/g	4.6	30		

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		Leachate Blank	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	Value	UNITS
8174096	Acid Extractable Mercury (Hg)	2022/08/19	100	75 - 125	90	80 - 120	<0.050	ug/g	NC	30		
8174096	Acid Extractable Molybdenum (Mo)	2022/08/19	103	75 - 125	100	80 - 120	<0.50	ug/g	NC	30		
8174096	Acid Extractable Nickel (Ni)	2022/08/19	98	75 - 125	102	80 - 120	<0.50	ug/g	5.3	30		
8174096	Acid Extractable Selenium (Se)	2022/08/19	103	75 - 125	97	80 - 120	<0.50	ug/g	NC	30		
8174096	Acid Extractable Silver (Ag)	2022/08/19	106	75 - 125	100	80 - 120	<0.20	ug/g	NC	30		
8174096	Acid Extractable Thallium (Tl)	2022/08/19	107	75 - 125	101	80 - 120	<0.050	ug/g	9.8	30		
8174096	Acid Extractable Uranium (U)	2022/08/19	106	75 - 125	102	80 - 120	<0.050	ug/g	11	30		
8174096	Acid Extractable Vanadium (V)	2022/08/19	NC	75 - 125	100	80 - 120	<5.0	ug/g	5.2	30		
8174096	Acid Extractable Zinc (Zn)	2022/08/19	NC	75 - 125	97	80 - 120	<5.0	ug/g	5.7	30		
8174400	Leachable 2,3,4,6-Tetrachlorophenol	2022/08/19	109	10 - 130	103	10 - 130	<2.5	ug/L	NC	40		
8174400	Leachable 2,4,5-Trichlorophenol	2022/08/19	97	10 - 130	93	10 - 130	<0.50	ug/L	NC	40		
8174400	Leachable 2,4,6-Trichlorophenol	2022/08/19	99	10 - 130	94	10 - 130	<2.5	ug/L	NC	40		
8174400	Leachable 2,4-Dichlorophenol	2022/08/19	95	10 - 130	90	10 - 130	<2.5	ug/L	NC	40		
8174400	Leachable 2,4-Dinitrotoluene	2022/08/19	93	30 - 130	86	30 - 130	<10	ug/L	NC	40		
8174400	Leachable Benzo(a)pyrene	2022/08/19	104	30 - 130	97	30 - 130	<0.10	ug/L	NC	40		
8174400	Leachable Cresol Total	2022/08/19	92	10 - 130	87	10 - 130	<2.5	ug/L	NC	40		
8174400	Leachable Hexachlorobenzene	2022/08/19	101	30 - 130	96	30 - 130	<10	ug/L	NC	40		
8174400	Leachable Hexachlorobutadiene	2022/08/19	71	30 - 130	75	30 - 130	<10	ug/L	NC	40		
8174400	Leachable Hexachloroethane	2022/08/19	78	30 - 130	83	30 - 130	<10	ug/L	NC	40		
8174400	Leachable m/p-Cresol	2022/08/19	91	10 - 130	86	10 - 130	<2.5	ug/L	NC	40		
8174400	Leachable Nitrobenzene	2022/08/19	103	30 - 130	97	30 - 130	<10	ug/L	NC	40		
8174400	Leachable o-Cresol	2022/08/19	93	10 - 130	88	10 - 130	<2.5	ug/L	NC	40		
8174400	Leachable Pentachlorophenol	2022/08/19	102	30 - 130	96	30 - 130	<2.5	ug/L	NC	40		
8174400	Leachable Pyridine	2022/08/19	34	10 - 130	24	10 - 130	<10	ug/L	NC	40		
8175599	1-Methylnaphthalene	2022/08/19	103	50 - 130	101	50 - 130	<0.0050	ug/g	96 (3)	40		
8175599	2-Methylnaphthalene	2022/08/19	104	50 - 130	101	50 - 130	<0.0050	ug/g	82 (3)	40		
8175599	Acenaphthene	2022/08/19	105	50 - 130	99	50 - 130	<0.0050	ug/g	142 (3)	40		
8175599	Acenaphthylene	2022/08/19	107	50 - 130	103	50 - 130	<0.0050	ug/g	37	40		
8175599	Anthracene	2022/08/19	118	50 - 130	103	50 - 130	<0.0050	ug/g	155 (3)	40		
8175599	Benzo(a)anthracene	2022/08/19	NC	50 - 130	115	50 - 130	<0.0050	ug/g	127 (3)	40		
8175599	Benzo(a)pyrene	2022/08/19	97	50 - 130	93	50 - 130	<0.0050	ug/g	113 (3)	40		
8175599	Benzo(b/j)fluoranthene	2022/08/19	90	50 - 130	98	50 - 130	<0.0050	ug/g	109 (3)	40		

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		Leachate Blank	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	Value	UNITS
8175599	Benzo(g,h,i)perylene	2022/08/19	102	50 - 130	84	50 - 130	<0.0050	ug/g	89 (3)	40		
8175599	Benzo(k)fluoranthene	2022/08/19	106	50 - 130	106	50 - 130	<0.0050	ug/g	108 (3)	40		
8175599	Biphenyl	2022/08/19	99	50 - 130	95	50 - 130	<0.0050	ug/g				
8175599	Chrysene	2022/08/19	115	50 - 130	105	50 - 130	<0.0050	ug/g	121 (3)	40		
8175599	Dibenzo(a,h)anthracene	2022/08/19	115	50 - 130	88	50 - 130	<0.0050	ug/g	114 (3)	40		
8175599	Fluoranthene	2022/08/19	108	50 - 130	104	50 - 130	<0.0050	ug/g	118 (3)	40		
8175599	Fluorene	2022/08/19	105	50 - 130	100	50 - 130	<0.0050	ug/g	142 (3)	40		
8175599	Indeno(1,2,3-cd)pyrene	2022/08/19	108	50 - 130	86	50 - 130	<0.0050	ug/g	103 (3)	40		
8175599	Naphthalene	2022/08/19	97	50 - 130	95	50 - 130	<0.0050	ug/g	52 (3)	40		
8175599	Phenanthrene	2022/08/19	120	50 - 130	101	50 - 130	<0.0050	ug/g	133 (3)	40		
8175599	Pyrene	2022/08/19	107	50 - 130	104	50 - 130	<0.0050	ug/g	119 (3)	40		
8175634	Conductivity	2022/08/19			100	90 - 110	<0.002	mS/cm	0.32	10		
8176518	Diesel (C10-C24)	2022/08/23					<50	ug/g				
8176518	F2 (C10-C16 Hydrocarbons)	2022/08/23	95	60 - 130	91	80 - 120	<10	ug/g	NC	30		
8176518	F3 (C16-C34 Hydrocarbons)	2022/08/23	100	60 - 130	96	80 - 120	<50	ug/g	7.4	30		
8176518	F4 (C34-C50 Hydrocarbons)	2022/08/23	105	60 - 130	101	80 - 120	<50	ug/g	NC	30		
8176537	Acid Extractable Antimony (Sb)	2022/08/19	86	75 - 125	95	80 - 120	<0.20	ug/g	NC	30		
8176537	Acid Extractable Arsenic (As)	2022/08/19	104	75 - 125	99	80 - 120	<1.0	ug/g	4.8	30		
8176537	Acid Extractable Barium (Ba)	2022/08/19	NC	75 - 125	100	80 - 120	<0.50	ug/g	3.1	30		
8176537	Acid Extractable Beryllium (Be)	2022/08/19	104	75 - 125	97	80 - 120	<0.20	ug/g	4.3	30		
8176537	Acid Extractable Boron (B)	2022/08/19	92	75 - 125	93	80 - 120	<5.0	ug/g	3.4	30		
8176537	Acid Extractable Cadmium (Cd)	2022/08/19	103	75 - 125	94	80 - 120	<0.10	ug/g	NC	30		
8176537	Acid Extractable Chromium (Cr)	2022/08/19	110	75 - 125	101	80 - 120	<1.0	ug/g	2.5	30		
8176537	Acid Extractable Cobalt (Co)	2022/08/19	105	75 - 125	99	80 - 120	<0.10	ug/g	1.2	30		
8176537	Acid Extractable Copper (Cu)	2022/08/19	NC	75 - 125	95	80 - 120	<0.50	ug/g	0.76	30		
8176537	Acid Extractable Lead (Pb)	2022/08/19	100	75 - 125	98	80 - 120	<1.0	ug/g	2.0	30		
8176537	Acid Extractable Mercury (Hg)	2022/08/19	95	75 - 125	92	80 - 120	<0.050	ug/g				
8176537	Acid Extractable Molybdenum (Mo)	2022/08/19	104	75 - 125	97	80 - 120	<0.50	ug/g	NC	30		
8176537	Acid Extractable Nickel (Ni)	2022/08/19	NC	75 - 125	99	80 - 120	<0.50	ug/g	2.6	30		
8176537	Acid Extractable Selenium (Se)	2022/08/19	103	75 - 125	97	80 - 120	<0.50	ug/g	NC	30		
8176537	Acid Extractable Silver (Ag)	2022/08/19	103	75 - 125	97	80 - 120	<0.20	ug/g	NC	30		
8176537	Acid Extractable Thallium (Tl)	2022/08/19	101	75 - 125	98	80 - 120	<0.050	ug/g	11	30		

QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		Leachate Blank	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	Value	UNITS
8176537	Acid Extractable Uranium (U)	2022/08/19	103	75 - 125	97	80 - 120	<0.050	ug/g	1.5	30		
8176537	Acid Extractable Vanadium (V)	2022/08/19	NC	75 - 125	100	80 - 120	<5.0	ug/g	6.4	30		
8176537	Acid Extractable Zinc (Zn)	2022/08/19	NC	75 - 125	99	80 - 120	<5.0	ug/g	6.0	30		
8178895	Benzene	2022/08/21	96	50 - 140	92	50 - 140	<0.020	ug/g	NC	50		
8178895	Ethylbenzene	2022/08/21	107	50 - 140	104	50 - 140	<0.020	ug/g	NC	50		
8178895	F1 (C6-C10) - BTEX	2022/08/21					<10	ug/g	NC	30		
8178895	F1 (C6-C10)	2022/08/21	95	60 - 140	104	80 - 120	<10	ug/g	NC	30		
8178895	Gasoline	2022/08/21	95	60 - 140	104	60 - 140	<10	ug/g				
8178895	o-Xylene	2022/08/21	105	50 - 140	100	50 - 140	<0.020	ug/g	NC	50		
8178895	p+m-Xylene	2022/08/21	105	50 - 140	100	50 - 140	<0.040	ug/g	NC	50		
8178895	Toluene	2022/08/21	101	50 - 140	96	50 - 140	<0.020	ug/g	NC	50		
8178895	Total Xylenes	2022/08/21					<0.040	ug/g	NC	50		
8180313	F2 (C10-C16 Hydrocarbons)	2022/08/24	105	60 - 130	102	80 - 120	<10	ug/g	19	30		
8180313	F3 (C16-C34 Hydrocarbons)	2022/08/24	104	60 - 130	103	80 - 120	<50	ug/g	12	30		
8180313	F4 (C34-C50 Hydrocarbons)	2022/08/24	108	60 - 130	108	80 - 120	<50	ug/g	NC	30		
8183312	Benzene	2022/08/24	74	50 - 140	72	50 - 140	<0.020	ug/g	NC	50		
8183312	Ethylbenzene	2022/08/24	93	50 - 140	92	50 - 140	<0.020	ug/g	NC	50		
8183312	F1 (C6-C10) - BTEX	2022/08/24					<10	ug/g	NC	30		
8183312	F1 (C6-C10)	2022/08/24	109	60 - 140	101	80 - 120	<10	ug/g	NC	30		
8183312	o-Xylene	2022/08/24	95	50 - 140	93	50 - 140	<0.020	ug/g	NC	50		
8183312	p+m-Xylene	2022/08/24	97	50 - 140	94	50 - 140	<0.040	ug/g	NC	50		
8183312	Toluene	2022/08/24	83	50 - 140	81	50 - 140	<0.020	ug/g	NC	50		
8183312	Total Xylenes	2022/08/24					<0.040	ug/g	NC	50		
8196080	Leachable (SPLP) Antimony (Sb)	2022/08/31	106	80 - 120	105	80 - 120	<0.5	ug/L	2.3	35	<0.5	ug/L
8196080	Leachable (SPLP) Arsenic (As)	2022/08/31	99	80 - 120	99	80 - 120	<1	ug/L	8.6	35	<1	ug/L
8196080	Leachable (SPLP) Barium (Ba)	2022/08/31	100	80 - 120	100	80 - 120	<5	ug/L	3.6	35	<5	ug/L
8196080	Leachable (SPLP) Beryllium (Be)	2022/08/31	105	80 - 120	104	80 - 120	<0.5	ug/L	NC	35	<0.5	ug/L
8196080	Leachable (SPLP) Boron (B)	2022/08/31	99	80 - 120	99	80 - 120	<10	ug/L	3.1	35	<10	ug/L
8196080	Leachable (SPLP) Cadmium (Cd)	2022/08/31	104	80 - 120	103	80 - 120	<0.1	ug/L	NC	35	<0.1	ug/L
8196080	Leachable (SPLP) Chromium (Cr)	2022/08/31	97	80 - 120	96	80 - 120	<5	ug/L	NC	35	<5	ug/L
8196080	Leachable (SPLP) Cobalt (Co)	2022/08/31	96	80 - 120	97	80 - 120	<0.5	ug/L	7.5	35	<0.5	ug/L
8196080	Leachable (SPLP) Copper (Cu)	2022/08/31	99	80 - 120	97	80 - 120	<1	ug/L	6.3	35	<1	ug/L

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		Leachate Blank	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	Value	UNITS
8196080	Leachable (SPLP) Lead (Pb)	2022/08/31	97	80 - 120	99	80 - 120	<0.5	ug/L	NC	35	<0.5	ug/L
8196080	Leachable (SPLP) Molybdenum (Mo)	2022/08/31	103	80 - 120	101	80 - 120	<1	ug/L	1.3	35	<1	ug/L
8196080	Leachable (SPLP) Nickel (Ni)	2022/08/31	97	80 - 120	98	80 - 120	<1	ug/L	8.8	35	<1	ug/L
8196080	Leachable (SPLP) Selenium (Se)	2022/08/31	105	80 - 120	109	80 - 120	<2	ug/L	NC	35	<2	ug/L
8196080	Leachable (SPLP) Silver (Ag)	2022/08/31	103	80 - 120	103	80 - 120	<0.1	ug/L	NC	35	<0.1	ug/L
8196080	Leachable (SPLP) Thallium (Tl)	2022/08/31	97	80 - 120	97	80 - 120	<0.05	ug/L	NC	35	<0.05	ug/L
8196080	Leachable (SPLP) Uranium (U)	2022/08/31	96	80 - 120	96	80 - 120	<0.1	ug/L	NC	35	<0.1	ug/L
8196080	Leachable (SPLP) Vanadium (V)	2022/08/31	98	80 - 120	97	80 - 120	<1	ug/L	2.4	35	<1	ug/L
8196080	Leachable (SPLP) Zinc (Zn)	2022/08/31	102	80 - 120	103	80 - 120	<5	ug/L	NC	35	<5	ug/L
8198689	Leachable (SPLP) 1,1,1,2-Tetrachloroethane	2022/08/31	99	70 - 130	102	70 - 130	<0.40	ug/L	NC	30		
8198689	Leachable (SPLP) 1,1,2,2-Tetrachloroethane	2022/08/31	91	70 - 130	100	70 - 130	<0.40	ug/L	NC	30		
8198689	Leachable (SPLP) 1,1,2-Trichloroethane	2022/08/31	95	70 - 130	101	70 - 130	<0.40	ug/L	NC	30		
8198689	Leachable (SPLP) 1,1-Dichloroethane	2022/08/31	100	70 - 130	100	70 - 130	<0.40	ug/L	NC	30		
8198689	Leachable (SPLP) 1,1-Dichloroethylene	2022/08/31	98	70 - 130	97	70 - 130	<0.40	ug/L	NC	30		
8198689	Leachable (SPLP) 1,2-Dichlorobenzene	2022/08/31	97	70 - 130	104	70 - 130	<0.40	ug/L	NC	30		
8198689	Leachable (SPLP) 1,2-Dichloroethane	2022/08/31	93	70 - 130	96	70 - 130	<0.40	ug/L	NC	30		
8198689	Leachable (SPLP) 1,2-Dichloropropane	2022/08/31	93	70 - 130	95	70 - 130	<0.40	ug/L	NC	30		
8198689	Leachable (SPLP) 1,4-Dichlorobenzene	2022/08/31	112	70 - 130	118	70 - 130	<0.40	ug/L	NC	30		
8198689	Leachable (SPLP) Bromomethane	2022/08/31	89	60 - 140	89	60 - 140	<0.40	ug/L	NC	30		
8198689	Leachable (SPLP) Carbon Tetrachloride	2022/08/31	98	70 - 130	96	70 - 130	<0.19	ug/L	NC	30		
8198689	Leachable (SPLP) Chloroform	2022/08/31	97	70 - 130	96	70 - 130	<0.90	ug/L	NC	30		
8198689	Leachable (SPLP) cis-1,2-Dichloroethylene	2022/08/31	103	70 - 130	103	70 - 130	<0.40	ug/L	NC	30		
8198689	Leachable (SPLP) cis-1,3-Dichloropropene	2022/08/31	95	70 - 130	98	70 - 130	<0.30	ug/L	NC	30		
8198689	Leachable (SPLP) Ethylene Dibromide	2022/08/31	94	70 - 130	100	70 - 130	<0.19	ug/L	NC	30		
8198689	Leachable (SPLP) Tetrachloroethylene	2022/08/31	95	70 - 130	93	70 - 130	<0.40	ug/L	NC	30		
8198689	Leachable (SPLP) trans-1,2-Dichloroethylene	2022/08/31	99	70 - 130	98	70 - 130	<0.40	ug/L	NC	30		
8198689	Leachable (SPLP) trans-1,3-Dichloropropene	2022/08/31	96	70 - 130	102	70 - 130	<0.30	ug/L	NC	30		
8198689	Leachable (SPLP) Trichloroethylene	2022/08/31	105	70 - 130	103	70 - 130	<0.40	ug/L	NC	30		

QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		Leachate Blank	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	Value	UNITS
8222405	Leachable Total PCB	2022/09/14	111	30 - 130	103	30 - 130	<3.0	ug/L	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.

Leachate Blank: A blank matrix containing all reagents used in the leaching procedure. Used to determine any process contamination.

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).

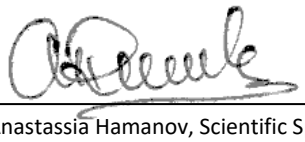
(1) The matrix spike recovery was below the lower control limit. This may be due in part to the reducing environment of the sample. The sample was re-analyzed with the same results

(2) 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.

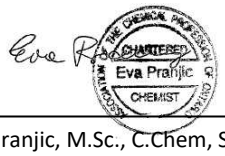
(3) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:



Anastassia Hamanov, Scientific Specialist



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

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Bureau Veritas 100 – 36 Antares Dr. Nepean, ON, K2E 7W5 Phone: 613-274-0573 Website: www.bvna.com

Bureau Veritas
6740 Campobello Road, Mississauga, Ontario Canada L5N 2L8 Tel:(905) 817-5700 Toll-free:800-563-6266 Fax:(905) 817-5777 www.bvna.com

15-Aug-22 09:00
Julie Clement
C2N1170
J L ENV-660

Page 1 of 2

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:	
Company Name:	#50098 Stantec Consulting Ltd	Company Name:		Quotation #:	C15856
Attention:	Accounts Payable	Attention:	Steve Hannington	P.O. #:	
Address:	1331 Clyde Avenue Suite 400	Address:		Project:	121624271.400
	Ottawa ON K2C 3G4			Project Name:	
Tel:	(613) 722-4420 Fax: (613) 738-0721	Tel:	Fax:	Site #:	
Email:	SAPinvoices@Stantec.com	Email:	Steve.Hannington@stantec.com	Sampled By:	Josh F-R

Bottle Order #: 892340
COC #: C#892340-01-01
Project Manager: Julie Clement

MOE REGULATED DRINKING WATER OR WATER INTENDED FOR HUMAN CONSUMPTION MUST BE SUBMITTED ON THE BUREAU VERITAS DRINKING WATER CHAIN OF CUSTODY

Regulation 153 (2011): [X] Table 1 [ ] Res/Park [ ] Medium/Fine; [ ] Table 2 [ ] Ind/Comm [ ] Coarse; [ ] Table 3 [ ] Agri/Other [ ] For RSC; [ ] Table ___

Other Regulations: [ ] CCME [ ] Sanitary Sewer Bylaw; [ ] Reg 558 [ ] Storm Sewer Bylaw; [ ] MISA Municipality ___; [ ] PWQO [X] Reg 406 Table 3.1; [ ] Other ___

Special Instructions:

Include Criteria on Certificate of Analysis (Y/N)? ___

Field Filtered (please circle): Metals / Hg / Cr VI

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

Turnaround Time (TAT) Required:
Please provide advance notice for rush projects

Regular (Standard) TAT: [X]
(will be applied if Rush TAT is not specified):
Standard TAT = 5-7 Working days for most tests.
Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.

Job Specific Rush TAT (if applies to entire submission)
Date Required: ___ Time Required: ___ [ ]
Rush Confirmation Number: ___ *(call lab for #)*

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	O.Reg 153 Metals & Inorganics Pkg (Soil)	O.Reg 153 PAHs (Soil)	O.Reg 153 PHCs, BTEX/F1-F4 (Soil)	O.Reg 153 VOCs by HS & F1-F4 (Soil)	O.Reg 153 PCBs (Soil)	ON HOLD FOR: O.Reg 406 Excess Soil SPLP VOCs	ON HOLD FOR: O.Reg 406 Excess Soil SPLP Metals	TCLP: VOC, SVOC, Inorg, Ignite, bulk: PCB, PHC, GRO, DRO			# of Bottles	Comments
1		BH22-6-1	22/08/12	1010	Soil	X	X		X		X	X				4	Hold all SPLP Analysis
2		BH22-6-2		1020		X	X	X		X		X				4	
3		BH22-6-3		1030		X	X		X		X	X				4	
4		BH22-6-4		1040		X	X	X		X		X				4	
5		QC-03		—			X				X					3	RECEIVED IN OTTAWA
6		QC-04		—		X						X				1	
7		BH22-2-1		1350		X	X	X		X		X				4	
8		BH22-2-2		1400		X	X		X		X	X				4	
9		BH22-2-3		1410		X	X	X		X		X				4	
10		BH22-2-4		1420		X	X		X		X	X				4	ON Ice

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted
Josh Fisher-Robertson	22/08/12	1700		2022/08/15	09:00	
				2022/08/16	09:24	

Laboratory Use Only

Time Sensitive	Temperature (°C) on Recei	Custody Seal	Yes	No
	3.1 3.2	Present		
		Intact	X	

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/TERMS-AND-CONDITIONS. ASHTINA SUKHUMAR
* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.
** SAMPLE CONTAINER, PRESERVATION, HOLD TIME AND PACKAGE INFORMATION CAN BE VIEWED AT WWW.BVNA.COM/RESOURCES/CHAIN-OF-CUSTODY-FORMS.

SAMPLES MUST BE KEPT COOL (< 10° C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

White: Bureau Veritas Yellow: Client
5/3/2
5/5/4

Bureau Veritas Canada (2019) Inc.

Bureau Veritas
6740 Campobello Road, Mississauga, Ontario Canada L5N 2L8 Tel:(905) 817-5700 Toll-free:800-563-6266 Fax:(905) 817-5777 www.bvna.com

CHAIN OF CUSTODY RECORD

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:		Laboratory Use Only:	
Company Name:	#50098 Stantec Consulting Ltd	Company Name:		Quotation #:	C15856	Bureau Veritas Job #:	Bottle Order #:
Attention:	Accounts Payable	Attention:	Steve Hannington	P.O. #:			892340
Address:	1331 Clyde Avenue Suite 400	Address:		Project:	121624271.400	COC #:	Project Manager:
	Ottawa ON K2C 3G4			Project Name:		C#892340-02-01	Julie Clement
Tel:	(613) 722-4420 Fax: (613) 738-0721	Tel:	Fax:	Site #:			
Email:	SAPinvoices@Stantec.com	Email:	Steve.Hannington@stantec.com	Sampled By:	JSH FR		

MOE REGULATED DRINKING WATER OR WATER INTENDED FOR HUMAN CONSUMPTION MUST BE SUBMITTED ON THE BUREAU VERITAS DRINKING WATER CHAIN OF CUSTODY

Regulation 153 (2011)
☐ Table 1 ☐ Res/Park ☐ Medium/Fine
☐ Table 2 ☐ Ind/Comm ☐ Coarse
☐ Table 3 ☐ Agri/Other ☐ For RSC
☐ Table ___

Other Regulations
☐ CCME ☐ Sanitary Sewer Bylaw
☒ Reg 558 ☐ Storm Sewer Bylaw
☐ MISA Municipality ___
☐ PWQO ☐ Reg 406 Table ___
☐ Other ___

Special Instructions

Include Criteria on Certificate of Analysis (Y/N)? ___

Turnaround Time (TAT) Required:
Please provide advance notice for rush projects

Regular (Standard) TAT:
(will be applied if Rush TAT is not specified):
Standard TAT = 5-7 Working days for most tests..
Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.

Job Specific Rush TAT (if applies to entire submission)
Date Required: ___ Time Required: ___
Rush Confirmation Number: ___ *(call lab for #)*

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered (please circle): Metals / Hg / Cr VI	O.Reg 153 Metals & Inorganics Pkg (Soil)	O.Reg 153 PAHs (Soil)	O.Reg 153 PHCs, BTEX/F1-F4 (Soil)	O.Reg 153 VOCs by HS & F1-F4 (Soil)	O.Reg 153 PCBs (Soil)	ON HOLD FOR: O.Reg 406 Excess Soil SPLP VOCs	ON HOLD FOR: O.Reg 406 Excess Soil SPLP Metals	TCLP: VOC, SVOC, Inorg, Ignite, bulk: PCB, PHC, GRO, DRO			# of Bottles	Comments
1		TCLP	21/08/12	1500	Soil	/								X			4	
2																		
3																		
4																		
5																		
6																		RECEIVED IN OTTAWA
7																		
8																		
9																		
10																		

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Laboratory Use Only				
JSH FR	21/08/12	1600	See p. 1				Time Sensitive	Temperature (°C) on Recei	Custody Seal	Yes	No
		1700	See Page 1						Present		
									Intact		

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/TERMS-AND-CONDITIONS.

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

** SAMPLE CONTAINER, PRESERVATION, HOLD TIME AND PACKAGE INFORMATION CAN BE VIEWED AT WWW.BVNA.COM/RESOURCES/CHAIN-OF-CUSTODY-FORMS.

SAMPLES MUST BE KEPT COOL (< 10° C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

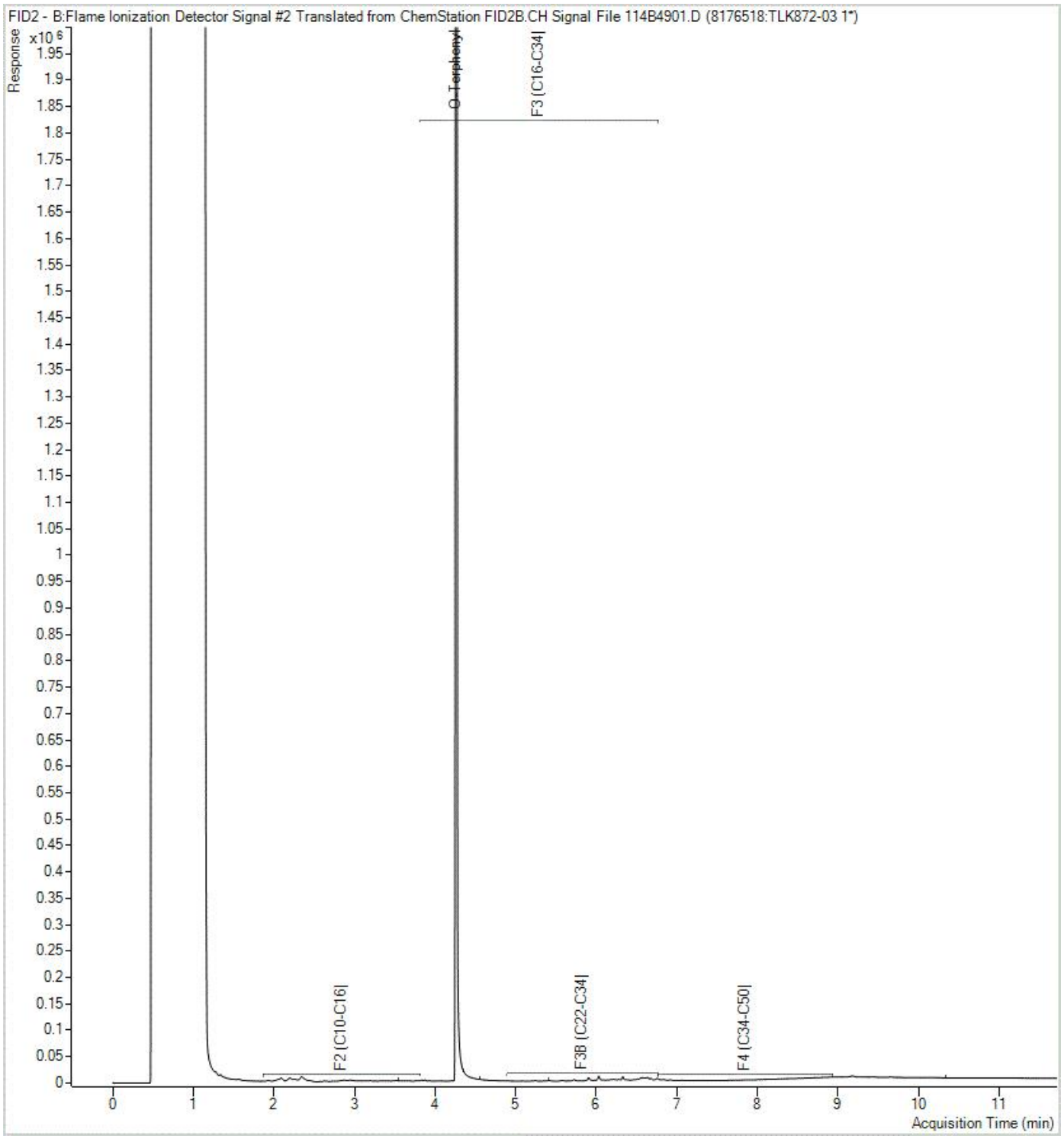
White: Bureau Veritas Yellow: Client

Bureau Veritas Canada (2019) Inc.

Bureau Veritas Job #: C2N1170
Report Date: 2022/09/14
Bureau Veritas Sample: TLK872

Stantec Consulting Ltd
Client Project #: 121624271.600
Client ID: BH22-6-1

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

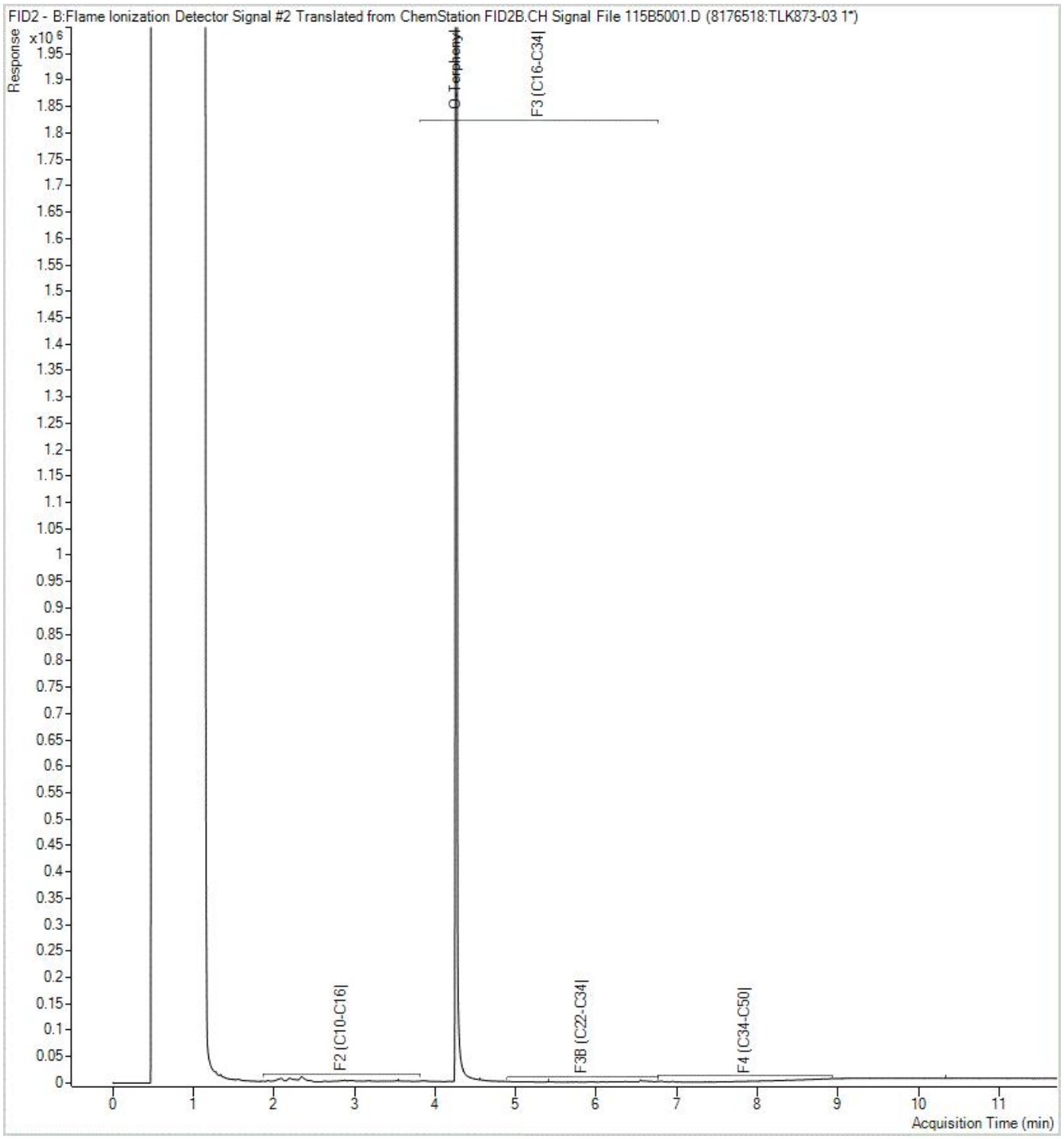


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C2N1170
Report Date: 2022/09/14
Bureau Veritas Sample: TLK873

Stantec Consulting Ltd
Client Project #: 121624271.600
Client ID: BH22-6-2

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

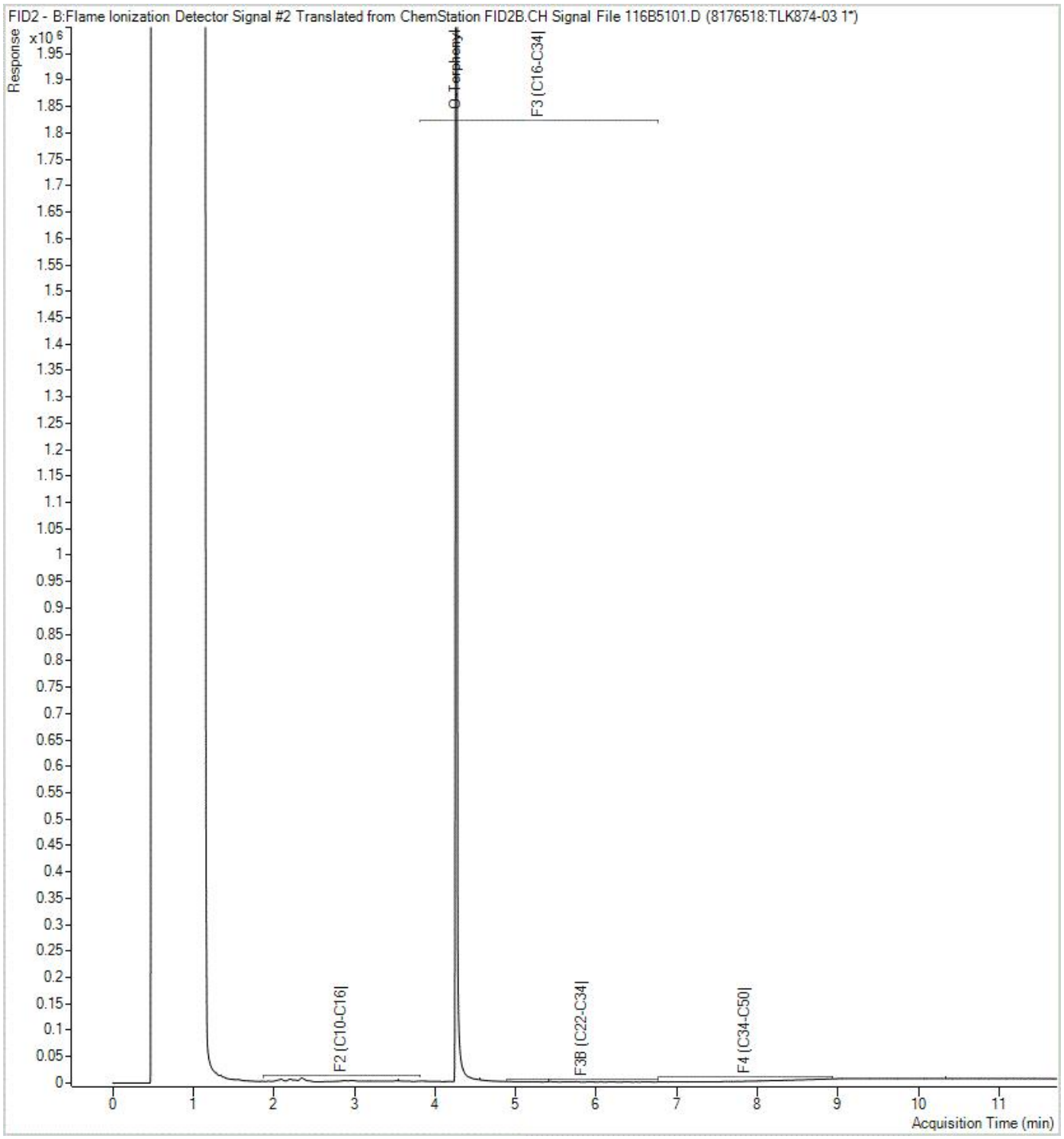


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C2N1170
Report Date: 2022/09/14
Bureau Veritas Sample: TLK874

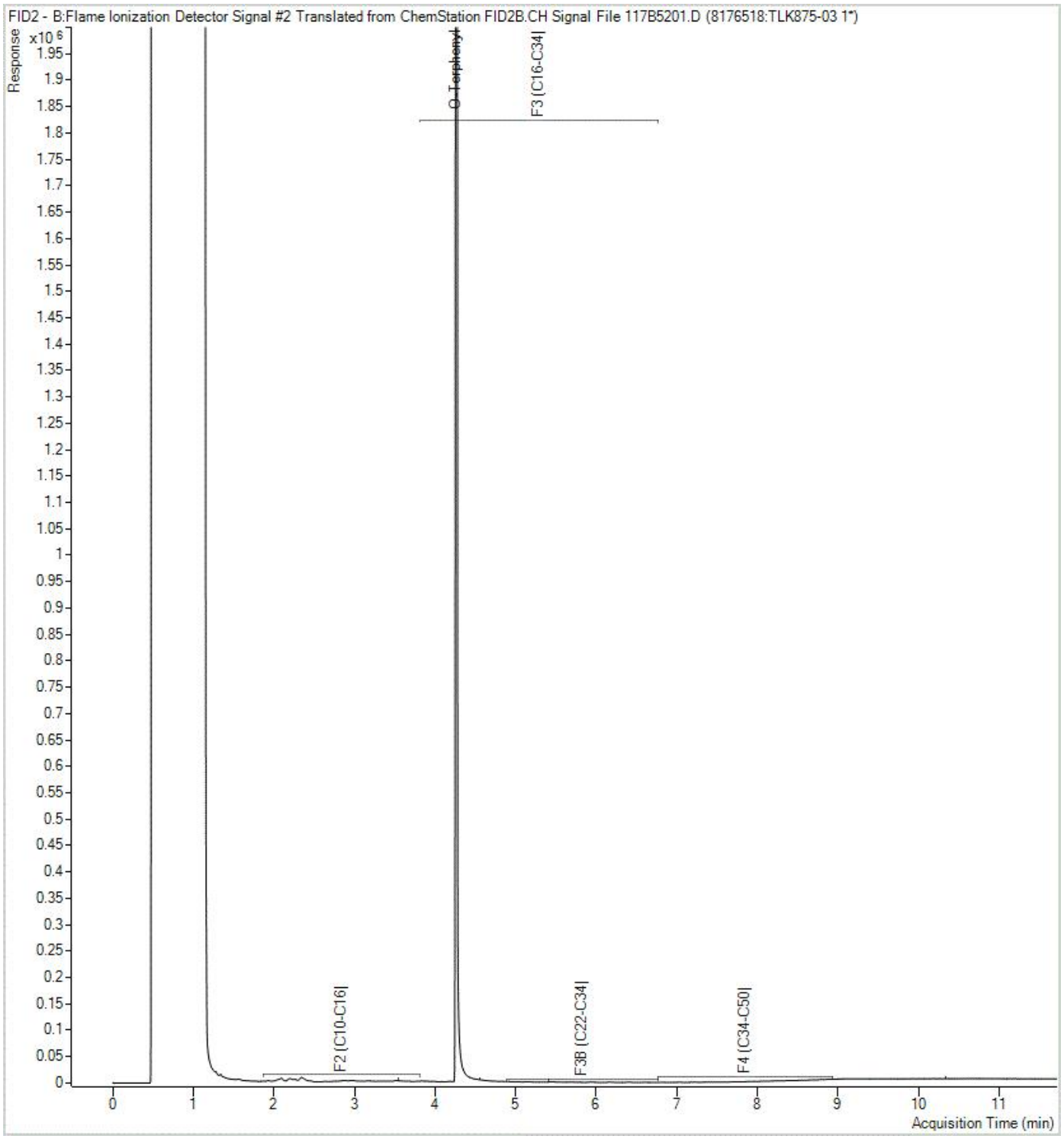
Stantec Consulting Ltd
Client Project #: 121624271.600
Client ID: BH22-6-3

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

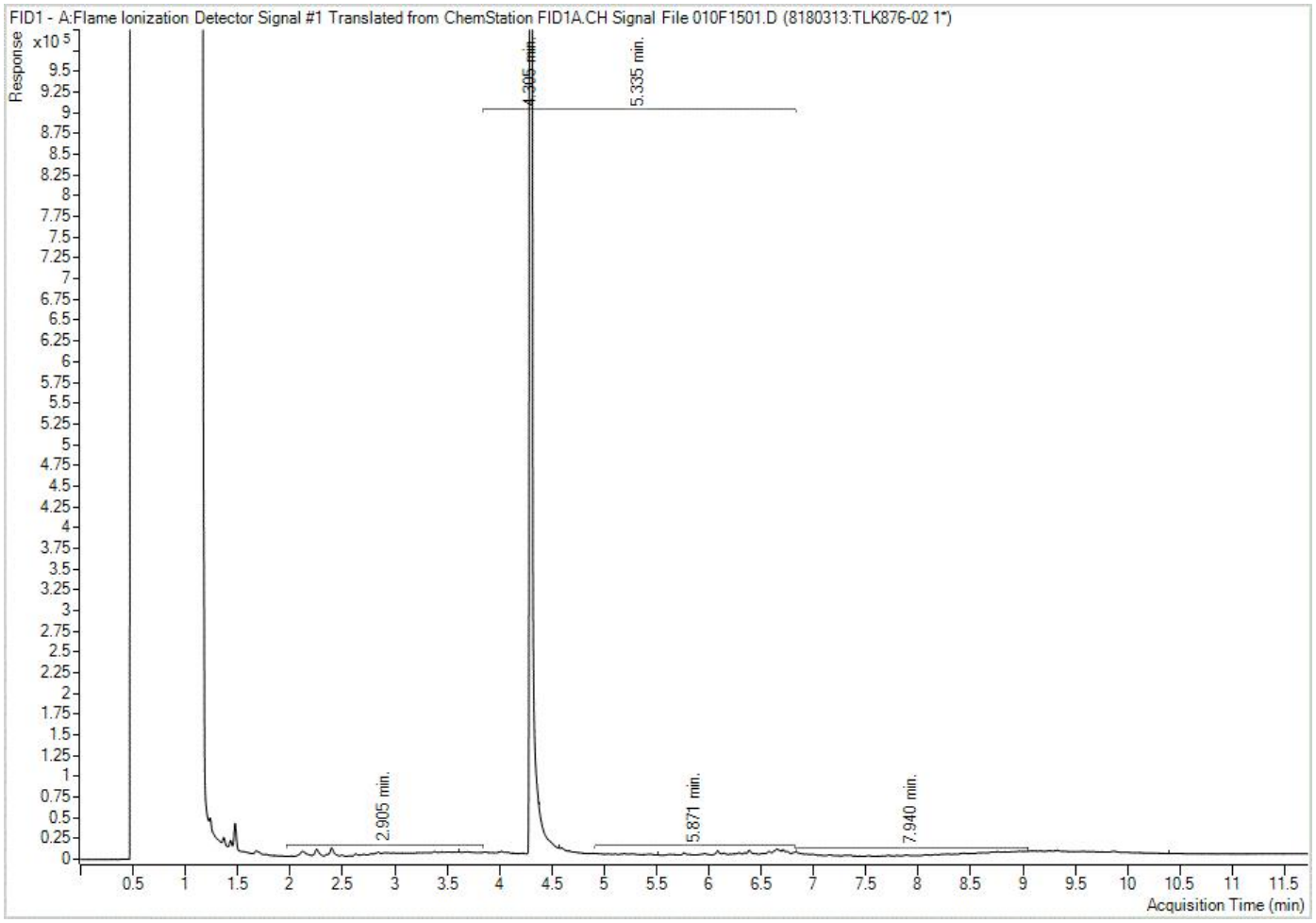


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C2N1170
Report Date: 2022/09/14
Bureau Veritas Sample: TLK876

Stantec Consulting Ltd
Client Project #: 121624271.600
Client ID: QC-03

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

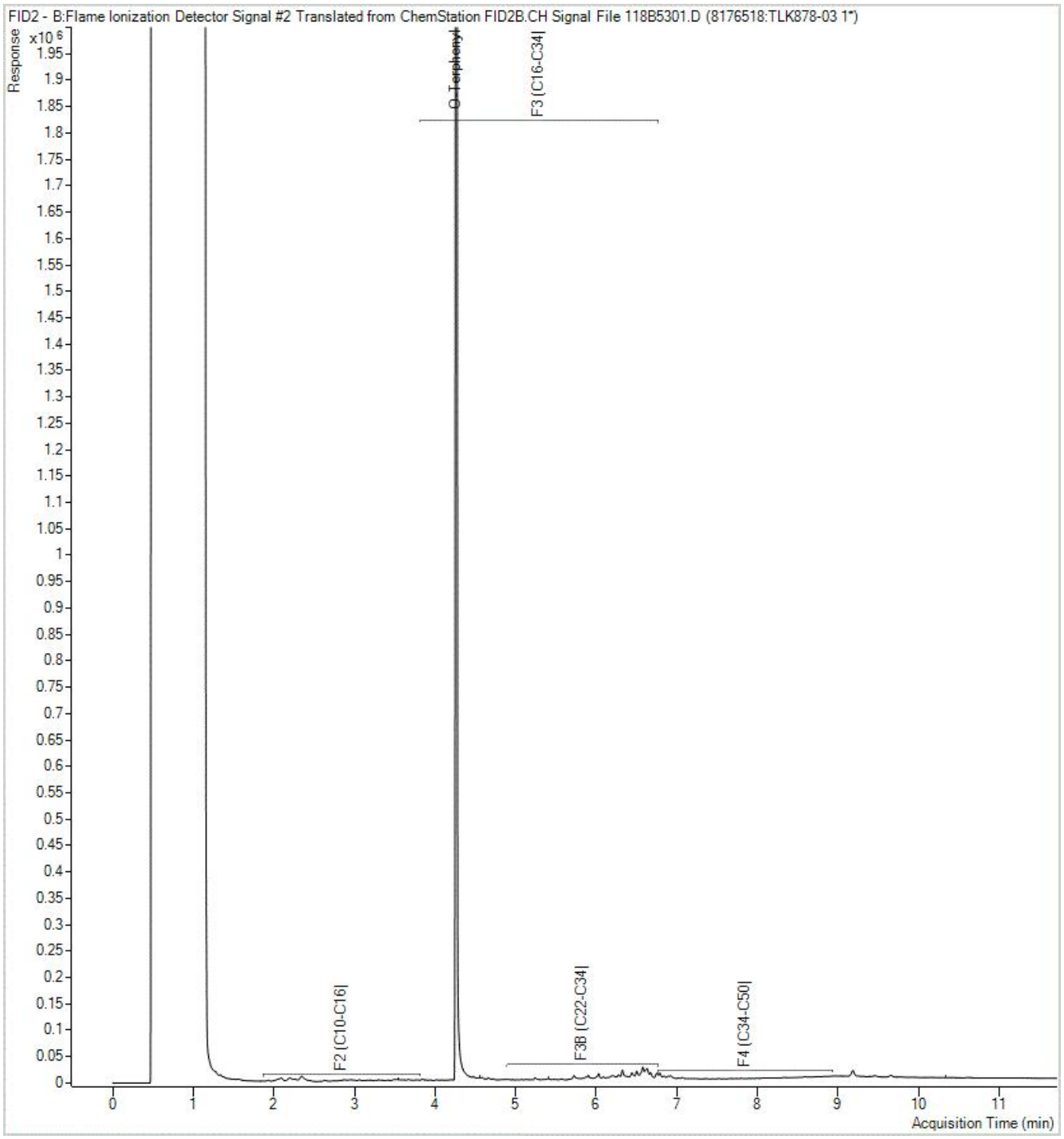


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C2N1170
Report Date: 2022/09/14
Bureau Veritas Sample: TLK878

Stantec Consulting Ltd
Client Project #: 121624271.600
Client ID: BH22-2-1

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

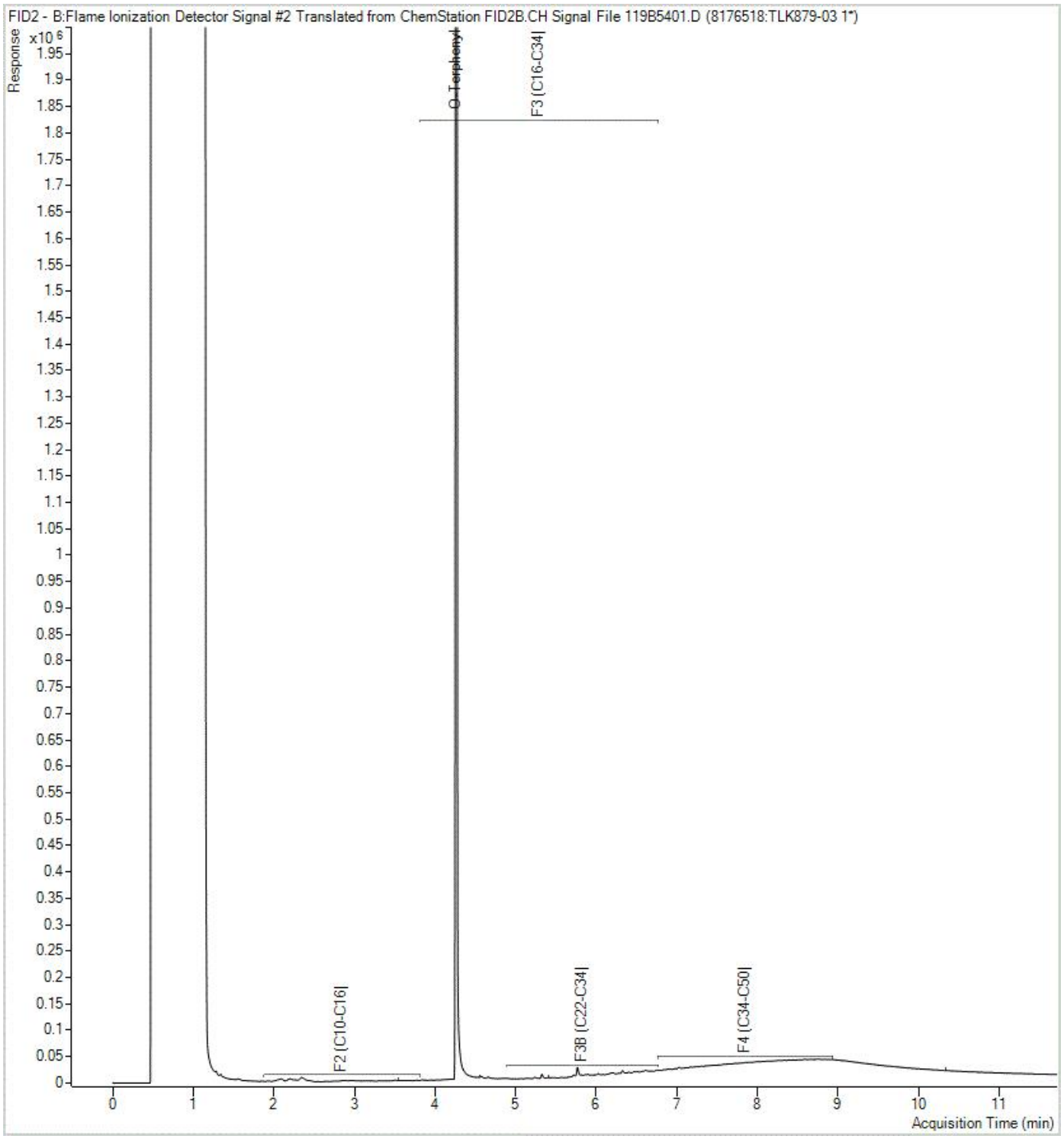


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C2N1170
Report Date: 2022/09/14
Bureau Veritas Sample: TLK879

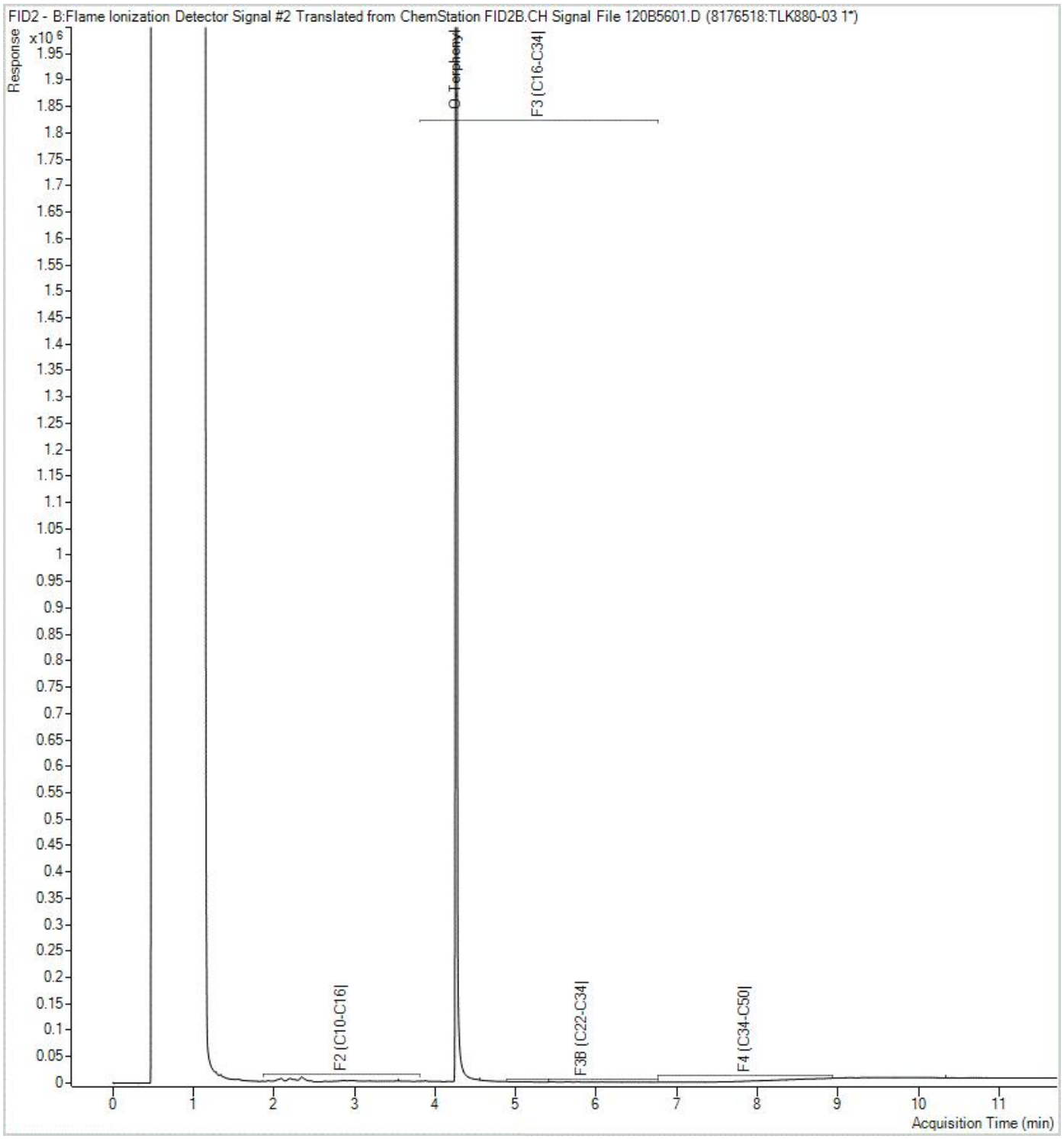
Stantec Consulting Ltd
Client Project #: 121624271.600
Client ID: BH22-2-2

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



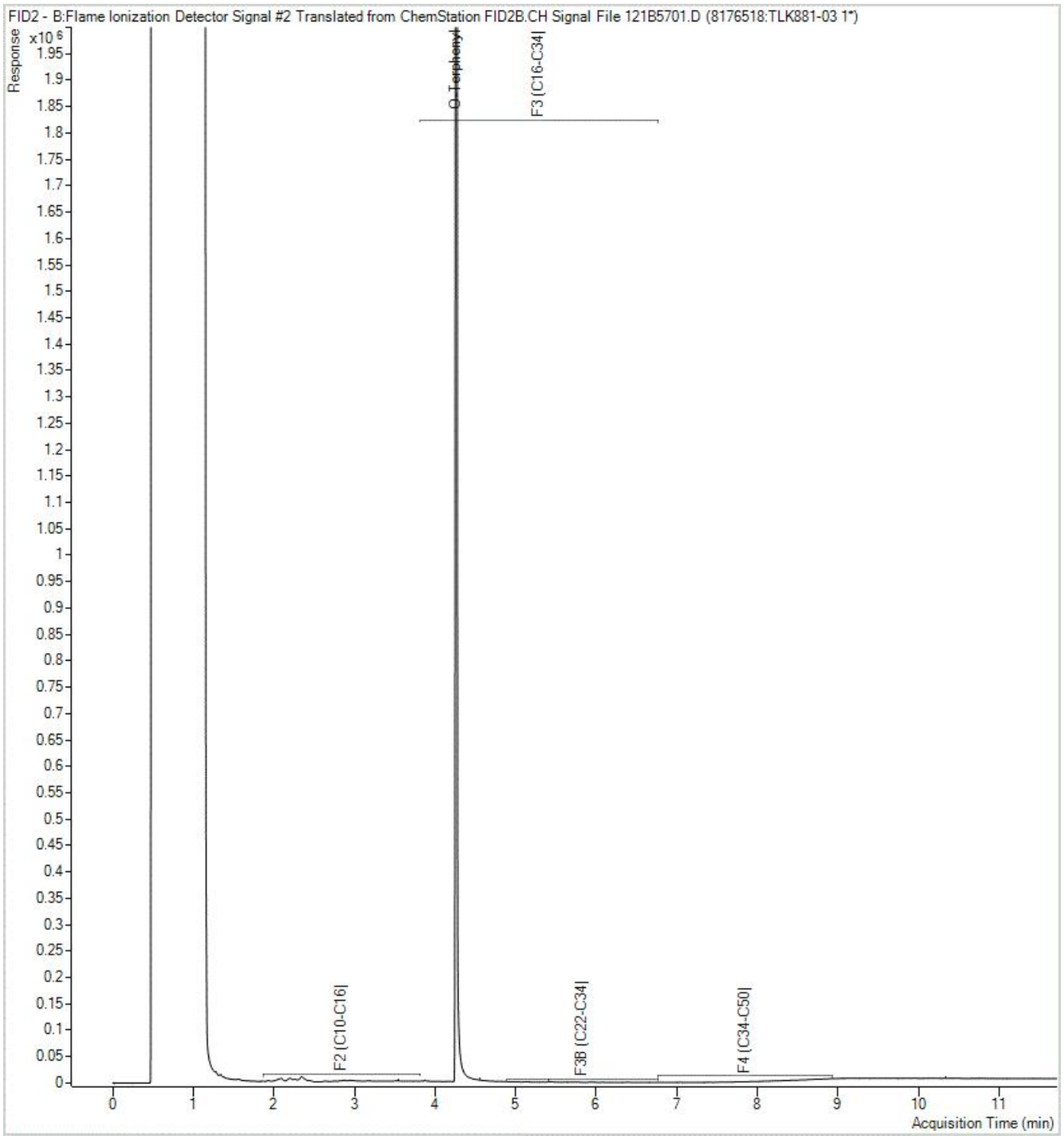
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



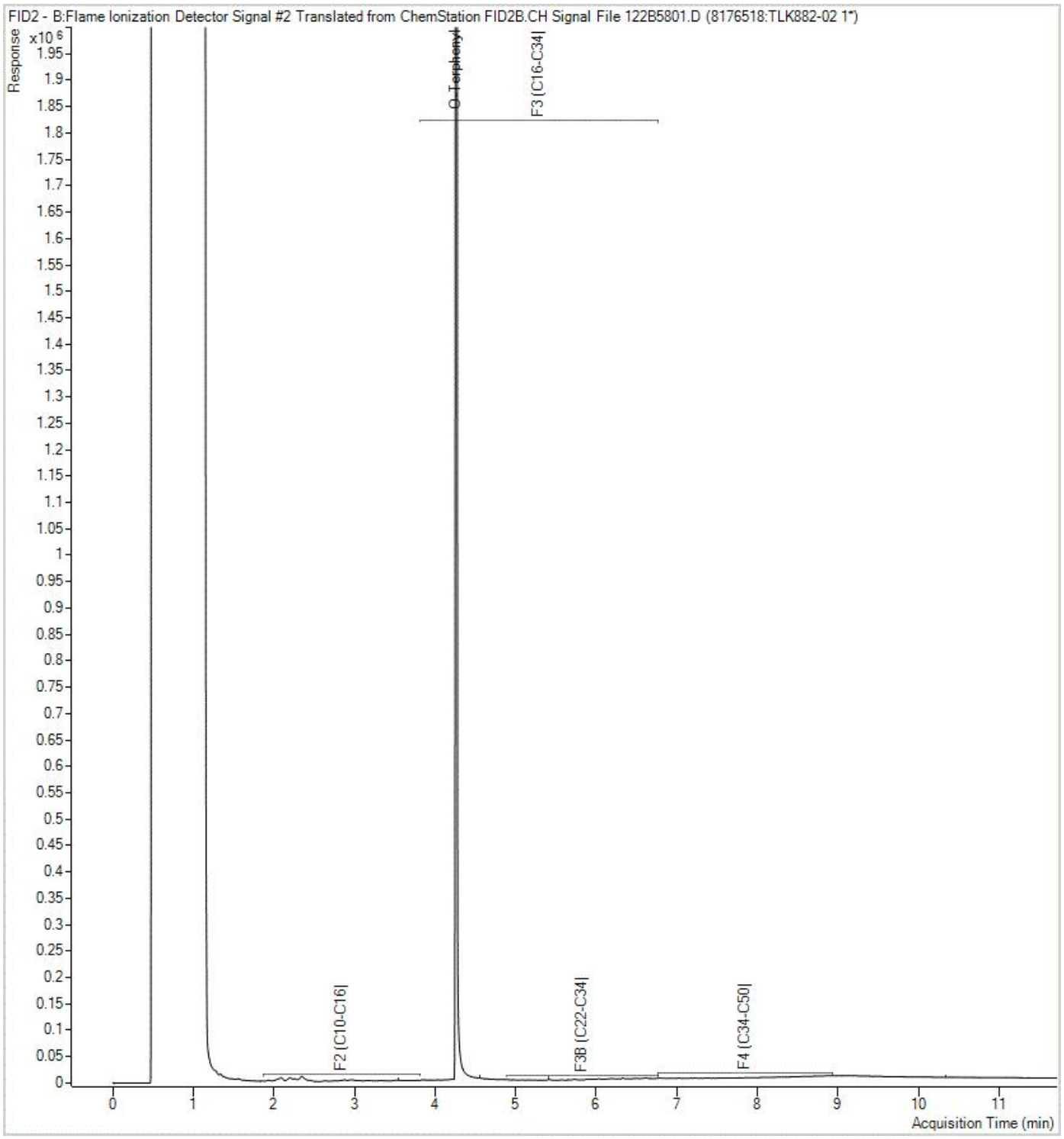
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Your Project #: 121624271.600
Your C.O.C. #: 892340-07-01

Attention: Steve Hannington

Stantec Consulting Ltd
1331 Clyde Avenue
Suite 400
Ottawa, ON
CANADA K2C 3G4

Report Date: 2022/09/01
Report #: R7279017
Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C2N2739
Received: 2022/08/16, 09:00

Sample Matrix: Soil
Samples Received: 8

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Methylnaphthalene Sum (1)	8	N/A	2022/08/24	CAM SOP-00301	EPA 8270D m
Hot Water Extractable Boron (1)	8	2022/08/19	2022/08/22	CAM SOP-00408	R153 Ana. Prot. 2011
1,3-Dichloropropene Sum (1)	1	N/A	2022/08/31		EPA 8260D m
1,3-Dichloropropene Sum (1)	4	N/A	2022/08/22		EPA 8260C m
Free (WAD) Cyanide (1)	5	2022/08/18	2022/08/22	CAM SOP-00457	OMOE E3015 m
Free (WAD) Cyanide (1)	3	2022/08/19	2022/08/23	CAM SOP-00457	OMOE E3015 m
Conductivity (1)	8	2022/08/22	2022/08/22	CAM SOP-00414	OMOE E3530 v1 m
Hexavalent Chromium in Soil by IC (1, 2)	1	2022/08/19	2022/08/19	CAM SOP-00436	EPA 3060/7199 m
Hexavalent Chromium in Soil by IC (1, 2)	1	2022/08/19	2022/08/22	CAM SOP-00436	EPA 3060/7199 m
Hexavalent Chromium in Soil by IC (1, 2)	6	2022/08/19	2022/08/23	CAM SOP-00436	EPA 3060/7199 m
Petroleum Hydro. CCME F1 & BTEX in Soil (1, 3)	4	N/A	2022/08/23	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydrocarbons F2-F4 in Soil (1, 4)	8	2022/08/20	2022/08/22	CAM SOP-00316	CCME CWS m
Acid Extractable Metals by ICPMS (1)	8	2022/08/19	2022/08/22	CAM SOP-00447	EPA 6020B m
Total Metals in SPLP Leachate by ICPMS (1)	2	2022/08/30	2022/08/30	CAM SOP-00447	EPA 6020B m
Moisture (1)	6	N/A	2022/08/18	CAM SOP-00445	Carter 2nd ed 51.2 m
Moisture (1)	2	N/A	2022/08/23	CAM SOP-00445	Carter 2nd ed 51.2 m
Modified SPLP extraction - Weight (1)	2	N/A	2022/08/30	CAM SOP-00941	OMOECP LaSB E9003 R3
PAH Compounds in Soil by GC/MS (SIM) (1)	5	2022/08/22	2022/08/22	CAM SOP-00318	EPA 8270D m
PAH Compounds in Soil by GC/MS (SIM) (1)	3	2022/08/22	2022/08/23	CAM SOP-00318	EPA 8270D m
Polychlorinated Biphenyl in Soil (1)	4	2022/08/19	2022/08/20	CAM SOP-00309	EPA 8082A m
pH CaCl2 EXTRACT (1)	8	2022/08/19	2022/08/19	CAM SOP-00413	EPA 9045 D m
Sodium Adsorption Ratio (SAR) (1)	8	N/A	2022/08/24	CAM SOP-00102	EPA 6010C
SPLP Zero Headspace Extraction (1)	1	2022/08/29	2022/08/30	CAM SOP-00430	EPA 1312 m
Volatile Organic Compounds and F1 PHCs (1)	4	N/A	2022/08/20	CAM SOP-00230	EPA 8260C m
Volatile organics in SPLP leachates (1)	1	N/A	2022/08/30	CAM SOP-00228	EPA 8260D m

Remarks:

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

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in

Your Project #: 121624271.600
Your C.O.C. #: 892340-07-01

Attention: Steve Hannington

Stantec Consulting Ltd
1331 Clyde Avenue
Suite 400
Ottawa, ON
CANADA K2C 3G4

Report Date: 2022/09/01
Report #: R7279017
Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C2N2739

Received: 2022/08/16, 09:00

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.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas 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 Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas 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 Bureau Veritas, results relate to the supplied samples tested.

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) This test was performed by Bureau Veritas Mississauga, 6740 Campobello Rd , Mississauga, ON, L5N 2L8
(2) Soils are reported on a dry weight basis unless otherwise specified.
(3) 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.
(4) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Bureau Veritas 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.
Julie Clement, Technical Account Manager
Email: Julie.CLEMENT@bureauveritas.com
Phone# (613)868-6079
==========
Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

O.REG 406 EXCESS SOIL SPLP METALS (SOIL)

Bureau Veritas ID		TLT676	TLT680		
Sampling Date		2022/08/15 10:50	2022/08/15 14:30		
COC Number		892340-07-01	892340-07-01		
	UNITS	BH22-4-2	BH22-1-2	RDL	QC Batch
Metals					
Leachable (SPLP) Antimony (Sb)	ug/L	0.9	<0.5	0.5	8196080
Leachable (SPLP) Arsenic (As)	ug/L	4	<1	1	8196080
Leachable (SPLP) Barium (Ba)	ug/L	<5	12	5	8196080
Leachable (SPLP) Beryllium (Be)	ug/L	<0.5	<0.5	0.5	8196080
Leachable (SPLP) Boron (B)	ug/L	<10	<10	10	8196080
Leachable (SPLP) Cadmium (Cd)	ug/L	<0.1	<0.1	0.1	8196080
Leachable (SPLP) Chromium (Cr)	ug/L	<5	<5	5	8196080
Leachable (SPLP) Cobalt (Co)	ug/L	<0.5	<0.5	0.5	8196080
Leachable (SPLP) Copper (Cu)	ug/L	4	2	1	8196080
Leachable (SPLP) Lead (Pb)	ug/L	3.5	<0.5	0.5	8196080
Leachable (SPLP) Molybdenum (Mo)	ug/L	1	2	1	8196080
Leachable (SPLP) Nickel (Ni)	ug/L	<1	<1	1	8196080
Leachable (SPLP) Selenium (Se)	ug/L	<2	<2	2	8196080
Leachable (SPLP) Silver (Ag)	ug/L	<0.1	<0.1	0.1	8196080
Leachable (SPLP) Thallium (Tl)	ug/L	<0.05	<0.05	0.05	8196080
Leachable (SPLP) Uranium (U)	ug/L	<0.1	<0.1	0.1	8196080
Leachable (SPLP) Vanadium (V)	ug/L	16	8	1	8196080
Leachable (SPLP) Zinc (Zn)	ug/L	<5	<5	5	8196080

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

O.REG 406 EXCESS SOIL SPLP PREP (SOIL)

Bureau Veritas ID		TLT676	TLT680	
Sampling Date		2022/08/15 10:50	2022/08/15 14:30	
COC Number		892340-07-01	892340-07-01	
	UNITS	BH22-4-2	BH22-1-2	QC Batch
Inorganics				
Dry Weight	g	100	100	8194151
QC Batch = Quality Control Batch				

O.REG 406 EXCESS SOIL SPLP VOCS (SOIL)

Bureau Veritas ID		TLT679		
Sampling Date		2022/08/15 14:15		
COC Number		892340-07-01		
	UNITS	BH22-1-1	RDL	QC Batch
Charge/Prep Analysis				
Amount Extracted (Wet Weight) (g)	N/A	25	N/A	8193854
Calculated Parameters				
Leachable (ZHE) 1,3-Dichloropropene (cis+trans)	ug/L	<0.42	0.42	8190282
Volatile Organics				
Leachable (SPLP) Bromomethane	ug/L	<0.40	0.40	8195999
Leachable (SPLP) Carbon Tetrachloride	ug/L	<0.19	0.19	8195999
Leachable (SPLP) Chloroform	ug/L	<0.90	0.90	8195999
Leachable (SPLP) 1,2-Dichlorobenzene	ug/L	<0.40	0.40	8195999
Leachable (SPLP) 1,4-Dichlorobenzene	ug/L	<0.40	0.40	8195999
Leachable (SPLP) 1,1-Dichloroethane	ug/L	<0.40	0.40	8195999
Leachable (SPLP) 1,2-Dichloroethane	ug/L	<0.40	0.40	8195999
Leachable (SPLP) 1,1-Dichloroethylene	ug/L	<0.40	0.40	8195999
Leachable (SPLP) cis-1,2-Dichloroethylene	ug/L	<0.40	0.40	8195999
Leachable (SPLP) trans-1,2-Dichloroethylene	ug/L	<0.40	0.40	8195999
Leachable (SPLP) 1,2-Dichloropropane	ug/L	<0.40	0.40	8195999
Leachable (SPLP) cis-1,3-Dichloropropene	ug/L	<0.30	0.30	8195999
Leachable (SPLP) trans-1,3-Dichloropropene	ug/L	<0.30	0.30	8195999
Leachable (SPLP) Ethylene Dibromide	ug/L	<0.19	0.19	8195999
Leachable (SPLP) 1,1,1,2-Tetrachloroethane	ug/L	<0.40	0.40	8195999
Leachable (SPLP) 1,1,2,2-Tetrachloroethane	ug/L	<0.40	0.40	8195999
Leachable (SPLP) Tetrachloroethylene	ug/L	<0.40	0.40	8195999
Leachable (SPLP) 1,1,2-Trichloroethane	ug/L	<0.40	0.40	8195999
Leachable (SPLP) Trichloroethylene	ug/L	<0.40	0.40	8195999
Surrogate Recovery (%)				
Leachable (SPLP) 4-Bromofluorobenzene	%	99		8195999
Leachable (SPLP) D4-1,2-Dichloroethane	%	105		8195999
Leachable (SPLP) D8-Toluene	%	94		8195999

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

O.REG 153 METALS & INORGANICS PKG (SOIL)

Bureau Veritas ID		TLT675			TLT676			TLT677		
Sampling Date		2022/08/15 10:40			2022/08/15 10:50			2022/08/15 11:00		
COC Number		892340-07-01			892340-07-01			892340-07-01		
	UNITS	BH22-4-1	RDL	QC Batch	BH22-4-2	RDL	QC Batch	BH22-4-3	RDL	QC Batch
Calculated Parameters										
Sodium Adsorption Ratio	N/A	0.28 (1)		8170786	0.83		8170786	11		8170786
Inorganics										
Conductivity	mS/cm	0.14	0.002	8179096	0.39	0.002	8179096	0.56	0.002	8179096
Moisture	%	11	1.0	8173747				17	1.0	8173747
Available (CaCl2) pH	pH	7.37		8175867	9.39		8175867	10.8		8175893
WAD Cyanide (Free)	ug/g	<0.01	0.01	8174429	<0.01	0.01	8176397	<0.01	0.01	8176397
Chromium (VI)	ug/g	<0.18	0.18	8175972	<0.18	0.18	8175972	0.25	0.18	8176511
Metals										
Hot Water Ext. Boron (B)	ug/g	0.16	0.050	8176683	0.17	0.050	8176683	0.29	0.050	8176683
Acid Extractable Antimony (Sb)	ug/g	0.36	0.20	8176404	0.66	0.20	8176404	<0.20	0.20	8176404
Acid Extractable Arsenic (As)	ug/g	2.4	1.0	8176404	2.3	1.0	8176404	1.6	1.0	8176404
Acid Extractable Barium (Ba)	ug/g	110	0.50	8176404	71	0.50	8176404	140	0.50	8176404
Acid Extractable Beryllium (Be)	ug/g	0.30	0.20	8176404	0.22	0.20	8176404	0.45	0.20	8176404
Acid Extractable Boron (B)	ug/g	<5.0	5.0	8176404	<5.0	5.0	8176404	6.6	5.0	8176404
Acid Extractable Cadmium (Cd)	ug/g	<0.10	0.10	8176404	0.12	0.10	8176404	<0.10	0.10	8176404
Acid Extractable Chromium (Cr)	ug/g	22	1.0	8176404	16	1.0	8176404	31	1.0	8176404
Acid Extractable Cobalt (Co)	ug/g	5.9	0.10	8176404	3.8	0.10	8176404	8.6	0.10	8176404
Acid Extractable Copper (Cu)	ug/g	20	0.50	8176404	27	0.50	8176404	20	0.50	8176404
Acid Extractable Lead (Pb)	ug/g	75	1.0	8176404	71	1.0	8176404	6.5	1.0	8176404
Acid Extractable Molybdenum (Mo)	ug/g	0.69	0.50	8176404	0.56	0.50	8176404	0.69	0.50	8176404
Acid Extractable Nickel (Ni)	ug/g	14	0.50	8176404	9.2	0.50	8176404	18	0.50	8176404
Acid Extractable Selenium (Se)	ug/g	<0.50	0.50	8176404	<0.50	0.50	8176404	<0.50	0.50	8176404
Acid Extractable Silver (Ag)	ug/g	<0.20	0.20	8176404	<0.20	0.20	8176404	<0.20	0.20	8176404
Acid Extractable Thallium (Tl)	ug/g	0.11	0.050	8176404	0.060	0.050	8176404	0.18	0.050	8176404
Acid Extractable Uranium (U)	ug/g	0.55	0.050	8176404	0.58	0.050	8176404	0.60	0.050	8176404
Acid Extractable Vanadium (V)	ug/g	31	5.0	8176404	24	5.0	8176404	45	5.0	8176404
Acid Extractable Zinc (Zn)	ug/g	62	5.0	8176404	66	5.0	8176404	65	5.0	8176404
Acid Extractable Mercury (Hg)	ug/g	0.16	0.050	8176404	0.20	0.050	8176404	<0.050	0.050	8176404

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Sodium was not detected. To report SAR the sodium detection limit was used in the calculation. This value represents a maximum ratio.

O.REG 153 METALS & INORGANICS PKG (SOIL)

Bureau Veritas ID		TLT678			TLT678			TLT679		
Sampling Date		2022/08/15 11:15			2022/08/15 11:15			2022/08/15 14:15		
COC Number		892340-07-01			892340-07-01			892340-07-01		
	UNITS	BH22-4-4	RDL	QC Batch	BH22-4-4 Lab-Dup	RDL	QC Batch	BH22-1-1	RDL	QC Batch
Calculated Parameters										
Sodium Adsorption Ratio	N/A	3.0		8170786				0.23 (1)		8170786
Inorganics										
Conductivity	mS/cm	0.23	0.002	8179096				0.21	0.002	8179096
Available (CaCl2) pH	pH	8.41		8175901				7.62		8175867
WAD Cyanide (Free)	ug/g	<0.01	0.01	8174429				<0.01	0.01	8176397
Chromium (VI)	ug/g	<0.18	0.18	8175730				<0.18	0.18	8175972
Metals										
Hot Water Ext. Boron (B)	ug/g	0.051	0.050	8176683	0.053	0.050	8176683	0.20	0.050	8176683
Acid Extractable Antimony (Sb)	ug/g	<0.20	0.20	8176404				<0.20	0.20	8176404
Acid Extractable Arsenic (As)	ug/g	<1.0	1.0	8176404				2.8	1.0	8176404
Acid Extractable Barium (Ba)	ug/g	110	0.50	8176404				95	0.50	8176404
Acid Extractable Beryllium (Be)	ug/g	0.36	0.20	8176404				0.37	0.20	8176404
Acid Extractable Boron (B)	ug/g	<5.0	5.0	8176404				5.2	5.0	8176404
Acid Extractable Cadmium (Cd)	ug/g	<0.10	0.10	8176404				<0.10	0.10	8176404
Acid Extractable Chromium (Cr)	ug/g	22	1.0	8176404				17	1.0	8176404
Acid Extractable Cobalt (Co)	ug/g	7.1	0.10	8176404				7.3	0.10	8176404
Acid Extractable Copper (Cu)	ug/g	22	0.50	8176404				16	0.50	8176404
Acid Extractable Lead (Pb)	ug/g	3.9	1.0	8176404				9.5	1.0	8176404
Acid Extractable Molybdenum (Mo)	ug/g	0.67	0.50	8176404				1.1	0.50	8176404
Acid Extractable Nickel (Ni)	ug/g	13	0.50	8176404				16	0.50	8176404
Acid Extractable Selenium (Se)	ug/g	<0.50	0.50	8176404				<0.50	0.50	8176404
Acid Extractable Silver (Ag)	ug/g	<0.20	0.20	8176404				<0.20	0.20	8176404
Acid Extractable Thallium (Tl)	ug/g	0.12	0.050	8176404				0.13	0.050	8176404
Acid Extractable Uranium (U)	ug/g	1.1	0.050	8176404				0.66	0.050	8176404
Acid Extractable Vanadium (V)	ug/g	39	5.0	8176404				25	5.0	8176404
Acid Extractable Zinc (Zn)	ug/g	33	5.0	8176404				34	5.0	8176404
Acid Extractable Mercury (Hg)	ug/g	<0.050	0.050	8176404				<0.050	0.050	8176404

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
(1) Sodium was not detected. To report SAR the sodium detection limit was used in the calculation. This value represents a maximum ratio.

O.REG 153 METALS & INORGANICS PKG (SOIL)

Bureau Veritas ID		TLT680	TLT681			TLT682		
Sampling Date		2022/08/15 14:30	2022/08/15 14:35			2022/08/15 14:50		
COC Number		892340-07-01	892340-07-01			892340-07-01		
	UNITS	**BH22-1-2**	**BH22-1-3**	**RDL**	**QC Batch**	**BH22-1-4**	**RDL**	**QC Batch**
Calculated Parameters								
Sodium Adsorption Ratio	N/A	1.3	0.89		8170786	0.63		8170786
Inorganics								
Conductivity	mS/cm	0.55	0.53	0.002	8179096	0.48	0.002	8179096
Moisture	%					20	1.0	8173747
Available (CaCl2) pH	pH	7.54	7.49		8175867	7.73		8175867
WAD Cyanide (Free)	ug/g	<0.01	<0.01	0.01	8174429	<0.01	0.01	8174429
Chromium (VI)	ug/g	<0.18	0.20	0.18	8175972	<0.18	0.18	8175972
Metals								
Hot Water Ext. Boron (B)	ug/g	0.058	0.052	0.050	8176683	<0.050	0.050	8176683
Acid Extractable Antimony (Sb)	ug/g	<0.20	<0.20	0.20	8176404	<0.20	0.20	8176404
Acid Extractable Arsenic (As)	ug/g	1.7	<1.0	1.0	8176404	<1.0	1.0	8176404
Acid Extractable Barium (Ba)	ug/g	240	100	0.50	8176404	150	0.50	8176404
Acid Extractable Beryllium (Be)	ug/g	0.75	0.39	0.20	8176404	0.39	0.20	8176404
Acid Extractable Boron (B)	ug/g	<5.0	<5.0	5.0	8176404	<5.0	5.0	8176404
Acid Extractable Cadmium (Cd)	ug/g	<0.10	<0.10	0.10	8176404	<0.10	0.10	8176404
Acid Extractable Chromium (Cr)	ug/g	47	24	1.0	8176404	26	1.0	8176404
Acid Extractable Cobalt (Co)	ug/g	12	7.5	0.10	8176404	8.4	0.10	8176404
Acid Extractable Copper (Cu)	ug/g	23	17	0.50	8176404	18	0.50	8176404
Acid Extractable Lead (Pb)	ug/g	5.7	3.6	1.0	8176404	4.2	1.0	8176404
Acid Extractable Molybdenum (Mo)	ug/g	<0.50	<0.50	0.50	8176404	<0.50	0.50	8176404
Acid Extractable Nickel (Ni)	ug/g	26	13	0.50	8176404	16	0.50	8176404
Acid Extractable Selenium (Se)	ug/g	<0.50	<0.50	0.50	8176404	<0.50	0.50	8176404
Acid Extractable Silver (Ag)	ug/g	<0.20	<0.20	0.20	8176404	<0.20	0.20	8176404
Acid Extractable Thallium (Tl)	ug/g	0.19	0.12	0.050	8176404	0.16	0.050	8176404
Acid Extractable Uranium (U)	ug/g	0.72	0.54	0.050	8176404	0.52	0.050	8176404
Acid Extractable Vanadium (V)	ug/g	66	45	5.0	8176404	45	5.0	8176404
Acid Extractable Zinc (Zn)	ug/g	68	36	5.0	8176404	40	5.0	8176404
Acid Extractable Mercury (Hg)	ug/g	<0.050	<0.050	0.050	8176404	<0.050	0.050	8176404

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

O.REG 153 PAHS (SOIL)

Bureau Veritas ID		TLT675	TLT676	TLT677	TLT678	TLT679	TLT680		
Sampling Date		2022/08/15 10:40	2022/08/15 10:50	2022/08/15 11:00	2022/08/15 11:15	2022/08/15 14:15	2022/08/15 14:30		
COC Number		892340-07-01	892340-07-01	892340-07-01	892340-07-01	892340-07-01	892340-07-01		
	UNITS	**BH22-4-1**	**BH22-4-2**	**BH22-4-3**	**BH22-4-4**	**BH22-1-1**	**BH22-1-2**	**RDL**	**QC Batch**
Calculated Parameters									
Methylnaphthalene, 2-(1-)	ug/g	<0.0071	<0.0071	<0.0071	<0.0071	<0.0071	<0.0071	0.0071	8170672
Polyaromatic Hydrocarbons									
Acenaphthene	ug/g	<0.0050	0.0068	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	8180234
Acenaphthylene	ug/g	0.0061	0.021	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	8180234
Anthracene	ug/g	0.018	0.029	0.0052	<0.0050	<0.0050	<0.0050	0.0050	8180234
Benzo(a)anthracene	ug/g	0.062	0.15	0.015	<0.0050	<0.0050	<0.0050	0.0050	8180234
Benzo(a)pyrene	ug/g	0.064	0.16	0.011	<0.0050	<0.0050	<0.0050	0.0050	8180234
Benzo(b/j)fluoranthene	ug/g	0.083	0.21	0.015	<0.0050	0.0073	<0.0050	0.0050	8180234
Benzo(g,h,i)perylene	ug/g	0.043	0.12	0.0075	<0.0050	<0.0050	<0.0050	0.0050	8180234
Benzo(k)fluoranthene	ug/g	0.028	0.076	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	8180234
Chrysene	ug/g	0.053	0.13	0.012	<0.0050	<0.0050	<0.0050	0.0050	8180234
Dibenzo(a,h)anthracene	ug/g	0.0098	0.027	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	8180234
Fluoranthene	ug/g	0.13	0.27	0.039	<0.0050	0.010	<0.0050	0.0050	8180234
Fluorene	ug/g	<0.0050	0.0060	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	8180234
Indeno(1,2,3-cd)pyrene	ug/g	0.045	0.13	0.0072	<0.0050	<0.0050	<0.0050	0.0050	8180234
1-Methylnaphthalene	ug/g	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	8180234
2-Methylnaphthalene	ug/g	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	8180234
Naphthalene	ug/g	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	8180234
Phenanthrene	ug/g	0.072	0.11	0.020	<0.0050	<0.0050	<0.0050	0.0050	8180234
Pyrene	ug/g	0.11	0.24	0.031	<0.0050	0.0084	<0.0050	0.0050	8180234
Biphenyl	ug/g	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	8180234
Surrogate Recovery (%)									
D10-Anthracene	%	102	95	100	98	105	98		8180234
D14-Terphenyl (FS)	%	104	96	102	99	106	99		8180234
D8-Acenaphthylene	%	86	64	77	74	83	75		8180234

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

O.REG 153 PAHS (SOIL)

Bureau Veritas ID		TLT681			TLT681			TLT682		
Sampling Date		2022/08/15 14:35			2022/08/15 14:35			2022/08/15 14:50		
COC Number		892340-07-01			892340-07-01			892340-07-01		
	UNITS	BH22-1-3	RDL	QC Batch	BH22-1-3 Lab-Dup	RDL	QC Batch	BH22-1-4	RDL	QC Batch
Calculated Parameters										
Methylnaphthalene, 2-(1-)	ug/g	<0.0071	0.0071	8170672				<0.0071	0.0071	8170672
Polyaromatic Hydrocarbons										
Acenaphthene	ug/g	<0.0050	0.0050	8180234	<0.0050	0.0050	8180234	<0.0050	0.0050	8180234
Acenaphthylene	ug/g	<0.0050	0.0050	8180234	<0.0050	0.0050	8180234	<0.0050	0.0050	8180234
Anthracene	ug/g	<0.0050	0.0050	8180234	<0.0050	0.0050	8180234	<0.0050	0.0050	8180234
Benzo(a)anthracene	ug/g	<0.0050	0.0050	8180234	<0.0050	0.0050	8180234	<0.0050	0.0050	8180234
Benzo(a)pyrene	ug/g	<0.0050	0.0050	8180234	<0.0050	0.0050	8180234	<0.0050	0.0050	8180234
Benzo(b/j)fluoranthene	ug/g	<0.0050	0.0050	8180234	<0.0050	0.0050	8180234	<0.0050	0.0050	8180234
Benzo(g,h,i)perylene	ug/g	<0.0050	0.0050	8180234	<0.0050	0.0050	8180234	<0.0050	0.0050	8180234
Benzo(k)fluoranthene	ug/g	<0.0050	0.0050	8180234	<0.0050	0.0050	8180234	<0.0050	0.0050	8180234
Chrysene	ug/g	<0.0050	0.0050	8180234	<0.0050	0.0050	8180234	<0.0050	0.0050	8180234
Dibenzo(a,h)anthracene	ug/g	<0.0050	0.0050	8180234	<0.0050	0.0050	8180234	<0.0050	0.0050	8180234
Fluoranthene	ug/g	<0.0050	0.0050	8180234	<0.0050	0.0050	8180234	<0.0050	0.0050	8180234
Fluorene	ug/g	<0.0050	0.0050	8180234	<0.0050	0.0050	8180234	<0.0050	0.0050	8180234
Indeno(1,2,3-cd)pyrene	ug/g	<0.0050	0.0050	8180234	<0.0050	0.0050	8180234	<0.0050	0.0050	8180234
1-Methylnaphthalene	ug/g	<0.0050	0.0050	8180234	<0.0050	0.0050	8180234	<0.0050	0.0050	8180234
2-Methylnaphthalene	ug/g	<0.0050	0.0050	8180234	<0.0050	0.0050	8180234	<0.0050	0.0050	8180234
Naphthalene	ug/g	<0.0050	0.0050	8180234	<0.0050	0.0050	8180234	<0.0050	0.0050	8180234
Phenanthrene	ug/g	<0.0050	0.0050	8180234	<0.0050	0.0050	8180234	<0.0050	0.0050	8180234
Pyrene	ug/g	<0.0050	0.0050	8180234	<0.0050	0.0050	8180234	<0.0050	0.0050	8180234
Biphenyl	ug/g	<0.0050	0.0050	8180234	<0.0050	0.0050	8180234	<0.0050	0.0050	8180234
Surrogate Recovery (%)										
D10-Anthracene	%	104		8180234	99		8180234	109		8180234
D14-Terphenyl (FS)	%	111		8180234	103		8180234	107		8180234
D8-Acenaphthylene	%	81		8180234	71		8180234	81		8180234

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

O.REG 153 PCBS (SOIL)

Bureau Veritas ID		TLT675	TLT677	TLT679	TLT682		
Sampling Date		2022/08/15 10:40	2022/08/15 11:00	2022/08/15 14:15	2022/08/15 14:50		
COC Number		892340-07-01	892340-07-01	892340-07-01	892340-07-01		
	UNITS	**BH22-4-1**	**BH22-4-3**	**BH22-1-1**	**BH22-1-4**	**RDL**	**QC Batch**
PCBs							
Aroclor 1242	ug/g	<0.010	<0.010	<0.010	<0.010	0.010	8175705
Aroclor 1248	ug/g	<0.010	<0.010	<0.010	<0.010	0.010	8175705
Aroclor 1254	ug/g	0.031	0.013	<0.010	<0.010	0.010	8175705
Aroclor 1260	ug/g	<0.010	0.022	<0.010	<0.010	0.010	8175705
Total PCB	ug/g	0.031	0.036	<0.010	<0.010	0.010	8175705
Surrogate Recovery (%)							
Decachlorobiphenyl	%	83	91	87	91		8175705

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

O.REG 153 PHCS, BTEX/F1-F4 (SOIL)

Bureau Veritas ID		TLT675	TLT677	TLT680			TLT680		
Sampling Date		2022/08/15 10:40	2022/08/15 11:00	2022/08/15 14:30			2022/08/15 14:30		
COC Number		892340-07-01	892340-07-01	892340-07-01			892340-07-01		
	UNITS	BH22-4-1	BH22-4-3	BH22-1-2	RDL	QC Batch	BH22-1-2 Lab-Dup	RDL	QC Batch
BTEX & F1 Hydrocarbons									
Benzene	ug/g	<0.020	<0.020	<0.020	0.020	8181455			
Toluene	ug/g	<0.020	<0.020	<0.020	0.020	8181455			
Ethylbenzene	ug/g	<0.020	<0.020	<0.020	0.020	8181455			
o-Xylene	ug/g	<0.020	<0.020	<0.020	0.020	8181455			
p+m-Xylene	ug/g	<0.040	<0.040	<0.040	0.040	8181455			
Total Xylenes	ug/g	<0.040	<0.040	<0.040	0.040	8181455			
F1 (C6-C10)	ug/g	<10	<10	<10	10	8181455			
F1 (C6-C10) - BTEX	ug/g	<10	<10	<10	10	8181455			
F2-F4 Hydrocarbons									
F2 (C10-C16 Hydrocarbons)	ug/g	<10	<10	<10	10	8178015	<10	10	8178015
F3 (C16-C34 Hydrocarbons)	ug/g	<50	54	<50	50	8178015	<50	50	8178015
F4 (C34-C50 Hydrocarbons)	ug/g	<50	<50	<50	50	8178015	<50	50	8178015
Reached Baseline at C50	ug/g	Yes	Yes	Yes		8178015	Yes		8178015
Surrogate Recovery (%)									
1,4-Difluorobenzene	%	99	97	97		8181455			
4-Bromofluorobenzene	%	96	94	97		8181455			
D10-o-Xylene	%	92	88	93		8181455			
D4-1,2-Dichloroethane	%	94	98	98		8181455			
o-Terphenyl	%	92	93	90		8178015	90		8178015

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

O.REG 153 PHCS, BTEX/F1-F4 (SOIL)

Bureau Veritas ID		TLT681		
Sampling Date		2022/08/15 14:35		
COC Number		892340-07-01		
	UNITS	BH22-1-3	RDL	QC Batch
BTEX & F1 Hydrocarbons				
Benzene	ug/g	<0.020	0.020	8181455
Toluene	ug/g	<0.020	0.020	8181455
Ethylbenzene	ug/g	<0.020	0.020	8181455
o-Xylene	ug/g	<0.020	0.020	8181455
p+m-Xylene	ug/g	<0.040	0.040	8181455
Total Xylenes	ug/g	<0.040	0.040	8181455
F1 (C6-C10)	ug/g	<10	10	8181455
F1 (C6-C10) - BTEX	ug/g	<10	10	8181455
F2-F4 Hydrocarbons				
F2 (C10-C16 Hydrocarbons)	ug/g	<10	10	8178015
F3 (C16-C34 Hydrocarbons)	ug/g	<50	50	8178015
F4 (C34-C50 Hydrocarbons)	ug/g	<50	50	8178015
Reached Baseline at C50	ug/g	Yes		8178015
Surrogate Recovery (%)				
1,4-Difluorobenzene	%	98		8181455
4-Bromofluorobenzene	%	95		8181455
D10-o-Xylene	%	86		8181455
D4-1,2-Dichloroethane	%	96		8181455
o-Terphenyl	%	93		8178015

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

O.REG 153 VOCS BY HS & F1-F4 (SOIL)

Bureau Veritas ID		TLT676	TLT678	TLT679			TLT682		
Sampling Date		2022/08/15 10:50	2022/08/15 11:15	2022/08/15 14:15			2022/08/15 14:50		
COC Number		892340-07-01	892340-07-01	892340-07-01			892340-07-01		
	UNITS	BH22-4-2	BH22-4-4	BH22-1-1	RDL	QC Batch	BH22-1-4	RDL	QC Batch
Inorganics									
Moisture	%	7.9	17	9.7	1.0	8173747			
Calculated Parameters									
1,3-Dichloropropene (cis+trans)	ug/g	<0.050	<0.050	<0.050	0.050	8170673	<0.050	0.050	8170673
Volatile Organics									
Acetone (2-Propanone)	ug/g	<0.49	<0.49	<0.49	0.49	8174394	<0.49	0.49	8174394
Benzene	ug/g	<0.0060	<0.0060	<0.0060	0.0060	8174394	<0.0060	0.0060	8174394
Bromodichloromethane	ug/g	<0.040	<0.040	<0.040	0.040	8174394	<0.040	0.040	8174394
Bromoform	ug/g	<0.040	<0.040	<0.040	0.040	8174394	<0.040	0.040	8174394
Bromomethane	ug/g	<0.040	<0.040	<0.040	0.040	8174394	<0.040	0.040	8174394
Carbon Tetrachloride	ug/g	<0.040	<0.040	<0.040	0.040	8174394	<0.040	0.040	8174394
Chlorobenzene	ug/g	<0.040	<0.040	<0.040	0.040	8174394	<0.040	0.040	8174394
Chloroform	ug/g	<0.040	<0.040	<0.040	0.040	8174394	<0.040	0.040	8174394
Dibromochloromethane	ug/g	<0.040	<0.040	<0.040	0.040	8174394	<0.040	0.040	8174394
1,2-Dichlorobenzene	ug/g	<0.040	<0.040	<0.040	0.040	8174394	<0.040	0.040	8174394
1,3-Dichlorobenzene	ug/g	<0.040	<0.040	<0.040	0.040	8174394	<0.040	0.040	8174394
1,4-Dichlorobenzene	ug/g	<0.040	<0.040	<0.040	0.040	8174394	<0.040	0.040	8174394
Dichlorodifluoromethane (FREON 12)	ug/g	<0.040	<0.040	<0.040	0.040	8174394	<0.040	0.040	8174394
1,1-Dichloroethane	ug/g	<0.040	<0.040	<0.040	0.040	8174394	<0.040	0.040	8174394
1,2-Dichloroethane	ug/g	<0.049	<0.049	<0.049	0.049	8174394	<0.049	0.049	8174394
1,1-Dichloroethylene	ug/g	<0.040	<0.040	<0.040	0.040	8174394	<0.040	0.040	8174394
cis-1,2-Dichloroethylene	ug/g	<0.040	<0.040	<0.040	0.040	8174394	<0.040	0.040	8174394
trans-1,2-Dichloroethylene	ug/g	<0.040	<0.040	<0.040	0.040	8174394	<0.040	0.040	8174394
1,2-Dichloropropane	ug/g	<0.040	<0.040	<0.040	0.040	8174394	<0.040	0.040	8174394
cis-1,3-Dichloropropene	ug/g	<0.030	<0.030	<0.030	0.030	8174394	<0.030	0.030	8174394
trans-1,3-Dichloropropene	ug/g	<0.040	<0.040	<0.040	0.040	8174394	<0.040	0.040	8174394
Ethylbenzene	ug/g	<0.010	<0.010	<0.010	0.010	8174394	<0.010	0.010	8174394
Ethylene Dibromide	ug/g	<0.040	<0.040	<0.040	0.040	8174394	<0.040	0.040	8174394
Hexane	ug/g	<0.040	<0.040	<0.040	0.040	8174394	<0.040	0.040	8174394
Methylene Chloride(Dichloromethane)	ug/g	<0.049	<0.049	<0.049	0.049	8174394	<0.049	0.049	8174394
Methyl Ethyl Ketone (2-Butanone)	ug/g	<0.40	<0.40	<0.40	0.40	8174394	<0.40	0.40	8174394
Methyl Isobutyl Ketone	ug/g	<0.40	<0.40	<0.40	0.40	8174394	<0.40	0.40	8174394

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

O.REG 153 VOCS BY HS & F1-F4 (SOIL)

Bureau Veritas ID		TLT676	TLT678	TLT679			TLT682		
Sampling Date		2022/08/15 10:50	2022/08/15 11:15	2022/08/15 14:15			2022/08/15 14:50		
COC Number		892340-07-01	892340-07-01	892340-07-01			892340-07-01		
	UNITS	BH22-4-2	BH22-4-4	BH22-1-1	RDL	QC Batch	BH22-1-4	RDL	QC Batch
Methyl t-butyl ether (MTBE)	ug/g	<0.040	<0.040	<0.040	0.040	8174394	<0.040	0.040	8174394
Styrene	ug/g	<0.040	<0.040	<0.040	0.040	8174394	<0.040	0.040	8174394
1,1,1,2-Tetrachloroethane	ug/g	<0.040	<0.040	<0.040	0.040	8174394	<0.040	0.040	8174394
1,1,2,2-Tetrachloroethane	ug/g	<0.040	<0.040	<0.040	0.040	8174394	<0.040	0.040	8174394
Tetrachloroethylene	ug/g	<0.040	<0.040	<0.040	0.040	8174394	<0.040	0.040	8174394
Toluene	ug/g	<0.020	<0.020	<0.020	0.020	8174394	<0.020	0.020	8174394
1,1,1-Trichloroethane	ug/g	<0.040	<0.040	<0.040	0.040	8174394	<0.040	0.040	8174394
1,1,2-Trichloroethane	ug/g	<0.040	<0.040	<0.040	0.040	8174394	<0.040	0.040	8174394
Trichloroethylene	ug/g	<0.010	<0.010	<0.010	0.010	8174394	<0.010	0.010	8174394
Trichlorofluoromethane (FREON 11)	ug/g	<0.040	<0.040	<0.040	0.040	8174394	<0.040	0.040	8174394
Vinyl Chloride	ug/g	<0.019	<0.019	<0.019	0.019	8174394	<0.019	0.019	8174394
p+m-Xylene	ug/g	<0.020	<0.020	<0.020	0.020	8174394	<0.020	0.020	8174394
o-Xylene	ug/g	<0.020	<0.020	<0.020	0.020	8174394	<0.020	0.020	8174394
Total Xylenes	ug/g	<0.020	<0.020	<0.020	0.020	8174394	<0.020	0.020	8174394
F1 (C6-C10)	ug/g	<10	<10	<10	10	8174394	<10	10	8174394
F1 (C6-C10) - BTEX	ug/g	<10	<10	<10	10	8174394	<10	10	8174394
F2-F4 Hydrocarbons									
F2 (C10-C16 Hydrocarbons)	ug/g	<10	<10	<10	10	8178015	<10	10	8178015
F3 (C16-C34 Hydrocarbons)	ug/g	<50	<50	<50	50	8178015	<50	50	8178015
F4 (C34-C50 Hydrocarbons)	ug/g	<50	<50	<50	50	8178015	<50	50	8178015
Reached Baseline at C50	ug/g	Yes	Yes	Yes		8178015	Yes		8178015
Surrogate Recovery (%)									
o-Terphenyl	%	89	89	104		8178015	92		8178015
4-Bromofluorobenzene	%	93	94	93		8174394	93		8174394
D10-o-Xylene	%	98	101	97		8174394	99		8174394
D4-1,2-Dichloroethane	%	104	109	108		8174394	107		8174394
D8-Toluene	%	101	100	99		8174394	99		8174394

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

RESULTS OF ANALYSES OF SOIL

Bureau Veritas ID		TLT680	TLT681		
Sampling Date		2022/08/15 14:30	2022/08/15 14:35		
COC Number		892340-07-01	892340-07-01		
	UNITS	BH22-1-2	BH22-1-3	RDL	QC Batch
Inorganics					
Moisture	%	20	24	1.0	8182690

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

TEST SUMMARY

Bureau Veritas ID: TLT675
Sample ID: BH22-4-1
Matrix: Soil

Collected: 2022/08/15
Shipped:
Received: 2022/08/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	8170672	N/A	2022/08/24	Automated Statchk
Hot Water Extractable Boron	ICP	8176683	2022/08/19	2022/08/22	Jaswinder Kaur
Free (WAD) Cyanide	TECH	8174429	2022/08/18	2022/08/22	Kruti Jitesh Patel
Conductivity	AT	8179096	2022/08/22	2022/08/22	Roya Fathitil
Hexavalent Chromium in Soil by IC	IC/SPEC	8175972	2022/08/19	2022/08/23	Sousan Besharatlou
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	8181455	N/A	2022/08/23	Abdikarim Ali
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	8178015	2022/08/20	2022/08/22	Suleeqa Nurr
Acid Extractable Metals by ICPMS	ICP/MS	8176404	2022/08/19	2022/08/22	Prempal Bhatti
Moisture	BAL	8173747	N/A	2022/08/18	Mathew Bowles
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	8180234	2022/08/22	2022/08/22	Mitesh Raj
Polychlorinated Biphenyl in Soil	GC/ECD	8175705	2022/08/19	2022/08/20	Farag Mansour
pH CaCl2 EXTRACT	AT	8175867	2022/08/19	2022/08/19	Taslima Aktar
Sodium Adsorption Ratio (SAR)	CALC/MET	8170786	N/A	2022/08/24	Automated Statchk

Bureau Veritas ID: TLT676
Sample ID: BH22-4-2
Matrix: Soil

Collected: 2022/08/15
Shipped:
Received: 2022/08/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	8170672	N/A	2022/08/24	Automated Statchk
Hot Water Extractable Boron	ICP	8176683	2022/08/19	2022/08/22	Jaswinder Kaur
1,3-Dichloropropene Sum	CALC	8170673	N/A	2022/08/22	Automated Statchk
Free (WAD) Cyanide	TECH	8176397	2022/08/19	2022/08/23	Kruti Jitesh Patel
Conductivity	AT	8179096	2022/08/22	2022/08/22	Roya Fathitil
Hexavalent Chromium in Soil by IC	IC/SPEC	8175972	2022/08/19	2022/08/23	Sousan Besharatlou
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	8178015	2022/08/20	2022/08/22	Suleeqa Nurr
Acid Extractable Metals by ICPMS	ICP/MS	8176404	2022/08/19	2022/08/22	Prempal Bhatti
Total Metals in SPLP Leachate by ICPMS	ICP/MS	8196080	2022/08/30	2022/08/30	Azita Fazaeli
Moisture	BAL	8173747	N/A	2022/08/18	Mathew Bowles
Modified SPLP extraction - Weight		8194151	N/A	2022/08/30	Eddie On
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	8180234	2022/08/22	2022/08/22	Mitesh Raj
pH CaCl2 EXTRACT	AT	8175867	2022/08/19	2022/08/19	Taslima Aktar
Sodium Adsorption Ratio (SAR)	CALC/MET	8170786	N/A	2022/08/24	Automated Statchk
Volatile Organic Compounds and F1 PHCs	GC/MSFD	8174394	N/A	2022/08/20	Jett Wu

Bureau Veritas ID: TLT677
Sample ID: BH22-4-3
Matrix: Soil

Collected: 2022/08/15
Shipped:
Received: 2022/08/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	8170672	N/A	2022/08/24	Automated Statchk
Hot Water Extractable Boron	ICP	8176683	2022/08/19	2022/08/22	Jaswinder Kaur
Free (WAD) Cyanide	TECH	8176397	2022/08/19	2022/08/23	Kruti Jitesh Patel
Conductivity	AT	8179096	2022/08/22	2022/08/22	Roya Fathitil
Hexavalent Chromium in Soil by IC	IC/SPEC	8176511	2022/08/19	2022/08/22	Surleen Kaur Romana
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	8181455	N/A	2022/08/23	Abdikarim Ali

TEST SUMMARY

Bureau Veritas ID: TLT677 **Collected:** 2022/08/15
Sample ID: BH22-4-3 **Shipped:**
Matrix: Soil **Received:** 2022/08/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	8178015	2022/08/20	2022/08/22	Suleeqa Nurr
Acid Extractable Metals by ICPMS	ICP/MS	8176404	2022/08/19	2022/08/22	Prempal Bhatti
Moisture	BAL	8173747	N/A	2022/08/18	Mathew Bowles
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	8180234	2022/08/22	2022/08/22	Mitesh Raj
Polychlorinated Biphenyl in Soil	GC/ECD	8175705	2022/08/19	2022/08/20	Farag Mansour
pH CaCl2 EXTRACT	AT	8175893	2022/08/19	2022/08/19	Taslima Aktar
Sodium Adsorption Ratio (SAR)	CALC/MET	8170786	N/A	2022/08/24	Automated Statchk

Bureau Veritas ID: TLT678 **Collected:** 2022/08/15
Sample ID: BH22-4-4 **Shipped:**
Matrix: Soil **Received:** 2022/08/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	8170672	N/A	2022/08/24	Automated Statchk
Hot Water Extractable Boron	ICP	8176683	2022/08/19	2022/08/22	Jaswinder Kaur
1,3-Dichloropropene Sum	CALC	8170673	N/A	2022/08/22	Automated Statchk
Free (WAD) Cyanide	TECH	8174429	2022/08/18	2022/08/22	Kruti Jitesh Patel
Conductivity	AT	8179096	2022/08/22	2022/08/22	Roya Fathitil
Hexavalent Chromium in Soil by IC	IC/SPEC	8175730	2022/08/19	2022/08/19	Sousan Besharatlou
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	8178015	2022/08/20	2022/08/22	Suleeqa Nurr
Acid Extractable Metals by ICPMS	ICP/MS	8176404	2022/08/19	2022/08/22	Prempal Bhatti
Moisture	BAL	8173747	N/A	2022/08/18	Mathew Bowles
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	8180234	2022/08/22	2022/08/22	Mitesh Raj
pH CaCl2 EXTRACT	AT	8175901	2022/08/19	2022/08/19	Taslima Aktar
Sodium Adsorption Ratio (SAR)	CALC/MET	8170786	N/A	2022/08/24	Automated Statchk
Volatile Organic Compounds and F1 PHCs	GC/MSFD	8174394	N/A	2022/08/20	Jett Wu

Bureau Veritas ID: TLT678 Dup **Collected:** 2022/08/15
Sample ID: BH22-4-4 **Shipped:**
Matrix: Soil **Received:** 2022/08/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	8176683	2022/08/19	2022/08/22	Jaswinder Kaur

Bureau Veritas ID: TLT679 **Collected:** 2022/08/15
Sample ID: BH22-1-1 **Shipped:**
Matrix: Soil **Received:** 2022/08/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	8170672	N/A	2022/08/24	Automated Statchk
Hot Water Extractable Boron	ICP	8176683	2022/08/19	2022/08/22	Jaswinder Kaur
1,3-Dichloropropene Sum	CALC	8190282	N/A	2022/08/31	Automated Statchk
1,3-Dichloropropene Sum	CALC	8170673	N/A	2022/08/22	Automated Statchk
Free (WAD) Cyanide	TECH	8176397	2022/08/19	2022/08/23	Kruti Jitesh Patel
Conductivity	AT	8179096	2022/08/22	2022/08/22	Roya Fathitil
Hexavalent Chromium in Soil by IC	IC/SPEC	8175972	2022/08/19	2022/08/23	Sousan Besharatlou

TEST SUMMARY

Bureau Veritas ID: TLT679 **Collected:** 2022/08/15
Sample ID: BH22-1-1 **Shipped:**
Matrix: Soil **Received:** 2022/08/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	8178015	2022/08/20	2022/08/22	Suleeqa Nurr
Acid Extractable Metals by ICPMS	ICP/MS	8176404	2022/08/19	2022/08/22	Prempal Bhatti
Moisture	BAL	8173747	N/A	2022/08/18	Mathew Bowles
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	8180234	2022/08/22	2022/08/23	Mitesh Raj
Polychlorinated Biphenyl in Soil	GC/ECD	8175705	2022/08/19	2022/08/20	Farag Mansour
pH CaCl2 EXTRACT	AT	8175867	2022/08/19	2022/08/19	Taslima Aktar
Sodium Adsorption Ratio (SAR)	CALC/MET	8170786	N/A	2022/08/24	Automated Statchk
SPLP Zero Headspace Extraction		8193854	2022/08/29	2022/08/30	Archit Prajapati
Volatile Organic Compounds and F1 PHCs	GC/MSFD	8174394	N/A	2022/08/20	Jett Wu
Volatile organics in SPLP leachates	HS/MS	8195999	N/A	2022/08/30	Dina Wang

Bureau Veritas ID: TLT680 **Collected:** 2022/08/15
Sample ID: BH22-1-2 **Shipped:**
Matrix: Soil **Received:** 2022/08/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	8170672	N/A	2022/08/24	Automated Statchk
Hot Water Extractable Boron	ICP	8176683	2022/08/19	2022/08/22	Jaswinder Kaur
Free (WAD) Cyanide	TECH	8174429	2022/08/18	2022/08/22	Kruti Jitesh Patel
Conductivity	AT	8179096	2022/08/22	2022/08/22	Roya Fathitil
Hexavalent Chromium in Soil by IC	IC/SPEC	8175972	2022/08/19	2022/08/23	Sousan Besharatlou
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	8181455	N/A	2022/08/23	Abdikarim Ali
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	8178015	2022/08/20	2022/08/22	Suleeqa Nurr
Acid Extractable Metals by ICPMS	ICP/MS	8176404	2022/08/19	2022/08/22	Prempal Bhatti
Total Metals in SPLP Leachate by ICPMS	ICP/MS	8196080	2022/08/30	2022/08/30	Azita Fazaeli
Moisture	BAL	8182690	N/A	2022/08/23	Min Yang
Modified SPLP extraction - Weight		8194151	N/A	2022/08/30	Eddie On
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	8180234	2022/08/22	2022/08/23	Mitesh Raj
pH CaCl2 EXTRACT	AT	8175867	2022/08/19	2022/08/19	Taslima Aktar
Sodium Adsorption Ratio (SAR)	CALC/MET	8170786	N/A	2022/08/24	Automated Statchk

Bureau Veritas ID: TLT680 Dup **Collected:** 2022/08/15
Sample ID: BH22-1-2 **Shipped:**
Matrix: Soil **Received:** 2022/08/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	8178015	2022/08/20	2022/08/22	Suleeqa Nurr

Bureau Veritas ID: TLT681 **Collected:** 2022/08/15
Sample ID: BH22-1-3 **Shipped:**
Matrix: Soil **Received:** 2022/08/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	8170672	N/A	2022/08/24	Automated Statchk
Hot Water Extractable Boron	ICP	8176683	2022/08/19	2022/08/22	Jaswinder Kaur
Free (WAD) Cyanide	TECH	8174429	2022/08/18	2022/08/22	Kruti Jitesh Patel

TEST SUMMARY

Bureau Veritas ID: TLT681 **Collected:** 2022/08/15
Sample ID: BH22-1-3 **Shipped:**
Matrix: Soil **Received:** 2022/08/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Conductivity	AT	8179096	2022/08/22	2022/08/22	Roya Fathitil
Hexavalent Chromium in Soil by IC	IC/SPEC	8175972	2022/08/19	2022/08/23	Sousan Besharatlou
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	8181455	N/A	2022/08/23	Abdikarim Ali
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	8178015	2022/08/20	2022/08/22	Suleeqa Nurr
Acid Extractable Metals by ICPMS	ICP/MS	8176404	2022/08/19	2022/08/22	Prempal Bhatti
Moisture	BAL	8182690	N/A	2022/08/23	Min Yang
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	8180234	2022/08/22	2022/08/22	Mitesh Raj
pH CaCl2 EXTRACT	AT	8175867	2022/08/19	2022/08/19	Taslima Aktar
Sodium Adsorption Ratio (SAR)	CALC/MET	8170786	N/A	2022/08/24	Automated Statchk

Bureau Veritas ID: TLT681 Dup **Collected:** 2022/08/15
Sample ID: BH22-1-3 **Shipped:**
Matrix: Soil **Received:** 2022/08/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	8180234	2022/08/22	2022/08/22	Mitesh Raj

Bureau Veritas ID: TLT682 **Collected:** 2022/08/15
Sample ID: BH22-1-4 **Shipped:**
Matrix: Soil **Received:** 2022/08/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	8170672	N/A	2022/08/24	Automated Statchk
Hot Water Extractable Boron	ICP	8176683	2022/08/19	2022/08/22	Jaswinder Kaur
1,3-Dichloropropene Sum	CALC	8170673	N/A	2022/08/22	Automated Statchk
Free (WAD) Cyanide	TECH	8174429	2022/08/18	2022/08/22	Kruti Jitesh Patel
Conductivity	AT	8179096	2022/08/22	2022/08/22	Roya Fathitil
Hexavalent Chromium in Soil by IC	IC/SPEC	8175972	2022/08/19	2022/08/23	Sousan Besharatlou
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	8178015	2022/08/20	2022/08/22	Suleeqa Nurr
Acid Extractable Metals by ICPMS	ICP/MS	8176404	2022/08/19	2022/08/22	Prempal Bhatti
Moisture	BAL	8173747	N/A	2022/08/18	Mathew Bowles
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	8180234	2022/08/22	2022/08/23	Mitesh Raj
Polychlorinated Biphenyl in Soil	GC/ECD	8175705	2022/08/19	2022/08/20	Farag Mansour
pH CaCl2 EXTRACT	AT	8175867	2022/08/19	2022/08/19	Taslima Aktar
Sodium Adsorption Ratio (SAR)	CALC/MET	8170786	N/A	2022/08/24	Automated Statchk
Volatile Organic Compounds and F1 PHCs	GC/MSFD	8174394	N/A	2022/08/20	Jett Wu

GENERAL COMMENTS

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

Package 1	3.0°C

Sample TLT677 [BH22-4-3] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample TLT680 [BH22-1-2] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Results relate only to the items tested.

QUALITY ASSURANCE REPORT

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		Leachate Blank	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	Value	UNITS
8174394	4-Bromofluorobenzene	2022/08/19	98	60 - 140	98	60 - 140	95	%				
8174394	D10-o-Xylene	2022/08/19	109	60 - 130	99	60 - 130	100	%				
8174394	D4-1,2-Dichloroethane	2022/08/19	108	60 - 140	106	60 - 140	104	%				
8174394	D8-Toluene	2022/08/19	100	60 - 140	102	60 - 140	100	%				
8175705	Decachlorobiphenyl	2022/08/19	88	60 - 130	96	60 - 130	92	%				
8178015	o-Terphenyl	2022/08/22	96	60 - 130	93	60 - 130	95	%				
8180234	D10-Anthracene	2022/08/22	101	50 - 130	105	50 - 130	103	%				
8180234	D14-Terphenyl (FS)	2022/08/22	106	50 - 130	113	50 - 130	103	%				
8180234	D8-Acenaphthylene	2022/08/22	80	50 - 130	93	50 - 130	74	%				
8181455	1,4-Difluorobenzene	2022/08/23	97	60 - 140	97	60 - 140	100	%				
8181455	4-Bromofluorobenzene	2022/08/23	99	60 - 140	98	60 - 140	97	%				
8181455	D10-o-Xylene	2022/08/23	92	60 - 140	96	60 - 140	92	%				
8181455	D4-1,2-Dichloroethane	2022/08/23	94	60 - 140	93	60 - 140	95	%				
8195999	Leachable (SPLP) 4-Bromofluorobenzene	2022/08/30	105	70 - 130	106	70 - 130	99	%				
8195999	Leachable (SPLP) D4-1,2-Dichloroethane	2022/08/30	102	70 - 130	99	70 - 130	103	%				
8195999	Leachable (SPLP) D8-Toluene	2022/08/30	100	70 - 130	99	70 - 130	93	%				
8173747	Moisture	2022/08/18							3.4	20		
8174394	1,1,1,2-Tetrachloroethane	2022/08/19	95	60 - 140	97	60 - 130	<0.040	ug/g	NC	50		
8174394	1,1,1-Trichloroethane	2022/08/19	95	60 - 140	100	60 - 130	<0.040	ug/g	NC	50		
8174394	1,1,2,2-Tetrachloroethane	2022/08/19	98	60 - 140	97	60 - 130	<0.040	ug/g	NC	50		
8174394	1,1,2-Trichloroethane	2022/08/19	106	60 - 140	106	60 - 130	<0.040	ug/g	NC	50		
8174394	1,1-Dichloroethane	2022/08/19	95	60 - 140	98	60 - 130	<0.040	ug/g	NC	50		
8174394	1,1-Dichloroethylene	2022/08/19	99	60 - 140	104	60 - 130	<0.040	ug/g	NC	50		
8174394	1,2-Dichlorobenzene	2022/08/19	95	60 - 140	97	60 - 130	<0.040	ug/g	NC	50		
8174394	1,2-Dichloroethane	2022/08/19	98	60 - 140	98	60 - 130	<0.049	ug/g	NC	50		
8174394	1,2-Dichloropropane	2022/08/19	96	60 - 140	98	60 - 130	<0.040	ug/g	NC	50		
8174394	1,3-Dichlorobenzene	2022/08/19	94	60 - 140	99	60 - 130	<0.040	ug/g	NC	50		
8174394	1,4-Dichlorobenzene	2022/08/19	109	60 - 140	113	60 - 130	<0.040	ug/g	NC	50		
8174394	Acetone (2-Propanone)	2022/08/19	101	60 - 140	99	60 - 140	<0.49	ug/g	NC	50		
8174394	Benzene	2022/08/19	90	60 - 140	93	60 - 130	<0.0060	ug/g	NC	50		
8174394	Bromodichloromethane	2022/08/19	100	60 - 140	102	60 - 130	<0.040	ug/g	NC	50		
8174394	Bromoform	2022/08/19	95	60 - 140	95	60 - 130	<0.040	ug/g	NC	50		

QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		Leachate Blank	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	Value	UNITS
8174394	Bromomethane	2022/08/19	90	60 - 140	92	60 - 140	<0.040	ug/g	NC	50		
8174394	Carbon Tetrachloride	2022/08/19	92	60 - 140	98	60 - 130	<0.040	ug/g	NC	50		
8174394	Chlorobenzene	2022/08/19	95	60 - 140	98	60 - 130	<0.040	ug/g	NC	50		
8174394	Chloroform	2022/08/19	99	60 - 140	102	60 - 130	<0.040	ug/g	NC	50		
8174394	cis-1,2-Dichloroethylene	2022/08/19	97	60 - 140	100	60 - 130	<0.040	ug/g	NC	50		
8174394	cis-1,3-Dichloropropene	2022/08/19	83	60 - 140	85	60 - 130	<0.030	ug/g	NC	50		
8174394	Dibromochloromethane	2022/08/19	95	60 - 140	96	60 - 130	<0.040	ug/g	NC	50		
8174394	Dichlorodifluoromethane (FREON 12)	2022/08/19	97	60 - 140	104	60 - 140	<0.040	ug/g	NC	50		
8174394	Ethylbenzene	2022/08/19	89	60 - 140	94	60 - 130	<0.010	ug/g	NC	50		
8174394	Ethylene Dibromide	2022/08/19	93	60 - 140	93	60 - 130	<0.040	ug/g	NC	50		
8174394	F1 (C6-C10) - BTEX	2022/08/19					<10	ug/g	NC	30		
8174394	F1 (C6-C10)	2022/08/19	91	60 - 140	91	80 - 120	<10	ug/g	NC	30		
8174394	Hexane	2022/08/19	94	60 - 140	101	60 - 130	<0.040	ug/g	NC	50		
8174394	Methyl Ethyl Ketone (2-Butanone)	2022/08/19	103	60 - 140	100	60 - 140	<0.40	ug/g	NC	50		
8174394	Methyl Isobutyl Ketone	2022/08/19	106	60 - 140	101	60 - 130	<0.40	ug/g	NC	50		
8174394	Methyl t-butyl ether (MTBE)	2022/08/19	89	60 - 140	90	60 - 130	<0.040	ug/g	NC	50		
8174394	Methylene Chloride(Dichloromethane)	2022/08/19	99	60 - 140	101	60 - 130	<0.049	ug/g	NC	50		
8174394	o-Xylene	2022/08/19	89	60 - 140	94	60 - 130	<0.020	ug/g	NC	50		
8174394	p+m-Xylene	2022/08/19	90	60 - 140	95	60 - 130	<0.020	ug/g	NC	50		
8174394	Styrene	2022/08/19	97	60 - 140	100	60 - 130	<0.040	ug/g	NC	50		
8174394	Tetrachloroethylene	2022/08/19	87	60 - 140	94	60 - 130	<0.040	ug/g	NC	50		
8174394	Toluene	2022/08/19	95	60 - 140	99	60 - 130	<0.020	ug/g	NC	50		
8174394	Total Xylenes	2022/08/19					<0.020	ug/g	NC	50		
8174394	trans-1,2-Dichloroethylene	2022/08/19	94	60 - 140	98	60 - 130	<0.040	ug/g	NC	50		
8174394	trans-1,3-Dichloropropene	2022/08/19	87	60 - 140	88	60 - 130	<0.040	ug/g	NC	50		
8174394	Trichloroethylene	2022/08/19	98	60 - 140	102	60 - 130	<0.010	ug/g	NC	50		
8174394	Trichlorofluoromethane (FREON 11)	2022/08/19	92	60 - 140	99	60 - 130	<0.040	ug/g	NC	50		
8174394	Vinyl Chloride	2022/08/19	84	60 - 140	89	60 - 130	<0.019	ug/g	NC	50		
8174429	WAD Cyanide (Free)	2022/08/22	98	75 - 125	93	80 - 120	<0.01	ug/g	NC	35		
8175705	Aroclor 1242	2022/08/20					<0.010	ug/g	NC	50		
8175705	Aroclor 1248	2022/08/20					<0.010	ug/g	NC	50		
8175705	Aroclor 1254	2022/08/20					<0.010	ug/g	NC	50		

QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		Leachate Blank	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	Value	UNITS
8175705	Aroclor 1260	2022/08/20	96	30 - 130	105	30 - 130	<0.010	ug/g	NC	50		
8175705	Total PCB	2022/08/20	96	30 - 130	105	30 - 130	<0.010	ug/g	NC	50		
8175730	Chromium (VI)	2022/08/19	0.18 (1)	70 - 130	94	80 - 120	<0.18	ug/g	NC	35		
8175867	Available (CaCl2) pH	2022/08/19			100	97 - 103			0.24	N/A		
8175893	Available (CaCl2) pH	2022/08/19			100	97 - 103			0.17	N/A		
8175901	Available (CaCl2) pH	2022/08/19			100	97 - 103			0.21	N/A		
8175972	Chromium (VI)	2022/08/23	87	70 - 130	88	80 - 120	<0.18	ug/g	NC	35		
8176397	WAD Cyanide (Free)	2022/08/23	104	75 - 125	96	80 - 120	<0.01	ug/g	NC	35		
8176404	Acid Extractable Antimony (Sb)	2022/08/22	110	75 - 125	104	80 - 120	<0.20	ug/g	NC	30		
8176404	Acid Extractable Arsenic (As)	2022/08/22	113	75 - 125	107	80 - 120	<1.0	ug/g	3.1	30		
8176404	Acid Extractable Barium (Ba)	2022/08/22	NC	75 - 125	104	80 - 120	<0.50	ug/g	15	30		
8176404	Acid Extractable Beryllium (Be)	2022/08/22	110	75 - 125	102	80 - 120	<0.20	ug/g	0.75	30		
8176404	Acid Extractable Boron (B)	2022/08/22	104	75 - 125	101	80 - 120	<5.0	ug/g	NC	30		
8176404	Acid Extractable Cadmium (Cd)	2022/08/22	109	75 - 125	99	80 - 120	<0.10	ug/g	NC	30		
8176404	Acid Extractable Chromium (Cr)	2022/08/22	112	75 - 125	103	80 - 120	<1.0	ug/g	2.3	30		
8176404	Acid Extractable Cobalt (Co)	2022/08/22	109	75 - 125	101	80 - 120	<0.10	ug/g	2.3	30		
8176404	Acid Extractable Copper (Cu)	2022/08/22	107	75 - 125	100	80 - 120	<0.50	ug/g	0.59	30		
8176404	Acid Extractable Lead (Pb)	2022/08/22	104	75 - 125	98	80 - 120	<1.0	ug/g	2.5	30		
8176404	Acid Extractable Mercury (Hg)	2022/08/22	102	75 - 125	94	80 - 120	<0.050	ug/g				
8176404	Acid Extractable Molybdenum (Mo)	2022/08/22	111	75 - 125	99	80 - 120	<0.50	ug/g	NC	30		
8176404	Acid Extractable Nickel (Ni)	2022/08/22	109	75 - 125	103	80 - 120	<0.50	ug/g	0.18	30		
8176404	Acid Extractable Selenium (Se)	2022/08/22	112	75 - 125	102	80 - 120	<0.50	ug/g	NC	30		
8176404	Acid Extractable Silver (Ag)	2022/08/22	107	75 - 125	98	80 - 120	<0.20	ug/g	NC	30		
8176404	Acid Extractable Thallium (Tl)	2022/08/22	105	75 - 125	99	80 - 120	<0.050	ug/g	NC	30		
8176404	Acid Extractable Uranium (U)	2022/08/22	107	75 - 125	99	80 - 120	<0.050	ug/g	12	30		
8176404	Acid Extractable Vanadium (V)	2022/08/22	117	75 - 125	104	80 - 120	<5.0	ug/g	0.91	30		
8176404	Acid Extractable Zinc (Zn)	2022/08/22	114	75 - 125	103	80 - 120	<5.0	ug/g	0.24	30		
8176511	Chromium (VI)	2022/08/22	87	70 - 130	93	80 - 120	<0.18	ug/g	7.4	35		
8176683	Hot Water Ext. Boron (B)	2022/08/22	97	75 - 125	97	75 - 125	<0.050	ug/g	3.8	40		
8178015	F2 (C10-C16 Hydrocarbons)	2022/08/22	106	60 - 130	102	80 - 120	<10	ug/g	NC	30		
8178015	F3 (C16-C34 Hydrocarbons)	2022/08/22	106	60 - 130	101	80 - 120	<50	ug/g	NC	30		
8178015	F4 (C34-C50 Hydrocarbons)	2022/08/22	107	60 - 130	101	80 - 120	<50	ug/g	NC	30		

QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		Leachate Blank	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	Value	UNITS
8179096	Conductivity	2022/08/22			98	90 - 110	<0.002	mS/cm	1.3	10		
8180234	1-Methylnaphthalene	2022/08/22	100	50 - 130	105	50 - 130	<0.0050	ug/g	NC	40		
8180234	2-Methylnaphthalene	2022/08/22	97	50 - 130	101	50 - 130	<0.0050	ug/g	NC	40		
8180234	Acenaphthene	2022/08/22	103	50 - 130	105	50 - 130	<0.0050	ug/g	NC	40		
8180234	Acenaphthylene	2022/08/22	98	50 - 130	102	50 - 130	<0.0050	ug/g	NC	40		
8180234	Anthracene	2022/08/22	111	50 - 130	115	50 - 130	<0.0050	ug/g	NC	40		
8180234	Benzo(a)anthracene	2022/08/22	113	50 - 130	116	50 - 130	<0.0050	ug/g	NC	40		
8180234	Benzo(a)pyrene	2022/08/22	94	50 - 130	96	50 - 130	<0.0050	ug/g	NC	40		
8180234	Benzo(b/j)fluoranthene	2022/08/22	103	50 - 130	108	50 - 130	<0.0050	ug/g	NC	40		
8180234	Benzo(g,h,i)perylene	2022/08/22	108	50 - 130	112	50 - 130	<0.0050	ug/g	NC	40		
8180234	Benzo(k)fluoranthene	2022/08/22	98	50 - 130	101	50 - 130	<0.0050	ug/g	NC	40		
8180234	Biphenyl	2022/08/22	97	50 - 130	99	50 - 130	<0.0050	ug/g	NC	40		
8180234	Chrysene	2022/08/22	108	50 - 130	112	50 - 130	<0.0050	ug/g	NC	40		
8180234	Dibenzo(a,h)anthracene	2022/08/22	98	50 - 130	94	50 - 130	<0.0050	ug/g	NC	40		
8180234	Fluoranthene	2022/08/22	115	50 - 130	122	50 - 130	<0.0050	ug/g	NC	40		
8180234	Fluorene	2022/08/22	103	50 - 130	106	50 - 130	<0.0050	ug/g	NC	40		
8180234	Indeno(1,2,3-cd)pyrene	2022/08/22	112	50 - 130	116	50 - 130	<0.0050	ug/g	NC	40		
8180234	Naphthalene	2022/08/22	93	50 - 130	101	50 - 130	<0.0050	ug/g	NC	40		
8180234	Phenanthrene	2022/08/22	105	50 - 130	109	50 - 130	<0.0050	ug/g	NC	40		
8180234	Pyrene	2022/08/22	117	50 - 130	126	50 - 130	<0.0050	ug/g	NC	40		
8181455	Benzene	2022/08/23	87	50 - 140	90	50 - 140	<0.020	ug/g	NC	50		
8181455	Ethylbenzene	2022/08/23	96	50 - 140	100	50 - 140	<0.020	ug/g	NC	50		
8181455	F1 (C6-C10) - BTEX	2022/08/23					<10	ug/g	NC	30		
8181455	F1 (C6-C10)	2022/08/23	83	60 - 140	99	80 - 120	<10	ug/g	NC	30		
8181455	o-Xylene	2022/08/23	92	50 - 140	96	50 - 140	<0.020	ug/g	NC	50		
8181455	p+m-Xylene	2022/08/23	92	50 - 140	96	50 - 140	<0.040	ug/g	NC	50		
8181455	Toluene	2022/08/23	90	50 - 140	94	50 - 140	<0.020	ug/g	NC	50		
8181455	Total Xylenes	2022/08/23					<0.040	ug/g	NC	50		
8182690	Moisture	2022/08/23							8.2	20		
8195999	Leachable (SPLP) 1,1,1,2-Tetrachloroethane	2022/08/31	101	70 - 130	100	70 - 130	<0.40	ug/L	NC	30		
8195999	Leachable (SPLP) 1,1,2,2-Tetrachloroethane	2022/08/31	97	70 - 130	92	70 - 130	<0.40	ug/L	NC	30		
8195999	Leachable (SPLP) 1,1,2-Trichloroethane	2022/08/31	102	70 - 130	97	70 - 130	<0.40	ug/L	NC	30		

QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		Leachate Blank	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	Value	UNITS
8195999	Leachable (SPLP) 1,1-Dichloroethane	2022/08/31	101	70 - 130	98	70 - 130	<0.40	ug/L	NC	30		
8195999	Leachable (SPLP) 1,1-Dichloroethylene	2022/08/31	96	70 - 130	95	70 - 130	<0.40	ug/L	NC	30		
8195999	Leachable (SPLP) 1,2-Dichlorobenzene	2022/08/31	99	70 - 130	97	70 - 130	<0.40	ug/L	NC	30		
8195999	Leachable (SPLP) 1,2-Dichloroethane	2022/08/31	99	70 - 130	94	70 - 130	<0.40	ug/L	NC	30		
8195999	Leachable (SPLP) 1,2-Dichloropropane	2022/08/31	95	70 - 130	92	70 - 130	<0.40	ug/L	NC	30		
8195999	Leachable (SPLP) 1,4-Dichlorobenzene	2022/08/31	110	70 - 130	109	70 - 130	<0.40	ug/L	NC	30		
8195999	Leachable (SPLP) Bromomethane	2022/08/31	91	60 - 140	88	60 - 140	<0.40	ug/L	NC	30		
8195999	Leachable (SPLP) Carbon Tetrachloride	2022/08/31	98	70 - 130	98	70 - 130	<0.19	ug/L	NC	30		
8195999	Leachable (SPLP) Chloroform	2022/08/31	100	70 - 130	97	70 - 130	<0.90	ug/L	NC	30		
8195999	Leachable (SPLP) cis-1,2-Dichloroethylene	2022/08/31	104	70 - 130	101	70 - 130	<0.40	ug/L	NC	30		
8195999	Leachable (SPLP) cis-1,3-Dichloropropene	2022/08/31	91	70 - 130	92	70 - 130	<0.30	ug/L	NC	30		
8195999	Leachable (SPLP) Ethylene Dibromide	2022/08/31	100	70 - 130	95	70 - 130	<0.19	ug/L	NC	30		
8195999	Leachable (SPLP) Tetrachloroethylene	2022/08/31	95	70 - 130	95	70 - 130	<0.40	ug/L	NC	30		
8195999	Leachable (SPLP) trans-1,2-Dichloroethylene	2022/08/31	98	70 - 130	96	70 - 130	<0.40	ug/L	NC	30		
8195999	Leachable (SPLP) trans-1,3-Dichloropropene	2022/08/31	95	70 - 130	105	70 - 130	<0.30	ug/L	NC	30		
8195999	Leachable (SPLP) Trichloroethylene	2022/08/31	105	70 - 130	105	70 - 130	<0.40	ug/L	NC	30		
8196080	Leachable (SPLP) Antimony (Sb)	2022/08/31	106	80 - 120	105	80 - 120	<0.5	ug/L	2.3	35	<0.5	ug/L
8196080	Leachable (SPLP) Arsenic (As)	2022/08/31	99	80 - 120	99	80 - 120	<1	ug/L	8.6	35	<1	ug/L
8196080	Leachable (SPLP) Barium (Ba)	2022/08/31	100	80 - 120	100	80 - 120	<5	ug/L	3.6	35	<5	ug/L
8196080	Leachable (SPLP) Beryllium (Be)	2022/08/31	105	80 - 120	104	80 - 120	<0.5	ug/L	NC	35	<0.5	ug/L
8196080	Leachable (SPLP) Boron (B)	2022/08/31	99	80 - 120	99	80 - 120	<10	ug/L	3.1	35	<10	ug/L
8196080	Leachable (SPLP) Cadmium (Cd)	2022/08/31	104	80 - 120	103	80 - 120	<0.1	ug/L	NC	35	<0.1	ug/L
8196080	Leachable (SPLP) Chromium (Cr)	2022/08/31	97	80 - 120	96	80 - 120	<5	ug/L	NC	35	<5	ug/L
8196080	Leachable (SPLP) Cobalt (Co)	2022/08/31	96	80 - 120	97	80 - 120	<0.5	ug/L	7.5	35	<0.5	ug/L
8196080	Leachable (SPLP) Copper (Cu)	2022/08/31	99	80 - 120	97	80 - 120	<1	ug/L	6.3	35	<1	ug/L
8196080	Leachable (SPLP) Lead (Pb)	2022/08/31	97	80 - 120	99	80 - 120	<0.5	ug/L	NC	35	<0.5	ug/L
8196080	Leachable (SPLP) Molybdenum (Mo)	2022/08/31	103	80 - 120	101	80 - 120	<1	ug/L	1.3	35	<1	ug/L
8196080	Leachable (SPLP) Nickel (Ni)	2022/08/31	97	80 - 120	98	80 - 120	<1	ug/L	8.8	35	<1	ug/L
8196080	Leachable (SPLP) Selenium (Se)	2022/08/31	105	80 - 120	109	80 - 120	<2	ug/L	NC	35	<2	ug/L
8196080	Leachable (SPLP) Silver (Ag)	2022/08/31	103	80 - 120	103	80 - 120	<0.1	ug/L	NC	35	<0.1	ug/L
8196080	Leachable (SPLP) Thallium (Tl)	2022/08/31	97	80 - 120	97	80 - 120	<0.05	ug/L	NC	35	<0.05	ug/L
8196080	Leachable (SPLP) Uranium (U)	2022/08/31	96	80 - 120	96	80 - 120	<0.1	ug/L	NC	35	<0.1	ug/L

QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		Leachate Blank	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	Value	UNITS
8196080	Leachable (SPLP) Vanadium (V)	2022/08/31	98	80 - 120	97	80 - 120	<1	ug/L	2.4	35	<1	ug/L
8196080	Leachable (SPLP) Zinc (Zn)	2022/08/31	102	80 - 120	103	80 - 120	<5	ug/L	NC	35	<5	ug/L

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.

Leachate Blank: A blank matrix containing all reagents used in the leaching procedure. Used to determine any process contamination.

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.

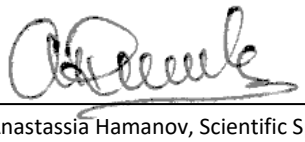
NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

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).

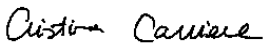
(1) The matrix spike recovery was below the lower control limit. This may be due in part to the reducing environment of the sample. The matrix spike was reanalyzed to confirm result.

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:



Anastassia Hamanov, Scientific Specialist



Cristina Carriere, Senior Scientific Specialist

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Bureau Veritas 100 – 36 Antares Dr. Nepean, ON, K2E 7W5 Phone: 613-274-0573 Website: www.bvna.com

Bureau Veritas
6740 Campobello Road, Mississauga, Ontario Canada L5N 2L8 Tel:(905) 817-5700 Toll-free:800-563-6266 Fax:(905) 817-5777 www.bvna.com

Page 1 of 1

16-Aug-22 09:00
Julie Clement
C2N2739
KTN ENV-813
C#892340-07-01

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:		Bottle Order #: 892340
Company Name:	#50098 Stantec Consulting Ltd	Company Name:		Quotation #:	C15856	
Attention:	Accounts Payable	Attention:	Steve Hannington	P.O. #:		
Address:	1331 Clyde Avenue Suite 400	Address:		Project:	121624271.400	
	Ottawa ON K2C 3G4			Project Name:		Project Manager: Julie Clement
Tel:	(613) 722-4420 Fax: (613) 738-0721	Tel:	Fax:	Site #:		
Email:	SAPinvoices@Stantec.com	Email:	Steve.Hannington@stantec.com	Sampled By:	S. Hannington	

MOE REGULATED DRINKING WATER OR WATER INTENDED FOR HUMAN CONSUMPTION MUST BE SUBMITTED ON THE BUREAU VERITAS DRINKING WATER CHAIN OF CUSTODY

Regulation 153 (2011): ☑ Table 1 ☐ Res/Park ☐ Medium/Fine ☐ Table 2 ☐ Ind/Comm ☐ Coarse ☐ Table 3 ☐ Agri/Other ☐ For RSC ☐ Table ___

Other Regulations: ☐ CCME ☐ Sanitary Sewer Bylaw ☐ Reg 558 ☐ Storm Sewer Bylaw ☐ MISA Municipality ☐ PWQO ☑ Reg 406 Table 3-1 ☐ Other

Special Instructions:

Include Criteria on Certificate of Analysis (Y/N)? ___

Turnaround Time (TAT) Required:
Please provide advance notice for rush projects
Regular (Standard) TAT: ☒
(will be applied if Rush TAT is not specified):
Standard TAT = 5-7 Working days for most tests.
Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.
Job Specific Rush TAT (if applies to entire submission)
Date Required: ___ Time Required: ___ ☐
Rush Confirmation Number: ___ *(call lab for #)*

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered (please circle): Metals / Hg / Cr VI	O Reg 153 Metals & Inorganics Pkg (Soil)	O Reg 153 PAHs (Soil)	O Reg 153 PHCs, BTEX/F1-F4 (Soil)	O Reg 153 VOCs by HS & F1-F4 (Soil)	O Reg 153 PCBs (Soil)	ON HOLD FOR: O.Reg 406 Excess Soil SPLP VOCs	ON HOLD FOR: O.Reg 406 Excess Soil SPLP Metals	TCLP: VOC, SVOC, Inorg, Ignite, bulk: PCB, PHC, GRO, DRO			# of Bottles	Comments
1		BH22-4-1	22/08/15	10:40	Soil	N	X	X	X		X		X				4	Hold all SPLP
2		BH22-4-2	"	10:50	"	"	X	X		X		X	X				5	VOC + metals
3		BH22-4-3	"	11:00	"	"	X	X	X		X		X				4	Samples
4		BH22-4-4	"	11:15	"	"	X	X		X		X	X				4	
5		BH22-1-1	"	2:15	"	"	X	X		X	X	X	X				5	
6		BH22-1-2	"	2:30	"	"	X	X	X				X				4	RECEIVED IN OTTAWA
7		BH22-1-3	"	2:35	"	"	X	X	X				X				4	
8		BH22-1-4	"	2:50	"	"	X	X	X	X	X	X	X				4	RECEIVED IN OTT
9																		
10																		ON Ice

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted
Steve Hannington	22/08/15	17:05	[illegible]	2022/08/16	09:00	
			[illegible]	2022/08/16	0900	

Laboratory Use Only

Time Sensitive	Temperature (°C) on Recei	Custody Seal	Yes	No
	3.3.3	Present		
		Intact	✓	

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/TERMS-AND-CONDITIONS.

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

** SAMPLE CONTAINER, PRESERVATION, HOLD TIME AND PACKAGE INFORMATION CAN BE VIEWED AT WWW.BVNA.COM/RESOURCES/CHAIN-OF-CUSTODY-FORMS.

SAMPLES MUST BE KEPT COOL (< 10° C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

White: Bureau Veritas Yellow: Client

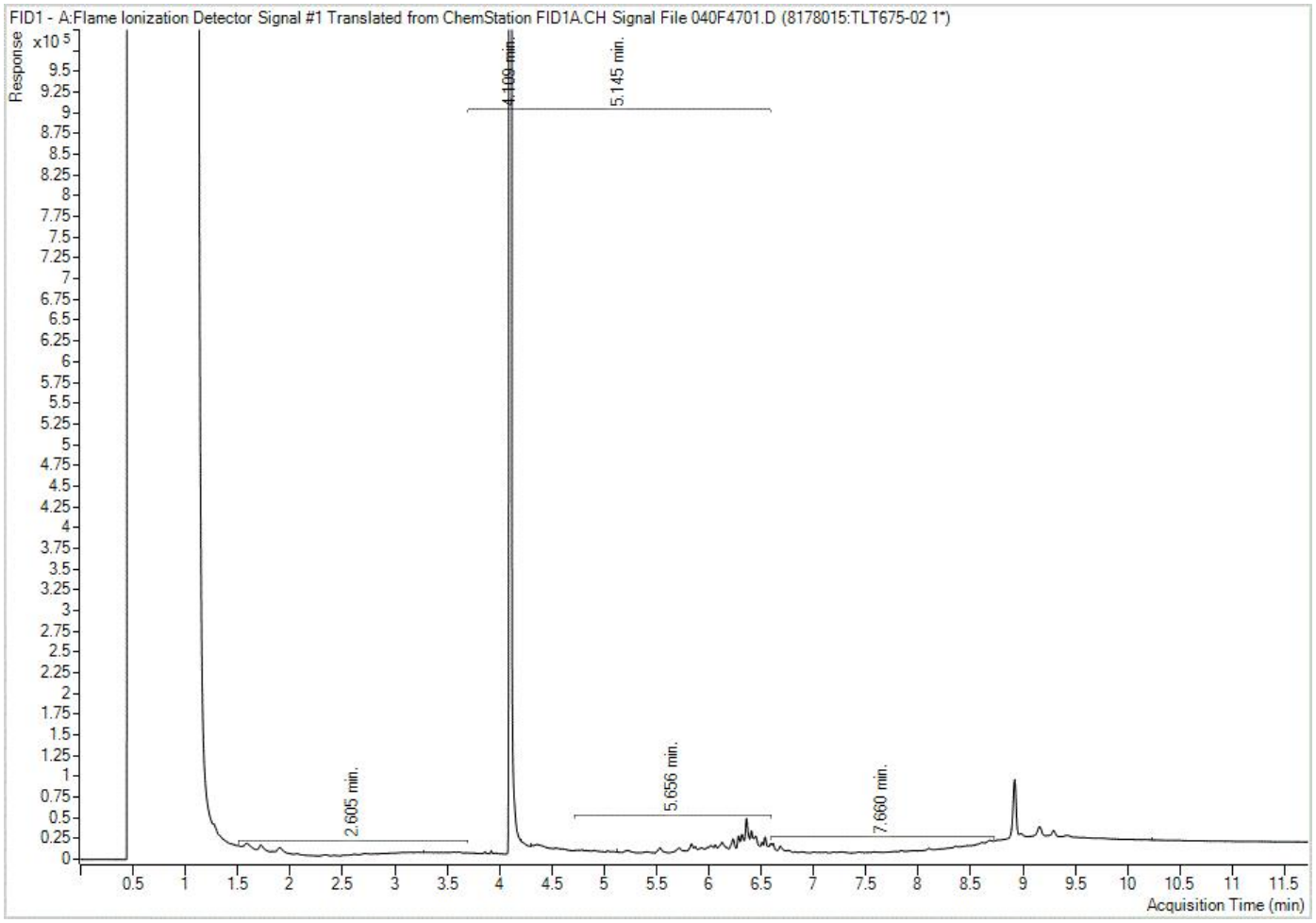
5/5/5

Bureau Veritas Canada (2019) Inc.

Bureau Veritas Job #: C2N2739
Report Date: 2022/09/01
Bureau Veritas Sample: TLT675

Stantec Consulting Ltd
Client Project #: 121624271.600
Client ID: BH22-4-1

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

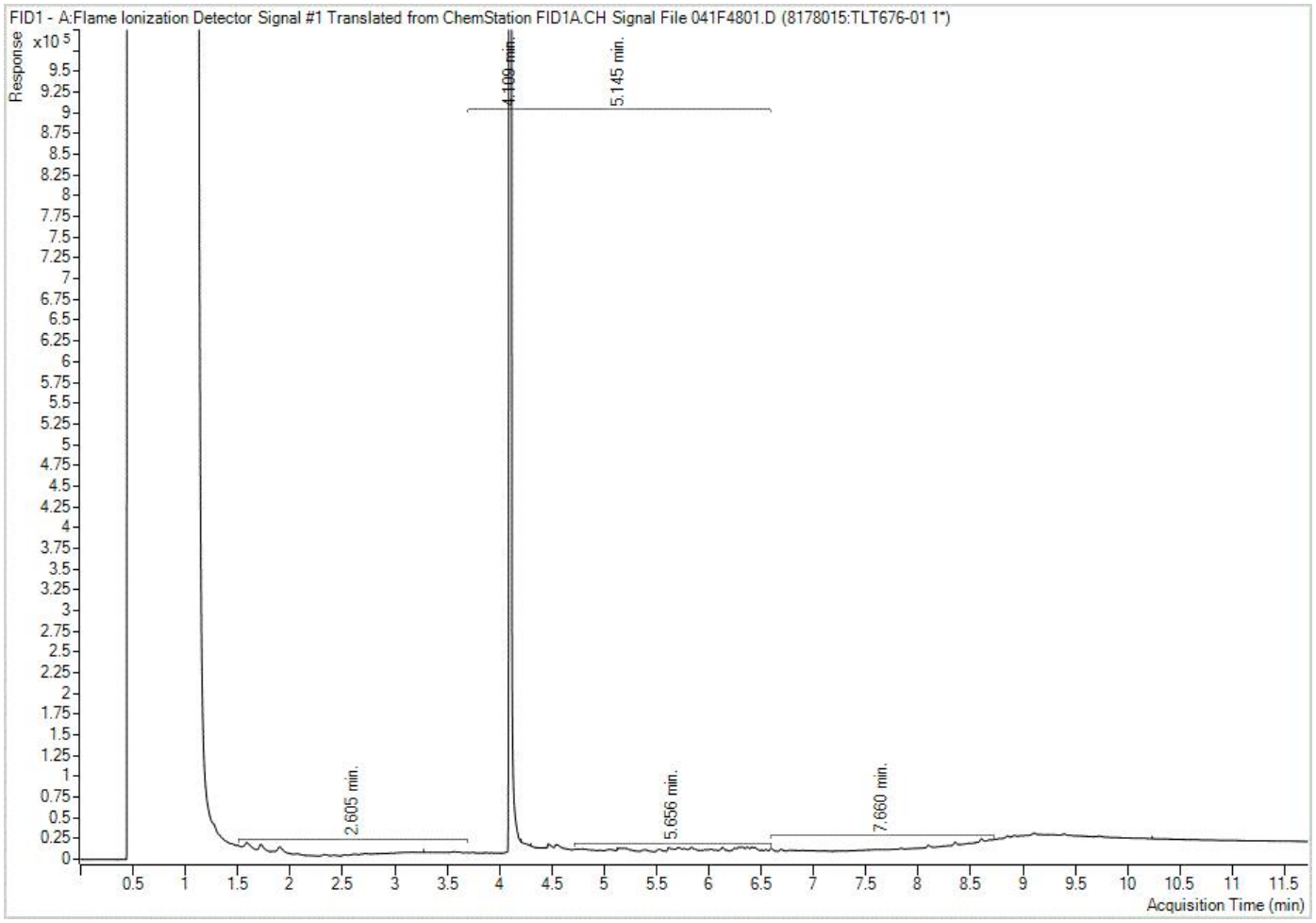


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C2N2739
Report Date: 2022/09/01
Bureau Veritas Sample: TLT676

Stantec Consulting Ltd
Client Project #: 121624271.600
Client ID: BH22-4-2

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

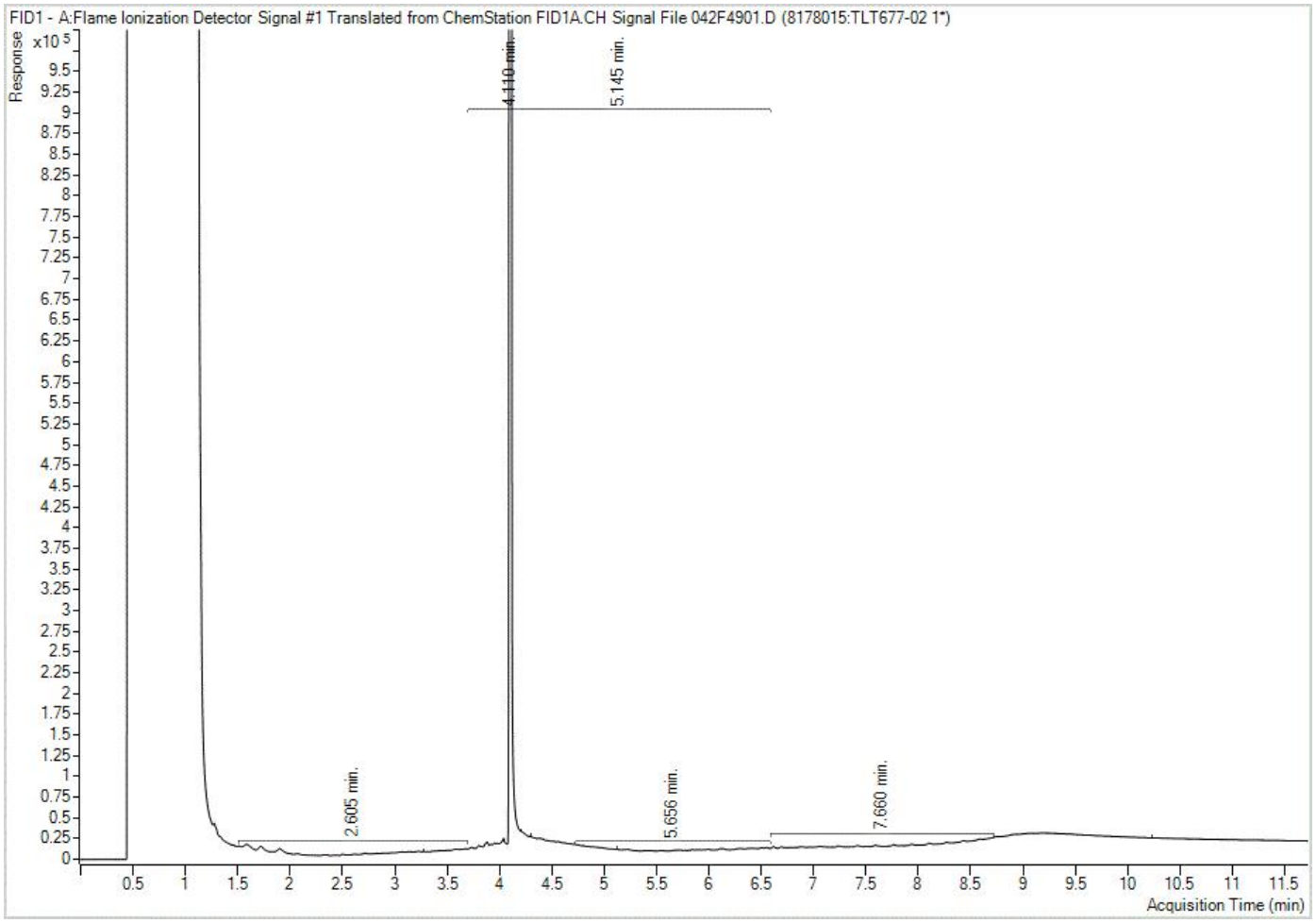


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C2N2739
Report Date: 2022/09/01
Bureau Veritas Sample: TLT677

Stantec Consulting Ltd
Client Project #: 121624271.600
Client ID: BH22-4-3

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

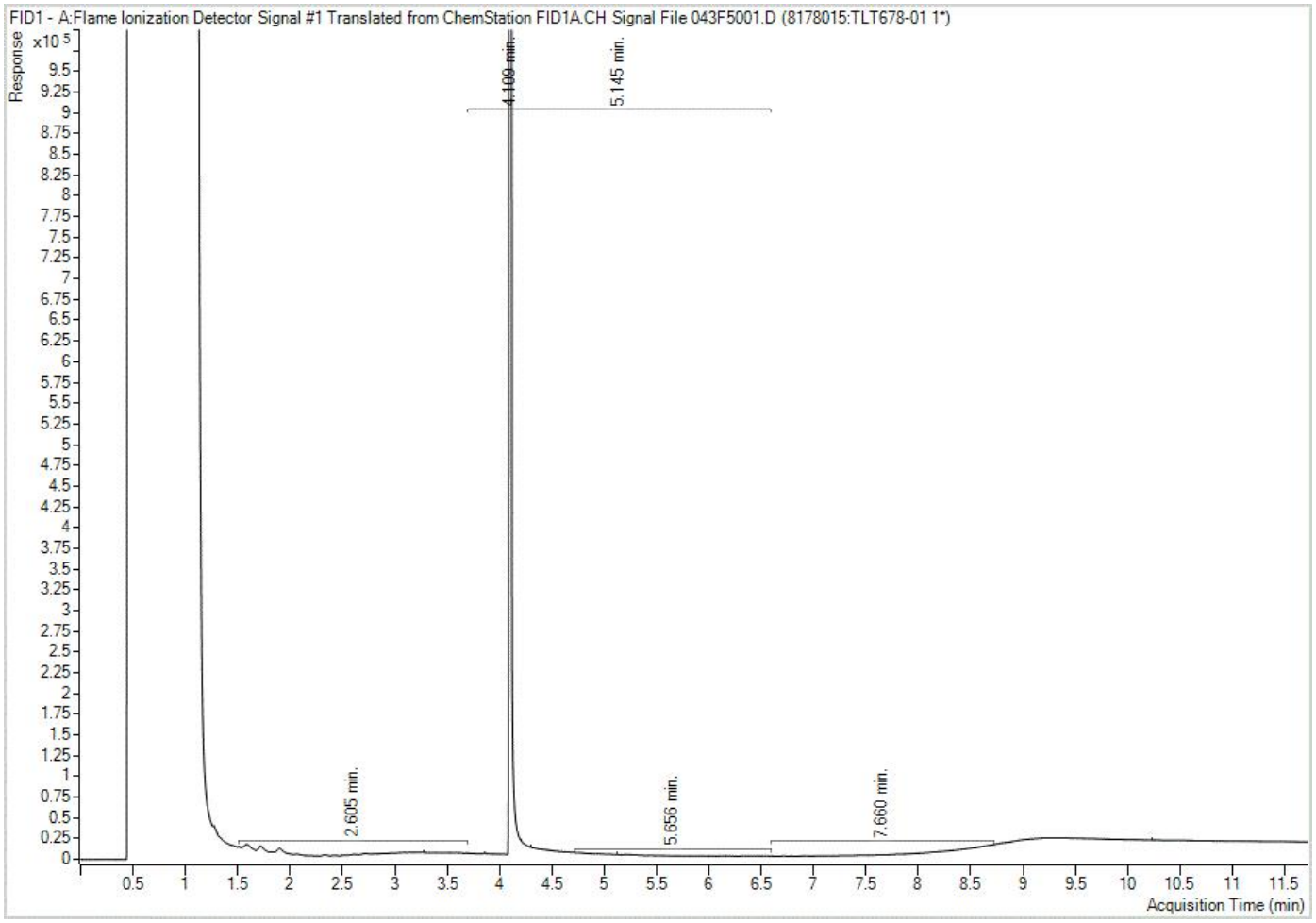


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C2N2739
Report Date: 2022/09/01
Bureau Veritas Sample: TLT678

Stantec Consulting Ltd
Client Project #: 121624271.600
Client ID: BH22-4-4

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

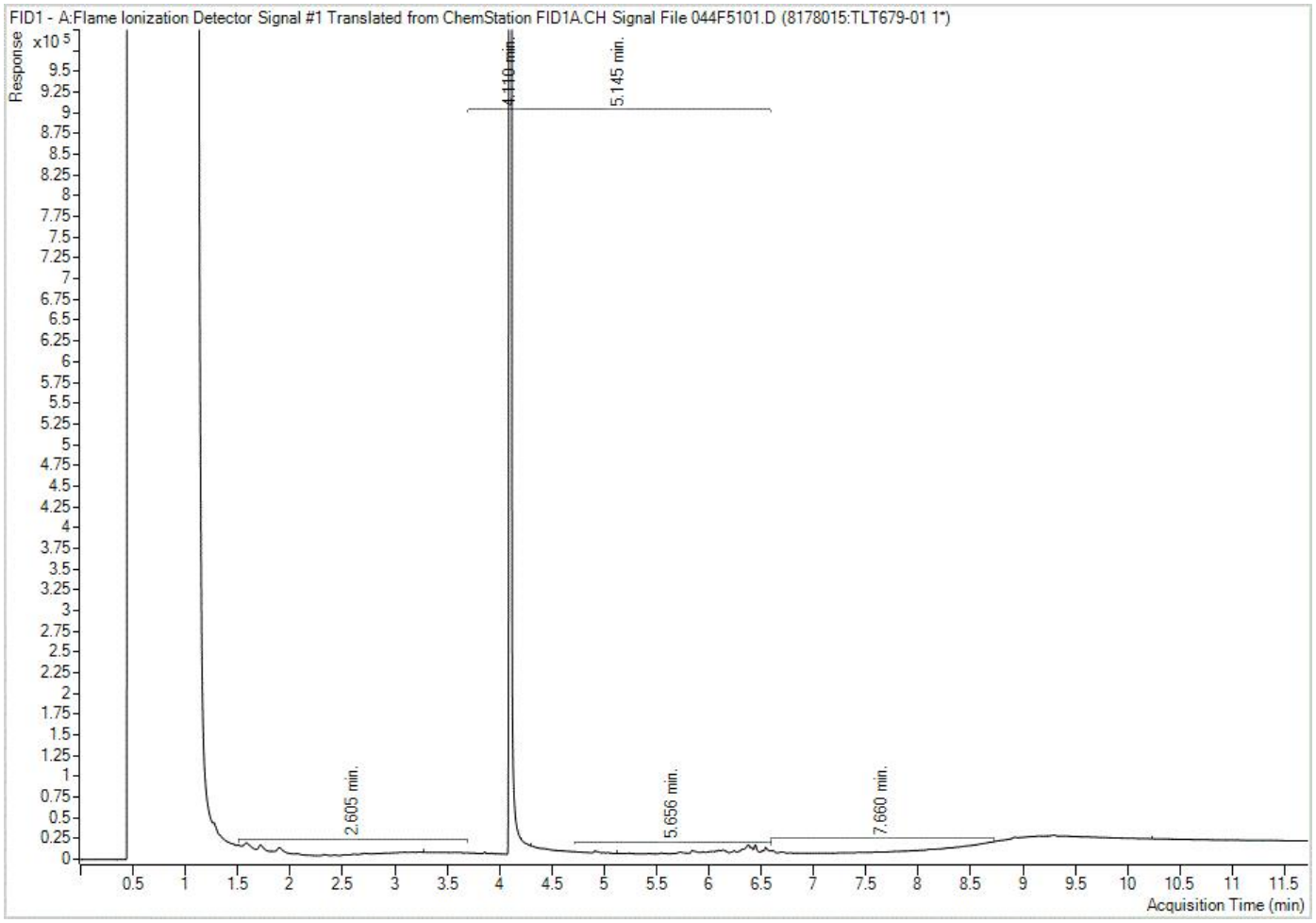


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C2N2739
Report Date: 2022/09/01
Bureau Veritas Sample: TLT679

Stantec Consulting Ltd
Client Project #: 121624271.600
Client ID: BH22-1-1

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

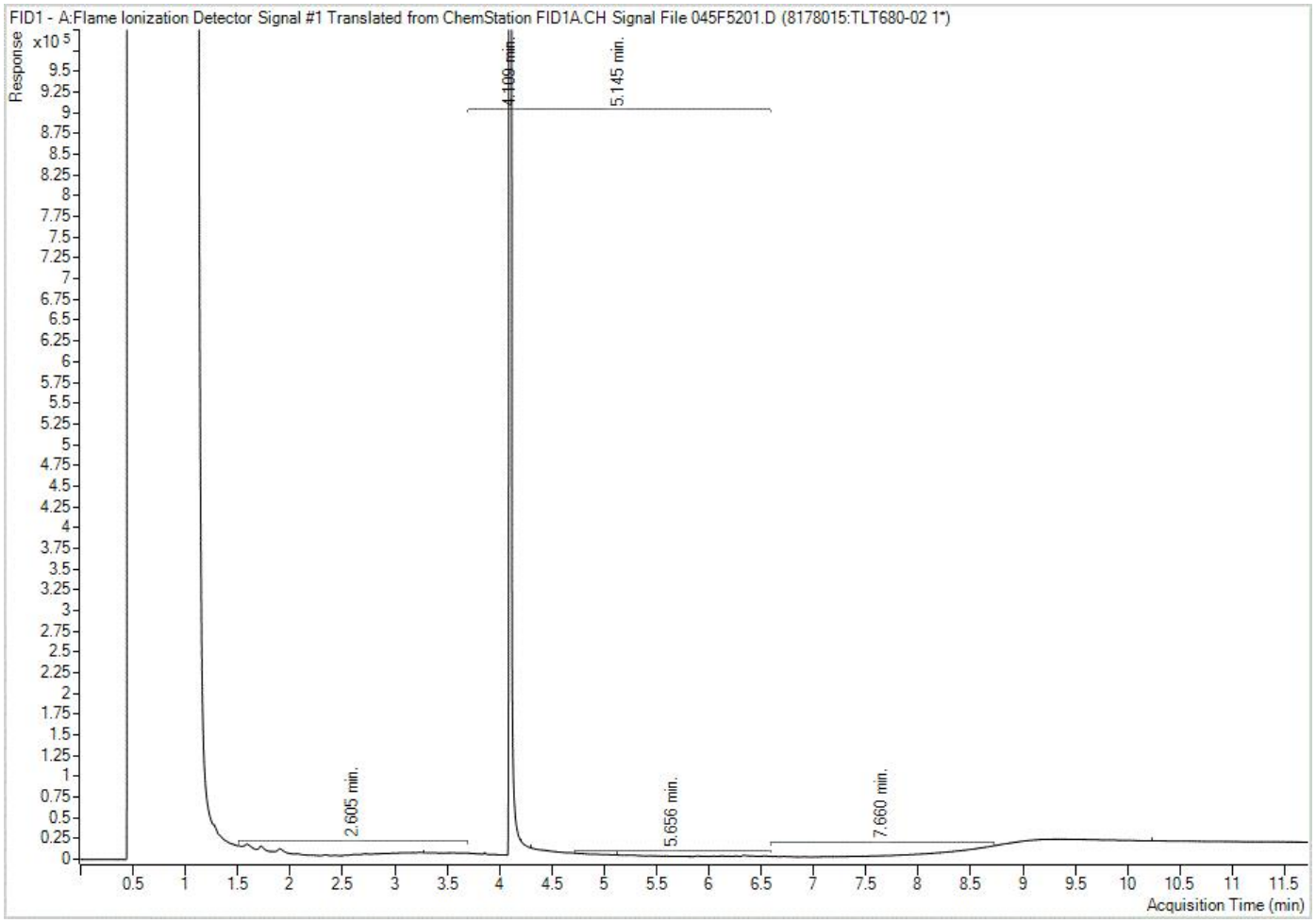


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C2N2739
Report Date: 2022/09/01
Bureau Veritas Sample: TLT680

Stantec Consulting Ltd
Client Project #: 121624271.600
Client ID: BH22-1-2

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

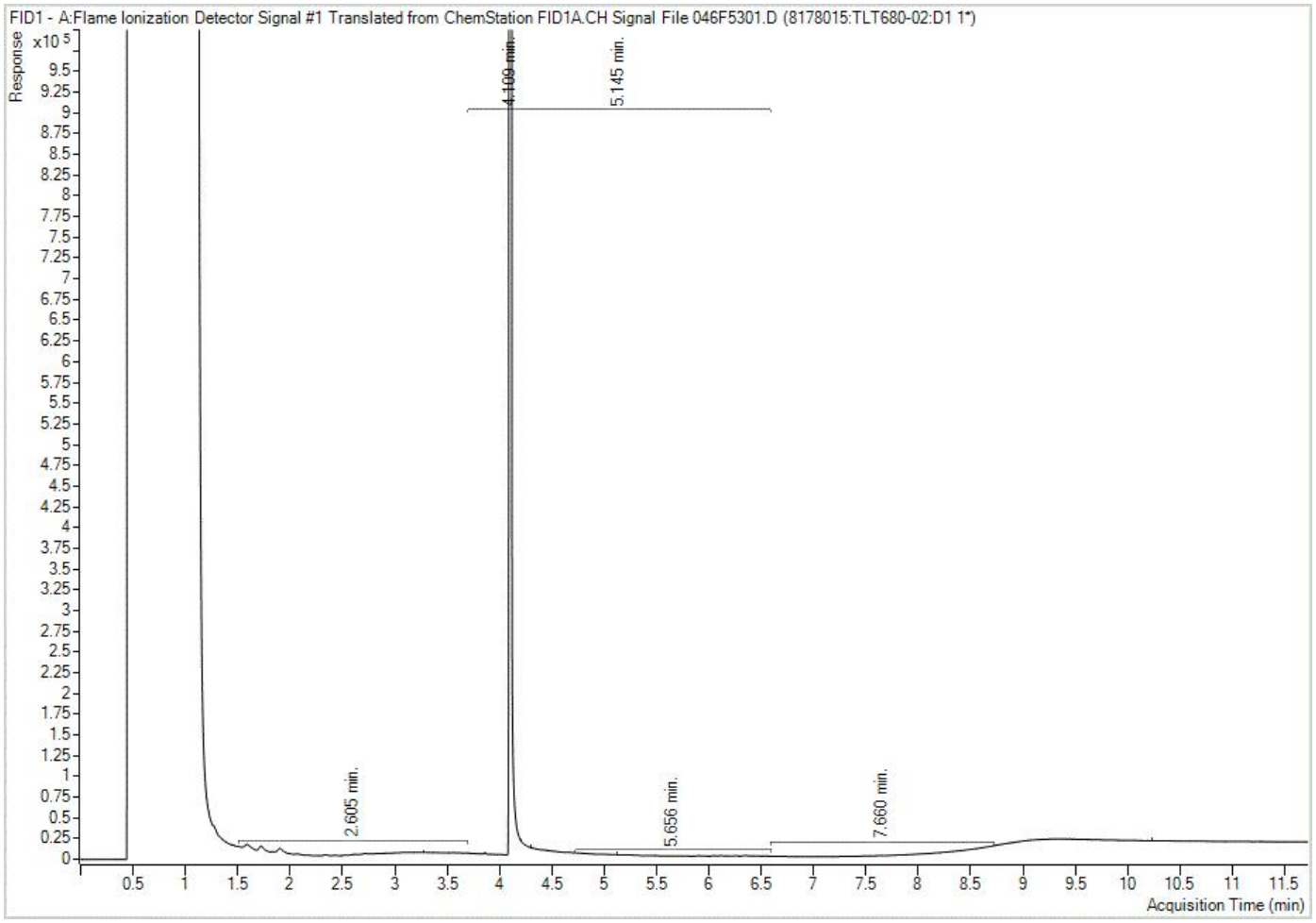


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C2N2739
Report Date: 2022/09/01
Bureau Veritas Sample: TLT680 Lab-Dup

Stantec Consulting Ltd
Client Project #: 121624271.600
Client ID: BH22-1-2

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

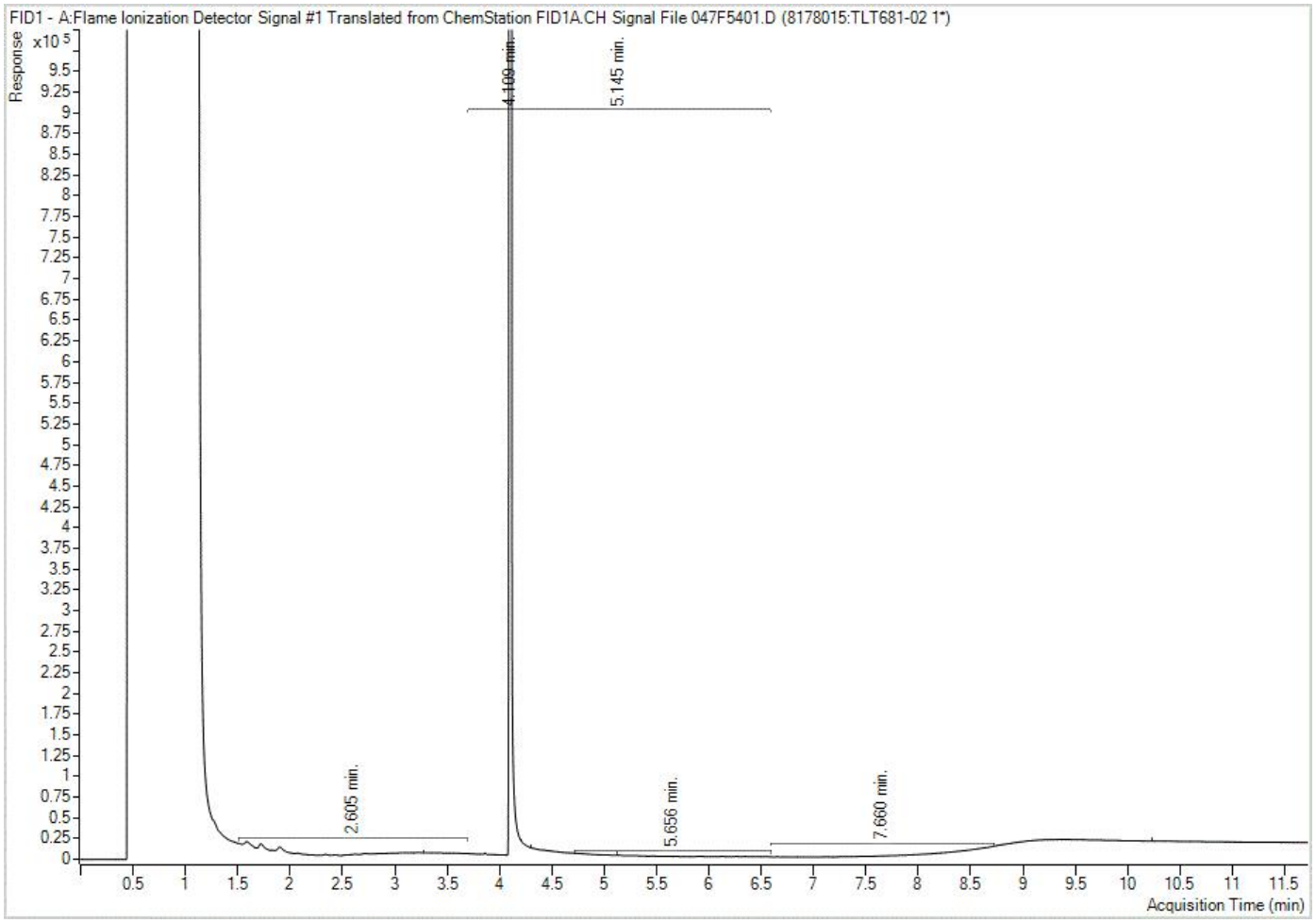


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C2N2739
Report Date: 2022/09/01
Bureau Veritas Sample: TLT681

Stantec Consulting Ltd
Client Project #: 121624271.600
Client ID: BH22-1-3

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

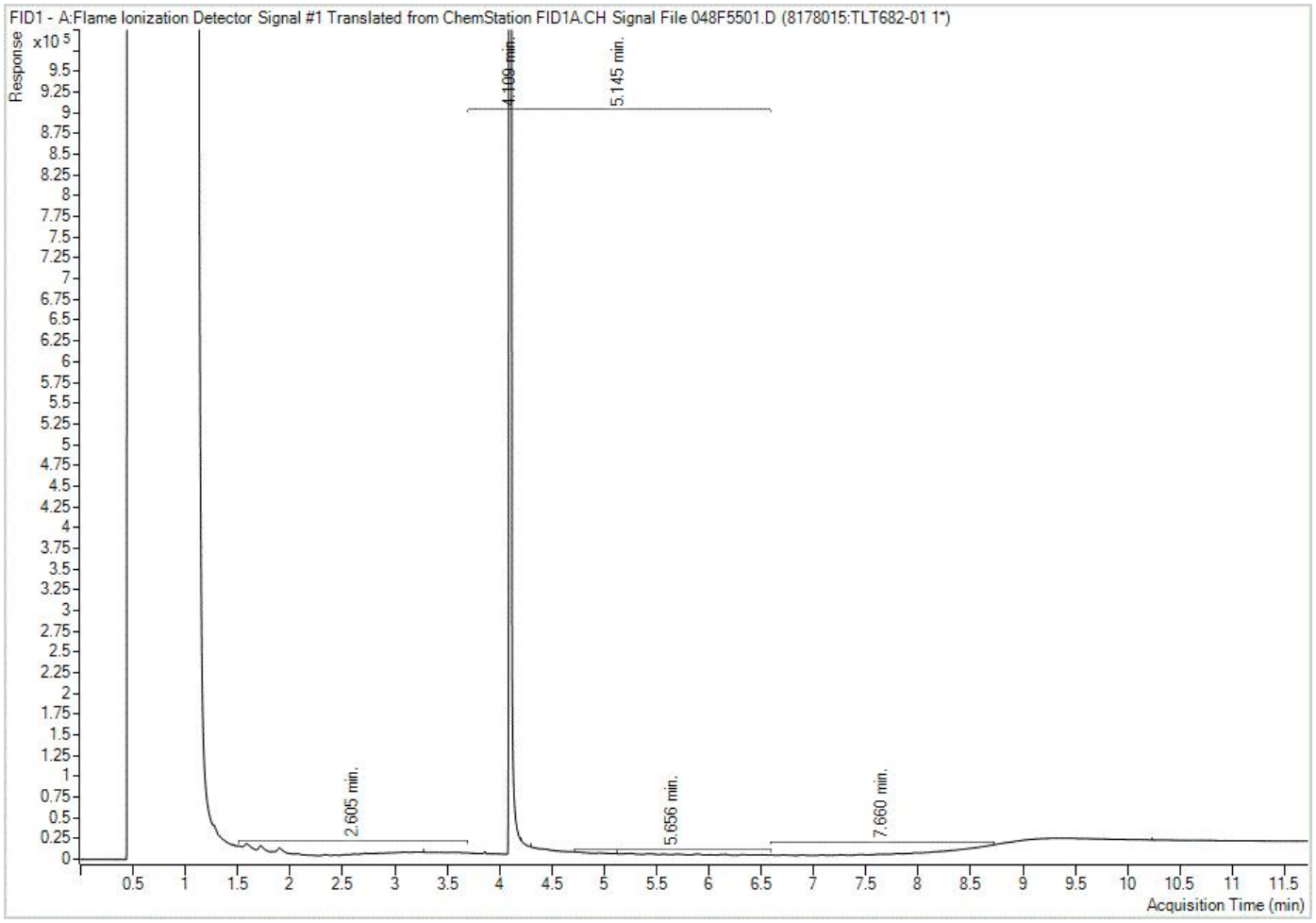


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C2N2739
Report Date: 2022/09/01
Bureau Veritas Sample: TLT682

Stantec Consulting Ltd
Client Project #: 121624271.600
Client ID: BH22-1-4

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.