GOLDER
MEMBER OF WSP

REPORT

Supplemental Sediment Sampling Program for the Kingston Inner Harbour

Transport Canada and Parks Canada Waterlots, Kingston, Ontario

Submitted to:

Public Service and Procurement Canada

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The report is based on data and information collected during the sediment sampling activities as referenced in this report. Except as noted herein, the work was conducted in accordance with the scope of work and terms and conditions within Golder’s proposal. The content of this factual report is based on information collected during sediment sampling at the time of this report. This report does not provide a legal opinion regarding compliance with applicable laws nor was it intended to be used for regulatory compliance. The factual data summary pertains to a specific project as described in this report, based on the information obtained during sediment sampling by Golder on the dates cited in the report, and are not applicable to any other project or site location. We accept no responsibility for any deficiency or inaccuracy contained in this report as a result of our reliance on information from other parties. While an attempt but made to provide a robust sampling program, additional investigation may be required to further refine and assess potential contamination. However, it is never possible, even with exhaustive sampling and testing, to dismiss the possibility that part of a site may be contaminated and remain undetected.

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1.0 INTRODUCTION

As requested by Public Services and Procurement Canada (PSPC), Golder Associates Ltd. (Golder) has prepared this factual report summarizing the results of the recently completed sediment sampling program (herein referred to as the "Sampling Program") conducted within Kingston Inner Harbour (KIH; the Site). The scope of work for this report is outlined in our work plan titled "Kingston Inner Harbour Support Proposal Scope of Work and Cost Estimate" dated 9 August 2021 under Amendment #7 to Public Services and Procurement Canada (PSPC) to Call-up No. 700470183. This work was carried out in accordance with the rates, terms, and conditions outlined in the Public Works and Government Services Canada (PWGSC) Task Authorization No. EQ447-180276/009/TOR dated 5 March 2018.

This report provides details of sampling methods used, laboratory sample methods and results, figures showing the sampling locations, field documentation (including core logs), and data analysis, including tabulated results screened against applicable sediment quality guidelines. This report also contains appended photographs, sampling record forms, chains of custody for all samples and analytical results.

1.1 Purpose

The purpose of the Sampling Program is to update and expand the current data set for Site sediment quality, including both subsurface (shallow core) and surface (grab) samples throughout KIH. This information will be used in upcoming amendments to the Sediment Management Plan (SMP) to update/refine areas of contamination requiring physical intervention and evaluate changes in surface sediment chemistry over time to evaluate the success of natural recovery over the past decade and a half.

1.2 Project Description

1.2.1 Project Objective

The objective of the Kingston Inner Harbour Sediment Management Project is to reduce the risks from sediment contamination to people and wildlife within the harbour through management of sediment quality. Proposed remediation techniques include dredging, capping, sediment amendments, and shoreline modification, while protecting sensitive species, habitats, and valued features.

1.2.2 Project Location

Kingston Harbour is adjacent to the City of Kingston, at the eastern end of Lake Ontario. The entire Kingston Harbour is approximately 765 hectares (ha) in size and includes an Inner and Outer Harbour. The Kingston Inner Harbour (KIH; the Site) is bounded by Highway 2 (LaSalle Causeway Bridge) to the south and Highway 401 to the north and includes a 5 km length of the Great Cataraqui River. The Inner Harbour is further divided into northern and southern sections by the Great Cataraqui Park. The sediment management area within KIH is bounded by Highway 2 (LaSalle Causeway Bridge) to the south and Belle Island/Cataraqui Park to the north and includes an approximate 1.7 km length of the Great Cataraqui River. The total project area including areas requiring physical intervention and monitored natural recovery is approximately 177 ha.

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Jurisdiction of most of the southern section of the Inner Harbour (i.e., south of Belle Island and Cataraqui Park) (Figure 1) is held by Transport Canada. Parks Canada is the manager of harbour sediments in the portion of the Inner Harbour immediately south of Belle Park Fairways (southwest of Belle Island) and in the portion of the Inner Harbour north of Belle Island. A small percentage of the southern half of KIH is managed by other parties, including a square water lot managed by the City of Kingston adjacent the former Woolen Mill, a triangular portion of water lot adjacent to the Orchard Street Marsh (jurisdiction for this lot is being determined), small areas of foreshore near the Kingston marina managed by the City of Kingston, and a Military Reserve in the southeastern corner of KIH managed by the Department of National Defense (Figure 1).

1.2.3 Project Phases and Activities

The Project is currently in the planning stage. The Conceptual Sediment Management Plan (SMP; Golder 2021) will be updated in 2022 to reflect comments received from recent stakeholder engagement and First Nations consultation that are currently underway. Public information sessions will be offered as part of stakeholder engagement process (tentatively planned for spring 2022 and summer/fall 2023).

In support of the Detailed Impact Assessment (DIA) process, the project team is currently completing biological, ecological, and archaeological baseline studies to gain a better understanding of wildlife presence and habitat use in the Inner Harbour. Baseline studies are currently being completed to facilitate evaluation of potential effects of implementing the sediment management plan. Any predicted interactions between the project phases (e.g., site preparation, sediment management activities, and post-construction monitoring) and their potential environmental effects will be identified and described in the DIA. Indigenous and stakeholder engagement will continue through the detailed design stage, and opportunity to provide input on more detailed project plans and effects analysis will be provided as part of the DIA process.

The project schedule is included in the figure below.

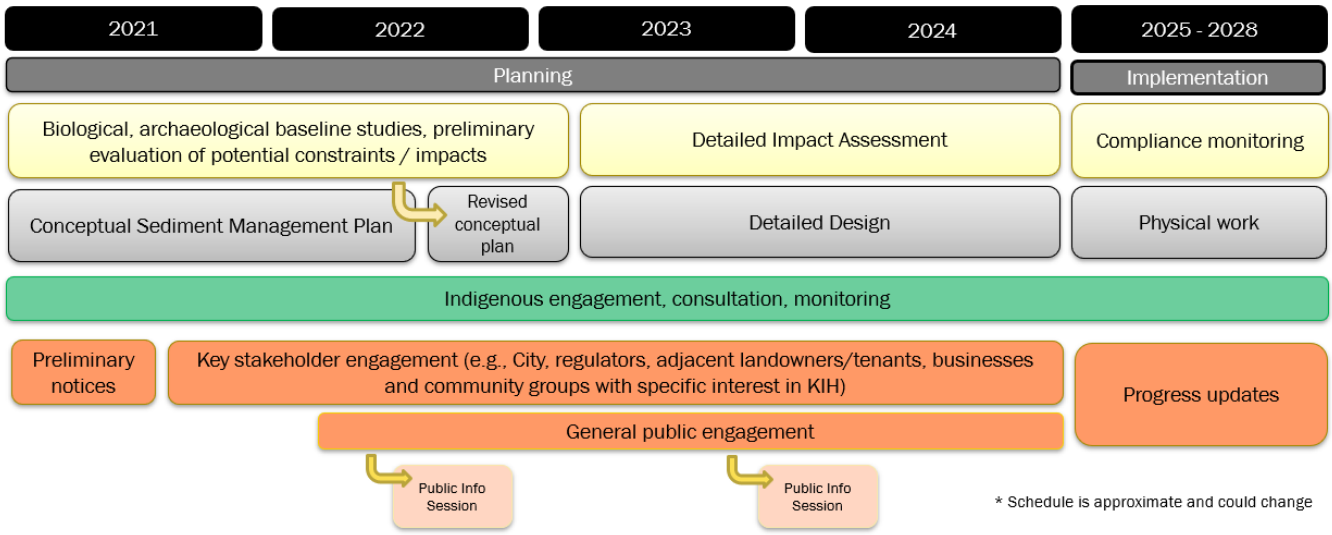

Figure 1: Project Schedule

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1.2.4 Project Environment

1.2.4.1 Site History

A history of industrial activity in the area surrounding Kingston Harbour resulted in contamination of the sediment that lines the harbour bed. Historical used included a railway, shipyard, fueling areas, coal gasification, tannery, lead smelter, landfill, and other operations. Studies have concluded that people, fish, and wildlife may experience negative health effects (risks) if exposed to this contaminated sediment (Golder 2016). Despite several decades of time for natural recovery, several areas have not recovered enough to be considered safe for current uses.

Since 2010, multiple field studies and desktop evaluations have been conducted in KIH to characterize the spatial extent and magnitude of contamination, including assessment of the risks of contaminants to humans and aquatic life (Golder 2016). Investigations have followed the Canada-Ontario Decision-Making Framework for assessment of Great Lakes Contaminated Sediment (OMOE 2008), which uses an ecosystem approach to sediment assessment; this framework is intended to standardize the decision-making process while also being flexible enough to account for site-specific considerations. The Federal Contaminated Sites Action Plan (FCSAP) Expert Support departments (Health Canada, Environment and Climate Change Canada, Fisheries and Oceans Canada), which provide advice regarding the technical competency of environmental investigations, have peer reviewed these studies and evaluations at milestone reporting stages.

Multiple risk management strategies and technologies have been identified, including both conventional intrusive options (e.g., capping, dredging) and lower intrusion options (e.g., thin-layer capping with active layers, monitored natural recovery) which integrated multiple scientific and logistical factors that influence the risk management decisions for KIH. The lower intrusion options are intended to provide a balance between chemical risk reduction (and associated long-term environmental liability) and the short- to medium-term consequences for ecological functions (e.g., sensitive habitats and presence of listed species). Management units were identified to customize candidate management options to specific portions of the water lot (Figure 1).

1.2.4.2 Biological Resources

Physical interventions have potential to result in a significant short-term alteration of biological resources; the DIA will identify sensitive habitats and ecological functions and disruptions due to physical works may be discouraged altogether or avoided through the application of construction activity timing windows.

[redacted]

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[redacted]

These species are not expected to be impacted by the management activities on-site, with the exception of the listed turtles. Restricted activity periods for any sensitive species with moderate potential to be present on-site will be established along with other mitigation measures as planning progresses.

No federally listed fish SAR are known to be located within the study area (DFO 2020). Bowfin (2011) indicated potential for some aquatic SAR to occur as transients within the Cataraqui River through migration from Lake Ontario (including the provincially endangered American eel [*Anguilla rostrata*]); however, the habitat requirements for the species were not met within the study area. As such, these species were considered unlikely to use the Site habitats extensively, particularly as more suitable habitats exist both upstream and downstream of the study area.

In addition to the species identified above, other endangered and threatened species and species of concern listed either provincially or federally have been identified in the region but have a lower potential to be present in the study area. [redacted] The list of SAR species is currently being re-evaluated and will be updated in the Detailed Impact Assessment for the project.

[redacted]

1.2.4.3 Cultural Resources

[redacted]

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[redacted]

1.2.5 Project Timing

It is expected that the planning stage will be complete by the end of 2024 with the final detailed design. Implementation for the project is planned for 2025 and is expected to take approximately 3 years to complete. A more detailed project schedule will be developed in the detailed design stage.

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4900500 4900000 4899500 4899000

PC-W
PC-E
PC-N
Belle Island
PC-OM
PP-OM
Orchard Street Marsh
TC-OM
Former Lead Smelter
TC-1
Former Davis Tannery
TC-RC
Emma Martin Park
WM
Woolen Mill
TC-2B
TC-E
TC-2A
TC-3B
TC-3A
Douglas Fluhrer Park
TC-4
TC-5
TC-AB
Anglin Bay

382000 382500

LEGEND

- MANAGEMENT UNIT
- CITY OF KINGSTON JURISDICTION
- PARKS CANADA JURISDICTION
- DEPARTMENT OF NATIONAL DEFENCE JURISDICTION
- TRANSPORT CANADA JURISDICTION
- FEDERAL WATER LOT
- WATERBODY

0 120 240

1:5,000 METERS

REFERENCES

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3. PROJECTION: UTM ZONE 18 DATUM: NAD 83

CLIENT
PWGSC

PROJECT
KINGSTON INNER HARBOUR
KINGSTON, ONTARIO

TITLE
STUDY AREA, MANAGEMENT UNITS AND WATERLOT BOUNDARIES

CONSULTANT
GOLDER
MEMBER OF WSP

YYYY-MM-DD	2021-03-09
DESIGNED	JD
PREPARED	JP/CDAB/MH
REVIEWED	GL
APPROVED	SS

PROJECT NO.	PHASE	REV.	FIGURE
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2.0 METHODS

2.1 Field Methods

Sediment samples were collected between 28 September and 7 October 2021. Sediment samples were collected by six qualified biologists/technicians experienced in sediment sampling and aquatic data collection. Sediment sampling followed standard methods as per the Specific Work Instructions (SWI). All samples were collected from three boats (i.e., 4.9 m Lund, 4.9 m Legend, 4.2 m Zodiac) each containing two to three crew members.

2.1.1 Sampling Locations

The field study area (i.e., stations) is shown in Figure 2, and detailed sampling locations are shown in Figure 3.

Sediment sampling stations for the sampling program were selected for chemical analysis based on previous evidence of contamination and/or to help fill any gaps in sediment characterization to better delineate lateral and vertical contamination. A subset of stations was also selected in areas previously identified for potential removal to provide a preliminary characterization for potential (off-Site) waste disposal purposes.

The number and type of samples collected from each management unit is provided in Table 1. The locations for sampling stations were selected based on the past recommended remedial design and include management units defined by the ownership within the waterlot, including:

- Parks Canada (PC)—includes management units coded as: Parks Canada West subunits of PC-W, PC-OM, PP-OM, and East (PC-E).
- Transport Canada (TC) —includes management units coded as: Orchard Street Marsh (TC-OM), Rowing Club (TC-RC) Units 1 to 5 (i.e., TC-1, TC-2A, TC-2B, TC-3A, TC-3B, TC-4 and TC-5), and Anglin Bay (TC-AB)
- Woolen Mill (WM)

The sediment sampling program was intended to update and expand the current data set for Site sediment quality and included both depth (shallow core) and surface (grab) samples. During the sampling program, surficial sediment samples were collected at all 120 proposed sampling locations, and core samples were collected at all 20 of the proposed sampling locations.

Because all the proposed samples were collected prior to the end of the allotted field program, some additions were made to the program:

- An additional 20 surficial sediment samples were added to the sampling program focused within the central harbour areas of the study area that were previously identified for monitored natural recovery (MNR).
- Four additional core samples were also added to the sampling program. These additional core samples were collected at previously sampled stations but were split into finer sediment horizons.

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2.1.2 Surficial (Grab) Sediment Sampling

Surficial sediment samples (i.e., grabs) were collected using either a petite ponar grab sampler (15 cm × 15 cm) or an Ekman dredge (15 cm × 15 cm × 15 cm) following in accordance with industry best-practices, including: (1) the FCSAP document, *Guidance for Assessing and Managing Aquatic Contaminated Sites in Working Harbours* (FCSAP 2019); (2) the BC Ministry of Environment and Climate Change Strategy (ENV) *British Columbia Field Sampling Manual* (ENV 2020b) and 3) The Ontario (OMOE 2008) *Guidelines for Identifying, Assessing and Managing Contaminated Sediment in Ontario*.

The following bullets provide a description of the methodology used for collection of the surficial sediment samples:

- Surface sediment grabs were collected at each station (three to five per station) by removing the top 7 cm of each and combining these fractions to create a single composite sample
- The grab sampler and sampling equipment was rinsed with ambient water three times to remove any clinging material and washed with laboratory-grade detergent prior to sampling at each station. The jaws were opened on the grab and the triggering device was set. The grab sampler was slowly lowered to the lake bottom at a rate of approximately 0.5 m/s, until it hit the bottom. The messenger was dropped to close the grab, or the line was slacked to release. The grab sampler was then gently pulled to the surface.
- As the surface sediment grab came out of the water, the jaws were checked to confirm they were completely closed. If any sediment leakage occurred, a stain-less steel metal bowl was held below the grab as it is lifted from the water. If plant material or rocks were caught in the jaws preventing complete closing of the jaws, the sample was discarded.
- The lid of the sediment grab was opened to confirm the grab contained at least 7 cm depth of sediment and was at least 60% full, with an undisturbed surface. If the grab contents were acceptable, a turkey baster was used to gently siphon any overlying water while attempting not to disturb the top layer of sediment.
- The sediment sampler was set down in a clean stain-less steel metal bowl. Using a clean stainless-steel spoon, the inner portion was scooped out (i.e., avoiding the sides of the grab sampler) of the surface sediment (top 7 cm) from each grab and placed into a clean stainless-steel bowl to create a composite sample. The composite sediment sample was mixed well until the colour and texture were homogeneous.
- Prior to jarring the samples, observations were recorded in the surface sediment collection logs (Appendix A) regarding a description of the sediment including particle size, colour, presence of biota, sheen, or detritus, depth of sediment horizon sampled, and grab penetration depth. The sampling station Universal Transverse Mercator (UTM) coordinates were recorded with the description using a differential global positioning system (GPS) unit, with an accuracy of +/- 5 m.
- Bagged samples for particle size analysis were double bagged with each bag knotted separately and the interior bag marked with a waterproof marker. A waterproof label was placed between the bags.
- All other sediment samples for analysis were split between airtight, pre-cleaned, wide-mouth glass jars with Teflon-lined lids with no headspace at 4°C unless otherwise noted.
- Sediment chemistry samples were kept cool with coolers and ice (4°C) in the field and until they were received by the applicable laboratories.

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2.1.3 Sub-surficial (Core) Sediment Sampling

Sub-surficial sediment samples (i.e., cores) were collected using a Tech-Ops corer following methods in accordance with industry best-practices, including the guidance described in Section 2.1.2.

The following bullets provide a description of the methodology used for collection of the surficial sediment samples:

- The Tech-Ops corer tube and sampling equipment were rinsed with ambient water three times to remove any clinging material and washed with laboratory-grade detergent prior to sampling at each station.
- The core head valve was inserted into the core tube and secured with electrical tape. The sediment core sampling tube and valve head were secured to the core head with O-ring clamps on the polyvinyl chloride (PVC) fingers.
- Rope was used to lower the Tech-Ops corer through the water column at a steady pace until it reached the sediment water interface. Care was taken to lower the instrument slowly to prevent creating a bow wave and disturbing the sediment prior to insertion into the substrate.
- The core was allowed to sink into the sediment using the weight of the core sampler. Weights were added to the corer to allow for further penetration, as needed, to achieve the maximum depth possible.
- The core was retrieved by a 2-person crew; one crew member brought the core to near the water's surface while the second crew member reached into the water and placed a bung at the bottom of the core tube. The corer and tube were brought onto the boat and set on the corer base, so the valve head could be removed for sample processing.
- The core tube was removed from the corer by loosening the clamps on the PVC fingers.
- The core tube was secured into the core tube holder on the extruder base. The core tube head was removed. At this time, the colour stratification of the core was recorded using the Munsell chart, each stratification was measured, and a picture of the core was taken.
- To remove the core, the core tube was slowly pushed down into the extruder base, which raised the core sample within the core tube. Care was taken not to disturb the core.
- When the core sample was at the top of the tube, a small tube piece marked with the desired sample range was placed on top of the core tube and held on with a solid grip. The core tube was pushed down until the desired sample amount of core was in the small tube piece. A slicer was used to separate the sample from the remainder of the core and the sample was transferred to a marked stainless steel bowl. This process continued until the core was divided into all require depth samples.
- Cores from the 20 originally proposed sampling stations were split into the following horizons for chemical analysis:
  - 0 – 0.1 m: this layer was not included in the composite core samples (as it was redundant with surface grabs collected nearby) and was discarded
  - 0.1 to 0.3 m: composite core sample to be submitted for laboratory analysis.
  - 0.3 to 0.5 m: composite core sample to be submitted for laboratory analysis (where possible).
  - 0.5 up to 0.8 m: composite core sample to be archived for future analysis (if collected).

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- Four additional core samples were added to the program which were collected with finer horizons. These cores were labeled with an “x” at the end of the station ID to differentiate between the originally planned core stations. The four additional core stations split into the following horizons for chemical analysis:
  - 0 – 0.05 m: composite core sample to be submitted for laboratory analysis.
  - 0.05 to 0.1 m: composite core sample to be submitted for laboratory analysis.
  - 0.1 to 0.15 m: composite core sample to be submitted for laboratory analysis.
  - 0.15 – 0.2 m: composite core sample to be submitted for laboratory analysis.
  - 0.25 – 0.3 m: composite core sample to be submitted for laboratory analysis.
  - 0.3 – 0.5 m: composite core sample to be submitted for laboratory analysis (where possible).
  - <0.5 m: composite core sample to be archived for future analysis (if collected).
- Material in the bowl more than 40 mm in diameter and debris was removed.
- The sample was mixed until it was homogenized (i.e., uniform colour and texture).
- Prior to jarring the samples, observations were recorded in the surface sediment collection logs (Appendix B) regarding a description of the sediment in each composite horizon including particle size, colour, presence of biota, sheen, or detritus, and depth of sediment horizon sampled. The sampling station UTM coordinates were recorded with the description using a differential GPS unit, with an accuracy of +/- 5 m
- Bagged samples for particle size analysis were double bagged with each bag knotted separately and the interior bag marked with a waterproof marker. A waterproof label was be placed between the bags.
- All other sediment samples for analysis were split between the airtight, pre-cleaned, wide-mouth glass jars with Teflon-lined lids with no headspace at 4°C unless otherwise noted. Lids were placed on jars securely to prevent leakage (e.g., no sediment in the threads).
- Sediment chemistry samples were kept cool with coolers and ice (4°C) in the field and until they were received by the applicable laboratories.

2.1.4 Sediment Sample Logging

As previously discussed, a description of the sediment was recorded prior to processing each sediment sample. Within each discernible stratigraphic layer, the following information was recorded:

- material classification (e.g., sand, silt) according to estimated grain size distribution
- colour
- presence of materials such as shell fragments, wood debris, biota
- potential presence of contamination (e.g., hydrocarbon-like sheen, staining, debris)
- sampling method (e.g., grab or core, sampler type)

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- station coordinates (e.g., UTM)
- sampling date and time
- sampler's initials
- number of sample collection attempts
- penetration depth
- overlying water depth (i.e., depth from water surface to lakebed)
- total core length
- weather conditions at the time of sampling
- any other visual observations deemed relevant by the Golder Field Supervisor

The surface sediment collection logs are provided in Appendix A and the core collection logs are provided in Appendix B. In addition, photos were taken of each sample and core. A tape measure was placed beside the core to be included with the photo. Close-up photos were taken, as required, to emphasize fine sedimentary structures. Photos are provided in Appendix C. General notes on incidental wildlife and human uses of the harbour were also included with the daily field reports.

2.1.5 Sample Documentation, Handling, and Shipping

A record of field activities was maintained using field logs and standardized data collection/reporting forms to facilitate data recording and subsequent data entry. Field records were reviewed for completeness after sampling, and then submitted for data entry and verification as appropriate. Sediment samples destined for chemical analysis and/or storage at the analytical laboratory were placed in laboratory-provided, pre-cleaned glass jars with Teflon lids and no headspace. The jars were labelled with the client's name, project name, sample date and a unique sample ID, which were checked against field records prior to shipping. The Teflon lids were properly sealed to prevent leakage. The jars were packed in coolers with protective material (e.g., bubble wrap) and ice packs.

Samples were delivered to the laboratory by courier. Information on the sample labels was checked against field records and samples were re-counted prior to shipping. Golder field staff followed chain-of-custody procedures for samples in the field, for final sample inventory, and for sample shipment and maintenance of chain-of-custody documentation.

The following samples were collected but lost in transit and not received by the laboratory: PCW-SC-011C, PCW-SC-013B.

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2.1.6 Shoreline Reconnaissance

A shoreline reconnaissance was conducted to document the shoreline conditions at the time of the sampling event, as well as potential turtle habitat.

Photographs were collected in a continuous nature from the further end of the shorelines within the study area (i.e., Anglin Bay to Belle Island). The photos were taken at a similar distance from shore, with some overlap to ensure the entire shoreline was photographed. The photos were taken using a smartphone with precise location enabled. The photos were then uploaded into a web viewer tool to allow the photos to be viewed with spatial reference.

Detailed notes on potential turtle habitat were recorded in shoreline management units TC-OM, TC-RC, and WM and general aquatic habitat notes were collected for all other habitat units. Notes included any observations of the following:

- bank shape and stability
- bank slope
- bank substrate/soil
- upland, riparian, and in-water vegetation
- percent overhanging cover
- evidence of highwater mark
- in-water features (log jams, boulders, sand bars, undercut banks)
- description of existing infrastructure present (i.e., outfall pipes, sheet pile, gabion baskets, rip rap, boardwalk)
- depth and slope of drop off
- turtle habitat features-logs, floating algal mats, dense in water vegetation, sand/gravel for nesting close by

2.2 Laboratory Analysis

2.2.1 Chemistry Analysis

Sediment samples selected for chemical analysis were submitted to ALS Laboratories (ALS) in Mississauga, ON. ALS is accredited under the Canadian Association for Laboratory Accreditation (CALA) for the selected analyses. The analyses were completed under Facility Code: 230179134

Some or all of the following analyses were conducted on the surface grabs and core samples, depending on the sampling station:

- Particle Size Analysis (PSA)
- Atterberg and specific gravity
- Total metals, excluding mercury

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- Total mercury
- Total organic carbon (TOC)
- Trivalent chromium (Cr[III]), hexavalent chromium (Cr[VI])
- Hot water extractable (HWE) Boron
- Polychlorinated biphenyls (PCBs)
- Polycyclic aromatic hydrocarbons (PAHs)
- Toxicity Characteristic Leaching Procedure (TCLP) total metals, excluding mercury
- TCLP total mercury
- TCLP PAHs

2.3 Quality Assurance/Quality Control

To confirm sample integrity, the following quality assurance/quality control (QA/QC) measures were undertaken:

- Samples were collected and processed by qualified experienced personnel.
- Samples were collected in such a way that no foreign material was introduced to the sample.
- Sample handling or contact with contaminating materials/samples was minimized.
- Sampling tools such as stainless-steel spoons and bowls were decontaminated prior to use, for each sample.
- Samples were placed in laboratory-supplied sampling containers appropriate for the analyses conducted in such a way that no material of interest was lost due to adsorption, degradation, or volatilization.
- Field data sheets were reviewed by the Golder Field Supervisor at the end of each day for completeness and accuracy.
- Samples were packaged with chain-of-custody forms and shipped to the laboratory within required laboratory holding times and shipping/storage conditions.

Additional controls for the chemical analyses included:

- Sufficient sediment volumes were collected so that required detection limits (DLs) were met, and quality control samples were analyzed.
- Eighteen samples (approximately 8% of the total number of samples selected for analysis) were selected at random in the field to be sampled in duplicate. To assess variability between field duplicates, the relative percent difference (RPD) between reported analyte concentrations was calculated as follows:

$$RPD = \left(\frac{sample - duplicate}{(sample + duplicate)/2}\right) \times 100$$

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Values less than five times the DL were not included in the RPD calculations because analytical variability near the DL is higher and does not provide a good measure of variability associated with the collection of field samples.

- In accordance with the *British Columbia Environmental Laboratory Manual* (ENV 2020a), Golder's internal data quality objectives (DQOs) for samples were as follows:
  - an RPD less than or equal to 40% for organics (e.g., PCBs, TBT, TOC)
  - an RPD less than or equal to 50% for PAHs
  - an RPD less than or equal to 40% for metals

- Laboratory QA/QC for sediment samples included the analysis of laboratory control samples, method blanks, laboratory duplicates, and spiked samples to assess precision and accuracy of analytical methods. Laboratory QA/QC reports were reviewed upon receipt to confirm the laboratory DQOs had been met and that the appropriate QA/QC information had been reported.

2.4 Data Evaluation

Sediment chemistry data were compared to the Canadian Council of Ministers of the Environment (CCME) Interim Sediment Quality Guidelines (ISQGs) and the probable effects level (PEL) for the protection and management of aquatic sediment (CCME 2011). The data was also compared to the Ontario Ministry of the Environment (OMOE) sediment quality low effects level (LEL) and severe effects level (SEL) guideline (OMOE 2008), representing concentrations likely to affect the health of sediment-dwelling organisms.

For parameters requiring calculations or total concentrations (*e.g.,* total PAHs) an estimated value of one-half the limit of detection was used for values below the method detection limit. However, for total PCBs, the total PCB concentration was calculated as the sum of detected Aroclors only. The total PCB method based on Aroclors extracts PCBs from a sample, analyzes the extract by gas chromatography (GC) and uses a certain subset of peaks to determine the concentration of the PCB mixture (Narquis *et al*. 2007). In the laboratory, a pattern recognition technique is used to qualitatively assess presence of various Aroclor mixtures, when the analyst assigns the total amount of material each Aroclor formulation, the concentration of PCB in remaining Aroclors is assumed to be zero.

The adjustment of PAH sediment guidelines for total organic carbon (TOC), are accepted chemical measures of contaminant bioavailability in aquatic sediments. Data from these analyses provide additional insights regarding the potential bioavailability of metals and PAHs to aquatic life in KIH. Organic carbon is one of the most important factors affecting the bioavailability of PAHs (Environment Canada 1998). Organic carbon is also the dominant factor influencing the partitioning of PCBs and other hydrophobic substances. The presence of clays and other fine materials can also contribute significantly to the sorption of nonpolar organic chemicals to bed sediments, reducing their bioavailability to aquatic biota (CCME 2011). To account for this potential source of variability with respect to PAH/PCB bioavailability, sediment PAH and PCB SEL guidelines were adjusted by dividing the PAH and PCB OMOE (2008) guidelines by the proportion of organic carbon in the sample. This procedure yielded sediment PAH and PCB Ontario SQGs SELs guidelines adjusted to TOC that could be compared to the dataset (OMOE 2008; Persaud et al. 1993). Sediment TOC concentrations from KIH in 2021 ranged from 2.3 to 9.5%,

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averaging 8% across management units. To avoid underestimating the bioavailability of PAHs in the organic rich sediments, a conservative adjustment threshold of 8% TOC was applied (i.e., bioavailability adjustment was capped to a maximum of 8% TOC, above which no further reduction was assumed). This approach is likely to provide a conservative estimate of bioavailability and consistent with previous approaches (Golder 2011).

Leachate analytical data was compared to the Ontario Regulation 347 Standards for Leachate Toxic Soils in the Environmental Protection Act, R.S.O. 1990, c. E.19 (RRO 1990). This waste management act provides guidelines for arsenic, barium, boron, cadmium, chromium, lead, mercury, selenium, silver, uranium, and benzo(a)pyrene.

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3.0 RESULTS

The results of the data evaluation are summarized in the following sections. A spatial depiction of the sediment chemistry distribution using GIS-smoothed surfaces by inverse-distance weighting for the 2021 field program are included in Figures 4 to 23. The contaminant distributions depicted in these figures have been assigned to categories based on increasing sediment quality guideline thresholds identified from the literature, including the federal (CCME) and provincial (OMOE) thresholds described above (Section 2.4). Other screening benchmarks were available from alternate jurisdictions, and use of these alternative values for categorizing sediment quality data is preferable to use of arbitrary numerical increments above the CCME benchmarks.

Establishment of contamination levels has precedent in other jurisdictions including NOAA (Buchman 2008) and Wisconsin Department of Natural Resources (WDNR 2003). Literature sources used to supplement the freshwater screening benchmarks included:

- Persaud et al. (1993) & OMOE (2008) – Ontario Ministry of the Environment sediment quality guidelines, including No Effect Level (NEL), Low Effect Level (LEL), and Severe Effect Level (SEL).
- Michelsen (2003) – Washington Department of Ecology recommended SQGs for freshwater sediments, including Lowest Adverse Effect Level (LAET) and Second Lowest Adverse Effect Level (2LAET).

The results from the 2021 surficial sediment screening are summarized in Tables 2 through 4, whereas the sub-surficial sediment screening are summarized in Tables 6 and 7. Summary statistics (for specific contaminants of potential concern) are provided in Appendix D. Detailed chemistry results for sediment chemistry analyses are provided in the ALS Certificates of Analyses (Appendix E).

3.1 Field Observations

The sampled sediments generally consisted of silt and organics. Approximately 30% of the stations also included small amounts of clay and/or sand. A minority of core samples also contained trace gravel (i.e., locations PCW-SC-005B and TRCR-SC-004A). Thirteen of the core samples also included peat in the samples, which were all contained in the 0.3 – 0.8 m depth horizons.

Other observations included:

- Visual observations included hydrocarbon sheen spotting on sediment(s) at surficial sampling stations: PCE-SG-004, PCE-SG-005, PCE-SG-006, PCE-SG-010, PCE-SG-012, PCOM-SG-001, PCOM-SG-002, PCW-SG-009, PCW-SG-012, PCW-SG-014, PCW-SG-015, TC2B-SG-003, TC4-SG-006, TCAB-SG-001, TCAB-SG-002, TCAB-SG-003, TCAB-SG-004, TCAB-SG-005, TCAB-SG-008, TCAB-SG-010, TCAB-SG-011, TCAB-SG-012, TCAB-SG-015, WM-SG-002, WM-SG-005; and the 0.1–0.3 m sample horizon of TC4-SC-009A
- Anthropogenic debris was noted at several surficial and core sampling locations including wood debris at PCW-SC-005B, TC3A-SG-002, TC4-SC-009A, TCRC-SG-004, and TCRC-SG-010, a cigarette butt at TC2A-SG-013, garbage at TC4-SC-009A, fibrous material at TC4-SC-010A, a pair of sunglasses at TCAB-SG-004, and brick fragments at TCOM-SC-001B.

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- Most of the samples contained organic material such as aquatic vegetation, decaying plant matter, twigs and/or leaves. Mussels (both whole and shell fragments) were also a common observation.
- Organic odour was observed in most of the samples. Hydrocarbon odour was most noticeable in samples from stations PCOM-SC-001A, PCOM-SC-001B, PCOM-SC-001C, PCOM-SC-001D, PCOM-SC-001E, PCOM-SC-001F, PCOM-SC-001G, PCOM-SG-001, PCOM-SG-002, PCW-SC-007A, PPOM-SC-002A, PPOM-SC-002B, PPOM-SC-002C, TC4-SC-003B, TC4-SG-003, WM-SC-003B, PCW-SC-001EX, PCW-SC-001FX, and PCW-SC-001GX.
- Benthic invertebrates (predominantly Chironomidae sp.) were observed in samples from stations PCE-SG-008, PCW-SC-013A, PCW-SC-013B, TC4-SC-009A, TC4-SG-004, TC4-SG-008, TC5-SG-007, TCAB-SG-001, TCAB-SG-002, TCAB-SG-003, TCAB-SG-004, TCAB-SG-005, TCAB-SG-008, TCAB-SG-009, TCAB-SG-010, TCAB-SG-011, TCAB-SG-012, TCAB-SG-014, TCAB-SG-017, and TCAB-SGC-013.

3.2 Surficial Sediment

One hundred and fifty-two (152) surficial samples (including 14 duplicates) from the sampling program were submitted to ALS for chemical analysis of total metals, total mercury, moisture, PAHs, PCBs, and TOC. A subset of samples was also submitted for the following:

- Twenty-two (22) samples (including two duplicates) were also submitted for analysis of boron, trivalent chromium, and hexavalent chromium.
- Fifty-three (53) samples (including four duplicates) were also submitted for PSA.
- Twenty-one (21) samples (including two duplicates) were also submitted for analysis of PSA along with TCLP metals, TCLP PAHs and TCLP leaching analysis.
- Nineteen (19) samples were also submitted for specific gravity and Atterberg limit tests.

Sample analyses are summarized in the Table 1.

3.2.1 Surficial Sediment – Summary of Samples

Table 1 provides a summary of the surficial samples collected, sample location coordinates, and the analyses conducted for the sampling program

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Table 1: Surficial Sediment Sample Summary

Management Unit	Station ID	Easting	Northing	Laboratory Analyses Conducted
PC-E	PCE-SG-001	382193.111	4900498.572	Metals-Hg-PAH-PCB Moisture-TOC PSA
PC-E	PCE-SG-002	382244.043	4900498.572	Metals-Hg-PAH-PCB Moisture-TOC
PC-E	PCE-SG-003	382142.179	4900549.504	
PC-E	PCE-SG-004	382192.450	4900551.489	
PC-E	PCE-SG-005	382244.043	4900550.166	Metals-Hg-PAH-PCB Boron-Cr3+-Cr6+ Moisture-TOC PSA TCLP-Metals-PAH TCLP-Leach
PC-E	PCE-SG-006	382294.314	4900550.166	Metals-Hg-PAH-PCB Moisture-TOC
PC-E	PCE-SG-007	382294.976	4900599.775	
PC-E	PCE-SG-008	382244.043	4900601.098	
PC-E	PCE-SG-009	382244.705	4900642.109	
PC-E	PCE-SG-010	382294.976	4900642.109	
PC-E	PCE-SG-011	382040.975	4900550.166	
PC-E	PCE-SG-012	381990.704	4900499.895	
PC-E	PCE-SG-013	382072	4900424	Metals-Hg-PAH-PCB Moisture-TOC PSA
PC-E	PCE-SG-014	382324	4900464	
PC-OM	PCOM-SG-001	381840.553	4900550.166	Metals-Hg-PAH-PCB Moisture-TOC
PC-OM	PCOM-SG-002	381787.636	4900525.692	Metals-Hg-PAH-PCB Boron-Cr3+-Cr6+ Moisture-TOC PSA TCLP-Metals-PAH TCLP-Leach
PC-OM	PCOM-SG-003	381837.907	4900499.895	Metals-Hg-PAH-PCB Moisture-TOC
PC-W	PCW-SG-002	382142.840	4900600.437	
PC-W	PCW-SG-003	382092.569	4900600.437	
PC-W	PCW-SG-004	382092.728	4900644.410	
PC-W	PCW-SG-005	382135.564	4900643.432	Metals-Hg-PAH-PCB Moisture-TOC Atterberg Limits Specific Gravity TCLP-Metals-PAH TCLP-Leach
PC-W	PCW-SG-006	382193.772	4900647.400	Metals-Hg-PAH-PCB Moisture-TOC
PC-W	PCW-SG-007	382041.028	4900641.210	Metals-Hg-PAH-PCB Boron-Cr3+-Cr6+ Moisture-TOC Atterberg Limits Specific Gravity PSA TCLP-Metals-PAH TCLP-Leach
PC-W	PCW-SG-008	382040.314	4900600.437	Metals-Hg-PAH-PCB Moisture-TOC
PC-W	PCW-SG-009	381991.366	4900549.504	
PC-W	PCW-SG-010	381941.095	4900550.827	
PC-W	PCW-SG-011	381891.485	4900531.314	Metals-Hg-PAH-PCB Boron-Cr3+-Cr6+ Moisture-TOC Atterberg Limits Specific Gravity PSA TCLP-Metals-PAH TCLP-Leach
PC-W	PCW-SG-012	381942.418	4900593.491	Metals-Hg-PAH-PCB Moisture-TOC
PC-W	PCW-SG-013	381977.475	4900597.791	Metals-Hg-PAH-PCB Boron-Cr3+-Cr6+ Moisture-TOC Atterberg Limits Specific Gravity PSA TCLP-Metals-PAH TCLP-Leach
PC-W	PCW-SG-014	381889.501	4900499.895	Metals-Hg-PAH-PCB Moisture-TOC
PC-W	PCW-SG-015	381939.772	4900498.572	
PC-W	PCW-SG-016	381938.449	4900397.369	
PP-OM	PPOM-SG-001	381837.907	4900448.962	

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Management Unit	Station ID	Easting	Northing	Laboratory Analyses Conducted
PP-OM	PPOM-SG-002	381889.501	4900448.962	Metals-Hg-PAH-PCB Boron-Cr3+-Cr6+ Moisture-TOC Atterberg Limits Specific Gravity PSA TCLP-Metals-PAH TCLP-Leach
PP-OM	PPOM-SG-003	381939.772	4900449.624	Metals-Hg-PAH-PCB Moisture-TOC
PP-OM	PPOM-SG-004	381838.569	4900398.030	Metals-Hg-PAH-PCB Boron-Cr3+-Cr6+ Moisture-TOC Atterberg Limits Specific Gravity PSA TCLP-Metals-PAH TCLP-Leach
PP-OM	PPOM-SG-005	381889.501	4900398.030	Metals-Hg-PAH-PCB Moisture-TOC
PP-OM	PPOM-SG-006	381839.230	4900347.098	
TC-1	TC1-SG-001	381966.892	4900296.827	
TC-1	TC1-SG-002	381964.907	4900245.894	
TC-1	TC1-SG-003	381965.569	4900194.962	Metals-Hg-PAH-PCB Moisture-TOC PSA
TC-1	TC1-SG-004	381964.246	4900144.030	Metals-Hg-PAH-PCB Moisture-TOC
TC-1	TC1-SG-005	381964.246	4900091.774	
TC-1	TC1-SG-006	382076	4900295	Metals-Hg-PAH-PCB Moisture-TOC PSA
TC-1	TC1-SG-007	382223	4900302	
TC-1	TC1-SG-008	382402	4900289	
TC-1	TC1-SG-009	382090	4900160	
TC-1	TC1-SG-010	382229	4900163	
TC-1	TC1-SG-011	382371	4900158	
TC-1	TC1-SG-012	382091	4900016	
TC-1	TC1-SG-013	382224	4899992	
TC-2A	TC2A-SG-001	381790.242	4899710.409	Metals-Hg-PAH-PCB Moisture-TOC
TC-2A	TC2A-SG-002	381837.246	4899714.081	
TC-2A	TC2A-SG-003	381938.449	4899689.607	
TC-2A	TC2A-SG-004	381784.990	4899664.471	
TC-2A	TC2A-SG-005	381837.246	4899663.148	
TC-2A	TC2A-SG-006	381785.652	4899612.877	Metals-Hg-PAH-PCB Boron-Cr3+-Cr6+ Moisture-TOC PSA TCLP-Metals-PAH TCLP-Leach
TC-2A	TC2A-SG-007	381836.584	4899612.877	Metals-Hg-PAH-PCB Moisture-TOC
TC-2A	TC2A-SG-008	381911.991	4899611.555	
TC-2A	TC2A-SG-009	381786.313	4899562.607	
TC-2A	TC2A-SG-010	381888.178	4899562.607	Metals-Hg-PAH-PCB Boron-Cr3+-Cr6+ Moisture-TOC PSA TCLP-Metals-PAH TCLP-Leach
TC-2A	TC2A-SG-011	381785.652	4899511.674	Metals-Hg-PAH-PCB Moisture-TOC
TC-2A	TC2A-SG-012	381734.719	4899562.607	
TC-2A	TC2A-SG-013	381734.719	4899613.539	
TC-2B	TC2B-SG-001	382066	4899791	Metals-Hg-PAH-PCB Moisture-TOC PSA
TC-2B	TC2B-SG-002	382218	4899799	
TC-2B	TC2B-SG-003	382078	4899687	
TC-3A	TC3A-SG-001	381785.652	4899461.403	
TC-3A	TC3A-SG-002	381786.975	4899411.794	Metals-Hg-PAH-PCB Moisture-TOC
TC-3A	TC3A-SG-003	381852.327	4899400.813	Metals-Hg-PAH-PCB Moisture-TOC Boron-Cr3+-Cr6+ PSA
TC-3A	TC3A-SG-004	381904	4899475	
TC-3B	TC3B-SG-001	382141	4899565	
TC-4	TC4-SG-001	381834.600	4899333.741	Metals-Hg-PAH-PCB Moisture-TOC
TC-4	TC4-SG-002	381878.584	4899362.954	
TC-4	TC4-SG-003	381910.097	4899340.066	
TC-4	TC4-SG-003A	381910.097	4899340.066	
TC-4	TC4-SG-003B	381910.097	4899340.066	
TC-4	TC4-SG-004	381988.058	4899384.674	

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Management Unit	Station ID	Easting	Northing	Laboratory Analyses Conducted
TC-4	TC4-SG-005	382032.649	4899357.370	
TC-4	TC4-SG-006	381896.777	4899322.364	
TC-4	TC4-SG-007	381931.755	4899371.555	
TC-4	TC4-SG-008	381988.058	4899334.403	
TC-4	TC4-SG-009	382080.144	4899371.344	Metals-Hg-PAH-PCB Boron-Cr3+-Cr6+ Moisture-TOC Atterberg Limits Specific Gravity PSA TCLP-Metals-PAH TCLP-Leach
TC-4	TC4-SG-010	382031.022	4899305.919	Metals-Hg-PAH-PCB Moisture-TOC Atterberg Limits Specific Gravity PSA
TC-4	TC4-SG-011	381938.449	4899282.809	Metals-Hg-PAH-PCB Moisture-TOC
TC-4	TC4-SG-012	381987.397	4899284.132	
TC-4	TC4-SG-013	381887.517	4899288.101	Metals-Hg-PAH-PCB Moisture-TOC PSA
TC-4	TC4-SG-013X	382129.611	4899332.550	Metals-Hg-PAH-PCB Moisture-TOC
TC-4	TC4-SG-014	382079.510	4899329.789	
TC-5	TC5-SG-001	382139.533	4899384.012	
TC-5	TC5-SG-002	382142.179	4899283.471	Metals-Hg-PAH-PCB Moisture-TOC PSA
TC-5	TC5-SG-003	382138.871	4899233.861	Metals-Hg-PAH-PCB Moisture-TOC
TC-5	TC5-SG-004	382089.262	4899131.996	
TC-5	TC5-SG-005	382192	4899401	Metals-Hg-PAH-PCB Moisture-TOC PSA
TC-5	TC5-SG-006	382244	4899288	
TC-5	TC5-SG-007	382201	4899119	
TC-AB	TCAB-SG-001	381842.000	4899178.000	Metals-Hg-PAH-PCB Boron-Cr3+-Cr6+ Moisture-TOC Atterberg Limits Specific Gravity PSA TCLP-Metals-PAH TCLP-Leach
TC-AB	TCAB-SG-002	382088.600	4899283.471	Metals-Hg-PAH-PCB Moisture-TOC
TC-AB	TCAB-SG-003	381985.413	4899231.215	
TC-AB	TCAB-SG-004	382031.225	4899250.370	
TC-AB	TCAB-SG-005	382087.939	4899232.538	Metals-Hg-PAH-PCB Moisture-TOC Boron-Cr3+-Cr6+ PSA TCLP-Metals-PAH TCLP-Leach
TC-AB	TCAB-SG-006	381982.502	4899194.438	Metals-Hg-PAH-PCB Moisture-TOC
TC-AB	TCAB-SG-007	382037.006	4899181.606	
TC-AB	TCAB-SG-008	382087.939	4899181.606	
TC-AB	TCAB-SG-009	381986.736	4899130.673	Metals-Hg-PAH-PCB Moisture-TOC Boron-Cr3+-Cr6+ PSA TCLP-Metals-PAH TCLP-Leach
TC-AB	TCAB-SG-010	382036.345	4899131.335	Metals-Hg-PAH-PCB Moisture-TOC
TC-AB	TCAB-SG-011	381931.834	4899117.444	
TC-AB	TCAB-SG-012	381870.000	4899104.000	Metals-Hg-PAH-PCB Boron-Cr3+-Cr6+ Moisture-TOC Atterberg Limits Specific Gravity PSA TCLP-Metals-PAH TCLP-Leach
TC-AB	TCAB-SG-013	381844.268	4899074.404	Metals-Hg-PAH-PCB Moisture-TOC
TC-AB	TCAB-SG-014	381890.332	4899127.133	
TC-AB	TCAB-SG-015	381852.206	4899142.683	Metals-Hg-PAH-PCB Moisture-TOC Atterberg Limits Specific Gravity
TC-AB	TCAB-SG-016	381883.051	4899173.863	Metals-Hg-PAH-PCB Moisture-TOC

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Management Unit	Station ID	Easting	Northing	Laboratory Analyses Conducted
TC-AB	TCAB-SG-017	381815.221	4899185.442	Metals-Hg-PAH-PCB Moisture-TOC PSA
TC-OM	TCOM-SG-001	381888.840	4900347.759	Metals-Hg-PAH-PCB Moisture-TOC Atterberg Limits Specific Gravity
TC-OM	TCOM-SG-002	381939.772	4900347.098	Metals-Hg-PAH-PCB Moisture-TOC
TC-OM	TCOM-SG-003	381863.704	4900297.488	
TC-OM	TCOM-SG-004	381913.975	4900297.488	
TC-OM	TCOM-SG-005	381863.704	4900246.556	
TC-OM	TCOM-SG-006	381914.636	4900246.556	Metals-Hg-PAH-PCB Moisture-TOC Specific Gravity Atterberg Limits
TC-OM	TCOM-SG-007	381862.381	4900194.962	
TC-OM	TCOM-SG-008	381914.636	4900196.285	Metals-Hg-PAH-PCB Moisture-TOC
TC-OM	TCOM-SG-009	381914.636	4900145.352	Metals-Hg-PAH-PCB Boron-Cr3+-Cr6+ Moisture-TOC Atterberg Limits Specific Gravity PSA TCLP-Metals-PAH TCLP-Leach
TC-RC	TCRC-SG-001	381862.381	4900093.759	Metals-Hg-PAH-PCB Boron-Cr3+-Cr6+ Moisture-TOC PSA TCLP-Metals-PAH TCLP-Leach
TC-RC	TCRC-SG-002	381913.975	4900092.436	Metals-Hg-PAH-PCB Moisture-TOC
TC-RC	TCRC-SG-003	381910.337	4900049.771	
TC-RC	TCRC-SG-004	381875.280	4900020.866	Metals-Hg-PAH-PCB Moisture-TOC Atterberg Limits Specific Gravity
TC-RC	TCRC-SG-005	381963.584	4900017.691	Metals-Hg-PAH-PCB Moisture-TOC
TC-RC	TCRC-SG-006	381913.975	4899993.217	
TC-RC	TCRC-SG-007	381875.002	4899911.275	Metals-Hg-PAH-PCB Moisture-TOC PSA
TC-RC	TCRC-SG-008	381913.314	4899890.691	Metals-Hg-PAH-PCB Moisture-TOC
TC-RC	TCRC-SG-009	381964.246	4899891.352	
WM	WM-SG-001	381880.519	4899836.157	
WM	WM-SG-002	381949.495	4899837.734	Metals-Hg-PAH-PCB Moisture-TOC PSA
WM	WM-SG-003	381898.431	4899784.196	Metals-Hg-PAH-PCB Boron-Cr3+-Cr6+ Moisture-TOC Atterberg Limits Specific Gravity PSA TCLP-Metals-PAH TCLP-Leach
WM	WM-SG-004	381938.449	4899790.149	Metals-Hg-PAH-PCB Moisture-TOC
WM	WM-SG-005	381886.194	4899739.216	
WM	WM-SG-006	381937.788	4899739.216	Metals-Hg-PAH-PCB Moisture-TOC PSA
WM	WM-SG-007	381962.262	4899763.029	Metals-Hg-PAH-PCB Moisture-TOC

Notes: Hg = mercury; PAHs = polycyclic aromatic hydrocarbons; PCBs = polychlorinated biphenyls; TOC = total organic carbon, TCLP = toxicity characteristic leaching procedure, PSA = particle size analysis.

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3.2.2 Surficial Sediment

The surficial sediment results are summarized in Tables 2 through 4 and the sediment chemistry distributions are also presented in Figures 4 through 13 (as discussed in section 3.0). Summary statistics (for specific contaminants of potential concern) can be found in Appendix D. Detailed compiled chemistry screening results for sediment chemistry analyses are provided in Appendix E. Full raw analytical data can be found in the ALS Certificates of Analyses Appendix F. A summary of the results is provided in the following sections.

3.2.3 Surficial Sediment – Metals

Table 2 summarizes the frequency of guideline exceedances for a subset of metals; arsenic, cadmium, chromium, copper, iron, lead, manganese, mercury, nickel, phosphorus, and zinc across individual management units. The sediment chemistry distributions for these metals are presented in Figures 4 through 11, and summary statistics can be found in Appendix D.

All management units exhibited lead CCME ISQG exceedances whereas cadmium, copper, mercury, and zinc exceeded ISQG guidelines across all management units except for TC-3B. There were arsenic ISQG exceedances at all units except for TC-3B and PP-OM. Only a single surficial sediment grab was collected from TC-3B (Table 2).

There were exceedances of the arsenic and mercury CCME PEL at TC-2A, TC-3A, TC-4, TC-RC, and WM. The PEL for mercury was also exceeded at PC-W. Lead exceeded CCME PEL guidelines at all management units, except for TC-3B. Copper only exceeded PEL guidelines at TC-AB, and there were no cadmium PEL exceedances across all locations (Table 2). The largest magnitude PEL exceedance was observed for mercury in the TC-4 management unit (TC4-SG-003B), where the maximum concentration (3.1 mg/kg dw [dry weight]) was approximately 6 times the PEL (Appendix D).

All management units exhibited OMOE LEL exceedances for the subset of metals outlined above, except for units TC-3B and PC-OM (Table 2). The largest LEL exceedance was chromium at the PC-W management unit (PCW-SG-013), with the maximum concentration (7,650 mg/kg dw) approximately 294 times the LEL guideline (Appendix D).

There were exceedances of the SEL guideline for arsenic, chromium, copper, iron, lead, manganese, mercury, nickel, and phosphorous. All management units exhibited SEL exceedances for chromium, where the largest exceedance had measured concentrations of 7,650 mg/kg dw, approximately 70 times the SEL guideline at the PC-W management unit (Appendix D). Arsenic exceeded SEL guidelines at TC-4, TC-RC, and WM, whereas copper exceedances were observed at TC-2A, TC-4 and TC-AB. There were lead exceedances at management units PC-OM, PC-W, PP-OM, TC-3A and TC-4, whereas mercury and phosphorus only exceeded the SEL at units TC-4 and PC-W, respectively. Iron exceedances of the SEL were only observed at TC-AB, whereas manganese exceedances were reported at TC-1, TC-2B, TC-5, TC-AB, TC-RC, and WM (Table 2).

A subset of samples (as discussed in Section 3.2.1) was sampled for both trivalent chromium (Cr^{3+}) and hexavalent chromium (Cr^{6+}). Trivalent chromium is an essential nutrient, with toxicological effects at higher doses relative to hexavalent chromium (ASTDR 2016; NTP 2021). Hexavalent chromium, often produced by industrial process, causes adverse effects at relatively low doses. Trivalent chromium ranged from 81 to 7,650 mg/kg dw, whereas hexavalent chromium ranged from 0.5 to 36.7 mg/kg dw (Appendix D).

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3.2.4 Surficial Sediment – Organic Contaminants

3.2.4.1 Polyaromatic Hydrocarbons

Table 3 summarizes the frequency of guideline exceedances for individual and total PAHs across individual management units. The sediment chemistry distributions for total PAHs are presented in Figure 12, and summary statistics can be found in Appendix D.

There were exceedances of the CCME ISQG for all individual PAHs analyzed across 12 of the 15 management units in 2021 (Table 3). In the remaining three management units (TC-1, TC-2B and TC-3B) all individual PAHs except for naphthalene exceeded ISQG guidelines. The greatest exceedance was observed for phenanthrene (30.6 mg/kg dw) at the TC-4 management unit (TC4-SG-001), being 730 times greater than the ISQG guideline (Appendix D).

CCME PEL guidelines were exceeded for all PAHs analyzed at the TC-4 and TC-OM units. Apart from naphthalene, units PC-E, PC-OM, PC-W, TC-2A, TC-5, TC-AB, TC-RC, and WM also exceeded PELs for all individual PAHs analyzed (Table 3). The highest concentrations relative to the PEL guideline was observed for phenanthrene (30.6 mg/kg dw) at the TC-4 management unit being 59 times greater than the PEL guideline (Appendix D).

There were also exceedances of the OMOE LEL across all management units with the highest concentrations relative to the LEL observed for phenanthrene (30.6 mg/kg dw) in TC-4 (~54 times greater than the LEL) (Appendix D).

Total PAHs (as Σ16PAH) ranged from 2.1 to 170 mg/kg dw (Appendix D), with the highest concentrations at the TC-4 management unit and all management units exceeded the LEL guideline of 4 mg/kg dw, except for TC-3B. However, there were no exceedances of the SEL guideline (Table 3).

3.2.4.2 Polychlorinated Biphenyls

A summary of exceedances of total PCBs are provided in Table 3. The sediment chemistry distributions for total PCBs is presented in Figure 13 and summary statistics can be found in Appendix D.

Concentrations of total PCBs were above CCME ISQG levels for all individual management units in 2021. All management units had exceedances of the CCME PEL for total PCBs, except for TC-3B and TC-5 (Table 3). The greatest total PCB concentrations were observed at TC-4 (TC4-SG-003B) where the maximum concentration (2.6 mg/kg dw) was approximately 9 times greater than the CCME PEL for total PCBs (Appendix D). However, there were no exceedances of the OMOE SEL guideline.

3.2.5 Surficial Sediment – Leachate

The surficial sediment leachate analytical data was compared to the Ontario Regulation 347 Standards for Leachate Toxic Soils in the Environmental Protection Act, R.S.O. 1990, c. E.19 (RRO 1990). This waste management act provides guidelines for arsenic, barium, boron, cadmium, chromium, lead, mercury, selenium, silver, uranium, and benzo(a)pyrene. The results show there were no exceedances of leachate criteria at any management unit for the parameters for which a criterion was available (Table 4). Full raw analytical data can be found in the ALS Certificates of Analyses Appendix F.

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3.2.6 Surficial Sediment Summary

The surficial sediment results indicate:

- Contaminants of concern (i.e., parameters exceeding CCME PELs) include PAHs, PCBs, and metals.
- Surface sediment metal concentrations exceeding ISQGs were observed in all 15 individual management units sampled.
- Concentrations of total PCBs were above CCME ISQG levels for all individual management units in 2021.
- Concentrations of individual PAHs analyzed across 12 of the 15 management units were above CCME ISQG levels.
- Surface sediment PAH and metal concentrations exceeding PELs were observed in 14 of 15 individual management units sampled.
- Surface sediment total PCB concentrations exceeding PELs were observed in 13 of 15 individual management units sampled.
- There were SEL exceedances of arsenic, chromium, copper, lead, manganese, mercury and phosphorous.

There were no SEL exceedances of total PAHs or total PCBs.

3.3 Sub-surficial Sediment

3.3.1 Sub-surficial Sediment – Summary of Samples

Table 5 provides a summary of the sub-surficial samples collected, sample location coordinates, and the analyses conducted.

Table 5: Sub-Surficial Sediment Sample Summary

Management Unit	Station ID	Easting	Northing	Laboratory Analyses Conducted
PC-OM	PCOM-SGC-001	381769.62	4900537.220	Metals-Hg-PAH-PCB
PC-W	PCW-SGC-001	382193.111	4900601.098	Metals-Hg-PAH-PCB Moisture-TOC
PC-W	PCW-SGC-005	382135.564	4900643.432	Metals-Hg-PAH-PCB Moisture-TOC Atterberg Limits Specific Gravity TCLP-Metals-PAH TCLP-Leach
PC-W	PCW-SGC-007	382041.028	4900641.210	Metals-Hg-PAH-PCB Boron-Cr3+-Cr6+ Moisture-TOC Atterberg Limits
PC-W	PCW-SGC-011	381891.485	4900531.314	
PC-W	PCW-SGC-013	381977.475	4900597.791	

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Management Unit	Station ID	Easting	Northing	Laboratory Analyses Conducted
PP-OM	PPOM-SGC-002	381889.501	4900448.962	Specific Gravity PSA TCLP-Metals-PAH TCLP-Leach
PP-OM	PPOM-SGC-004	381838.569	4900398.030	
TC-4	TC4-SGC-010	382031.022	4899305.919	Metals-Hg-PAH-PCB Moisture-TOC PSA Specific Gravity Atterberg Limits
TC-AB	TCAB-SGC-001	381842.000	4899178.000	Metals-Hg-PAH-PCB Boron-Cr3+-Cr6+ Moisture-TOC Atterberg Limits Specific Gravity PSA TCLP-Metals-PAH TCLP-Leach
TC-AB	TCAB-SGC-012	381870.000	4899104.000	
TC-AB	TCAB-SGC-015	381852.206	4899142.683	Metals-Hg-PAH-PCB Moisture-TOC Specific Gravity Atterberg Limits
TC-OM	TCOM-SGC-001	381888.840	4900347.759	
TC-OM	TCOM-SGC-006	381914.636	4900246.556	
TC-OM	TCOM-SGC-007	381862.381	4900194.962	
TC-OM	TCOM-SGC-009	381914.636	4900145.352	Metals-Hg-PAH-PCB Boron-Cr3+-Cr6+ Moisture-TOC Atterberg Limits Specific Gravity PSA TCLP-Metals-PAH TCLP-Leach
TC-RC	TCRC-SGC-004	381875.280	4900020.866	Metals-Hg-PAH-PCB Moisture-TOC Specific Gravity Atterberg Limits
TC-RC	TCRC-SGC-010	381869.128	4899872.302	Metals-Hg-PAH-PCB Boron-Cr3+-Cr6+ Moisture-TOC Atterberg Limits Specific Gravity PSA TCLP-Metals-PAH TCLP-Leach
WM	WM-SGC-003	381898.431	4899784.196	

Notes: Hg = mercury; PAHs = polycyclic aromatic hydrocarbons; PCBs = polychlorinated biphenyls; TOC = total organic carbon, TCLP = toxicity characteristic leaching procedure, PSA = particle size analysis..

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3.3.2 Sub-surficial Sediment

The sub-surficial sediment results are summarized in Tables 6 and 7 and the sediment chemistry distributions are also presented in Figures 14 through 23 (as discussed in Section 3.0). Summary statistics, including comparisons across varying depth cores for individual management units can be found in Appendix D. Detailed compiled chemistry screening results for sediment chemistry analyses are provided in Appendix E. Full raw analytical data can be found in the ALS Certificates of Analyses Appendix F. A summary of the results is provided in the following sections.

3.3.3 Sub-surficial Sediment – Metals

Results of the 2021 sub-surficial sediment chemistry metal analyses are provided in Table 6. A visual presentation of the chemistry distribution for each location and sediment depth is presented in Figures 14 through 21, and summaries across depths can be found in Appendix D.

Table 6 summarizes the frequency of guideline exceedances for arsenic, cadmium, chromium, copper, iron, lead, manganese, mercury, nickel, phosphorus, and zinc across individual management units. There were exceedances across all core depths but no consistent relationships between depth and concentrations of COPCs were observed (Appendix D).

There were exceedances of the CCME ISQG for arsenic, cadmium, copper, lead, mercury, and zinc, across all management units (with the exception of TC-RC for cadmium).

In addition, all units exhibited CCME PEL exceedances for lead. Arsenic CCME PEL exceedances were observed at PC-W, PP-OM, TC-OM, TC-RC, and WM units, whereas copper only exceeded at TC-AB. Mercury exceeded PEL guidelines at all units, except TC-4 and TC-AB. Zinc also exceeded PEL guidelines at all units except for TC-4, TC-OM, and TC-RC. No PEL exceedances were observed for cadmium at any management unit (Table 6).

The largest magnitude PEL exceedance was mercury at the WM management unit with a core depth of 0.3–0.5 m, where the concentration (12.1 mg/kg dw) was approximately 25 times the PEL (Appendix D).

All management units sampled had OMOE LEL exceedances for the subset of metals outlined above, except for units TC-RC and PC-OM (Table 6). The largest LEL exceedance was mercury at the WM management unit (WM-SC-003B) with a core depth of 0.3–0.5 m, where the concentration (12.1 mg/kg dw) was approximately 60 times the LEL (Appendix D).

There were exceedances of the SEL guideline for arsenic, chromium, copper, iron, lead, mercury, nickel, and phosphorous. All management units exhibited SEL exceedances for chromium. The largest chromium exceedance was at the PP-OM (PPOM-SC-002C) management unit at a core depth of 0.5–0.8 m, which exhibited a measured concentration (16,400 mg/kg dw) approximately 149 times the SEL guideline (Appendix D). Copper and iron exceeded SEL guidelines at TC-AB, whereas mercury and nickel exceeded the SEL in the WM management unit. Arsenic exceeded SEL guidelines at PP-OM, TC-OM, TC-RC, and WM, whereas lead exceeded guidelines at all units, except for TC-4, TC-AB and TC-RC. Finally, phosphorus SEL exceedances were observed at PC-W and PC-OM. No SEL exceedances were observed for cadmium, manganese, or zinc at any management unit (Table 6).

Trivalent chromium (Cr^{3+}) ranged from 127 to 9,740 mg/kg dw, while hexavalent chromium (Cr^{6+}) ranged from 0.36 to 423 mg/kg (Appendix D).

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3.3.4 Sub-surficial Sediment – Organic Contaminants

3.3.4.1 Polyaromatic Hydrocarbons

Results of the 2021 sub-surficial sediment individual and total PAH analyses are provided in Table 7. A visual presentation of the total PAHs distribution for each location and sediment depth is provided in Figure 22, and summaries across depths are presented in Appendix D.

Appendix D shows that exceedances were relatively consistent across all core depths (though concentrations varied within and between cores), and no clear relationship between depth and concentrations of COPCs was observed. Concentrations of all individual PAHs were above CCME ISQG levels for the eight individual management units which were sampled for sub-surficial chemistry in 2021, apart from the TR-RC unit for naphthalene (Table 7). CCME PEL exceedances were also observed for all individual PAHs analyzed apart from naphthalene for PC-OM, PC-W, PP-OM, TC-AB, and WM.

Total PAHs (as Σ16PAH) ranged from 0.7 to 84.1 mg/kg dw across varying depths, with the highest concentrations observed at the PC-OM management unit (PCOM-SC-001G) at a core depth of 0.5 m; at this location the total PAH concentration (84.1 mg/kg dw) was approximately 21 times greater than the OMOE LEL guideline. The lowest observed concentrations were observed at the TC-OM management unit at a core depth of 0.5 m. All management units exceeded the OMOE LEL guideline of 4 mg/kg dw, except for TC-RC. There were no exceedances of the OMOE SEL guideline.

Table 7 summarizes the frequency of guideline exceedances for individual and total PAHs.

3.3.4.2 Polychlorinated Biphenyls

Results of the 2021 sub-surficial sediment total PCBs are provided in Table 7. A visual presentation of the total PCBs distribution for each location and sediment depth is presented in Figure 23, and summary statistics can be found in Appendix D.

Concentrations of total PCBs were above CCME ISQG levels for all individual management units in 2021. All management units also exceeded the CCME PEL for total PCBs, except for TC-RC. Appendix D shows exceedances were relatively consistent across core depths (concentrations varied within and between cores), and no clear relationship between depth and concentrations of COPCs was observed.

The greatest total PCB concentrations were observed at the PC-OM management unit (PCOM-SC-001G) with a vertical core depth of 0.5 m with measured concentrations (5.2 mg/kg) approximately 18 times greater than the CCME PEL for total PCBs. However, no exceedances were seen of the SEL guideline.

3.3.5 Sub-surficial Sediment Summary

The sub-surficial sediment results indicate:

- Contaminants of concern (i.e., parameters exceeding CCME PELs) include PAHs, PCBs, and metals.
- Sub-surface sediment PAH, PCB, and metal concentrations exceeding ISQGs were observed for all nine individual management units sampled. Exceedances were relatively consistent across core depths (concentrations varied within and between cores).

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- Sub-surface sediment PAH, PCB and metal concentrations exceeding PELs were observed in eight of nine individual management units sampled. As outlined above, exceedances were relatively consistent across core depths.
- There were SEL exceedances of arsenic, chromium, copper, iron, lead, manganese, mercury, nickel, or phosphorous. There were no SEL exceedances of total PAHs or total PCBs.
- Varying depths were taken across each management unit, and no clear relationships between depth and concentrations of COPCs were observed.

3.4 QA/QC Results

The 2021 sediment quality data were considered valid based on the results of the QA/QC for the following reasons:

- Most chemical analyses on sediment samples were completed within the sample hold time requirements.
  - Seven samples from a total of 199 submitted (not including duplicates), had minor hold time exceedances for PAH and PCB analysis.
- Sample temperature was within laboratory thresholds (< 10°C).
- Data reported by the laboratory were considered reliable according to the accredited laboratory QA/QC assessment.
- There was low variability and high precision between duplicates.

Overall, the QA/QC results indicate that the water chemistry data collected during the 2021 sediment investigation are of acceptable quality.

3.4.1 Field Duplicate Analysis

Eighteen duplicate samples were submitted for chemical analysis (approximately 8% of the total number of samples analyzed). Field duplicate (split) sediment samples were collected to provide an indication of variability in the sediment chemistry. The ability of the laboratory to provide the same result on replicate analyses was assessed through the laboratory's internal replicate analyses results. As discussed in Section 2.3, variability between the duplicates was assessed by calculating RPDs between the duplicate and parent sample constituent concentrations. The RPD calculations are presented in Appendix G.

In accordance with the *British Columbia Environmental Laboratory Manual* (ENV 2020a), Golder's internal data quality objectives (DQOs) for samples were as follows:

- an RPD less than or equal to 40% for organics (e.g., PCBs, TBT, TOC)
- an RPD less than or equal to 50% for PAHs
- an RPD less than or equal to 40% for metals

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Calculated RPDs for the following analytes and samples exceeded the DQOs:

- Acenaphthene, acridine, fluorene, 1-methylnaphthalene, 2-methylnaphthalene, phenanthrene in parent and duplicate sample pair PCE-SG010 exceeded the RPD DQOs with values ranging from 58% to 119%.
- Arsenic, mercury, molybdenum, tin in parent and duplicate sample pair PCOM-SG001 exceeded the RPD DQOs with values ranging from 49% to 127%.
- Silver in parent and duplicate sample pair PCOM-SG002 exceeded the RPD DQOs with a value of 42%.
- Acridine in parent and duplicate sample pair PCW-SG015 exceeded the RPD DQOs with a value of 95%.
- Benzo(k)fluoranthene and indeno(1,2,3-c,d)pyrene in parent and duplicate sample pair TC4-SG007 both exceeded the RPD DQO with values ranging from 51 to 52%.
- Antimony, arsenic, silver, mercury, tin, and molybdenum in parent and duplicate sample pair PCW-SC011A all exceeded the RPD DQO with values ranging from 52 to 151%.
- Cadmium, chromium, and strontium in parent and duplicate sample pair PCW-SC001A exceeded the RPD DQO with values ranging from 52 to 65%.

Where variances between the sample and duplicate pair, the data were reviewed on a sample-by-sample basis to evaluate potential impact to interpretation of the data. Based on this review, in the context of the project-specific regulatory criteria and overall objectives, the data are considered reliable and no impact to interpretation of data was identified.

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4.0 SUMMARY

The results of the 2021 Sediment Investigation are summarized as follows:

- The sampling program included surficial and sub-surficial sampling across 15 management units.
- The results were screened against sediment quality guidelines including CCME ISQGs and PELs, as well as OMOE LELs and SELs.
- There were numerous surficial and sub-surficial exceedances of guidelines across management units.
- Results indicated that concentrations of select metals and PAHs exceeded ISQGs and PELs across management units for both the surficial and sub-surficial sediments. These included arsenic, chromium, copper, iron, lead, mercury, nickel, phosphorous, zinc, acenaphthene, acenaphthylene, anthracene, benz(a)anthracene, benzo(a)pyrene, benzo(g,h,i)perylene, chrysene, dibenz(a,h)anthracene, fluoranthene, fluorene, indeno(1,2,3-c,d), pyrene, naphthalene, phenanthrene, and pyrene.
- There were no SEL exceedances of total PAHs or total PCBs for either surficial or sub-surficial samples.
- Several SEL exceedances were observed for metals, with the greatest frequency observed for chromium.

The results presented in this report will be used to update and/or refine areas of contamination requiring physical intervention in future amendments to the Sediment Management Plan. In addition, the relative effectiveness of natural attenuation/recovery will be assessed using the surface sediment results in comparison to the historical data and the subsurface results will be used to assess the rate in which contaminated sediment is being buried over time.

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5.0 CLOSURE

We trust the information in this factual report meets your needs at this time. Should you have any questions regarding this report, please do not hesitate to contact the undersigned at (604) 296- 4200.

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Table 2: Summary of Metal Constituents Exceeding Regulatory Criteria in Surficial Sediment (0 to 0.1 m)

Parameter	CCME SQG (mg/kg dw)		OMOE 2008 (mg/kg dw)		Management Units											
					PC-E (n=14)				PC-OM (n=5)				PC-W (n=15)			
	ISQG	PEL	LEL	SEL	ISQG Exceedances (%)	PEL Exceedances (%)	LEL Exceedances (%)	SEL Exceedances (%)	ISQG Exceedances (%)	PEL Exceedances (%)	LEL Exceedances (%)	SEL Exceedances (%)	ISQG Exceedances (%)	PEL Exceedances (%)	LEL Exceedances (%)	SEL Exceedances (%)
Arsenic	**5.9**	**17**	**6**	**33**	14	0	14	0	0	0	0	0	67	0	53	0
Cadmium	**0.6**	**3.5**	**0.6**	**10**	29	0	29	0	100	0	100	0	87	0	87	0
Chromium	**-**	**-**	**26**	**110**	-	-	100	100	-	-	100	100	-	-	100	100
Copper	**35.7**	**197**	**16**	**110**	50	0	100	0	100	0	100	0	100	0	100	0
Iron	**-**	**-**	**20000**	**40000**	-	-	86	0	-	-	40	0	-	-	80	0
Lead	**35**	**91.3**	**31**	**250**	100	43	100	0	100	100	100	60	100	93	100	40
Manganese	**-**	**-**	**460**	**1100**	-	-	79	0	-	-	0	0	-	-	87	0
Mercury	**0.17**	**0.486**	**0.2**	**2.0**	64	0	43	0	100	0	80	0	93	20	80	0
Nickel	**-**	**-**	**16**	**75**	-	-	93	0	-	-	60	0	-	-	100	0
Phosphorus	**-**	**-**	**600**	**2000**	-	-	100	0	-	-	100	0	-	-	100	20
Zinc	**123**	**315**	**120**	**820**	79	0	79	0	100	60	100	0	100	33	100	0

Table 2: Summary of Metal Constituents Exceeding Regulatory Criteria in Surficial Sediment (0 to 0.1 m)

Parameter	CCME SQG (mg/kg dw)		OMOE 2008 (mg/kg dw)		Management Units											
					PPOM (n=6)				TC-1 (n=13)				TC-2A (n=13)			
	ISQG	PEL	LEL	SEL	ISQG Exceedances (%)	PEL Exceedances (%)	LEL Exceedances (%)	SEL Exceedances (%)	ISQG Exceedances (%)	PEL Exceedances (%)	LEL Exceedances (%)	SEL Exceedances (%)	ISQG Exceedances (%)	PEL Exceedances (%)	LEL Exceedances (%)	SEL Exceedances (%)
Arsenic	**5.9**	**17**	**6**	**33**	67	0	67	0	77	0	77	0	92	0	92	0
Cadmium	**0.6**	**3.5**	**0.6**	**10**	100	0	100	0	92	0	92	0	77	0	77	0
Chromium	**-**	**-**	**26**	**110**	-	-	100	100	-	-	100	100	-	-	92	85
Copper	**35.7**	**197**	**16**	**110**	100	0	100	0	85	0	100	0	92	0	100	8
Iron	**-**	**-**	**20000**	**40000**	-	-	100	0	-	-	100	0	-	-	77	0
Lead	**35**	**91.3**	**31**	**250**	100	100	100	17	100	77	100	0	92	85	92	0
Manganese	**-**	**-**	**460**	**1100**	-	-	100	0	-	-	100	8	-	-	77	0
Mercury	**0.17**	**0.486**	**0.2**	**2.0**	100	0	83	0	92	0	85	0	92	92	92	0
Nickel	**-**	**-**	**16**	**75**	-	-	100	0	-	-	100	0	-	-	92	0
Phosphorus	**-**	**-**	**600**	**2000**	-	-	100	0	-	-	92	0	-	-	100	0
Zinc	**123**	**315**	**120**	**820**	100	17	100	0	100	8	100	0	92	15	92	0

Table 2: Summary of Metal Constituents Exceeding Regulatory Criteria in Surficial Sediment (0 to 0.1 m)

Parameter	CCME SQG (mg/kg dw)		OMOE 2008 (mg/kg dw)		Management Units											
					TC-2B (n=3)				TC-3A (n=4)				TC-3B (n=1)			
	ISQG	PEL	LEL	SEL	ISQG Exceedances (%)	PEL Exceedances (%)	LEL Exceedances (%)	SEL Exceedances (%)	ISQG Exceedances (%)	PEL Exceedances (%)	LEL Exceedances (%)	SEL Exceedances (%)	ISQG Exceedances (%)	PEL Exceedances (%)	LEL Exceedances (%)	SEL Exceedances (%)
Arsenic	**5.9**	**17**	**6**	**33**	67	0	67	0	100	25	100	0	0	0	0	0
Cadmium	**0.6**	**3.5**	**0.6**	**10**	100	0	100	0	100	0	100	0	0	0	0	0
Chromium	**-**	**-**	**26**	**110**	-	-	100	100	-	-	100	100	-	-	100	100
Copper	**35.7**	**197**	**16**	**110**	100	0	100	0	100	0	100	0	0	0	100	0
Iron	**-**	**-**	**20000**	**40000**	-	-	100	0	-	-	100	0	-	-	0	0
Lead	**35**	**91.3**	**31**	**250**	100	67	100	0	100	100	100	50	100	0	100	0
Manganese	**-**	**-**	**460**	**1100**	-	-	100	33	-	-	100	0	-	-	100	0
Mercury	**0.17**	**0.486**	**0.2**	**2.0**	67	33	67	0	100	100	100	0	0	0	0	0
Nickel	**-**	**-**	**16**	**75**	-	-	100	0	-	-	100	0	-	-	100	0
Phosphorus	**-**	**-**	**600**	**2000**	-	-	100	0	-	-	100	0	-	-	100	0
Zinc	**123**	**315**	**120**	**820**	100	0	100	0	100	25	100	0	0	0	0	0

Table 2: Summary of Metal Constituents Exceeding Regulatory Criteria in Surficial Sediment (0 to 0.1 m)

Parameter	CCME SQG (mg/kg dw)		OMOE 2008 (mg/kg dw)		Management Units											
					TC-4 (n=18)				TC-5 (n=6)				TC-AB (n=17)			
	ISQG	PEL	LEL	SEL	ISQG Exceedances (%)	PEL Exceedances (%)	LEL Exceedances (%)	SEL Exceedances (%)	ISQG Exceedances (%)	PEL Exceedances (%)	LEL Exceedances (%)	SEL Exceedances (%)	ISQG Exceedances (%)	PEL Exceedances (%)	LEL Exceedances (%)	SEL Exceedances (%)
Arsenic	**5.9**	**17**	**6**	**33**	72	11	67	6	33	0	33	0	82	0	82	0
Cadmium	**0.6**	**3.5**	**0.6**	**10**	78	0	78	0	100	0	100	0	88	0	88	0
Chromium	**-**	**-**	**26**	**110**	-	-	94	89	-	-	100	100	-	-	94	88
Copper	**35.7**	**197**	**16**	**110**	94	0	100	6	100	0	100	0	94	29	94	41
Iron	**-**	**-**	**20000**	**40000**	-	-	89	0	-	-	100	0	-	-	88	6
Lead	**35**	**91.3**	**31**	**250**	100	61	100	11	100	17	100	0	94	59	94	0
Manganese	**-**	**-**	**460**	**1100**	-	-	89	0	-	-	100	100	-	-	94	82
Mercury	**0.17**	**0.486**	**0.2**	**2.0**	100	28	89	11	33	0	33	0	76	0	65	0
Nickel	**-**	**-**	**16**	**75**	-	-	89	0	-	-	100	0	-	-	94	0
Phosphorus	**-**	**-**	**600**	**2000**	-	-	100	0	-	-	100	0	-	-	94	0
Zinc	**123**	**315**	**120**	**820**	94	11	94	0	100	0	100	0	94	29	94	0

Table 2: Summary of Metal Constituents Exceeding Regulatory Criteria in Surficial Sediment (0 to 0.1 m)

Parameter	CCME SQG (mg/kg dw)		OMOE 2008 (mg/kg dw)		Management Units											
					TC-OM (n=9)				TC-RC (n=10)				WM (n=7)			
	ISQG	PEL	LEL	SEL	ISQG Exceedances (%)	PEL Exceedances (%)	LEL Exceedances (%)	SEL Exceedances (%)	ISQG Exceedances (%)	PEL Exceedances (%)	LEL Exceedances (%)	SEL Exceedances (%)	ISQG Exceedances (%)	PEL Exceedances (%)	LEL Exceedances (%)	SEL Exceedances (%)
Arsenic	**5.9**	**17**	**6**	**33**	78	0	78	0	100	30	100	20	100	71	100	29
Cadmium	**0.6**	**3.5**	**0.6**	**10**	67	0	67	0	60	0	60	0	100	0	100	0
Chromium	**-**	**-**	**26**	**110**	-	-	100	100	-	-	100	100	-	-	100	100
Copper	**35.7**	**197**	**16**	**110**	78	0	100	0	70	0	100	0	100	0	100	0
Iron	**-**	**-**	**20000**	**40000**	-	-	89	0	-	-	100	0	-	-	100	0
Lead	**35**	**91.3**	**31**	**250**	100	67	100	0	100	70	100	0	100	100	100	0
Manganese	**-**	**-**	**460**	**1100**	-	-	89	0	-	-	100	10	-	-	100	14
Mercury	**0.17**	**0.486**	**0.2**	**2.0**	89	0	89	0	100	30	100	0	100	100	100	0
Nickel	**-**	**-**	**16**	**75**	-	-	100	0	-	-	100	0	-	-	100	0
Phosphorus	**-**	**-**	**600**	**2000**	-	-	100	0	-	-	100	0	-	-	100	0
Zinc	**123**	**315**	**120**	**820**	100	0	100	0	100	10	100	0	100	29	100	0

TABLE 3: Summary of PAH and PCB Constituents Exceeding Regulatory Criteria in Surficial Sediment (0 to 0.1 m)

Parameter	CCME SQG (mg/kg dw)		OMOE 2008 (mg/kg dw)		Management Units											
					PC-E (n=14)				PC-OM (n=5)				PC-W (n=15)			
	ISQG	PEL	LEL	SEL [1]	ISQG Exceedances (%)	PEL Exceedances (%)	LEL Exceedances (%)	SEL Exceedances (%)	ISQG Exceedances (%)	PEL Exceedances (%)	LEL Exceedances (%)	SEL Exceedances (%)	ISQG Exceedances (%)	PEL Exceedances (%)	LEL Exceedances (%)	SEL Exceedances (%)
Acenaphthene	**0.0067**	**0.089**	-	**-**	100	14	-	-	100	100	-	-	100	80	-	-
Acenaphthylene	**0.0059**	**0.128**	-	**-**	100	100	-	-	100	100	-	-	100	100	-	-
Anthracene	**0.0469**	**0.245**	**0.220**	**29.6**	100	21	29	0	100	100	100	0	100	73	80	0
Benz(a)anthracene	**0.0317**	**0.385**	**0.320**	**118.4**	100	93	100	0	100	100	100	0	100	100	100	0
Benzo(g,h,i)perylene	-	**-**	**0.170**	**25.6**	-	-	100	0	-	-	100	0	-	-	100	0
Benzo(a)pyrene	**0.0319**	**0.782**	**0.370**	**115.2**	100	57	100	0	100	100	100	0	100	93	100	0
Fluoranthene	**0.1110**	**2.355**	**0.750**	**81.6**	100	14	43	0	100	100	100	0	100	13	87	0
Indeno(1,2,3-c,d)pyrene	-	**-**	**0.200**	**25.6**	-	-	100	0	-	-	100	0	-	-	100	0
Naphthalene	**0.0346**	**0.391**	-	**-**	14	0	-	**-**	100	0	-	**-**	80	0	-	**-**
Pyrene	**0.0530**	**0.875**	**0.490**	**68.0**	100	57	100	0	100	100	100	0	100	100	100	0
Dibenz(a,h)anthracene	**0.0062**	**0.135**	**0.0600**	**10.4**	100	50	100	0	100	100	100	0	100	87	100	0
Fluorene	**0.0212**	**0.144**	**0.190**	**12.8**	100	14	14	0	100	100	100	0	100	60	60	0
Chrysene	**0.0571**	**0.862**	**0.340**	**36.8**	100	29	100	0	100	100	100	0	100	87	100	0
Phenanthrene	**0.0419**	**0.515**	**0.560**	**76.0**	100	21	14	0	100	100	100	0	100	67	67	0
Benzo(k)fluoranthene	-	**-**	**0.240**	**107.2**	-	-	57	0	-	-	100	0	-	-	87	0
Total PAHs	-	**-**	**4.00**	**800.0**	-	-	64	0	-	-	100	0	-	-	100	0
Total PCBs	**0.0341**	**0.277**	**0.07**	**42.4**	100	43	93	0	100	100	100	0	100	80	100	0

[1] - Numbers in this column converted to bulk sediment values by multiplying by the average TOC concentration of the sediments (Based on Ontario MOE)

TABLE 3: Summary of PAH and PCB Constituents Exceeding Regulatory Criteria in Surficial Sediment (0 to 0.1 m)

Parameter	CCME SQG (mg/kg dw)		OMOE 2008 (mg/kg dw)		Management Units											
					PPOM (n=6)				TC-1 (n=13)				TC-2A (n=13)			
	ISQG	PEL	LEL	SEL [1]	ISQG Exceedances (%)	PEL Exceedances (%)	LEL Exceedances (%)	SEL Exceedances (%)	ISQG Exceedances (%)	PEL Exceedances (%)	LEL Exceedances (%)	SEL Exceedances (%)	ISQG Exceedances (%)	PEL Exceedances (%)	LEL Exceedances (%)	SEL Exceedances (%)
Acenaphthene	**0.0067**	**0.089**	-	-	100	83	-	-	100	0	-	-	100	23	-	-
Acenaphthylene	**0.0059**	**0.128**	-	-	100	100	-	-	100	92	-	-	100	46	-	-
Anthracene	**0.0469**	**0.245**	**0.220**	**29.6**	100	33	50	0	100	0	0	0	100	23	23	0
Benz(a)anthracene	**0.0317**	**0.385**	**0.320**	**118.4**	100	100	100	0	100	15	31	0	100	100	100	0
Benzo(g,h,i)perylene	-	-	**0.170**	**25.6**			100	0	-	-	100	0	-	-	100	0
Benzo(a)pyrene	**0.0319**	**0.782**	**0.370**	**115.2**	100	83	100	0	100	8	85	0	100	31	100	0
Fluoranthene	**0.1110**	**2.355**	**0.750**	**81.6**	100	0	100	0	100	0	0	0	100	15	85	0
Indeno(1,2,3-c,d)pyrene	-	-	**0.200**	**25.6**	-	-	100	0	-	-	85	0	-	-	100	0
Naphthalene	**0.0346**	**0.391**	-	-	83	0	-	-	0	0	-	-	23	0	-	-
Pyrene	**0.0530**	**0.875**	**0.490**	**68.0**	100	100	100	0	100	0	54	0	100	62	100	0
Dibenz(a,h)anthracene	**0.0062**	**0.135**	**0.0600**	**10.4**	100	83	100	0	100	0	85	0	100	54	100	0
Fluorene	**0.0212**	**0.144**	**0.190**	**12.8**	100	33	0	0	85	0	0	0	100	15	15	0
Chrysene	**0.0571**	**0.862**	**0.340**	**36.8**	100	67	100	0	100	0	62	0	100	46	100	0
Phenanthrene	**0.0419**	**0.515**	**0.560**	**76.0**	100	50	50	0	100	0	0	0	100	54	54	0
Benzo(k)fluoranthene	-	-	**0.240**	**107.2**	-	-	100	0	-	-	15	0	-	-	92	0
Total PAHs	-	-	**4.00**	**800.0**	-	-	100	0	-	-	8	0	-	-	92	0
Total PCBs	**0.0341**	**0.277**	**0.07**	**42.4**	100	67	100	0	100	69	100	0	92	46	92	0

[1] - Numbers in this column converted to bulk sediment values by multiplying by the average TOC concentration of the sediments (Based on Ontario MOE)

TABLE 3: Summary of PAH and PCB Constituents Exceeding Regulatory Criteria in Surficial Sediment (0 to 0.1 m)

Parameter	CCME SQG (mg/kg dw)		OMOE 2008 (mg/kg dw)		Management Units											
					TC-2B (n=3)				TC-3A (n=4)				TC-3B (n=1)			
	ISQG	PEL	LEL	SEL [1]	ISQG Exceedances (%)	PEL Exceedances (%)	LEL Exceedances (%)	SEL Exceedances (%)	ISQG Exceedances (%)	PEL Exceedances (%)	LEL Exceedances (%)	SEL Exceedances (%)	ISQG Exceedances (%)	PEL Exceedances (%)	LEL Exceedances (%)	SEL Exceedances (%)
Acenaphthene	**0.0067**	**0.089**	-	-	100	0	-	-	100	25	-	-	100	0	-	-
Acenaphthylene	**0.0059**	**0.128**	-	-	100	67	-	-	100	75	-	-	100	100	-	-
Anthracene	**0.0469**	**0.245**	**0.220**	**29.6**	100	0	0	0	100	25	25	0	100	0	0	0
Benz(a)anthracene	**0.0317**	**0.385**	**0.320**	**118.4**	100	67	67	0	100	75	100	0	100	0	100	0
Benzo(g,h,i)perylene	-	-	**0.170**	**25.6**	-	-	100	0	-	-	100	0			100	0
Benzo(a)pyrene	**0.0319**	**0.782**	**0.370**	**115.2**	100	0	67	0	100	50	100	0	100	0	100	0
Fluoranthene	**0.1110**	**2.355**	**0.750**	**81.6**	100	0	0	0	100	0	50	0	100	0	0	0
Indeno(1,2,3-c,d)pyrene	-	-	**0.200**	**25.6**	-	-	67	0	-	-	100	0	-	-	100	0
Naphthalene	**0.0346**	**0.391**	-	-	0	0	-	-	75	0	-	-	0	0	-	-
Pyrene	**0.0530**	**0.875**	**0.490**	**68.0**	100	0	67	0	100	50	100	0	100	0	100	0
Dibenz(a,h)anthracene	**0.0062**	**0.135**	**0.0600**	**10.4**	100	0	100	0	100	50	100	0	100	0	100	0
Fluorene	**0.0212**	**0.144**	**0.190**	**12.8**	100	0	0	0	100	25	0	0	100	0	0	0
Chrysene	**0.0571**	**0.862**	**0.340**	**36.8**	100	0	67	0	100	25	100	0	100	0	100	0
Phenanthrene	**0.0419**	**0.515**	**0.560**	**76.0**	100	0	0	0	100	25	25	0	100	0	0	0
Benzo(k)fluoranthene	-	-	**0.240**	**107.2**	-	-	33	0	-	-	100	0	-	-	0	0
Total PAHs	-	-	**4.00**	**800.0**	-	-	0	0	-	-	75	0	-	-	0	0
Total PCBs	**0.0341**	**0.277**	**0.07**	**42.4**	100	67	100	0	100	100	100	0	100	0	100	0

[1] - Numbers in this column converted to bulk sediment values by multiplying by the average TOC concentration of the sediments (Based on Ontario MOE)

TABLE 3: Summary of PAH and PCB Constituents Exceeding Regulatory Criteria in Surficial Sediment (0 to 0.1 m)

Parameter	CCME SQG (mg/kg dw)		OMOE 2008 (mg/kg dw)		Management Units											
					TC-4 (n=18)				TC-5 (n=6)				TC-AB (n=17)			
	ISQG	PEL	LEL	SEL [1]	ISQG Exceedances (%)	PEL Exceedances (%)	LEL Exceedances (%)	SEL Exceedances (%)	ISQG Exceedances (%)	PEL Exceedances (%)	LEL Exceedances (%)	SEL Exceedances (%)	ISQG Exceedances (%)	PEL Exceedances (%)	LEL Exceedances (%)	SEL Exceedances (%)
Acenaphthene	**0.0067**	**0.089**	-	-	100	50	-	-	100	100	-	-	100	59	-	-
Acenaphthylene	**0.0059**	**0.128**	-	-	100	94	-	-	100	100	-	-	100	94	-	-
Anthracene	**0.0469**	**0.245**	**0.220**	**29.6**	100	61	67	0	100	100	100	0	100	76	88	0
Benz(a)anthracene	**0.0317**	**0.385**	**0.320**	**118.4**	100	100	100	0	100	100	100	0	100	100	100	0
Benzo(g,h,i)perylene	-	-	**0.170**	**25.6**	-	-	100	0	-	-	100	0	-	-	100	0
Benzo(a)pyrene	**0.0319**	**0.782**	**0.370**	**115.2**	100	94	100	0	100	100	100	0	100	76	100	0
Fluoranthene	**0.1110**	**2.355**	**0.750**	**81.6**	100	17	89	0	100	17	100	0	100	6	100	0
Indeno(1,2,3-c,d)pyrene	-	-	**0.200**	**25.6**	-	-	100	0	-	-	100	0	-	-	100	0
Naphthalene	**0.0346**	**0.391**	-	-	72	6	-	-	17	0	-	-	76	0	-	-
Pyrene	**0.0530**	**0.875**	**0.490**	**68.0**	100	100	100	0	100	100	100	0	100	100	100	0
Dibenz(a,h)anthracene	**0.0062**	**0.135**	**0.0600**	**10.4**	100	100	100	0	100	83	100	0	100	88	100	0
Fluorene	**0.0212**	**0.144**	**0.190**	**12.8**	100	28	17	0	100	17	17	0	100	29	12	0
Chrysene	**0.0571**	**0.862**	**0.340**	**36.8**	100	72	100	0	100	100	100	0	100	65	100	0
Phenanthrene	**0.0419**	**0.515**	**0.560**	**76.0**	100	56	56	0	100	17	17	0	100	41	35	0
Benzo(k)fluoranthene	-	-	**0.240**	**107.2**	-	-	100	0	-	-	100	0	-	-	94	0
Total PAHs	-	-	**4.00**	**800.0**	-	-	100	0	-	-	100	0	-	-	100	0
Total PCBs	**0.0341**	**0.277**	**0.07**	**42.4**	100	61	89	0	100	0	100	0	100	12	94	0

[1] - Numbers in this column converted to bulk sediment values by multiplying by the average TOC concentration of the sediments (Based on Ontario MOE)

TABLE 3: Summary of PAH and PCB Constituents Exceeding Regulatory Criteria in Surficial Sediment (0 to 0.1 m)

Parameter	CCME SQG (mg/kg dw)		OMOE 2008 (mg/kg dw)		Management Units											
					TC-OM (n=4)				TC-RC (n=10)				WM (n=7)			
	ISQG	PEL	LEL	SEL [1]	ISQG Exceedances (%)	PEL Exceedances (%)	LEL Exceedances (%)	SEL Exceedances (%)	ISQG Exceedances (%)	PEL Exceedances (%)	LEL Exceedances (%)	SEL Exceedances (%)	ISQG Exceedances (%)	PEL Exceedances (%)	LEL Exceedances (%)	SEL Exceedances (%)
Acenaphthene	**0.0067**	**0.089**	-	-	100	50	-	-	100	10	-	-	100	29	-	-
Acenaphthylene	**0.0059**	**0.128**	-	-	100	100	-	-	100	50	-	-	100	100	-	-
Anthracene	**0.0469**	**0.245**	**0.220**	**29.6**	100	50	50	0	90	10	10	0	100	29	29	0
Benz(a)anthracene	**0.0317**	**0.385**	**0.320**	**118.4**	100	50	75	0	100	20	50	0	100	86	100	0
Benzo(g,h,i)perylene	-	-	**0.170**	**25.6**	-	-	100	0	-	-	100	0	-	-	100	0
Benzo(a)pyrene	**0.0319**	**0.782**	**0.370**	**115.2**	100	50	100	0	100	10	60	0	100	43	100	0
Fluoranthene	**0.1110**	**2.355**	**0.750**	**81.6**	100	25	50	0	100	10	30	0	100	29	57	0
Indeno(1,2,3-c,d)pyrene	-	-	**0.200**	**25.6**	-	-	100	0	-	-	80	0	-	-	100	0
Naphthalene	**0.0346**	**0.391**	-	-	50	25	-	-	20	0	-	-	43	0	-	-
Pyrene	**0.0530**	**0.875**	**0.490**	**68.0**	100	50	75	0	100	10	60	0	100	43	100	0
Dibenz(a,h)anthracene	**0.0062**	**0.135**	**0.0600**	**10.4**	100	50	100	0	100	10	70	0	100	29	100	0
Fluorene	**0.0212**	**0.144**	**0.190**	**12.8**	100	25	25	0	70	10	10	0	100	29	29	0
Chrysene	**0.0571**	**0.862**	**0.340**	**36.8**	100	50	75	0	100	10	60	0	100	29	100	0
Phenanthrene	**0.0419**	**0.515**	**0.560**	**76.0**	100	25	25	0	100	20	20	0	100	29	29	0
Benzo(k)fluoranthene	-	-	**0.240**	**107.2**	-	-	75	0	-	-	20	0	-	-	57	0
Total PAHs	-	-	**4.00**	**800.0**	-	-	50	0	-	-	20	0	-	-	43	0
Total PCBs	**0.0341**	**0.277**	**0.07**	**42.4**	100	50	100	0	100	40	100	0	100	57	100	0

[1] - Numbers in this column converted to bulk sediment values by multiplying by the average TOC concentration of the sediments (Based on Ontario MOE)

Table 4: Summary of Leachate Constituents Exceeding Regulatory Criteria in Surficial Sediment (0 to 0.1 m)

		Management Units														
		PC-OM (n=1)			PC-W (n=8)			PPOM (n=4)			TC-2A (n=2)			TC-3A (n=1)		
Parameter	O.Reg 347/558	Min (mg/L)	Max (mg/L)	Ontario Regulation Exceedances (%)	Min (mg/L)	Max (mg/L)	Ontario Regulation Exceedances (%)	Min (mg/L)	Max (mg/L)	Ontario Regulation Exceedances (%)	Min (mg/L)	Max (mg/L)	Ontario Regulation Exceedances (%)	Min (mg/L)	Max (mg/L)	Ontario Regulation Exceedances (%)
Metals																
Arsenic	**2.5**	0.025	0.025	0.0	0.025	0.025	0.0	0.025	0.025	0.0	0.025	0.025	0.0	0.088	0.088	0.0
Barium	**100**	1.040	1.040	0.0	0.640	1.090	0.0	1.090	1.330	0.0	0.870	1.120	0.0	1.220	1.220	0.0
Boron	**500**	1.250	1.250	0.0	1.250	1.250	0.0	1.250	1.250	0.0	1.250	1.250	0.0	1.250	1.250	0.0
Cadmium	**0.5**	0.003	0.003	0.0	0.003	0.003	0.0	0.003	0.003	0.0	0.003	0.003	0.0	0.003	0.003	0.0
Chromium	**5**	0.025	0.025	0.0	0.025	0.126	0.0	0.025	0.025	0.0	0.025	0.025	0.0	0.025	0.025	0.0
Lead	**5**	0.013	0.013	0.0	0.013	0.089	0.0	0.013	0.125	0.0	0.026	0.054	0.0	0.214	0.214	0.0
Mercury	**0.1**	0.000	0.000	0.0	0.000	0.000	0.0	0.000	0.000	0.0	0.000	0.000	0.0	0.000	0.000	0.0
Selenium	**1**	0.013	0.013	0.0	0.013	0.013	0.0	0.013	0.013	0.0	0.013	0.013	0.0	0.013	0.013	0.0
Silver	**5**	0.003	0.003	0.0	0.003	0.003	0.0	0.003	0.003	0.0	0.003	0.003	0.0	0.003	0.003	0.0
Uranium	**10**	0.125	0.125	0.0	0.125	0.125	0.0	0.125	0.125	0.0	0.125	0.125	0.0	0.125	0.125	0.0
Hydrocarbons																
Benzo(a)pyrene	**0.001**	0.001	0.001	0.0	0.001	0.001	0.000	0.001	0.001	0.0	0.001	0.001	0.0	0.001	0.001	0.0

Table 4: Summary of Leachate Constituents Exceeding Regulatory Criteria in Surficial Sediment (0 to 0.1 m)

Parameter	O.Reg 347/558	Management Units														
		TC-4 (n=2)			TC-AB (n=6)			TC-OM (n=1)			TC-RC (n=3)			WM (n=2)		
		Min (mg/L)	Max (mg/L)	Ontario Regulation Exceedances (%)	Min (mg/L)	Max (mg/L)	Ontario Regulation Exceedances (%)	Min (mg/L)	Max (mg/L)	Ontario Regulation Exceedances (%)	Min (mg/L)	Max (mg/L)	Ontario Regulation Exceedances (%)	Min (mg/L)	Max (mg/L)	Ontario Regulation Exceedances (%)
Metals																
Arsenic	**2.5**	0.025	0.025	0.0	0.025	0.025	0.0	0.025	0.025	0.0	0.025	0.025	0.0	0.025	0.179	0.0
Barium	**100**	0.840	0.910	0.0	0.560	0.860	0.0	1.300	1.300	0.0	1.210	1.660	0.0	0.900	0.960	0.0
Boron	**500**	1.250	1.250	0.0	1.250	1.250	0.0	1.250	1.250	0.0	1.250	1.250	0.0	1.250	1.250	0.0
Cadmium	**0.5**	0.003	0.003	0.0	0.003	0.003	0.0	0.003	0.003	0.0	0.003	0.003	0.0	0.003	0.003	0.0
Chromium	**5**	0.025	0.025	0.0	0.025	0.025	0.0	0.025	0.025	0.0	0.025	0.068	0.0	0.025	0.025	0.0
Lead	**5**	0.013	0.051	0.0	0.013	0.070	0.0	0.087	0.087	0.0	0.046	0.161	0.0	0.040	0.104	0.0
Mercury	**0.1**	0.000	0.000	0.0	0.000	0.000	0.0	0.000	0.000	0.0	0.000	0.000	0.0	0.000	0.000	0.0
Selenium	**1**	0.013	0.013	0.0	0.013	0.013	0.0	0.013	0.013	0.0	0.013	0.013	0.0	0.013	0.013	0.0
Silver	**5**	0.003	0.003	0.0	0.003	0.003	0.0	0.003	0.003	0.0	0.003	0.003	0.0	0.003	0.003	0.0
Uranium	**10**	0.125	0.125	0.0	0.125	0.125	0.0	0.125	0.125	0.0	0.125	0.125	0.0	0.125	0.125	0.0
Hydrocarbons																
Benzo(a)pyrene	**0.001**	0.001	0.001	0.0	0.001	0.001	0.0	0.001	0.001	0.0	0.001	0.001	0.0	0.001	0.001	0.0

Table 6: Summary of Metal Constituents Exceeding Regulatory Criteria in Sub-surficial Sediment (0.1 to 0.8 m)

Parameter	CCME SQG (mg/kg dw)		OMOE 2008 (mg/kg dw)		Management Units											
					PC-OM (n=7)				PC-W (n=16)				PPOM (n=6)			
	ISQG	PEL	LEL	SEL	ISQG Exceedances (%)	PEL Exceedances (%)	LEL Exceedances (%)	SEL Exceedances (%)	ISQG Exceedances (%)	PEL Exceedances (%)	LEL Exceedances (%)	SEL Exceedances (%)	ISQG Exceedances (%)	PEL Exceedances (%)	LEL Exceedances (%)	SEL Exceedances (%)
Arsenic	**5.9**	**17**	**6**	**33**	14	0	14	0	81	13	81	0	83	67	83	17
Cadmium	**0.6**	**3.5**	**0.6**	**10**	86	0	86	0	56	0	56	0	83	0	83	0
Chromium	**-**	**-**	**26**	**110**	-	-	100	100	-	-	100	100	-	-	100	83
Copper	**35.7**	**197**	**16**	**110**	100	0	100	0	75	0	94	0	83	0	83	0
Iron	**-**	**-**	**20000**	**40000**	-	-	0	0	-	-	56	0	-	-	67	0
Lead	**35**	**91.3**	**31**	**250**	100	100	100	57	94	69	100	38	83	83	83	83
Manganese	**-**	**-**	**460**	**1100**	-	-	0	0	-	-	50	0	-	-	50	0
Mercury	**0.17**	**0.49**	**0.2**	**2.0**	71	14	43	0	94	38	81	0	83	67	83	0
Nickel	**-**	**-**	**16**	**75**	-	-	0	0	-	-	81	0	-	-	50	0
Phosphorus	**-**	**-**	**600**	**2000**	-	-	100	14	-	-	88	19	-	-	83	0
Zinc	**123**	**315**	**120**	**820**	100	14	100	0	88	25	88	0	83	33	83	0

Table 6: Summary of Metal Constituents Exceeding Regulatory Criteria in Sub-surficial Sediment (0.1 to 0.8 m)

Parameter	CCME SQG (mg/kg dw)		OMOE 2008 (mg/kg dw)		Management Units											
					TC-4 (n=5)				TC-AB (n=3)				TC-OM (n=13)			
	ISQG	PEL	LEL	SEL	ISQG Exceedances (%)	PEL Exceedances (%)	LEL Exceedances (%)	SEL Exceedances (%)	ISQG Exceedances (%)	PEL Exceedances (%)	LEL Exceedances (%)	SEL Exceedances (%)	ISQG Exceedances (%)	PEL Exceedances (%)	LEL Exceedances (%)	SEL Exceedances (%)
Arsenic	**5.9**	**17**	**6**	**33**	60	0	60	0	100	0	100	0	85	38	85	8
Cadmium	**0.6**	**3.5**	**0.6**	**10**	100	0	100	0	100	0	100	0	69	0	69	0
Chromium	**-**	**-**	**26**	**110**	-	-	100	100	-	-	100	100	-	-	100	92
Copper	**35.7**	**197**	**16**	**110**	100	0	100	0	100	33	100	100	77	0	92	0
Iron	**-**	**-**	**20000**	**40000**	-	-	100	0	-	-	100	33	-	-	92	0
Lead	**35**	**91.3**	**31**	**250**	100	60	100	0	100	100	100	0	92	77	92	8
Manganese	**-**	**-**	**460**	**1100**	-	-	100	0	-	-	100	0	-	-	92	0
Mercury	**0.17**	**0.49**	**0.2**	**2.0**	100	0	80	0	100	0	100	0	85	46	77	0
Nickel	**-**	**-**	**16**	**75**	-	-	100	0	-	-	100	0	-	-	92	0
Phosphorus	**-**	**-**	**600**	**2000**	-	-	100	0	-	-	100	0	-	-	85	0
Zinc	**123**	**315**	**120**	**820**	100	0	100	0	100	100	100	0	85	0	85	0

Table 6: Summary of Metal Constituents Exceeding Regulatory Criteria in Sub-surficial Sediment (0.1 to 0.8 m)

Parameter	CCME SQG (mg/kg dw)		OMOE 2008 (mg/kg dw)		Management Units							
					TC-RC (n=3)				WM (n=2)			
	ISQG	PEL	LEL	SEL	ISQG Exceedances (%)	PEL Exceedances (%)	LEL Exceedances (%)	SEL Exceedances (%)	ISQG Exceedances (%)	PEL Exceedances (%)	LEL Exceedances (%)	SEL Exceedances (%)
Arsenic	**5.9**	**17**	**6**	**33**	100	67	100	33	100	100	100	100
Cadmium	**0.6**	**3.5**	**0.6**	**10**	0	0	0	0	100	0	100	0
Chromium	**-**	**-**	**26**	**110**	-	-	100	67	-	-	100	100
Copper	**35.7**	**197**	**16**	**110**	33	0	100	0	100	0	100	0
Iron	**-**	**-**	**20000**	**40000**	-	-	100	0	-	-	100	0
Lead	**35**	**91.3**	**31**	**250**	67	33	67	0	100	100	100	100
Manganese	**-**	**-**	**460**	**1100**	-	-	100	0	-	-	100	0
Mercury	**0.17**	**0.49**	**0.2**	**2.0**	67	67	67	0	100	100	100	100
Nickel	**-**	**-**	**16**	**75**	-	-	100	0	-	-	100	50
Phosphorus	**-**	**-**	**600**	**2000**	-	-	100	0	-	-	100	0
Zinc	**123**	**315**	**120**	**820**	67	0	67	0	100	50	100	0

Table 7: Summary of PAH and PCB Constituents Exceeding Regulatory Criteria in Sub-surficial Sediment (0.1 to 0.8 m)

Parameter	CCME SQG (mg/kg dw)		OMOE 2008 (mg/kg dw)		Management Units											
					PC-OM (n=7)				PC-W (n=16)				PPOM (n=6)			
	ISQG	PEL	LEL	SEL [1]	ISQG Exceedances (%)	PEL Exceedances (%)	LEL Exceedances (%)	SEL Exceedances (%)	ISQG Exceedances (%)	PEL Exceedances (%)	LEL Exceedances (%)	SEL Exceedances (%)	ISQG Exceedances (%)	PEL Exceedances (%)	LEL Exceedances (%)	SEL Exceedances (%)
Acenaphthene	**0.0067**	**0.089**	-	-	100	100	-	-	100	69	-	-	100	67	-	-
Acenaphthylene	**0.0059**	**0.128**	-	-	100	100	-	-	100	100	-	-	100	67	-	-
Anthracene	**0.0469**	**0.245**	**0.220**	**29.6**	100	100	100	0	100	69	69	0	67	67	67	0
Benz(a)anthracene	**0.0317**	**0.385**	**0.320**	**118.4**	100	100	100	0	100	94	94	0	83	67	67	0
Benzo(g,h,i)perylene	-	-	**0.170**	**25.6**	-	-	100	0	-	-	94	0	-	-	67	0
Benzo(a)pyrene	**0.0319**	**0.782**	**0.370**	**115.2**	100	100	100	0	100	88	94	0	83	67	67	0
Fluoranthene	**0.1110**	**2.355**	**0.750**	**81.6**	100	71	100	0	100	56	88	0	67	17	67	0
Indeno(1,2,3-c,d)pyrene	-	-	**0.200**	**25.6**	-	-	100	0	-	-	94	0	-	-	67	0
Naphthalene	**0.0346**	**0.391**	-	-	86	0	-	-	69	0	-	-	67	0	-	-
Pyrene	**0.0530**	**0.875**	**0.490**	**68.0**	100	100	100	0	100	94	100	0	83	67	67	0
Dibenz(a,h)anthracene	**0.0062**	**0.135**	**0.0600**	**10.4**	100	100	100	0	100	81	94	0	100	67	67	0
Fluorene	**0.0212**	**0.144**	**0.190**	**12.8**	100	100	71	0	100	69	50	0	100	50	33	0
Chrysene	**0.0571**	**0.862**	**0.340**	**36.8**	100	100	100	0	100	81	94	0	67	67	67	0
Phenanthrene	**0.0419**	**0.515**	**0.560**	**76.0**	100	100	100	0	100	69	69	0	100	67	67	0
Benzo(k)fluoranthene	-	-	**0.240**	**107.2**	-	-	100	0	-	-	94	0	-	-	67	0
Total PAHs	-	-	**4.00**	**800.0**	-	-	100	0	-	-	94	0	-	-	67	0
Total PCBs	**0.0341**	**0.277**	**0.07**	**42.4**	100	29	100	0	100	88	100	0	83	83	83	0

[1] - Numbers in this column converted to bulk sediment values by multiplying by the average TOC concentration of the sediments (Based on Ontario MOE)

Table 7: Summary of PAH and PCB Constituents Exceeding Regulatory Criteria in Sub-surficial Sediment (0.1 to 0.8 m)

Parameter	CCME SQG (mg/kg dw)		OMOE 2008 (mg/kg dw)		Management Units											
					TC-4 (n=5)				TC-AB (n=3)				TC-OM (n=13)			
	ISQG	PEL	LEL	SEL [1]	ISQG Exceedances (%)	PEL Exceedances (%)	LEL Exceedances (%)	SEL Exceedances (%)	ISQG Exceedances (%)	PEL Exceedances (%)	LEL Exceedances (%)	SEL Exceedances (%)	ISQG Exceedances (%)	PEL Exceedances (%)	LEL Exceedances (%)	SEL Exceedances (%)
Acenaphthene	**0.0067**	**0.089**	-	-	100	80	-	-	100	100	-	-	100	15	-	-
Acenaphthylene	**0.0059**	**0.128**	-	-	100	100	-	-	100	100	-	-	100	77	-	-
Anthracene	**0.0469**	**0.245**	**0.220**	**29.6**	100	80	100	0	100	67	100	0	85	31	31	0
Benz(a)anthracene	**0.0317**	**0.385**	**0.320**	**118.4**	100	100	100	0	100	100	100	0	100	77	85	0
Benzo(g,h,i)perylene	-	-	**0.170**	**25.6**	-	-	100	0	-	-	100	0	-	-	85	0
Benzo(a)pyrene	**0.0319**	**0.782**	**0.370**	**115.2**	100	100	100	0	100	100	100	0	100	46	85	0
Fluoranthene	**0.1110**	**2.355**	**0.750**	**81.6**	100	0	100	0	100	33	100	0	92	0	38	0
Indeno(1,2,3-c,d)pyrene	-	-	**0.200**	**25.6**	-	-	100	0	-	-	100	0	-	-	85	0
Naphthalene	**0.0346**	**0.391**	-	-	100	0	-	-	100	0	-	-	62	0	-	-
Pyrene	**0.0530**	**0.875**	**0.490**	**68.0**	100	100	100	0	100	100	100	0	100	62	85	0
Dibenz(a,h)anthracene	**0.0062**	**0.135**	**0.0600**	**10.4**	100	100	100	0	100	100	100	0	100	46	85	0
Fluorene	**0.0212**	**0.144**	**0.190**	**12.8**	100	20	20	0	100	33	33	0	85	8	0	0
Chrysene	**0.0571**	**0.862**	**0.340**	**36.8**	100	100	100	0	100	67	100	0	92	31	85	0
Phenanthrene	**0.0419**	**0.515**	**0.560**	**76.0**	100	40	40	0	100	67	67	0	92	8	0	0
Benzo(k)fluoranthene	-	-	**0.240**	**107.2**	-	-	100	0	-	-	100	0	-	-	69	0
Total PAHs	-	-	**4.00**	**800.0**	-	-	100	0	-	-	100	0	-	-	69	0
Total PCBs	**0.0341**	**0.277**	**0.07**	**42.4**	100	80	100	0	100	33	100	0	85	69	85	0

[1] - Numbers in this column converted to bulk sediment values by multiplying by the average TOC concentration of the sediments (Based on Ontario MOE)

Table 7: Summary of PAH and PCB Constituents Exceeding Regulatory Criteria in Sub-surficial Sediment (0.1 to 0.8 m)

Parameter	CCME SQG (mg/kg dw)		OMOE 2008 (mg/kg dw)		Management Units							
					TC-RC (n=3)				WM (n=2)			
	ISQG	PEL	LEL	SEL [1]	ISQG Exceedances (%)	PEL Exceedances (%)	LEL Exceedances (%)	SEL Exceedances (%)	ISQG Exceedances (%)	PEL Exceedances (%)	LEL Exceedances (%)	SEL Exceedances (%)
Acenaphthene	**0.0067**	**0.089**	-	-	67	0	-	-	100	100	-	-
Acenaphthylene	**0.0059**	**0.128**	-	-	100	0	-	-	100	100	-	-
Anthracene	**0.0469**	**0.245**	**0.220**	**29.6**	67	0	0	0	100	100	100	0
Benz(a)anthracene	**0.0317**	**0.385**	**0.320**	**118.4**	100	0	33	0	100	100	100	0
Benzo(g,h,i)perylene	-	-	**0.170**	**25.6**	-	-	33	0	-	-	100	0
Benzo(a)pyrene	**0.0319**	**0.782**	**0.370**	**115.2**	100	0	0	0	100	100	100	0
Fluoranthene	**0.1110**	**2.355**	**0.750**	**81.6**	100	0	0	0	100	50	100	0
Indeno(1,2,3-c,d)pyrene	-	-	**0.200**	**25.6**	-	-	0	0	-	-	100	0
Naphthalene	**0.0346**	**0.391**	-	-	0	0	-	-	100	0	-	-
Pyrene	**0.0530**	**0.875**	**0.490**	**68.0**	100	0	33	0	100	100	100	0
Dibenz(a,h)anthracene	**0.0062**	**0.135**	**0.0600**	**10.4**	100	0	33	0	100	100	100	0
Fluorene	**0.0212**	**0.144**	**0.190**	**12.8**	67	0	0	0	100	100	50	0
Chrysene	**0.0571**	**0.862**	**0.340**	**36.8**	100	0	33	0	100	100	100	0
Phenanthrene	**0.0419**	**0.515**	**0.560**	**76.0**	100	0	0	0	100	100	100	0
Benzo(k)fluoranthene	-	-	**0.240**	**107.2**	-	-	0	0	-	-	100	0
Total PAHs	-	-	**4.00**	**800.0**	-	-	0	0	-	-	100	0
Total PCBs	**0.0341**	**0.277**	**0.07**	**42.4**	67	0	33	0	100	100	100	0

[1] - Numbers in this column converted to bulk sediment values by multiplying by the average TOC concentration of the sediments (Based on Ontario MOE)

PATH: Y:\burnaby\CAD-GIS\Client\PWGSC\Kingston_Inner_Harbour\99_PROJECTS\1783886\8000\8007\02_PRODUCTION\MXD\Report\1783886_8000_8007_FIG_2_Proposed_Sampling_Locations.mxd

382000 382500

4900500 4900000 4899500 4899000

PC-W PC-OM PC-E PC-N Belle Island PP-OM Orchard Street Marsh TC-OM Former Lead Smelter Former Davis Tannery TC-1 TC-RC Emma Martin Park WM Woolen Mill TC-2B TC-E TC-2A TC-3B TC-3A TC-4 Douglas Fluhrer Park TC-5 TC-AB Anglin Bay

PCW-SG-004 PCW-SGC-005 PCW-SG-006 PCE-SG-009 PCW-SGC-007 PCE-SG-010 PCW-SGC-013 PCW-SG-008 PCW-SG-003 PCW-SGC-001 PCE-SG-008 PCW-SG-012 PCW-SG-002 PCE-SG-007 PCW-SG-010 PCE-SG-004 PCOM-SC-001B PCOM-SG-001 PCE-SG-003 PCE-SG-006 PCOM-SC-001A PCW-SG-009 PCE-SG-011 PCE-SG-005 PCOM-SC-001 PCOM-SG-002 PCW-SGC-011 PCW-SG-014 PCE-SG-001 PCE-SG-012 PCE-SG-002 PCOM-SG-003 PCW-SG-015 PCE-SG-014 PPOM-SGC-002 PPOM-SG-001 PPOM-SG-003 PCE-SG-013 PPOM-SGC-004 PCW-SG-016 PPOM-SG-005 TCOM-SGC-001 PPOM-SG-006 TCOM-SG-002 TCOM-SG-003 TCOM-SG-004 TC1-SG-001 TC1-SG-006 TC1-SG-007 TC1-SG-008 TCOM-SG-005 TC1-SG-002 TCOM-SGC-006 TCOM-SG-008 TCOM-SGC-007 TC1-SG-003 TC1-SG-009 TC1-SG-010 TC1-SG-011 TCOM-SGC-009 TC1-SG-004 TCRC-SG-002 TCRC-SG-001 TC1-SG-005 TCRC-SG-003 TCRC-SGC-004 TCRC-SG-005 TC1-SG-012 TCRC-SG-006 TC1-SG-013 TC1-SG-014 TCRC-SG-007 TCRC-SG-008 TCRC-SG-009 TCRC-SGC-010 WM-SG-001 WM-SG-002 TC2B-SG-002 WM-SGC-003 WM-SG-004 TC2B-SG-001 WM-SG-007 WM-SG-005 WM-SG-006 TC2A-SG-001 TC2A-SG-002 TC2A-SG-003 TC2B-SG-003 TC2B-SG-004 TC2A-SG-004 TC2A-SG-005 TC2A-SG-006 TC2A-SG-013 TC2A-SG-007 TC2A-SG-008 TC3B-SG-001 TC2A-SG-012 TC2A-SG-009 TC2A-SG-010 TC2A-SG-011 TC3A-SG-004 TC3A-SG-001 TC3A-SG-002 TC3A-SG-003 TC5-SG-001 TC5-SG-005 TC4-SG-007 TC4-SG-004 TC4-SGC-009 TC4-SG-002 TC4-SG-005 TC4-SG-001 TC4-SG-013 TC4-SGC-003 TC4-SG-008 TC4-SG-014 TC4-SG-006 TC4-SGC-010 TC4-SG-011 TC4-SG-013 TC4-SG-012 TC5-SG-002 TC5-SG-006 TCAB-SG-002 TCAB-SG-004 TC5-SG-003 TCAB-SG-003 TCAB-SG-005 TCAB-SG-006 TCAB-SG-007 TCAB-SG-017 TCAB-SG-008 TCAB-SG-016 TCAB-SGC-001 TCAB-SGC-015 TCAB-SG-014 TC5-SG-004 TC5-SG-007 TCAB-SG-009 TCAB-SG-010 TCAB-SG-011 TCAB-SGC-012 TCAB-SG-013

LEGEND

- MANAGEMENT UNIT
- CITY OF KINGSTON JURISDICTION
- PARKS CANADA JURISDICTION
- DEPARTMENT OF NATIONAL DEFENCE JURISDICTION
- TRANSPORT CANADA JURISDICTION
- FEDERAL WATER LOT
- WATERBODY

PROPOSED SAMPLE LOCATION AND TYPE

- SURFACE GRAB
- SURFACE GRAB AND CORE

0 120 240

1:5,000 METERS

REFERENCES

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2. WATERBODIES AND WATERCIOURSES OBTAINED FROM THE CITY OF KINGSTON ONTARIO.
3. PROJECTION: UTM ZONE 18 DATUM: NAD 83

CLIENT
PWGSC

PROJECT
KINGSTON INNER HARBOUR
KINGSTON, ONTARIO

TITLE
PROPOSED SAMPLING LOCATIONS

CONSULTANT
GOLDER
MEMBER OF WSP

YYYY-MM-DD	2021-03-09
DESIGNED	JD
PREPARED	JP/CDAB/MH
REVIEWED	
APPROVED	

PROJECT NO.	PHASE	REV.	FIGURE
1783886	8000/8007	A	3

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

25mm 0

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381500 382000 382500

4900500 4900000 4899500 4899000

PC-N

PC-W

PC-OM

PC-E

PP-OM

TC-OM

TC-1

TC-RC

WM

TC-2B

TC-E

TC-2A

TC-3B

TC-3A

TC-4

TC-AB

TC-5

LEGEND

- SURFACE GRAB SAMPLE LOCATION
- FEDERAL WATER LOT BOUNDARY
- MANAGEMENT UNIT

ANTIMONY

- 0 - 0.2 mg/kg
- 0.2 - 0.6 mg/kg (<LAET)
- 0.6 - 1.9 mg/kg (<2LAET)
- 1.9 - 6 mg/kg
- 6 - 20 mg/kg
- > 20 mg/kg

FOR DISCUSSION PURPOSES ONLY

DRAFT

0 120 240

1:6,000 METERS

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CLIENT
PWGSC

PROJECT
KINGSTON INNER HARBOUR
KINGSTON, ONTARIO

TITLE
ANTIMONY BULK SEDIMENT CHEMISTRY AND INVERSE WEIGHTED DISTANCE SURFACE (2021)

CONSULTANT
GOLDER
MEMBER OF WSP

YYYY-MM-DD	2022-01-27
DESIGNED	CP
PREPARED	JP/MH
REVIEWED	
APPROVED	

PROJECT NO.	PHASE	REV.	FIGURE
1783886	8007	A	4

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

25mm

0

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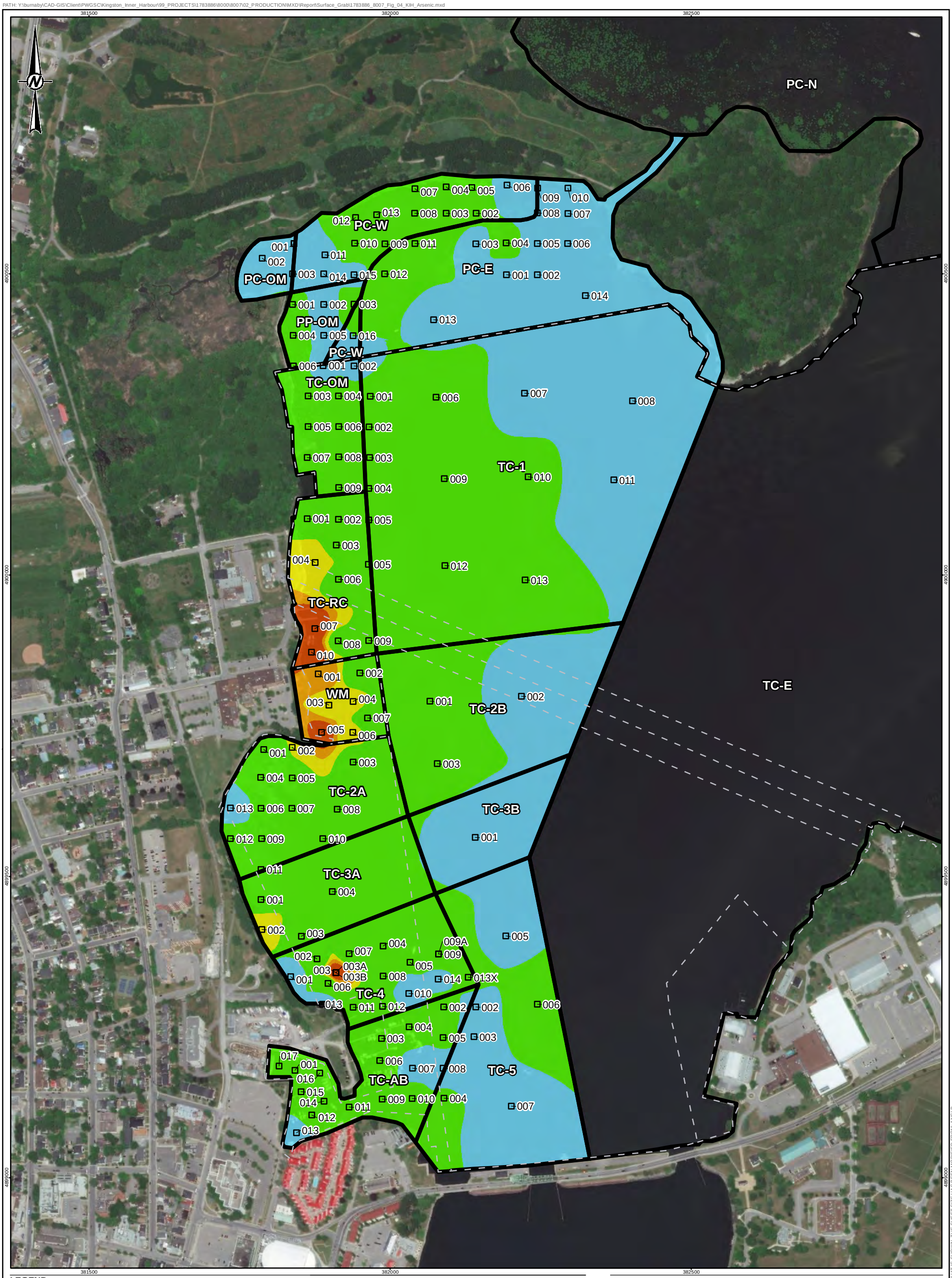

LEGEND

- SURFACE GRAB SAMPLE LOCATION
- FEDERAL WATER LOT BOUNDARY
- MANAGEMENT UNIT

ARSENIC

- 0 - 5.9 mg/kg (<ISQG)
- 5.9 - 17 mg/kg (<PEL)
- 17- 33 mg/kg (<SEL)
- 33 - 50.9 mg/kg (<2LAET)
- 50.9 - 100 mg/kg
- > 100 mg/kg

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0 120 240

1:6,000 METERS

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PROJECTION: UTM ZONE 18 DATUM: NAD 83

CLIENT
PWGSC

PROJECT
KINGSTON INNER HARBOUR
KINGSTON, ONTARIO

TITLE
ARSENIC BULK SEDIMENT CHEMISTRY AND INVERSE WEIGHTED DISTANCE SURFACE (2021)

CONSULTANT
GOLDER
MEMBER OF WSP

YYYY-MM-DD	2022-01-27
DESIGNED	CP
PREPARED	JP/MH
REVIEWED	
APPROVED	

PROJECT NO.	PHASE	REV.	FIGURE
1783886	8007	A	5

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

25mm

0

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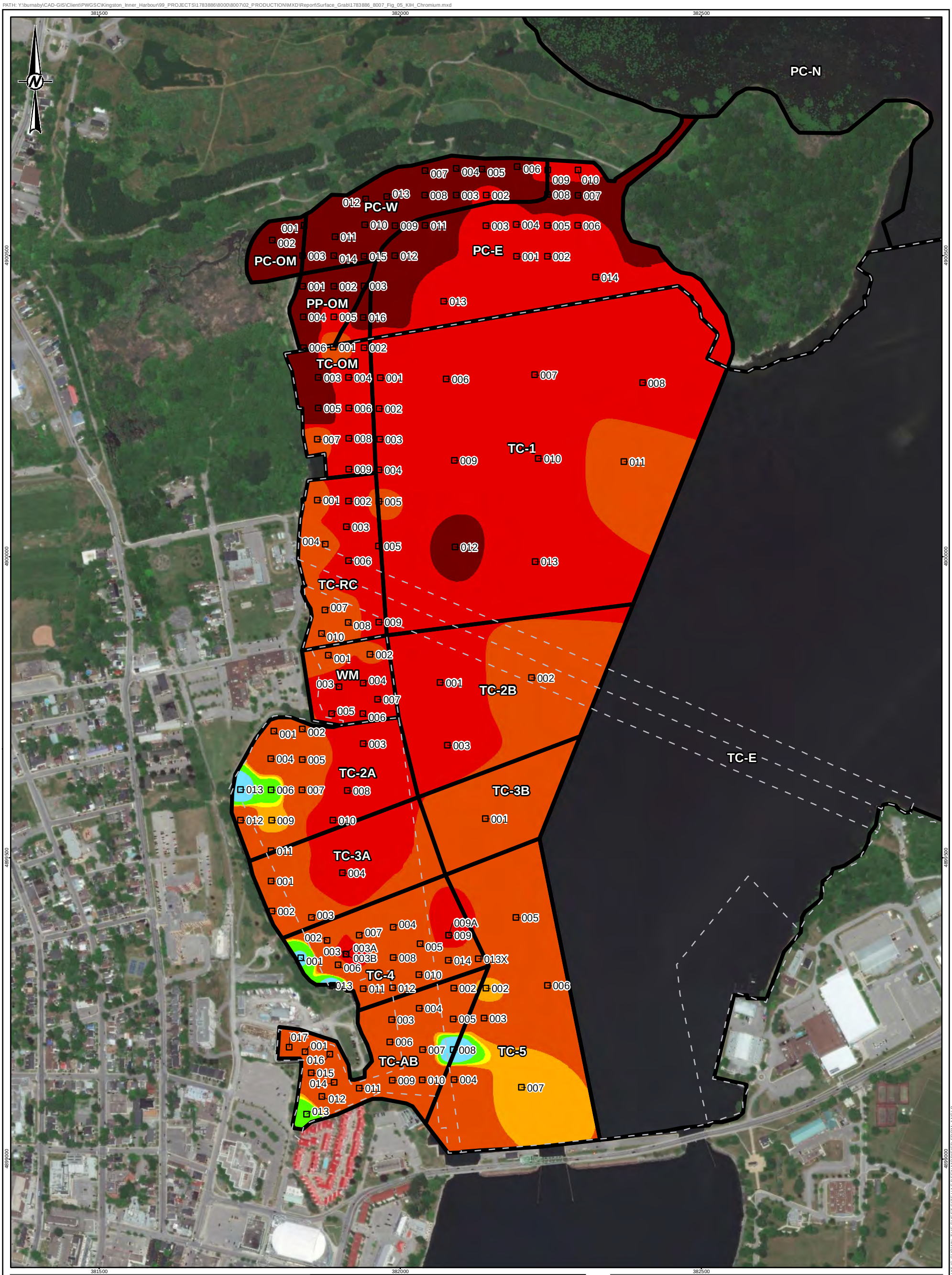

LEGEND

- SURFACE GRAB SAMPLE LOCATION
- FEDERAL WATER LOT BOUNDARY
- MANAGEMENT UNIT

CHROMIUM

- 0 - 37.3 mg/kg (<ISQG)
- 37.3 - 90 mg/kg (<PEL)
- 90 - 110 mg/kg (<SEL)
- 110 - 133 mg/kg (<2LAET)
- 133 - 500 mg/kg
- 500 - 1,000 mg/kg
- > 1,000 mg/kg

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0 120 240

1:6,000 METERS

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CLIENT
PWGSC

PROJECT
KINGSTON INNER HARBOUR
KINGSTON, ONTARIO

TITLE
CHROMIUM BULK SEDIMENT CHEMISTRY AND INVERSE WEIGHTED DISTANCE SURFACE (2021)

CONSULTANT
GOLDER
MEMBER OF WSP

YYYY-MM-DD	2022-01-27
DESIGNED	CP
PREPARED	JP/MH
REVIEWED	
APPROVED	

PROJECT NO.	PHASE	REV.	FIGURE
1783886	8007	A	6

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

25mm

0

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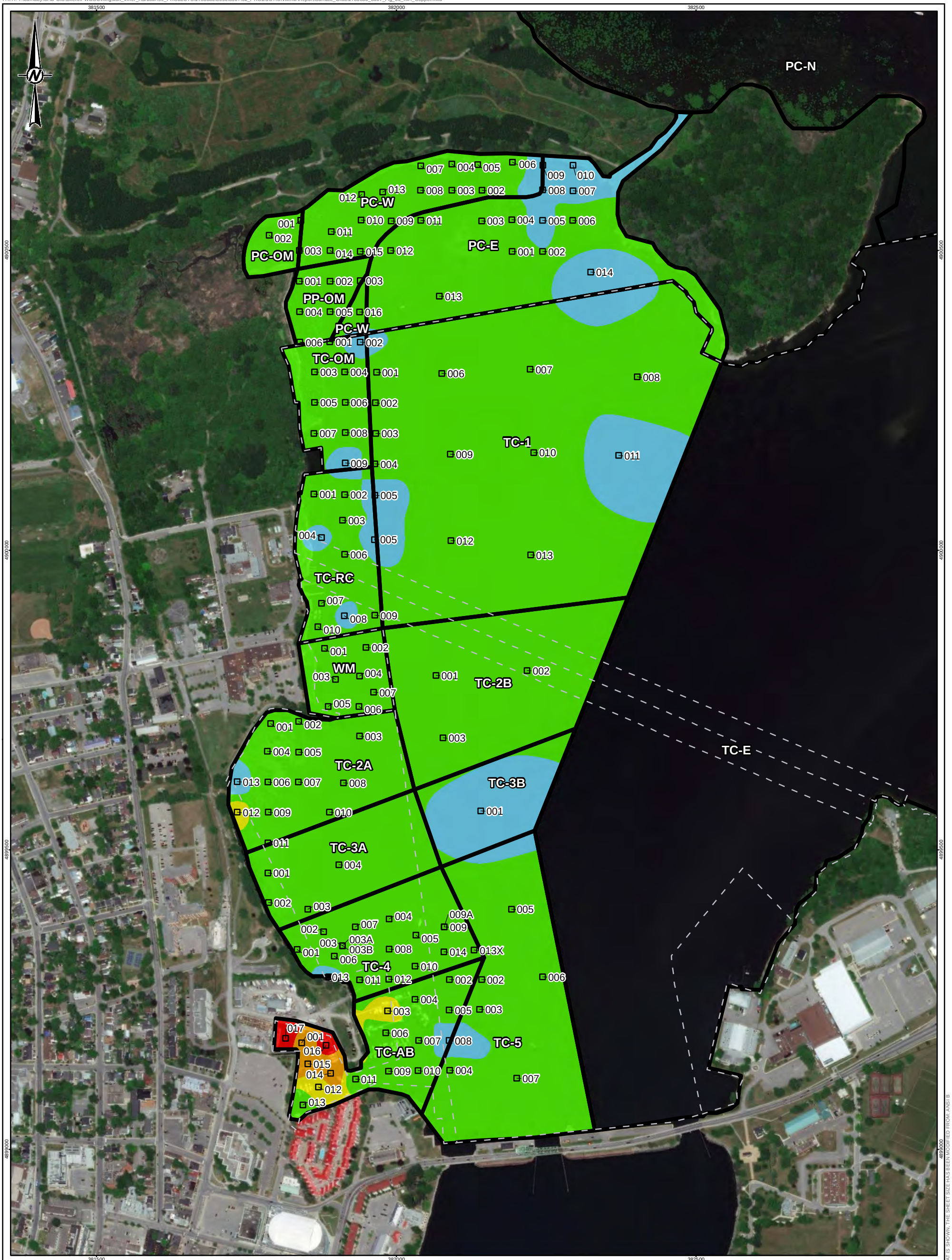

LEGEND

- SURFACE GRAB SAMPLE LOCATION
- FEDERAL WATER LOT BOUNDARY
- MANAGEMENT UNIT

COPPER

- 0 - 35.7 mg/kg (<ISQG)
- 35.7 - 110 mg/kg (<SEL)
- 110 - 197 mg.kg (<PEL)
- 197 - 619 mg/kg (<LAET)
- 619 - 829 mg/kg (<2LAET)

FOR DISCUSSION PURPOSES ONLY

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0 120 240

1:6,000 METERS

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CLIENT
PWGSC

PROJECT
KINGSTON INNER HARBOUR
KINGSTON, ONTARIO

TITLE
COPPER BULK SEDIMENT CHEMISTRY AND INVERSE WEIGHTED DISTANCE SURFACE (2021)

CONSULTANT
GOLDER
MEMBER OF WSP

YYYY-MM-DD	2022-01-27
DESIGNED	CP
PREPARED	JP/MH
REVIEWED	
APPROVED	

PROJECT NO.	PHASE	REV.	FIGURE
1783886	8007	A	7

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

25mm

0

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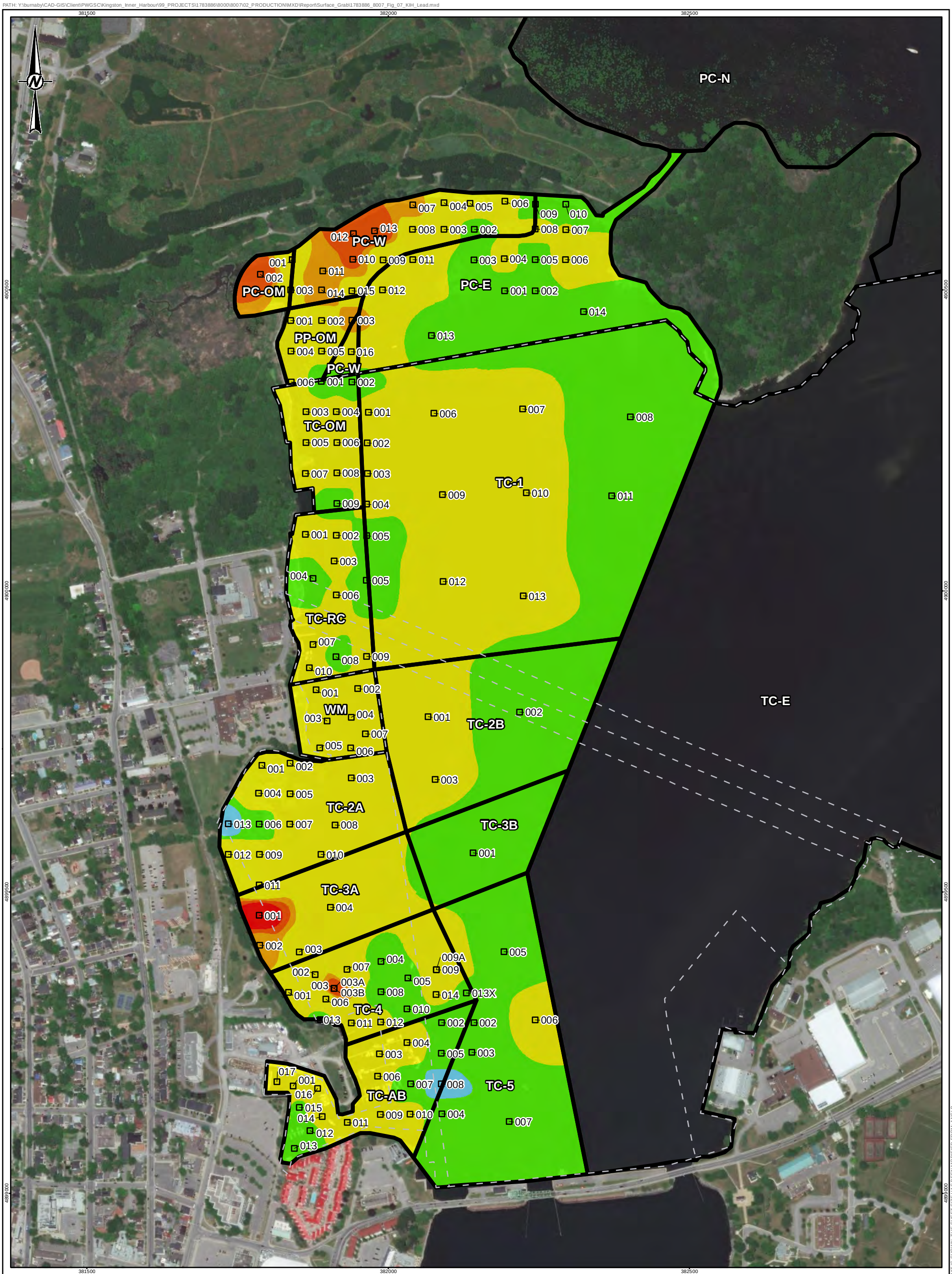

LEGEND

- SURFACE GRAB SAMPLE LOCATION
- FEDERAL WATER LOT BOUNDARY
- MANAGEMENT UNIT

LEAD

- 0 - 35 mg/kg (<ISQG)
- 35 - 91.3 mg/kg (<PEL)
- 91.3 - 250 mg/kg
- 250 - 335 mg/kg (<LAET)
- 335 - 431 mg/kg (<2LAET)
- >431 mg/kg

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0 120 240

1:6,000 METERS

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PWGSC

PROJECT
KINGSTON INNER HARBOUR
KINGSTON, ONTARIO

TITLE
LEAD BULK SEDIMENT CHEMISTRY AND INVERSE WEIGHTED DISTANCE SURFACE (2021)

CONSULTANT
GOLDER
MEMBER OF WSP

YYYY-MM-DD	2022-01-27
DESIGNED	CP
PREPARED	JP/MH
REVIEWED	
APPROVED	

PROJECT NO.	PHASE	REV.	FIGURE
1783886	8007	A	8

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

25mm

0

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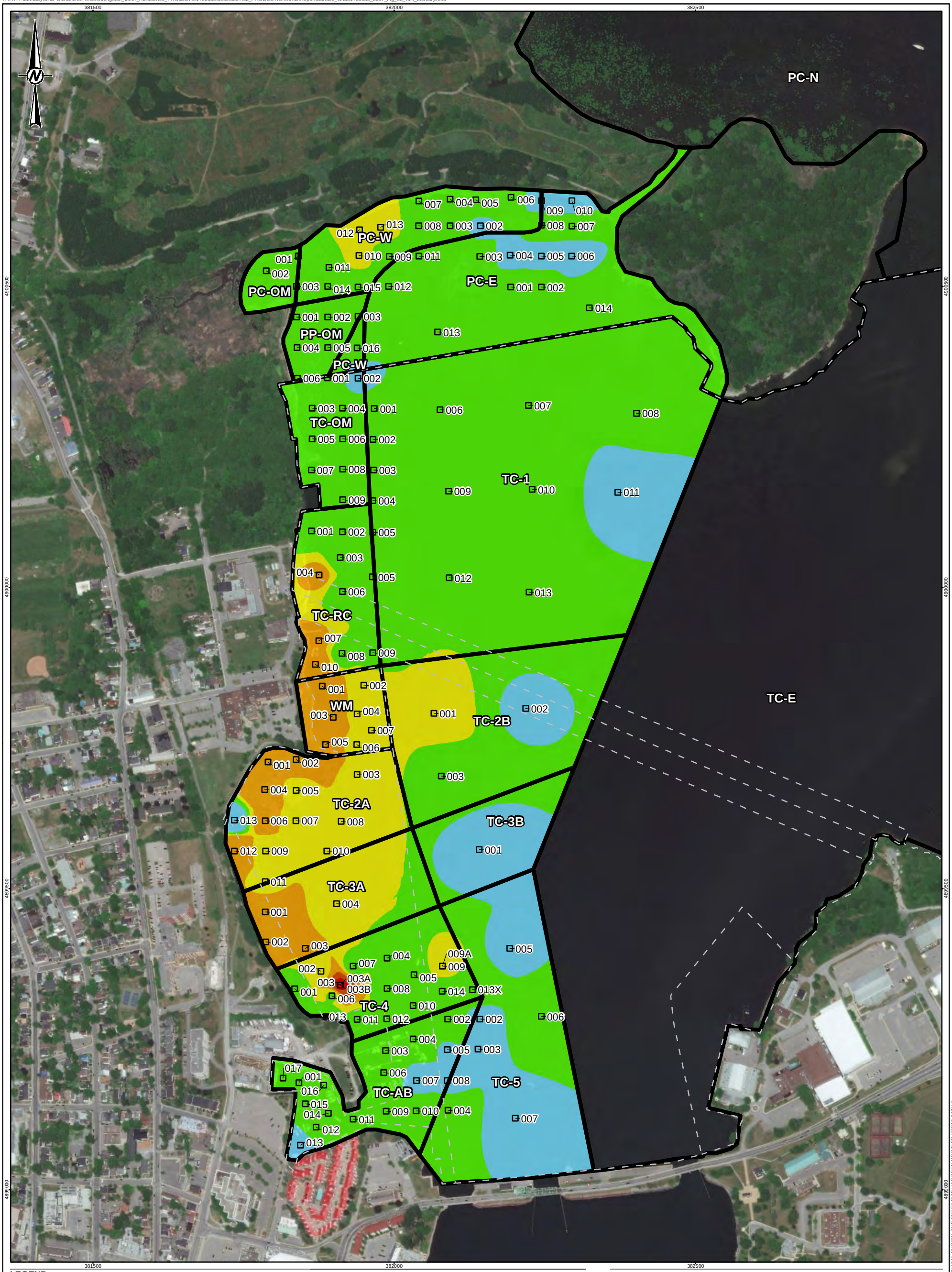

LEGEND

- SURFACE GRAB SAMPLE LOCATION
- FEDERAL WATER LOT BOUNDARY
- MANAGEMENT UNIT

MERCURY

- 0 - 0.17 mg/kg (<ISQG)
- 0.17 - 0.486 mg/kg (<PEL)
- 0.486 - 0.8 mg/kg (<LAET)
- 0.8 - 2 mg/kg (<SEL)
- 2 - 3.04 mg/kg (<2LAET)
- > 3.04 mg/kg

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0 120 240

1:6,000 METERS

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PROJECT
KINGSTON INNER HARBOUR
KINGSTON, ONTARIO

TITLE
MERCURY BULK SEDIMENT CHEMISTRY AND INVERSE WEIGHTED DISTANCE SURFACE (2021)

CONSULTANT
GOLDER
MEMBER OF WSP

YYYY-MM-DD	2022-01-27
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APPROVED	

PROJECT NO.	PHASE	REV.	FIGURE
1783886	8007	A	9

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

25mm

0

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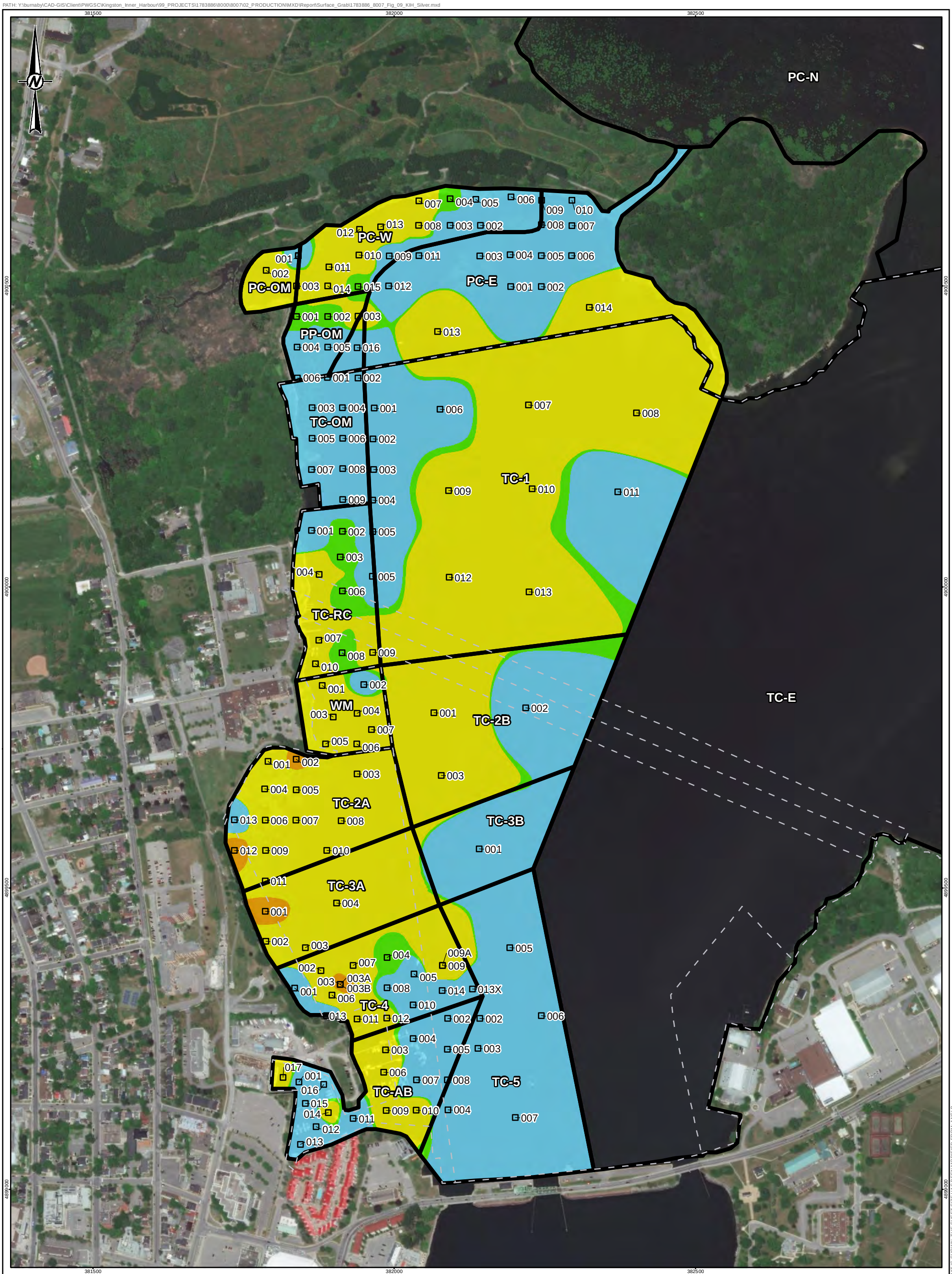

LEGEND

- SURFACE GRAB SAMPLE LOCATION
- FEDERAL WATER LOT BOUNDARY
- MANAGEMENT UNIT

SILVER

- 0 - 0.5 mg/kg
- 0.5 - 0.545 mg/kg (<LAET)
- 0.545 - 2 mg/kg
- 2 - 3.5 mg/kg (<2LAET)
- 3.5 - 4.5 mg/kg
- > 4.5 mg/kg

FOR DISCUSSION PURPOSES ONLY

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0 120 240

1:6,000 METERS

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CLIENT
PWGSC

PROJECT
KINGSTON INNER HARBOUR
KINGSTON, ONTARIO

TITLE
SILVER BULK SEDIMENT CHEMISTRY AND INVERSE WEIGHTED DISTANCE SURFACE (2021)

CONSULTANT
GOLDER
MEMBER OF WSP

YYYY-MM-DD	2022-01-27
DESIGNED	CP
PREPARED	JP/MH
REVIEWED	
APPROVED	

PROJECT NO.	PHASE	REV.	FIGURE
1783886	8007	A	10

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

0 25mm

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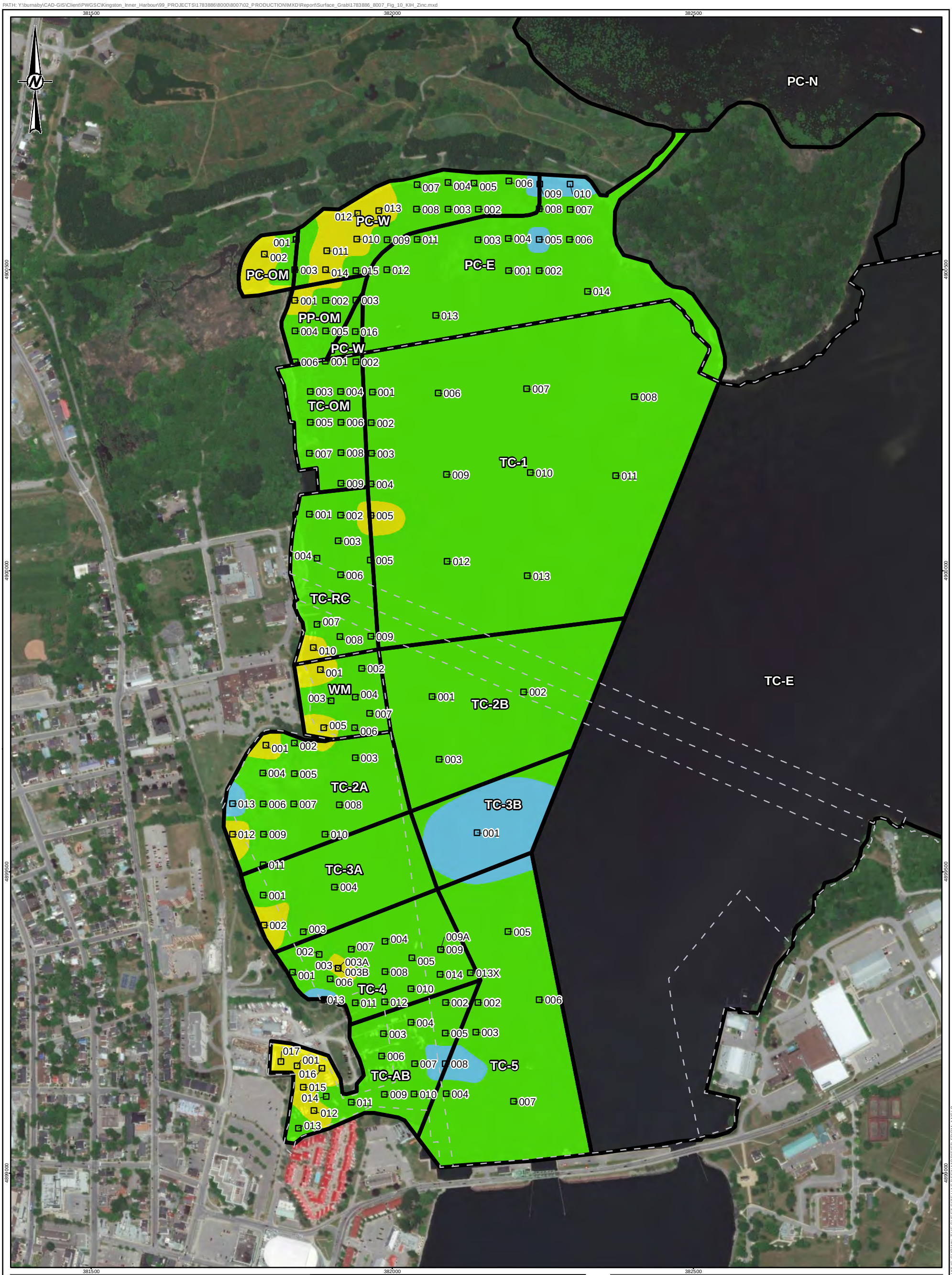

LEGEND

- SURFACE GRAB SAMPLE LOCATION
- FEDERAL WATER LOT BOUNDARY
- MANAGEMENT UNIT

ZINC

- 0 - 123 mg/kg (<ISQG)
- 123 - 315 mg/kg (<PEL)
- 315 - 683 mg/kg (<LAET)
- 683 - 820 mg/kg (<SEL)
- 820 - 1080 mg/kg (<2LAET)
- > 1080 mg/kg

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0 120 240

1:6,000 METERS

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CLIENT
PWGSC

PROJECT
KINGSTON INNER HARBOUR
KINGSTON, ONTARIO

TITLE
ZINC BULK SEDIMENT CHEMISTRY AND INVERSE WEIGHTED DISTANCE SURFACE (2021)

CONSULTANT
GOLDER
MEMBER OF WSP

YYYY-MM-DD	2022-01-27
DESIGNED	CP
PREPARED	JP/MH
REVIEWED	
APPROVED	

PROJECT NO.	PHASE	REV.	FIGURE
1783886	8007	A	11

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

25mm

0

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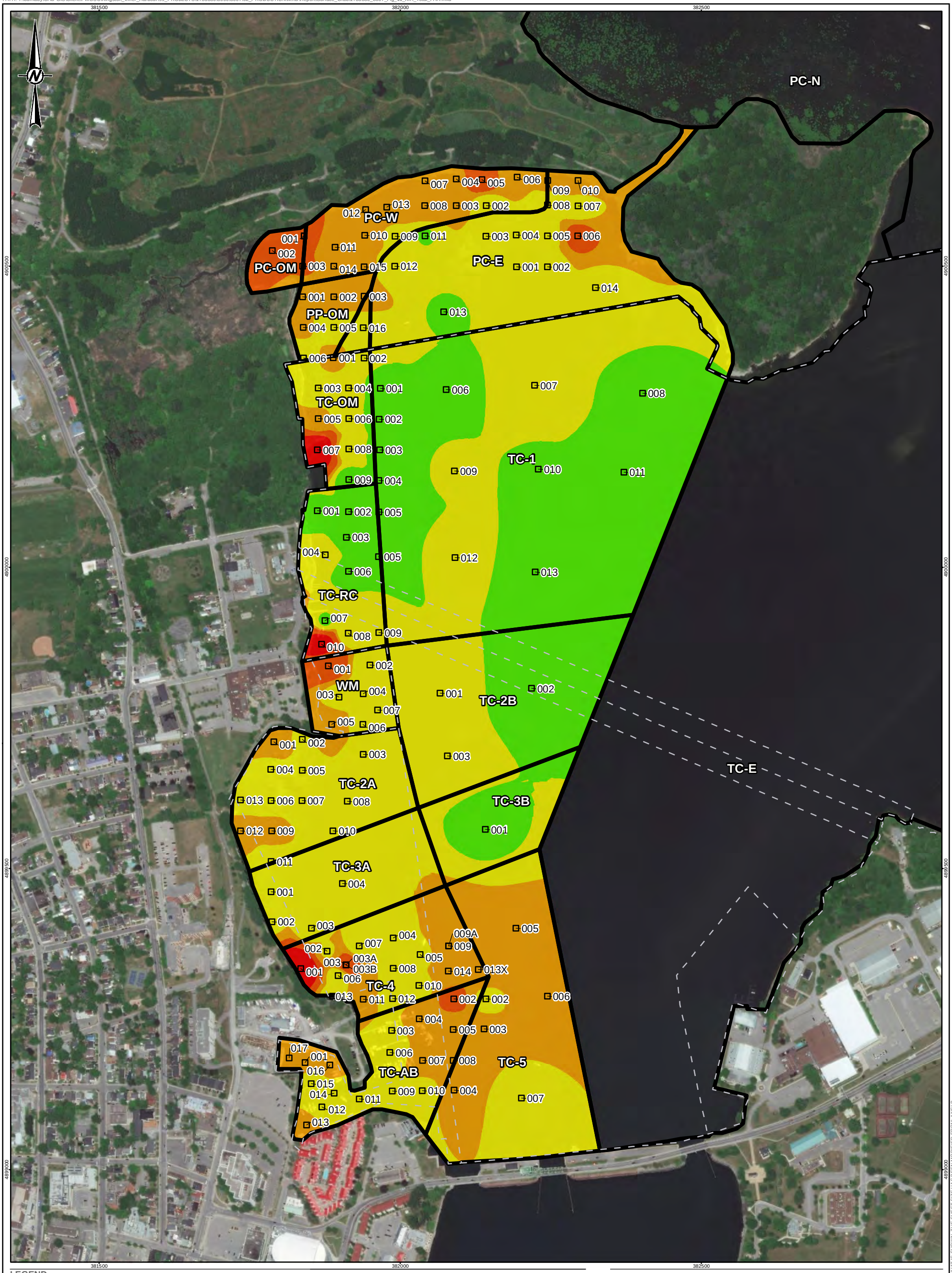

LEGEND

- SURFACE GRAB SAMPLE LOCATION
- FEDERAL WATER LOT BOUNDARY
- MANAGEMENT UNIT

TOTAL PAH

- 0 - 1.61 mg/kg (<TEC)
- 1.61 - 4 mg/kg (<LEL)
- 4 - 10 mg/kg
- 10 - 22.8 mg/kg (<PEC)
- 22.8 - 100 mg/kg
- 100 - 750 mg/kg

FOR DISCUSSION PURPOSES ONLY

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0 120 240

1:6,000 METERS

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CLIENT
PWGSC

PROJECT
KINGSTON INNER HARBOUR
KINGSTON, ONTARIO

TITLE
TOTAL PAH BULK SEDIMENT CHEMISTRY AND INVERSE WEIGHTED DISTANCE SURFACE (2021)

CONSULTANT
GOLDER
MEMBER OF WSP

YYYY-MM-DD	2022-01-27
DESIGNED	CP
PREPARED	JP/MH
REVIEWED	
APPROVED	

PROJECT NO.	PHASE	REV.	FIGURE
1783886	8007	A	12

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

0 25mm

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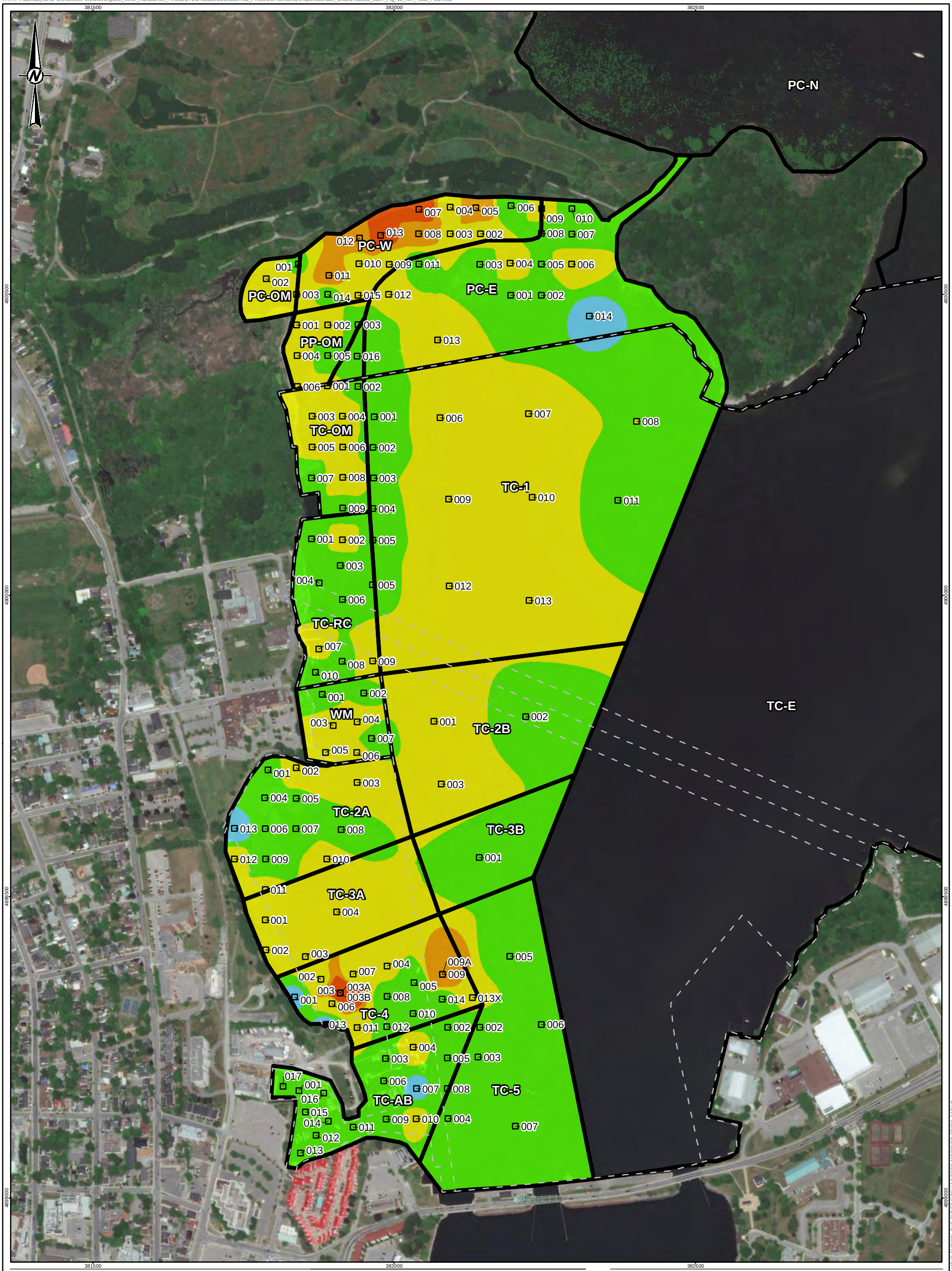

LEGEND

- SURFACE GRAB SAMPLE LOCATION
- FEDERAL WATER LOT BOUNDARY
- MANAGEMENT UNIT

TOTAL PCB

- 0 - 0.07 mg/kg (<LEL)
- 0.07 - 0.3 mg/kg (<PEL)
- 0.3 - 0.6 mg/kg (<LAET)
- 0.6 - 1 mg/kg
- 1 - 5.3 mg/kg (<SEL)
- > 5.3 mg/kg

FOR DISCUSSION PURPOSES ONLY

DRAFT

0 120 240

1:6,000 METERS

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PROJECTION: UTM ZONE 18 DATUM: NAD 83

CLIENT
PWGSC

PROJECT
KINGSTON INNER HARBOUR
KINGSTON, ONTARIO

TITLE
TOTAL PCB BULK SEDIMENT CHEMISTRY AND INVERSE WEIGHTED DISTANCE SURFACE (2021)

CONSULTANT
GOLDER
MEMBER OF WSP

YYYY-MM-DD	2022-01-27
DESIGNED	CP
PREPARED	JP/MH
REVIEWED	
APPROVED	

PROJECT NO.	PHASE	REV.	FIGURE
1783886	8007	A	13

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

25mm

0

PATH: Y:\burnaby\CAD-GIS\Client\PWGSC\Kingston_Inner_Harbour\99_PROJECTS\1783886\8000\8007\02_PRODUCTION\MXD\Report\Core\1783886_8007_Fig_13_Core_Antimony.mxd

381500 382000 382500

4900500 4900000 4899500 4899000

Former Belle Landfill
PC-N
PCW-SC-007
PCW-SC-005
PCOM-SC-001
PCW-SC-013
PC-W
PCW-SC-011
PCW-SC-001
Belle Island
PC-OM
PC-E
PPOM-SC-002
PP-OM
Orchard Street Marsh
PPOM-SC-004
TCOM-SC-001
TC-OM
Former Lead Smelter
TCOM-SC-006
TC-1
Former Davis Tannery
TCOM-SC-007
TCOM-SC-009
TCRC-SC-004
TC-RC
Emma Martin Park
TCRC-SC-010
TC-E
WM
WM-SC-003
Woolen Mill
TC-2B
TC-2A
TC-3B
TC-3A
Douglas Fluhrer Park
TC-4
TC4-SC-010
TC-AB
TC-5
TCAB-SC-001
TCAB-SC-015
Anglin Bay
TCAB-SC-012

381500 382000 382500

LEGEND

- FEDERAL WATER LOT BOUNDARY
- MANAGEMENT UNIT

Antimony

- 0 - 0.2 mg/kg
- 0.2 - 0.6 mg/kg (<LAET)
- 0.6 - 1.9 mg/kg (<2LAET)
- 1.9 - 6 mg/kg
- 6 - 20 mg/kg
- > 20 mg/kg

ORIGINAL CORE LOCATION
10-30 cm
30-50 cm
50-80 cm

ADDITIONAL CORE LOCATOIN
0-5 cm
5-10 cm
10-15 cm
15-20 cm
25-30 cm
30-50 cm
<50 cm

FOR DISCUSSION PURPOSES ONLY

DRAFT

0 120 240

1:6,000 METERS

REFERENCE(S)

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2. INSET BASE OBTAINED FROM ESRI CANADA.
PROJECTION: UTM ZONE 18 DATUM: NAD 83

CLIENT
PWGSC

PROJECT
KINGSTON INNER HARBOUR
KINGSTON, ONTARIO

TITLE
ANTIMONY SEDIMENT CONCENTRATION BELOW SEDIMENT SURFACE (2021)

CONSULTANT
GOLDER
MEMBER OF WSP

YYYY-MM-DD	2022-01-27
DESIGNED	CP
PREPARED	JP/MH
REVIEWED	
APPROVED	

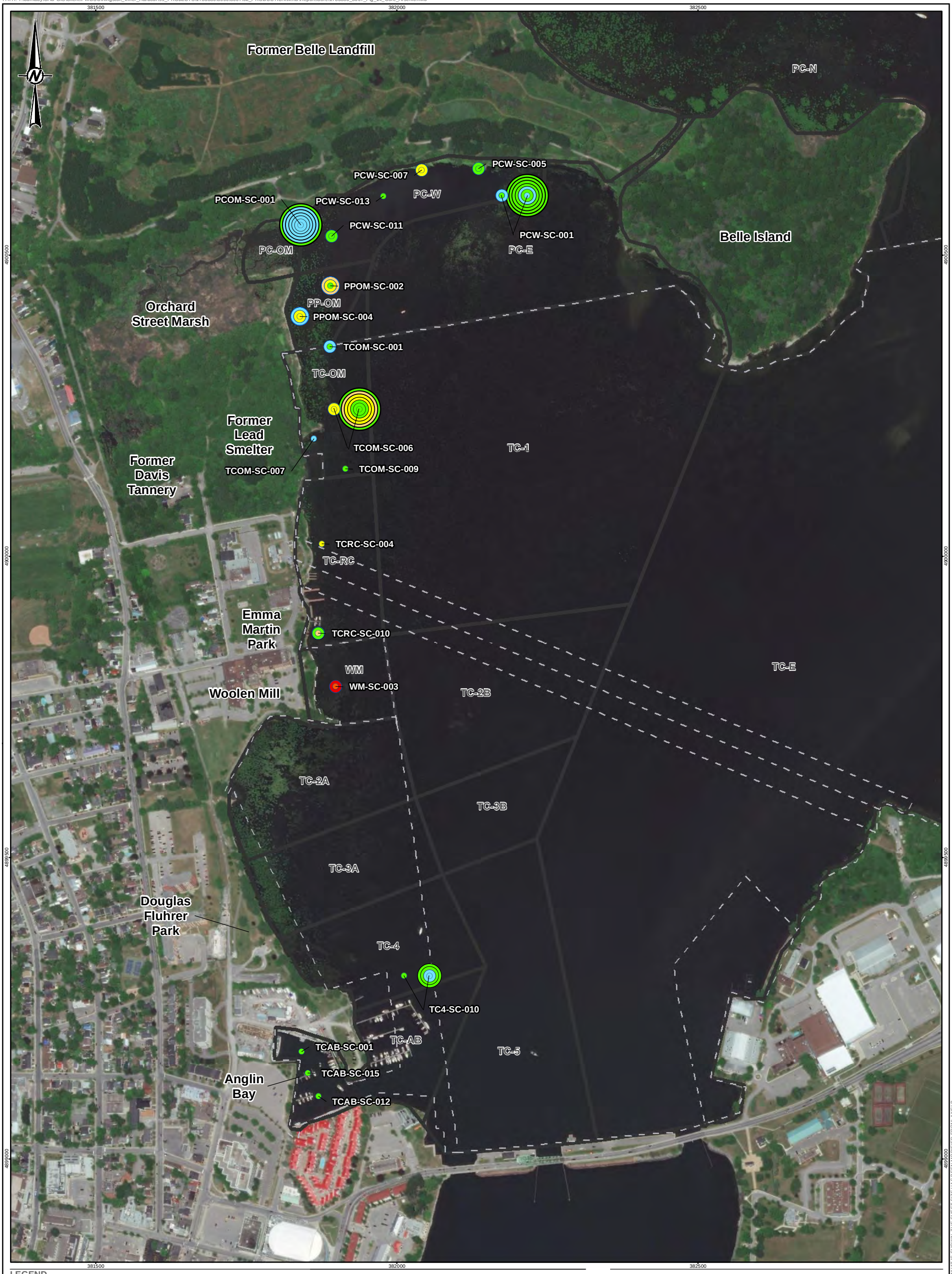
PROJECT NO.	PHASE	REV.	FIGURE
1783886	8007	A	14

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

25mm

0

PATH: Y:\burnaby\CAD-GIS\Client\PWGSC\Kingston_Inner_Harbour\99_PROJECTS\1783886\8000\8007\02_PRODUCTION\MXD\Report\Core\1783886_8007_Fig_14_Core_Arsenic.mxd



LEGEND

FEDERAL WATER LOT BOUNDARY

MANAGEMENT UNIT

Arsenic

- 0 - 5.9 mg/kg (<ISQG)
- 5.9 - 17 mg/kg (<PEL)
- 17 - 33 mg/kg (<SEL)
- 33 - 50.9 mg/kg (<2LAET)
- 50.9 - 100 mg/kg
- > 100 mg/kg

ORIGINAL CORE LOCATION

10-30 cm
30-50 cm
50-80 cm

ADDITIONAL CORE LOCATOIN

0-5 cm
5-10 cm
10-15 cm
15-20 cm
25-30 cm
30-50 cm
<50 cm

FOR DISCUSSION PURPOSES ONLY

DRAFT

0 120 240

1:6,000 METERS

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PROJECTION: UTM ZONE 18 DATUM: NAD 83

CLIENT
PWGSC

PROJECT
KINGSTON INNER HARBOUR
KINGSTON, ONTARIO

TITLE
ARSENIC SEDIMENT CONCENTRATION BELOW SEDIMENT SURFACE (2021)

CONSULTANT
GOLDER
MEMBER OF WSP

YYYY-MM-DD	2022-01-27
DESIGNED	CP
PREPARED	JP/MH
REVIEWED	
APPROVED	

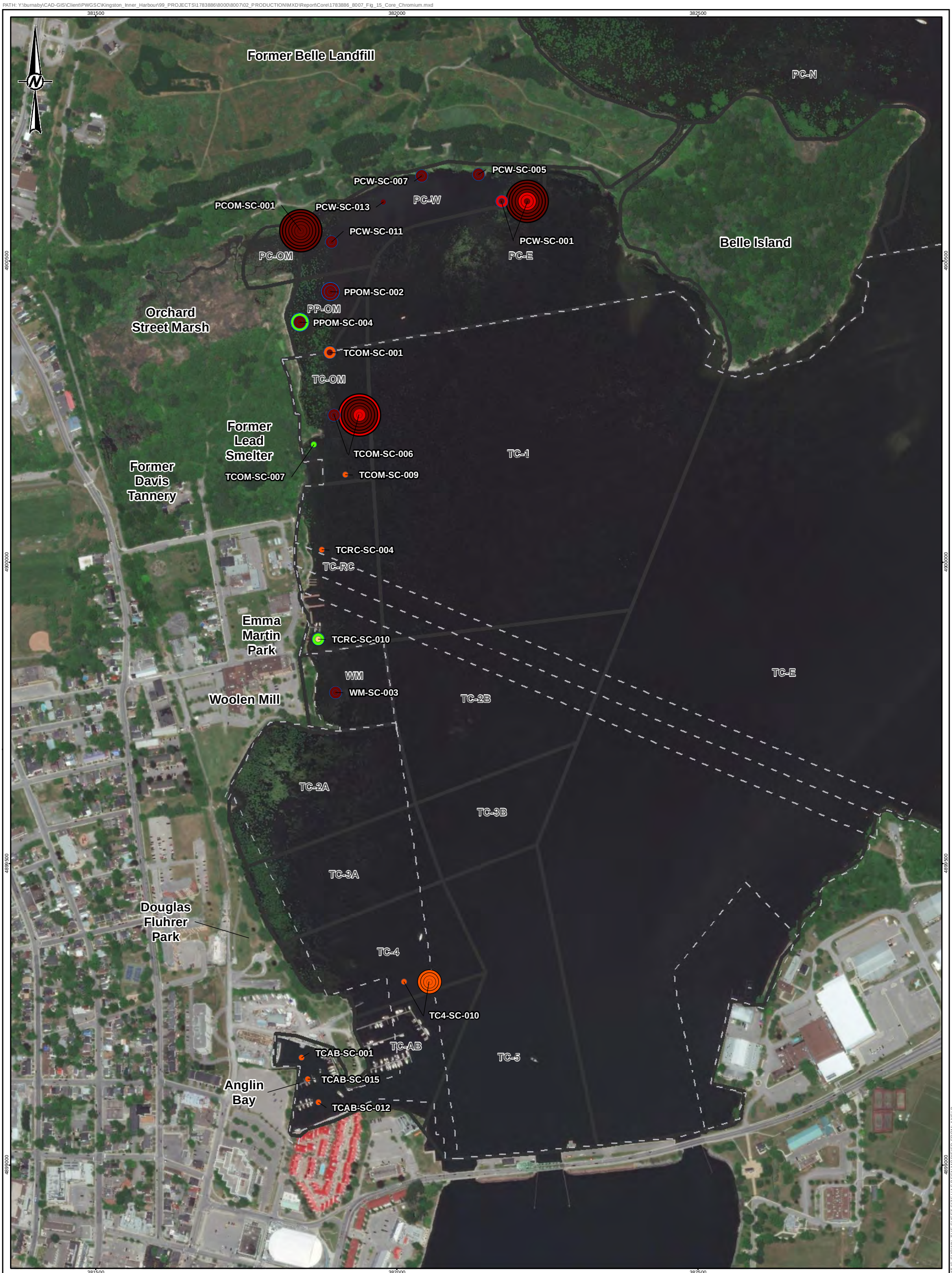
PROJECT NO.	PHASE	REV.	FIGURE
1783886	8007	A	15

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

25mm

0

PATH: Y:\burnaby\CAD-GIS\Client\PWGSC\Kingston_Inner_Harbour\99_PROJECTS\1783886\8000\8007\02_PRODUCTION\MXD\Report\Core\1783886_8007_Fig_15_Core_Chromium.mxd



LEGEND

FEDERAL WATER LOT BOUNDARY

MANAGEMENT UNIT

Chromium

- 0 - 37.3 mg/kg (<ISQG)
- 37.3 - 90 mg/kg (<PEL)
- 90 - 110 mg/kg (<SEL)
- 110 - 133 mg/kg (<2LAET)
- 133 - 500 mg/kg
- 500 - 1000 mg/kg
- >1000 mg/kg

ORIGINAL CORE LOCATION

10-30 cm
30-50 cm
50-80 cm

ADDITIONAL CORE LOCATOIN

0-5 cm
5-10 cm
10-15 cm
15-20 cm
25-30 cm
30-50 cm
<50 cm

FOR DISCUSSION PURPOSES ONLY

DRAFT

0 120 240

1:6,000 METERS

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PROJECTION: UTM ZONE 18 DATUM: NAD 83

CLIENT
PWGSC

PROJECT
KINGSTON INNER HARBOUR
KINGSTON, ONTARIO

TITLE
CHROMIUM SEDIMENT CONCENTRATION BELOW SEDIMENT SURFACE (2021)

CONSULTANT
GOLDER
MEMBER OF WSP

YYYY-MM-DD	2022-01-27
DESIGNED	CP
PREPARED	JP/MH
REVIEWED	
APPROVED	

PROJECT NO.	PHASE	REV.	FIGURE
1783886	8007	A	16

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

25mm

0

PATH: Y:\burnaby\CAD-GIS\Client\PWGSC\Kingston_Inner_Harbour\99_PROJECTS\1783886\8000\8007\02_PRODUCTION\MXD\Report\Core\1783886_8007_Fig_16_Core_Copper.mxd



LEGEND

FEDERAL WATER LOT BOUNDARY

MANAGEMENT UNIT

Copper

- 0 - 35.7 mg/kg (<ISQG)
- 35.7 - 110 mg/kg (<SEL)
- 110 - 197 mg/kg (<PEL)
- 197 - 619 mg/kg (<LAET)
- 619 - 829 mg/kg (<2LAET)

ORIGINAL CORE LOCATION

10-30 cm
30-50 cm
50-80 cm

ADDITIONAL CORE LOCATOIN

0-5 cm
5-10 cm
10-15 cm
15-20 cm
25-30 cm
30-50 cm
<50 cm

FOR DISCUSSION PURPOSES ONLY

DRAFT

0 120 240

1:6,000 METERS

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PROJECTION: UTM ZONE 18 DATUM: NAD 83

CLIENT
PWGSC

PROJECT
KINGSTON INNER HARBOUR
KINGSTON, ONTARIO

TITLE
COPPER SEDIMENT CONCENTRATION BELOW SEDIMENT SURFACE (2021)

CONSULTANT
GOLDER
MEMBER OF WSP

YYYY-MM-DD	2022-01-27
DESIGNED	CP
PREPARED	JP/MH
REVIEWED	
APPROVED	

PROJECT NO.	PHASE	REV.	FIGURE
1783886	8007	A	17

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

25mm

0

PATH: Y:\burnaby\CAD-GIS\Client\PWGSC\Kingston_Inner_Harbour\99_PROJECTS\1783886\8000\8007\02_PRODUCTION\MXD\Report\Core\1783886_8007_Fig_17_Core_Lead.mxd

381500 382000 382500

4900500 4900000 4899500 4899000

Former Belle Landfill
PC-N
PCW-SC-005
PCW-SC-007
PC-W
PCOM-SC-001
PCW-SC-013
PCW-SC-011
PCW-SC-001
Belle Island
PC-OM
PC-E
PPOM-SC-002
PP-OM
Orchard Street Marsh
PPOM-SC-004
TCOM-SC-001
TC-OM
Former Lead Smelter
TCOM-SC-006
TC-1
Former Davis Tannery
TCOM-SC-007
TCOM-SC-009
TCRC-SC-004
TC-RC
Emma Martin Park
TCRC-SC-010
WM
TC-E
Woolen Mill
WM-SC-003
TC-2B
TC-2A
TC-3B
TC-3A
Douglas Fluhrer Park
TC-4
TC4-SC-010
TC-AB
TCAB-SC-001
TC-5
Anglin Bay
TCAB-SC-015
TCAB-SC-012

LEGEND

- FEDERAL WATER LOT BOUNDARY
- MANAGEMENT UNIT

Lead

- 0 - 35 mg/kg (<ISQG)
- 35 - 91.3 mg/kg (<PEL)
- 91.3 - 250 mg/kg
- 250 - 335 mg/kg (<LAET)
- 335 - 431 mg/kg (<2LAET)
- >431 mg/kg

ORIGINAL CORE LOCATION
10-30 cm
30-50 cm
50-80 cm

ADDITIONAL CORE LOCATOIN
0-5 cm
5-10 cm
10-15 cm
15-20 cm
25-30 cm
30-50 cm
<50 cm

FOR DISCUSSION PURPOSES ONLY

DRAFT

0 120 240

1:6,000 METERS

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PROJECTION: UTM ZONE 18 DATUM: NAD 83

CLIENT
PWGSC

PROJECT
KINGSTON INNER HARBOUR
KINGSTON, ONTARIO

TITLE
LEAD SEDIMENT CONCENTRATION BELOW SEDIMENT SURFACE (2021)

CONSULTANT
GOLDER
MEMBER OF WSP

YYYY-MM-DD	2022-01-27
DESIGNED	CP
PREPARED	JP/MH
REVIEWED	
APPROVED	

PROJECT NO.	PHASE	REV.	FIGURE
1783886	8007	A	18

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

0 25mm

PATH: Y:\burnaby\CAD-GIS\Client\PWGSC\Kingston_Inner_Harbour\99_PROJECTS\1783886\8000\8007\02_PRODUCTION\MXD\Report\Core\1783886_8007_Fig_18_Core_Mercury.mxd



LEGEND

FEDERAL WATER LOT BOUNDARY

MANAGEMENT UNIT

Mercury

- 0 - 0.17 mg/kg (<ISQG)
- 0.17 - 0.486 mg/kg (<PEL)
- 0.486 - 0.8 mg/kg (<LAET)
- 0.8 - 2 mg/kg (<SEL)
- 2 - 3.04 mg/kg (<2LAET)
- >3.04 mg/kg

ORIGINAL CORE LOCATION

10-30 cm
30-50 cm
50-80 cm

ADDITIONAL CORE LOCATOIN

0-5 cm
5-10 cm
10-15 cm
15-20 cm
25-30 cm
30-50 cm
<50 cm

FOR DISCUSSION PURPOSES ONLY

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0 120 240

1:6,000 METERS

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PROJECTION: UTM ZONE 18 DATUM: NAD 83

CLIENT
PWGSC

PROJECT
KINGSTON INNER HARBOUR
KINGSTON, ONTARIO

TITLE
MERCURY SEDIMENT CONCENTRATION BELOW SEDIMENT SURFACE (2021)

CONSULTANT
GOLDER
MEMBER OF WSP

YYYY-MM-DD	2022-01-27
DESIGNED	CP
PREPARED	JP/MH
REVIEWED	
APPROVED	

PROJECT NO.	PHASE	REV.	FIGURE
1783886	8007	A	**19**

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

0 25mm

PATH: Y:\burnaby\CAD-GIS\Client\PWGSC\Kingston_Inner_Harbour\99_PROJECTS\1783886\8000\8007\02_PRODUCTION\MXD\Report\Core\1783886_8007_Fig_19_Core_Silver.mxd

381500 382000 382500

4900500 4900000 4899500 4899000

Former Belle Landfill
PC-N
PCW-SC-005
PCW-SC-007
PC-W
PCOM-SC-001
PCW-SC-013
PCW-SC-011
PCW-SC-001
Belle Island
PC-OM
PC-E
PPOM-SC-002
PP-OM
Orchard Street Marsh
PPOM-SC-004
TCOM-SC-001
TC-OM
Former Lead Smelter
TCOM-SC-006
TC-1
Former Davis Tannery
TCOM-SC-007
TCOM-SC-009
TCRC-SC-004
TC-RC
Emma Martin Park
TCRC-SC-010
TC-E
WM
Woolen Mill
WM-SC-003
TC-2B
TC-2A
TC-3B
TC-3A
Douglas Fluhrer Park
TC-4
TC4-SC-010
TC-AB
TC-5
TCAB-SC-001
Anglin Bay
TCAB-SC-015
TCAB-SC-012

381500 382000 382500

LEGEND

- FEDERAL WATER LOT BOUNDARY
- MANAGEMENT UNIT

Silver

- 0 - 0.5 mg/kg
- 0.5 - 0.545 mg/kg (<LAET)
- 0.545 - 2 mg/kg
- 2 - 3.5 mg/kg (<2LAET)
- 3.5 - 4.5 mg/kg
- > 4.5 mg/kg

ORIGINAL CORE LOCATION
10-30 cm
30-50 cm
50-80 cm

ADDITIONAL CORE LOCATOIN
0-5 cm
5-10 cm
10-15 cm
15-20 cm
25-30 cm
30-50 cm
<50 cm

FOR DISCUSSION PURPOSES ONLY

DRAFT

0 120 240

1:6,000 METERS

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PROJECTION: UTM ZONE 18 DATUM: NAD 83

CLIENT
PWGSC

PROJECT
KINGSTON INNER HARBOUR
KINGSTON, ONTARIO

TITLE
SILVER SEDIMENT CONCENTRATION BELOW SEDIMENT SURFACE (2021)

CONSULTANT
GOLDER
MEMBER OF WSP

YYYY-MM-DD	2022-01-27
DESIGNED	CP
PREPARED	JP/MH
REVIEWED	
APPROVED	

PROJECT NO.	PHASE	REV.	FIGURE
1783886	8007	A	**20**

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

0 25mm

PATH: Y:\burnaby\CAD-GIS\Client\PWGSC\Kingston_Inner_Harbour\99_PROJECTS\1783886\8000\8007\02_PRODUCTION\MXD\Report\Core\1783886_8007_Fig_20_Core_Zinc.mxd



LEGEND

- FEDERAL WATER LOT BOUNDARY
- MANAGEMENT UNIT

Zinc

- 0 - 132 mg/kg (<ISQG)
- 123 - 315 mg/kg (<PEL)
- 315 - 683 mg/kg (<LAET)
- 683 - 820 mg/kg (<SEL)
- 820 - 1080 mg/kg (<2LAET)
- > 1080 mg/kg

ORIGINAL CORE LOCATION

- 10-30 cm
- 30-50 cm
- 50-80 cm

ADDITIONAL CORE LOCATOIN

- 0-5 cm
- 5-10 cm
- 10-15 cm
- 15-20 cm
- 25-30 cm
- 30-50 cm
- <50 cm

FOR DISCUSSION PURPOSES ONLY

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0 120 240

1:6,000 METERS

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PROJECTION: UTM ZONE 18 DATUM: NAD 83

CLIENT
PWGSC

PROJECT
KINGSTON INNER HARBOUR
KINGSTON, ONTARIO

TITLE
ZINC SEDIMENT CONCENTRATION BELOW SEDIMENT SURFACE (2021)

CONSULTANT
GOLDER
MEMBER OF WSP

YYYY-MM-DD	2022-01-27
DESIGNED	CP
PREPARED	JP/MH
REVIEWED	
APPROVED	

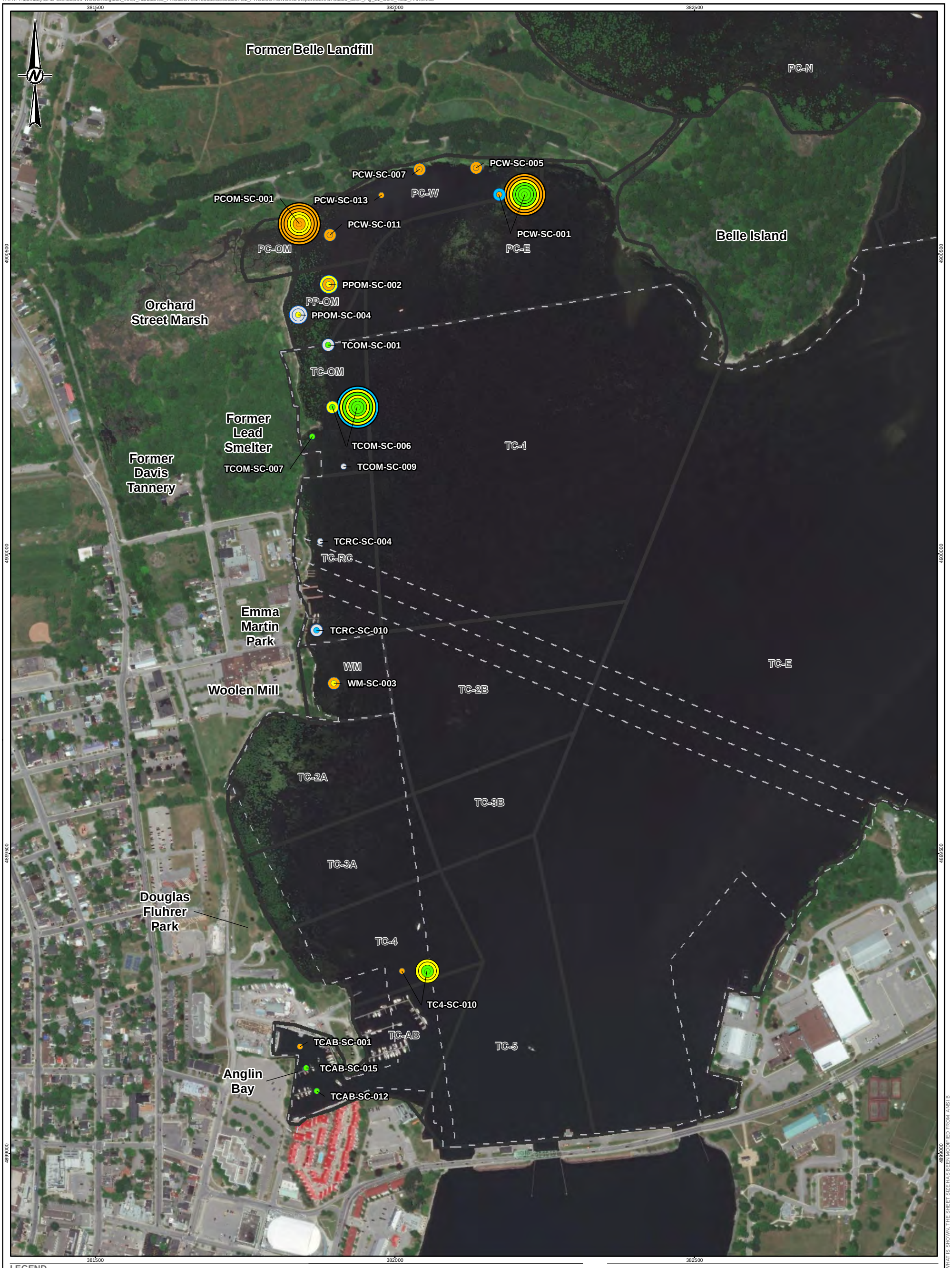
PROJECT NO.	PHASE	REV.	FIGURE
1783886	8007	A	21

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

25mm

0

PATH: Y:\burnaby\CAD-GIS\Client\PWGSC\Kingston_Inner_Harbour\99_PROJECTS\1783886\8000\8007\02_PRODUCTION\MXD\Report\Core\1783886_8007_Fig_21_Core_Total_PAHs.mxd



LEGEND

FEDERAL WATER LOT BOUNDARY

MANAGEMENT UNIT

Total PAH

- 0 - 1.61 mg/kg
- 1.61 - 4 mg/kg (< LEL)
- 4 - 10 mg/kg
- 10 - 15 mg/kg
- 15 - 100 mg/kg
- 100 - 740 mg/kg (< SEL)
- > 740 mg/kg

ORIGINAL CORE LOCATION

10-30 cm
30-50 cm
50-80 cm

ADDITIONAL CORE LOCATOIN

0-5 cm
5-10 cm
10-15 cm
15-20 cm
25-30 cm
30-50 cm
<50 cm

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0 120 240

1:6,000 METERS

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PROJECTION: UTM ZONE 18 DATUM: NAD 83

CLIENT
PWGSC

PROJECT
KINGSTON INNER HARBOUR
KINGSTON, ONTARIO

TITLE
TOTAL PAH SEDIMENT CONCENTRATION BELOW SEDIMENT SURFACE (2021)

CONSULTANT
GOLDER
MEMBER OF WSP

YYYY-MM-DD	2022-01-27
DESIGNED	CP
PREPARED	JP/MH
REVIEWED	
APPROVED	

PROJECT NO.	PHASE	REV.	FIGURE
1783886	8007	A	22

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

25mm

0

PATH: Y:\burnaby\CAD-GIS\Client\PWGSC\Kingston_Inner_Harbour\99_PROJECTS\1783886\8000\8007\02_PRODUCTION\MXD\Report\Core\1783886_8007_Fig_22_Core_Total_PCB.mxd



LEGEND

- FEDERAL WATER LOT BOUNDARY
- MANAGEMENT UNIT

TOTAL PCB

- 0 - 0.07 mg/kg (<LEL)
- 0.07 - 0.3 mg/kg (<PEL)
- 0.3 - 0.6 mg/kg (<LAET)
- 0.6 - 1 mg/kg
- 1 - 5.3 mg/kg (<SEL)
- > 5.3 mg/kg

ORIGINAL CORE LOCATION

- 10-30 cm
- 30-50 cm
- 50-80 cm

ADDITIONAL CORE LOCATOIN

- 0-5 cm
- 5-10 cm
- 10-15 cm
- 15-20 cm
- 25-30 cm
- 30-50 cm
- <50 cm

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0 120 240

1:6,000 METERS

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PROJECTION: UTM ZONE 18 DATUM: NAD 83

CLIENT
PWGSC

PROJECT
KINGSTON INNER HARBOUR
KINGSTON, ONTARIO

TITLE
TOTAL PCB SEDIMENT CONCENTRATION BELOW SEDIMENT SURFACE (2021)

CONSULTANT
GOLDER
MEMBER OF WSP

YYYY-MM-DD	2022-01-27
DESIGNED	CP
PREPARED	JP/MH
REVIEWED	
APPROVED	

PROJECT NO.	PHASE	REV.	FIGURE
1783886	8007	A	23

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

25mm

0

APPENDIX A

Surface Sediment Collection Logs

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SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	2-OCT-21	Sampled by:	JW/IS/SB
Station Number (ID):	PCE-SG-001	Sampling Method:	Petite Ponar/Ekman/Tech-Ops Corer
Weather:	15°, rain	UTM:	WP 037 382190 4900499
Water Depth:	114	Location Description:	Approx. 175m SoPshore
# of Attempts to Obtain Sample:	III (3)	Time of Collection:	15:30

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	Olive	S, org	aquatic veg	organic odor	
2	↓	↓	↓	↓	
3	↓	↓	↓	↓	

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
	60	80	70			

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

1621 N, 1622 E, 1623 S, 1624 W, 1625 grab #1, 1626 grab #2, 1627 grab #3, 1628 comp. sample

3 JARS, 1 BAG

QC'd by: Andrew Rous Date: Oct 2/21

SEDIMENT COLLECTION LOG

Project No: 17783886-8000-8004

Project Title: PSPC Kingston Inner Harbour Sediment Assessment

Date: 2-OCT-21

Sampled by: JW/RS/SR

Station Number (ID): PCE-SG-002

Sampling Method: Petite Ponar /Ekman/Tech-Ops Corer

Weather: 15°, rain

UTM: WP 038 382242 4900478

Water Depth: 1.15

Location Description: Approx. 175m S. PShore

# of Attempts to Obtain Sample: III (3)

Time of Collection: 15:55

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	olive	Si/org	aquatic mat	organic odour	
2	″	″	″	″	″
3	″	″	″	″	″

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
	60	70	65	/	/	/

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

1612 N, 1613 E, 1614 S, 1615 W, 1616 grab #1, 1617 grab #2, 1618 grab #3, 1619 comp sample

x 3 JARS

QC'd by: Andrew Rous Date: Oct 7/21

SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	2-OCT-21	Sampled by:	JW/RS/SB
Station Number (ID):	PCE-SD-003	Sampling Method:	Petite Ponar /Ekman/Tech-Ops Corer
Weather:	15°, rain	UTM:	WP 039 382140 4900550
Water Depth:	1.05	Location Description:	Approx. 100m S of Shore
# of Attempts to Obtain Sample:	111 (4)	Time of Collection:	16:15

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	olive	Si, Org, Cl	aquatic veg	organic odour	
2	↓	↓	↓	↓	
3					
4					

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
	60	0	60	80		

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

1629 N, 1630 E, 1631 S, 1632 W, 1633 grab #1, 1634 grab #3, 1635 grab #4, 1636 comp. sample

* 3 JARS

QC'd by: Andrew Rous Date: Oct 2/21

SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	3-OCT-21	Sampled by:	JW/RS/SB
Station Number (ID):	PCE-SG-004	Sampling Method:	Petite Ponar / Ekman / Tech-Ops Corer
Weather:	18°; 8km SE wind, light rain	UTM:	WP 040 382189 4900554
Water Depth:	1.05	Location Description:	W of Bell Island
# of Attempts to Obtain Sample:	III (3)	Time of Collection:	11:40

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	olive	Si; Org	aquatic veg	organic odour	
2	↓	↓	↓	sheen spotting	
3				↓	

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
	60	70	70	/	/	/

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

1642 N, 1643 E, 1644 S, 1645 W, 1646 grab #1, 1647 grab #2, 1648 grab #3, 1649 comp. sample

* 3 JARS

QC'd by: Jared Sheath Date: 3-OCT-21

SEDIMENT COLLECTION LOG

Project No: 17783886-8000-8004

Project Title: PSPC Kingston Inner Harbour Sediment Assessment

Date: 3-OCT-21

Sampled by: JW/RS/SB

Station Number (ID): PCE-SG-005

Sampling Method: Petite Ponar / Ekman / Tech-Ops Corer

Weather: 17°, 12 km SE wind, cloud (100)

UTM: WP 044 382241 4900554

Water Depth: 1.15

Location Description: W of Belle Island

# of Attempts to Obtain Sample: ||| 11

Time of Collection: 14:15

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
5	olive	Si; Org; Cl	aquatic veg	organic odour	
6	↓	↓	↓	sheen spotting	
7				↓	

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☑ Duplicate Sample? Duplicate Sample ID: DUP-004

Approx % Collected in Grab Sample(s): Grab 1: 0 Grab 2: 0 Grab 3: 0 Grab 4: 0 Grab 5: 80 Grab 6: 80 Grab 7: 90

Sediment Horizon Sampled (cm): Grab 1: Grab 2: Grab 3: Grab 4: Grab 5: Grab 6:

0 to 0.3 m

0.3 to 0.5 m

0.5 to 0.8 m

Photograph Notes (grab, sampling location, field sampling methods, etc.):

1672 N, 1673 E, 1674 S, 1675 W, 1676 grab # 5, 1677 grab # 6, 1678 grab # 7, 1679 comp. sample

* 7 JARS, 1 BAG

QC'd by: JaredSkeath Date: 30 Oct 21

SEDIMENT COLLECTION LOG

Pg 1 of 1

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	3-OCT-21	Sampled by:	JW / RS / SB
Station Number (ID):	PCE-SG-006	Sampling Method:	Petite Ponar /Ekman/Tech-Ops Corer
Weather:	18°, 8 km SE wind, light rain	UTM:	WP 041 382192 4900648
Water Depth:	0.54	Location Description:	W of Bell Island
# of Attempts to Obtain Sample:	1111	Time of Collection:	12:00

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
4	olive	Si; Org, Cl	aquatic veg.	organic veg	
5	↓	↓	woody deb.	sheen spotting	
6			↓	↓	

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☐ Duplicate Sample? Duplicate Sample ID: _____

Approx % Collected in Grab Sample(s)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
	0	0	0	60	60	60

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

1650 N, 1651 E, 1652 S, 1653 W, 1654 grab #4, 1655 grab #5, 1656 #6, 1657 comp sample

* 3 JARS

QC'd by: Jared Sheath Date: 3 Oct 21

SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	3-OCT-21	Sampled by:	JW/RS/SB
Station Number (ID):	PCE-SG-007	Sampling Method:	Petite Ponar/Ekman/Tech-Ops Corer
Weather:	18°, 10 km SE wind,	UTM:	WP 042 382293 4900604
Water Depth:	0.90	Location Description:	W of Belle Island
# of Attempts to Obtain Sample:	III (3)	Time of Collection:	12:25

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	olive	Si. Org	aquatic veg	organic odour	
2	↓	↓	↓	↓	
3	↓	↓	↓	↓	

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
	60	70	80	✓	✓	✓

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

1658 N, 1659 E, 1660 S, 1661 W, 1662 grab # 1, 1663 grab # 2, 1664 grab # 3 ~~1665 comp sample~~

* 3 JARS

QC'd by: Brad Sleath Date: 30 Oct 21

SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	3-OCT-21	Sampled by:	JW/RS/SB
Station Number (ID):	PCE-SG-008	Sampling Method:	Petite Ponar / Ekman / Tech-Ops Corer
Weather:	18°, 10 km SE wind, light rain	UTM:	WP 043 382245 4900601
Water Depth:	0.84m	Location Description:	W of Belle Island
# of Attempts to Obtain Sample:	III (3)	Time of Collection:	12:40

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	alive	Si, Org	aquatic veg	organic odour	
2	↓	↓	↓	↓	bloodworms
3					↓

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
	70	70	90	/	/	/

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

1665 N, 1666 E, 1667 S, 1668 W, 1669 grab #1, 1670 grab #2, 1671 grab #3, 1672 comp sample

*3 JARS

QC'd by: Jarel Sheath Date: 30ct21

SEDIMENT COLLECTION LOG

pg 1 of 1

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	3-OCT-2009	Sampled by:	JW/RS/SB
Station Number (ID):	PCE SG-009	Sampling Method:	Petite Ponar/Ekman/Tech-Ops Corer
Weather:	17°, 12 km SE wind, cloud (100)	UTM:	WP 045 382240 4900647
Water Depth:	0.45	Location Description:	W of Belle Island
# of Attempts to Obtain Sample:	4	Time of Collection:	15:25

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	olive	si/org	Aquatic veg,	Organic odour	—
3	↓	↓	shell fragments	↓	—
4	↓	↓	↓	↓	—

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
	60	30	70	60	—	—

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m	~~40~~					
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):
1680 - north, 1681 - east, 1682 - south, 1683 - west, 1684 - grab #1, 1685 grab #2
1686 - grab #3, 1687 - composite

* 3 JARS

QC'd by: Jared Skeath Date: 3 Oct 21

SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	030ct2021	Sampled by:	J. Weir, S. Brenzan, R. Stephen
Station Number (ID):	PCE-SG-010	Sampling Method:	Petite Ponar / Ekman / Tech-Ops Corer
Weather:	16°C, Overcast, Wind E 13km/h	UTM:	WP046 382295E 4900640
Water Depth:	0.38m	Location Description:	W of Belle Island - nearshore
# of Attempts to Obtain Sample:	12	Time of Collection:	15:50

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
6	olive	Si/Cl/org	shell fragments, wood, gravel, veg	sheen spotting	none
9	↓	↓	↓	↓	↓
12					

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☒ Duplicate Sample? Duplicate Sample ID: DUP-005

Approx % Collected in Grab Sample(s)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
	0	0	0	0	30	60
Sediment Horizon Sampled (cm)	**Grab 1:**	**Grab 2:**	**Grab 3:**	**Grab 4:**	**Grab 5:**	**Grab 6:**
0 to 0.3 m	7	8	9	10	4	12
0.3 to 0.5 m	0	dead clam	0	100	0	60
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

1688 - north, 1689 - east, 1690 - south, 1691 - west, 1692 - grab # 6, 1693 - grab # 10, 1694 - grab # 12, 1695 - composite sample

QC'd by: Jared Sheath Date: 30oct21

SEDIMENT COLLECTION LOG

pg 1 of 1

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	03 Oct 2021	Sampled by:	JW, SB, RS
Station Number (ID):	PCE-SG-011	Sampling Method:	Petite Ponar /Ekman/Tech-Ops Corer
Weather:	16°C, overcast, wind & 13 km/h	UTM:	WP047 382041E 4900551N
Water Depth:	1.02	Location Description:	West of Belle Island
# of Attempts to Obtain Sample:	4	Time of Collection:	16:45

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	olive	si/org	plant debris	organic odour	none
3	↓	↓	↓	↓	↓
4					

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☑ Duplicate Sample? Duplicate Sample ID: DUP-006

Approx % Collected in Grab Sample(s)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
	60	40	60	60		

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

1696 - north, 1697 - east, 1698 - south, 1699 - west, 1700 - grab #1, 1701 - grab #3, 1702 - grab #4, [illegible]

QC'd by: Jared Skeath Date: 3 Oct 21

SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	4-OCT-21	Sampled by:	JF/JS/RS
Station Number (ID):	PCE-SG-012	Sampling Method:	Petite Ponar/Ekman/Tech-Ops Corer
Weather:	15°C, Mod wind, overcast	UTM:	18T 381992 4900502
Water Depth:	0.9m	Location Description:	175m from shore
# of Attempts to Obtain Sample:	3	Time of Collection:	1625

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	4-4 2.5Y8	orgs/silt	Aquatic Veg	Sheen organic	N/A
2	↓	↓	↓	Sheen ↓	↓
3					

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s) Grab 1: 60 Grab 2: 70 Grab 3: 70 Grab 4: X Grab 5: X Grab 6: X

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

Photos - N, E, S, W, Grab 1, Grab 2, Grab 3, Composite

QC'd by: Andrew Rous Date: 04 Oct 21

3 x Jars

SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	06 Oct 2021	Sampled by:	JW, AR, RS
Station Number (ID):	PCE-SG-013	Sampling Method:	Petite Ponar /Ekman/Tech-Ops Corer
Weather:	20'C, Sunny, wind SE 13km/h	UTM:	WP057 382068E 4900479N
Water Depth:	1.18m	Location Description:	middle of PCE Area
# of Attempts to Obtain Sample:	4	Time of Collection:	14:30

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	Olive	Silt/org	plant material	slight org. odour	none
3	↓	↓	↓	↓	↓
4					

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☑ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
	70	0 veg	70	70	\	\

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m	\	\	\	\	\	\
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

2700 - north, 2701 - east, 2702 - South, 2703 - west, 2704 - grab1
2705 - grab2, 2706 - grab3

QC'd by: Andrew Rous Date: 06Oct21

SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	06 Oct 2021	Sampled by:	JW, AR, RS
Station Number (ID):	PC E-SG-014	Sampling Method:	Petite Ponar/Ekman/Tech-Ops Corer
Weather:	20°C, Sunny, wind NE 13km/h	UTM:	18T0058 382321E 4900463N
Water Depth:	1.27	Location Description:	West of Belle Island
# of Attempts to Obtain Sample:	5	Time of Collection:	15:00

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	olive	silt/org	plant matter	None	None
2	↓	↓	↓	↓	↓
4	↓	↓	↓	↓	↓
5	↓	↓	↓	↓	↓

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☑ Duplicate Sample? Duplicate Sample ID: DUP-210

Approx % Collected in Grab Sample(s)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
	60	70	30	80	60	\

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

2707 - north, 2708 - east, 2709 - south, 2710 - west, 2711 - grab #1
2712 - grab 2, 2713 - grab 4, 2714 - ~~composite~~ Grab 5 sample, 2715 Composite Sample

QC'd by: Andrew Rous Date: 06 Oct 21

SEDIMENT COLLECTION LOG

Pg 1 of 1

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	05 Oct 2021	Sampled by:	JW, RS
Station Number (ID):	PCOM-SG-001	Sampling Method:	Petite Ponar / Ekman / Tech-Ops Corer
Weather:	16°C, partly cloudy, N17km/h	UTM:	wpos2 381842E 4900547
Water Depth:	0.33	Location Description:	nearshore in orchard st marsh
# of Attempts to Obtain Sample:	3	Time of Collection:	12:48

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	Dark olive	silt / clay	plastic, shell fragments, woody debris	sheen spotting, slight hydrocarbon odour	none
2					
3					

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☑ Duplicate Sample? Duplicate Sample ID: DUP-208

Approx % Collected in Grab Sample(s)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
	80	60	70			

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

2431 - north, 2432 - east, 2433 - south, 2434 - west, 2435 - grab #1, 2436 grab #2, 2437 - composite sample

QC'd by: Jared Sheath Date: 5 Oct 21

SEDIMENT COLLECTION LOG

Project No:	17783686-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	05Oct2021	Sampled by:	J. Weir, R. Stephens
Station Number (ID):	PCOM-SG-002	Sampling Method:	Petite Ponar / Ekman / Tech-Ops Corer
Weather:	16°C, overcast, wind NE 13	UTM:	WPOS1 381789E 4900526N
Water Depth:	0.27	Location Description:	Orchard Sts. marsh
# of Attempts to Obtain Sample:	5	Time of Collection:	11:50

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	Dark olive	silt/clay	opportunistic plant material	sheen, hydrocarbon odour	none
2	↓	↓	↓	↓	↓
3					
5					

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☑ Duplicate Sample? Duplicate Sample ID: DUP-207

Approx % Collected in Grab Sample(s)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
	60	80	60	—	60	—

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

2419 - north, 2420 - east, 2421 - south, 2422 - west, 2423 - Grab #1, 2424 - Grab #2, 2425 - Grab #5.

QC'd by: Jared Sheath Date: 5Oct21

7 Jars + BAG

SEDIMENT COLLECTION LOG

pg 1 of 1

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	05 Oct 2021	Sampled by:	J. Weik, R. Stephens
Station Number (ID):	PCOM-SG-003	Sampling Method:	Petite Ponar /(Ekman)/Tech-Ops Corer
Weather:	16°C, Overcast	UTM:	WP053 381837E 4900501N
Water Depth:	0.39	Location Description:	Orchard St. marsh
# of Attempts to Obtain Sample:	3	Time of Collection:	13.10

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	Dark olive	Silty	Organic odour	none	none
2	↓	↓	plant matter, shells	↓	↓
3	↓	↓	↓	↓	↓

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☐ Duplicate Sample? Duplicate Sample ID: ———

Approx % Collected in Grab Sample(s)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
	70	60	60			

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

2438 - north, 2439 - east, 2440 - south, 2441 - west, 2442 - grab #1, 2443 - grab #2, 2444 - grab #3, 2445 - sample composite

QC'd by: Jared Skrath Date: 5 Oct 21

3 x JARS

SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	4 Oct - 21	Sampled by:	JF/JS/RS
Station Number (ID):	PCW-SG-002	Sampling Method:	Petite Ponar / Ekman / Tech-Ops Corer
Weather:	Overcast, 15°C, light wind	UTM:	18T 382142 4900601
Water Depth:	0.95m	Location Description:	≈ 40m offshore
# of Attempts to Obtain Sample:	4	Time of Collection:	1315

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	4-4	Orgs/silts	aquatic Veg	organics	Na
2	"	"	"	"	"
3	Jaws Did not close		—	—	—
4	4-4	silts/orgs	aquatic Veg	organics	N/A

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s) Grab 1: 90 Grab 2: 90 Grab 3: 30 Grab 4: 90 Grab 5: / Grab 6: /

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

Photos - N, E, S, W, Grab 1, Grab 2, Grab 4, Composite

QC'd by: Andrew Paul Date: 04 Oct 21

3 Jars

SEDIMENT COLLECTION LOG

Page 1 of 1

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	4-OCT-21	Sampled by:	JF/JS/RS
Station Number (ID):	PCW-SG-003	Sampling Method:	Petite Ponar /Ekman/Tech-Ops Corer
Weather:	overcast, light wind 15°C	UTM:	18T 382093 4900600
Water Depth:	0.85m	Location Description:	≈ 100m offshore
# of Attempts to Obtain Sample:	3	Time of Collection:	1355

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	4-4 2.5y	orgs/silt	aquatic Veg	organics	N/A
2	↓	↓	↓	↓	↓
3					

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s) Grab 1: 80 Grab 2: 90 Grab 3: 70 Grab 4: X Grab 5: X Grab 6: X

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

Photos - N, E, S, W, Grab 1, Grab 2, Grab , Composite

QC'd by: Andrew Rous Date: 04 Oct 21

3x Jars

SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	4-Oct-21	Sampled by:	JF/JS/RS
Station Number (ID):	PCN-SG-004	Sampling Method:	Petite Ponar /Ekman/Tech-Ops Corer
Weather:	Overcast, light wind, 15°C	UTM:	18T 382091 4900614
Water Depth:	0.7m	Location Description:	~15m off shore
# of Attempts to Obtain Sample:	3	Time of Collection:	1340

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	4-4-25YR	Brgs/silt	aquatic Veg	organics	N/A
2	↓	↓	↓	↓	↓
3					

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s) Grab 1: 90 Grab 2: 90 Grab 3: 90 Grab 4: X Grab 5: X Grab 6: X

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

Photos - N, E, S, W, Grab 1, Grab 2, Grab 3, Composite

- Possible Sheen observed in composite bowl

QC'd by: Andrew Rous Date: 04 Oct 21

3 x Jars

SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	4 OCT - 21	Sampled by:	JF/RS/JS
Station Number (ID):	PCW-SG-0006	Sampling Method:	Petite Ponar / Ekman / Tech-Ops Corer
Weather:	overcast, light wind, 15°C	UTM:	18T 382195 4900646
Water Depth:	0.7m	Location Description:	≈10m from Shore
# of Attempts to Obtain Sample:	3	Time of Collection:	12:55

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	4-4 2.5y	orgs/silts	Aquatic Veg	orgs	N/A
2	↓	↓	↓	↓	↓
3					

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☐ Duplicate Sample? Duplicate Sample ID: DUP-007

Approx % Collected in Grab Sample(s) Grab 1: 80 Grab 2: 90 Grab 3: 60 Grab 4: / Grab 5: / Grab 6: /

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

Photos - N, E, S, W, Grab1, Grab2, Grab3, Composite

*Possible sheen observed in composite bowl

QC'd by: Andrew Paus Date: 04 Oct 21

3 x Jars + 3 Jars

SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	4-Oct-21	Sampled by:	JF/JS/RS
Station Number (ID):	PCW-SG-008	Sampling Method:	Petite Ponar /Ekman/Tech-Ops Corer
Weather:	overcast, light wind, 15°C	UTM:	18T 382038 4900601
Water Depth:	0.8m	Location Description:	≈50m from shore
# of Attempts to Obtain Sample:	3	Time of Collection:	1520

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	4-4 2.5Y	ovgs / silt	aquatic veg	organics	N/A
3	↓		↓	↓	↓

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s) Grab 1: 90 Grab 2: 90 Grab 3: 90 Grab 4: / Grab 5: / Grab 6: /

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

Photos - N, E, S, W, Grab 1, Grab 2, Grab 3, Composite

* Sheen observed in composite bowl

QC'd by: Andrew Rous Date: 04 Oct 21

3 x Jars

SEDIMENT COLLECTION LOG

Page 1 of 1

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	4-Oct-21	Sampled by:	JF / JS / RS
Station Number (ID):	PCW-SG-009	Sampling Method:	Petite Ponar / Ekman / Tech-Ops Corer
Weather:	15°C, overcast, light wind	UTM:	18T 381991 4900551
Water Depth:	0.8m	Location Description:	≈100m from shore
# of Attempts to Obtain Sample:	3	Time of Collection:	16:05

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	4-4 2.5Y	Orgs / silt	Aquatic Veg	organic sheen	N/A
2	↓	↓	↓	↓ sheen	↓
3					

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s) Grab 1: 70 Grab 2: 80 Grab 3: 60 Grab 4: X Grab 5: X Grab 6: X

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

Photos - N, E, S, W, Grab 1, Grab 2, Grab 3, COMPOSITE

QC'd by: Andrew Rous Date: 04 Oct 21

3x Jars

Golder Associates

SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	4-OCT-21	Sampled by:	JP / JS / RS
Station Number (ID):	PCN-SG-0010	Sampling Method:	Petite Ponar / Ekman / Tech-Ops Corer
Weather:	15°C, overcast, light wind	UTM:	18T 381934 4900552
Water Depth:	0.6m	Location Description:	~50m from Shore.
# of Attempts to Obtain Sample:	3	Time of Collection:	1555

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	4-4-254	orgs / silt	aquatic veg	organic	N/A
2	↓	↓	↓	↓	↓
3	↓	↓	↓	↓	↓

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☐ Duplicate Sample? Duplicate Sample ID: _____

Approx % Collected in Grab Sample(s) Grab 1: 90 Grab 2: 90 Grab 3: 90 Grab 4: / Grab 5: / Grab 6: /

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

Photos N, E, S, W, Grab 1, Grab 2, Grab 3, COMPOSITE

*Sheen noted in Composite Bowl

QC'd by: Andrew Rous Date: 04 Oct 21

3 x Jars

SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	4-Oct-21	Sampled by:	JT/JS/RS
Station Number (ID):	PCW-SG-012	Sampling Method:	Petite Ponar /Ekman/Tech-Ops Corer
Weather:	15°C, overcast, light wind	UTM:	18T 381944 4900595
Water Depth:	0.5m	Location Description:	≈ 10m from shore
# of Attempts to Obtain Sample:	3	Time of Collection:	1540

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	4-4 2.5y	Orgs/Silt	aquatic veg	Sheen organic	N/A
2	↓	↓	↓	Sheen organic	↓
3	↓	↓	↓	Sheen organic	↓

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s) Grab 1: 60 Grab 2: 60 Grab 3: 90 Grab 4: / Grab 5: / Grab 6: /

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

Photos-N, E, S, W, Grab 1, Grab 2, Grab 3, Composite

QC'd by: Andrew Rous Date: 04Oct21

3x Jars

SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	4-OCT-21	Sampled by:	JF/JS/RS
Station Number (ID):	PCW-SG-014	Sampling Method:	Petite Ponar/Ekman/Tech-Ops Corer
Weather:	overcast, Mod wind 15°C	UTM:	18T 381884 4900504
Water Depth:	0.5m	Location Description:	≈ 40m from Shore
# of Attempts to Obtain Sample:	3	Time of Collection:	1650

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	4-4	orgs/s:/t	Aquatic veg	organics Sheen	NA
2					
3					

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s) Grab 1: 70 Grab 2: 80 Grab 3: 80 Grab 4: / Grab 5: / Grab 6: /

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

Photos - N, E, S, W, Grab 1, Grab 2, Grab 3, Composite

PHC odour in Grab #2

QC'd by: Andrew Rous Date: 04Oct21

3x Jars

SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	4-OCT-21	Sampled by:	JF/JS/RS
Station Number (ID):	PCW-SG-015	Sampling Method:	Petite Ponar /Ekman/Tech-Ops Corer
Weather:	15°C, overcast, mod wind	UTM:	18T 381939 4960497
Water Depth:	0.85m	Location Description:	~ 150m offshore
# of Attempts to Obtain Sample:	3	Time of Collection:	1635

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	4-4Y 5/1	org/s/slt	Aquatic veg	Organics Sheen Sheen	N/A
2	↓	↓	↓	↓	↓
3					

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☐ Duplicate Sample? Duplicate Sample ID: * DUP-608 *

Approx % Collected in Grab Sample(s) Grab 1: 70 Grab 2: 70 Grab 3: 80 Grab 4: X Grab 5: X Grab 6: X

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

Photos - N, E, S, W, Grab 1, Grab 2, Grab 3, Composite

QC'd by: Andrew Rous Date: 04 Oct 21

3x Jars + 3x Jars

SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	4-Oct-21	Sampled by:	JF/JS/RS
Station Number (ID):	PCW-SG-016	Sampling Method:	Petite Ponar /Ekman/Tech-Ops Corer
Weather:	15°C, overcast, light wind	UTM:	18T 381937 4900397
Water Depth:	1.05m	Location Description:	≈ 175m from shore
# of Attempts to Obtain Sample:	3	Time of Collection:	1705

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	4-4 2.5	orgs/silt	aquatic veg	organic	N/A
2	↓	↓	↓	↓	↓
3					

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s) Grab 1: 80 Grab 2: 60 Grab 3: 80 Grab 4: / Grab 5: / Grab 6: /

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

Photos - N, E, S, W, Grab 1, Grab 2, Grab 3, Composite

QC'd by: Andrew Paus Date: 04 Oct 21

3 x Jars

SEDIMENT COLLECTION LOG

Project No:	17783686-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	3-OCT-2021	Sampled by:	J.F / JS / AR
Station Number (ID):	PCW-SGC-001	Sampling Method:	Petite Ponar / Ekman / Tech-Ops Corer
Weather:	overcast, light rain, 15°C	UTM:	18T 382190 4900603
Water Depth:	1.0m	Location Description:	≈ 40m from shore
# of Attempts to Obtain Sample:	Core 5 Grab 4	Time of Collection:	CORE - 1205 Grab - 1255

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	4-4 dark olive	Silt	Org material	None	Zebra mussel shells
2	4-4 dark olive	Silt	Org material	None	Zebra mussel shells
3	↓	↓	↓	↓	↓
4					

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description
15	4-4 org/silt	21	4-4 org/silt 2.5y	14	4-4 2.5y orgs/silt
15	7-1 2.5y - Silty clay	7	7-1 2.5y Silty clay	14	7-1 2.5y Silty clay
2	3-4 - Silty clay	5	3-4 2.5y Silty clay	1	3-4 2.5y Silty clay
18	10R 4-6 - Peat	16	10R 4-6 Peat	18	10R 4-6 - Peat

☐ Duplicate Sample? Duplicate Sample ID: DUP-205 for Horizon A (11+1)

Approx % Collected in Grab Sample(s) Grab 1: 90 Grab 2: 90 Grab 3: 90 Grab 4: 90 Grab 5: Grab 6:

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m	20cm	20cm	20cm	20cm	18cm	
0.3 to 0.5 m	18cm	17cm	15cm	—	—	
0.5 to 0.8 m	—	—	—	—	—	

Photograph Notes (grab, sampling location, field sampling methods, etc.):

Photos - N, E, S, W, Core 1, Horizon A, Horizon B, CORE 2, Horizon A, Horizon B, Core 3, Horizon A, Horizon B, CORE 4, Horizon A, Core 5, Horizon A, GRAB 1, GRAB 2, GRAB 3, GRAB 4, COMPOSITE

QC'd by: SB Date: 3-OCT-21

A 11+1
B 3+1
Grab 11+1

Golder Associates

* Collected 2 extra Cores for extra Horizon A Material for

SEDIMENT COLLECTION LOG

2 OF 2

Project No: 17783886-8000-8004

Project Title: PSPC Kingston Inner Harbour Sediment Assessment

Date:

Sampled by:

Station Number (ID):

Sampling Method: Petite Ponar /Ekman/Tech-Ops Corer

Weather:

UTM:

Water Depth:

Location Description:

# of Attempts to Obtain Sample:

Time of Collection:

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota

Core 4	Core layer Description	Core 5	Core layer Description	Core 3	Core layer Description
15	4-4 2.5y orgs/s.lt	14	4-4 2.5y orgs/s.lt		
17	7.1 2.5y silty clay	9	7.1 2.5y silty clay		
8	10YR 4-6 - peat	6	10YR 4-6. Peat		

☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s) Grab 1: Grab 2: Grab 3: Grab 4: Grab 5: Grab 6:

Sediment Horizon Sampled (cm) Grab 1: Grab 2: Grab 3: Grab 4: Grab 5: Grab 6:

0 to 0.3 m

0.3 to 0.5 m

0.5 to 0.8 m

Photograph Notes (grab, sampling location, field sampling methods, etc.):

QC'd by: SB Date: 3-OCT-2

SEDIMENT COLLECTION LOG

pg 1 of 1

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	3-OCT-21	Sampled by:	JF/JS/AR
Station Number (ID):	PCW-SCG-005	Sampling Method:	Petite Ponar /Ekman/Tech-Ops Corer
Weather:	overcast	UTM:	18T 382133 4900644
Water Depth:	0.5m	Location Description:	<5m From Shore
# of Attempts to Obtain Sample:	3	Time of Collection:	Core 14:30, Grab 1520

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	3-4	Silt/orgs	aquatic veg.	ORGANIC	N/A
2	3-4	Silt/orgs	↓	↓	↓
3	3-4	Silt orgs			

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description
13cm	3-4 7.5y organics/silt	14cm	3-4 2.5y orgs/silt	15cm	3-4 orgs/silt
4cm	4-4 2.5y orgs/silt		- trace natural wood debris	2cm	4-4 silty clay
15cm	7-1 2.5y silty clay - possible PAC odour	7cm	7-1 2.5y silty clay - trace gravel	20cm	7-1 silty clay
trace gravel		2cm	4-6 10YR - Peat	4cm	4-6 10YR - Peat

☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s) Grab 1: 90 Grab 2: 90 Grab 3: 90 Grab 4: — Grab 5: — Grab 6: —

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m	18cm	13cm	20cm			
0.3 to 0.5 m	—	—	9cm			
0.5 to 0.8 m	—	—	—			

Photograph Notes (grab, sampling location, field sampling methods, etc.):

Photos - N, E, S, W, Core 1, Horizon A, ~~Horizon B~~, Core 2, Horizon A, Core 3, Horizon A, Horizon B, Grab 1, Grab 2, Grab 3

QC'd by: SB Date: 3-OCT-21

A-7 GRAB-7
B-3

SEDIMENT COLLECTION LOG

Pg 1 of 1.

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	3 OCT-21	Sampled by:	JF/JS/AR.
Station Number (ID):	PCW-SGC-007	Sampling Method:	Petite Ponar /Ekman/Tech-Ops Corer
Weather:	Overcast, Calm, 15°C	UTM:	18T 382041 - 4900636
Water Depth:	0.7m	Location Description:	~10m from shore
# of Attempts to Obtain Sample:	3	Time of Collection:	Cores - 1605 / Grabs.

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	4-4	silt/orgs	Aquatic veg	organic	N/A.
2	4-4	↓	↓	organic	N/A
3	4-4			organic	N/A.

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description
18	4-4 orgs/silt	30cm	4-4 orgs/silt	15	4-4 - orgs/silt
8cm	7-1 silty clay			10	7-1 silty clay
24cm	- Peat 10 yr 4-6	14cm	- Peat 10YR 4-6	25cm	- Peat 10YR 4-6
Horizon A - slight PHC odour				slight PHC odour in Horizon A	

☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s) Grab 1: 90 Grab 2: 90 Grab 3: 90 Grab 4: — Grab 5: — Grab 6: —

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m	20cm	20cm	20cm	X	X	X
0.3 to 0.5 m	18cm	13cm	17cm			
0.5 to 0.8 m	—	—	—			

Photograph Notes (grab, sampling location, field sampling methods, etc.):

Photos - N, E, S, W, Core 1, Horizon A, Horizon B, Core 2, Horizon A, Horizon B, Core 3, Horizon A, Horizon B. Grab 1, Grab 2, Grab 3, COMPOSITE

QC'd by: SB Date: 3-OCT-21

A-11+1 Grab 11+1
B-13+1

SEDIMENT COLLECTION LOG

Project No: 17783886-8000-8004

Project Title: PSPC Kingston Inner Harbour Sediment Assessment

Date: 2-OCT-21

Sampled by: SW/RS/SB

Station Number (ID): PPOM-SG-001

Sampling Method: Petite Ponar/Ekman/Tech-Ops Corer

Weather: 16°, cloud (100%)

UTM: WP 033 381841 4900449

Water Depth: 0.64

Location Description: E of Orchard Street Marsh

# of Attempts to Obtain Sample: IIII (4)

Time of Collection: 14:00

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	olive	Si org	aquatic veg	organic odour	
2	↓	↓	↓	↓	
4					

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
	60	90	0	70		

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

1568 N, 1569 E, 1570 S, 1571 W, 1572 grab #1, 1573 grab #2, 1574 grab #3, 1575 comp. sample

QC'd by: Andrew Rous Date: Oct 2/21

SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	2-OCT-21	Sampled by:	JW/JS/SB
Station Number (ID):	PPOM-SG-003	Sampling Method:	Petite Ponar /Ekman/Tech-Ops Corer
Weather:	16, rain	UTM:	WP 031 381939 4900452
Water Depth:	0.74	Location Description:	E of Orchard Street Marsh
# of Attempts to Obtain Sample:	III (3)	Time of Collection:	14:30

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	olive	Si ora	organic veg	organic odour	
2	↓	↓	↓	↓	
3	↓	↓	↓	↓	

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☐ Duplicate Sample? Duplicate Sample ID:

	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
Approx % Collected in Grab Sample(s)	65	70	70	/	/	/
Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

1574 N, 1575 E, 1576 S, 1577 W, 1578 grab #1, 1579 grab #2, 1580 grab #3, 1581 comp.

* 3 JARS

QC'd by: Andrew Rous Date: Oct 2/21

SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	2-OCT-21	Sampled by:	JW / JS / SB
Station Number (ID):	PPOM-SG-005	Sampling Method:	Petite Ponar /Ekman/Tech-Ops Corer
Weather:	15°, rain	UTM:	WP 035 381890 4900398
Water Depth:	0.82	Location Description:	E of orchard Street Marsh
# of Attempts to Obtain Sample:	III (3)	Time of Collection:	14:40

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	olive	Si, Org	aquatic veg.	organic odour	
2	↓	↓	↓	↓	↓
3	↓	↓	↓	↓	↓

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
	100	95	60	—	—	—

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

1584 N, 1585 E, 1586 S, 1587 W, 1588 grab #1,
1589 grab #2, 1590 grab #3, 1591 comp. sample

* 3 JARS.

QC'd by: Andrew Rous Date: Oct 7/21

SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	2-OCT-21	Sampled by:	JW / JS / SB
Station Number (ID):	PPOM-SG-006	Sampling Method:	Petite Ponar /Ekman/Tech-Ops Corer
Weather:	5°, heavy rain	UTM:	WP 036 381842 4900347
Water Depth:	0.71	Location Description:	E of orchard Street Marsh
# of Attempts to Obtain Sample:	HH-(5)	Time of Collection:	15:00

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	olive	Si. Org	aquatic mac	organic odour	
2	↓	↓	↓	↓	
3					

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
	60	40	20	80	100	

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

1597 N, 1598 E, 1599 S, 1600 W, 1601 aquatic mac, 1602 grab #1, 1603 grab #4, 1604 grab #5, 1605 comp. sample

* 3 JARS

QC'd by: Andrew Bous Date: Oct 2/21

SEDIMENT COLLECTION LOG

Project No: 17783886-8000-8004

Project Title: PSPC Kingston Inner Harbour Sediment Assessment

Date: 28-SEPT-21

Sampled by: JW / RS / SB

Station Number (ID): TC1-SG-001

Sampling Method: Petite Ponar / Ekman / Tech-Ops Corer

Weather: 14°, 20 km N wind, sunny

UTM: WP 009, 381968 4900299

Water Depth: 1.45

Location Description: 100m from shoreline, E of former lead smelting land

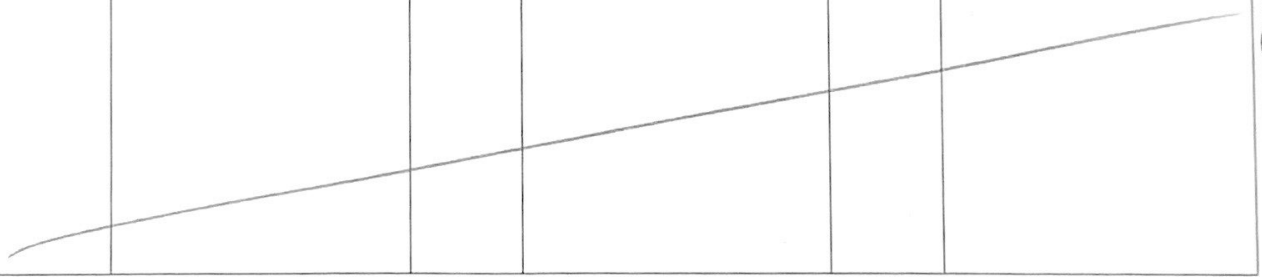
# of Attempts to Obtain Sample: HH | 6

Time of Collection: 13:37

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1 (NO SED)					
2 (NO SED)					
3 (NO SED)					
4	olive	Si 95%, Sa 5%	aquatic mac.	min. org. odour	
5	↓	↓	↓	↓	
6	↓	↓	↓	↓	

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description



☐ Duplicate Sample? Duplicate Sample ID: _____

Approx % Collected in Grab Sample(s)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
	0	0	0	80	30	60

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

~~2182 North, 2183 East, 2184 South, 2185 West~~, 2182 comp. sample

QC'd by: JF Date: 28/09/21

SEDIMENT COLLECTION LOG

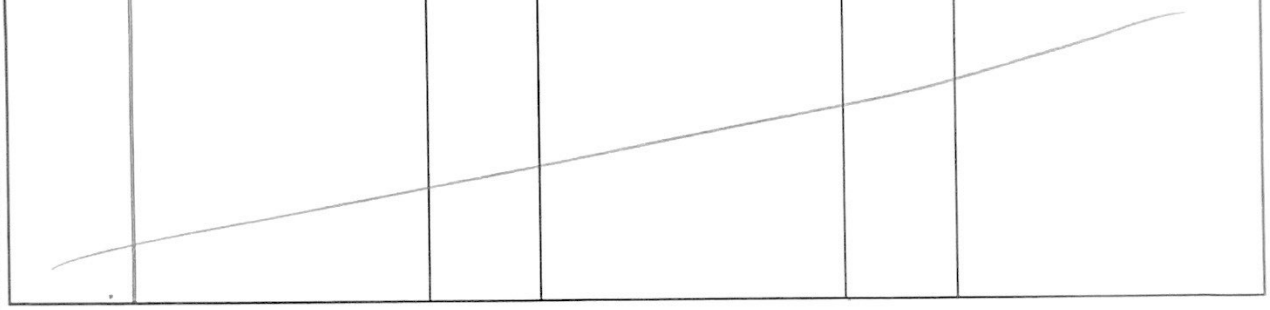
Pg 1 of 1

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	28-SEPT-21	Sampled by:	JW/RS/SB
Station Number (ID):	TC1-SG-002	Sampling Method:	Petite Ponar / Ekman / Tech-Ops Corer
Weather:	14°, 20 km N wind, sunny	UTM:	WP 008 381968 4900247
Water Depth:	1.62	Location Description:	100 m from Shoreline
# of Attempts to Obtain Sample:	HH II (7)	Time of Collection:	13:18

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	olive	Si 95%; Sa 5%	aquatic mac.	min. org. odor	
2 (NO SED)					
3 (NO SED)					
4	olive	Si 95%; Sa 5%	aquatic mac.	min. org. odor	
5 (NO SED)					
6	olive	Si 95%; Sa 5%	aquatic mac.	min org odor	
7	↓	↓	↓	↓	

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description



☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:	GRAB 7:
	40	0	0	60	0	60	95

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

2177 north, 2178 east, 2179 south, 2180 west, 2181 comp. sample

QC'd by: JF Date: 28/09/21

SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	28-SEPT-21	Sampled by:	JW/RS/SB
Station Number (ID):	TCI-SG-003	Sampling Method:	Petite Ponar /Ekman/Tech-Ops Corer
Weather:	14°, 19 km N wind, sunny	UTM:	WP 007 381968 4900198
Water Depth:	1.52	Location Description:	100m from shoreline
# of Attempts to Obtain Sample:	III (3)	Time of Collection:	13:00

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	olive	Si 95%, Sa 5%	aquatic mac	min org. odor	
2	↓	↓	↓	↓	
3					

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
	90	90	90	—	—	—

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):
2172 north, 2173 east, 2174 south, 2175 west, 2176 comp. sample

QC'd by: JF Date: 28/09/21

+1 org

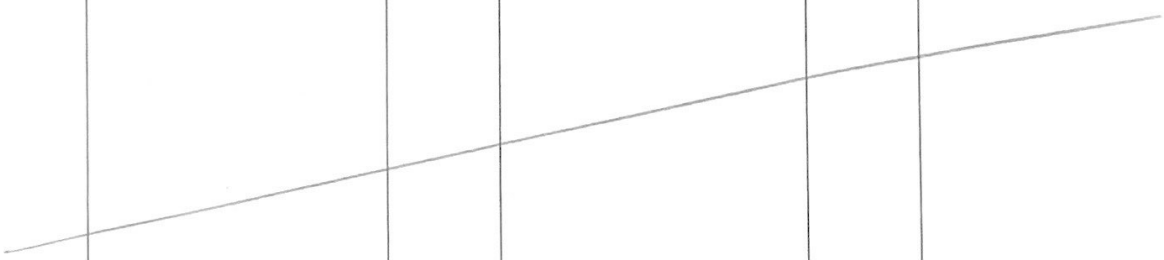
SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	28-SEPT-21	Sampled by:	JW/RS/SB
Station Number (ID):	TC1-SG-004	Sampling Method:	Petite Ponar/Ekman/Tech-Ops Corer
Weather:	14°, 19km N wind, sunny	UTM:	WP006 381963 4900145
Water Depth:	1.46	Location Description:	100 m from shoreline
# of Attempts to Obtain Sample:	HH 1 (6)	Time of Collection:	12:40

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	olive	Si 95%, Sa 5%	aquatic mac.	min org odor	
2	↓	↓	↓	↓	
3					
4 (NO SED)					
5 (NO SED)					
6	olive	Si 95%, Sa 5%	aquatic mac.	min. org odor	

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description



☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
	30	40	60	Ø	Ø	50

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

2166 north, 2167 east, 2168 south, 2169 west, 2170 aquatic mac., 2171 comp. sample

QC'd by: JF Date: 28/09/21

SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	28-SEPT-21	Sampled by:	JW/SB/RS
Station Number (ID):	TC1-SG-005	Sampling Method:	Petite Ponar /Ekman/Tech-Ops Corer
Weather:	15°, 10 km wind N, Sunny	UTM:	WP 005, 381965 4900089
Water Depth:	1.48	Location Description:	100 m From shoreline, NE of rowing club
# of Attempts to Obtain Sample:	1 (3)	Time of Collection:	11:15

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	light olive brown	Si 95% Sa 5%	aquatic mac.	min org. odor	
2	↓	↓	↓	↓	
3					

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
	90	60	60	—	—	—

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

2161 north, 2162 east, 2163 south, 2164 west, 2165 comp. sample

- paddlers on the water (canoe)

QC'd by: JF Date: 29 Sep/21

Pg 1 of 1

SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	06 Oct 2021	Sampled by:	JW, AR, RS
Station Number (ID):	TC1-S6-006	Sampling Method:	Petite Ponar /Ekman/Tech-Ops Corer
Weather:	20°C, Sunny, wind SE 17km/h	UTM:	WP059 382076E 4900299N
Water Depth:	1.44	Location Description:	NW portion of TC-1
# of Attempts to Obtain Sample:	3	Time of Collection:	15:50

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	olive	silt/org	aquatic veg.	org. odour	none
2	↓	↓	↓	↓	↓
3	↓	↓	↓	↓	↓

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
	60	90	70			

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

2716 - north, 2717 - east, 2718 - South, 2719 - west, 2720 - grab 1, 2721 grab 2, 2722 grab 3, 2723 composite sample

QC'd by: Andrew Row Date: 06 Oct 21

SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	06 Oct 2021	Sampled by:	JW, AR, RS
Station Number (ID):	TC1-SG-007	Sampling Method:	Petite Ponar/Ekman/Tech-Ops Corer
Weather:	20°C, Sunny, Wind SE 17 km/h	UTM:	WP060 382221E · 4900301N
Water Depth:	1.49	Location Description:	north Area of TC1
# of Attempts to Obtain Sample:	4	Time of Collection:	16:10

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	olive	silt/org	aquatic veg.	organic odor	none
3	↓	↓	↓	↓	↓
4					

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☐ Duplicate Sample? Duplicate Sample ID: ——

Approx % Collected in Grab Sample(s)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
	70	didn't close	70	80		

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

2724 - north, 2725 - east, 2726 - south, 2727 - west, 2728 - grab 1, 2729 - grab 3, ~~2730 grab 4~~, 2730 - Composite Sample

JW

QC'd by: Andrew Reus Date: 06 Oct 21

SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	06 Oct 2021	Sampled by:	JW, AR, RS
Station Number (ID):	TCI-SG-008	Sampling Method:	Petite Ponar /Ekman/Tech-Ops Corer
Weather:	20°C, sunny, South 11km/h	UTM:	WP061 382401E 4900293N
Water Depth:	1.47m	Location Description:	NE area of TCI
# of Attempts to Obtain Sample:	3	Time of Collection:	16:30

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	olive	si/org	plant material	slight org. odour	none
2	↓	↓	↓	↓	↓
3	↓	↓	↓	↓	↓

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
	80	90	80			

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

2731 - north, 2732 - east, 2733 - south, 2734 - west, 2735 grab1, 2736 grab2
2737 - grab3, 2738 composite sample

QC'd by: Andrew Rous Date: 06 Oct 21

SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	7-OCT-21	Sampled by:	JF/JS
Station Number (ID):	TCI-SG-009	Sampling Method:	Petite Ponar /Ekman/Tech-Ops Corer
Weather:	overcast, 18°C, calm	UTM:	18T 382086 4900160
Water Depth:	1.75	Location Description:	≈ 200m from shore
# of Attempts to Obtain Sample:	3	Time of Collection:	0940

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	4-4	Orgs/silt	aquatic veg	orgs	N/A
2	↓	↓	↓	↓	↓
3	↓	↓	↓	↓	↓

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	*Core layer Description

☐ Duplicate Sample? Duplicate Sample ID: _____

Approx % Collected in Grab Sample(s) Grab 1: 90 Grab 2: 60 Grab 3: 80 Grab 4: / Grab 5: / Grab 6: /

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

Photos - N, E, S, W, GRAB 1, GRAB 2, GRAB 3, COMPOSITE

QC'd by: [illegible] Date: 7-OCT-21

SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	7-Oct-21	Sampled by:	JF/JB
Station Number (ID):	TC1-SG-010	Sampling Method:	Petite Ponar/Ekman/Tech-Ops Corer
Weather:	18°C, calm, overcast	UTM:	18T 382232 4900163
Water Depth:	1.9m	Location Description:	
# of Attempts to Obtain Sample:	3	Time of Collection:	0955

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	4-4	silt/orgs	aquatic veg	organics	N/A
2	↓	↓	↓	↓	↓
3	↓	↓	↓	↓	↓

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s) Grab 1: 90 Grab 2: 90 Grab 3: 90 Grab 4: / Grab 5: / Grab 6: /

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

Photos- N, E, S, W, GRAB 1, GRAB 2, GRAB 3, COMOSITE

QC'd by: [illegible] Date: 7-OCT-21

SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	7-OCT-21	Sampled by:	JF/JS
Station Number (ID):	TC1-SG-011	Sampling Method:	Petite Ponar/Ekman/Tech-Ops Corer
Weather:	18°C, overcast, calm	UTM:	18T 382372 4900160
Water Depth:	2m	Location Description:	
# of Attempts to Obtain Sample:	3	Time of Collection:	1015

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	4-4	Orgs/silt	Aquatic Veg	organic	NA
2	↓	↓	↓	↓	↓
3					

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s) Grab 1: 90 Grab 2: 90 Grab 3: Grab 4: Grab 5: Grab 6:

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

Photos - N, E, S, W, GRAB 1, GRAB 2, GRAB, COMPOSITE

QC'd by: SB Date: 7-OCT-21

SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	7-OCT-21	Sampled by:	JF/JS
Station Number (ID):	TC1-SG-012	Sampling Method:	Petite Ponar/Ekman/Tech-Ops Corer
Weather:	18°C, overcast, Calm	UTM:	18T 382089, 4900016
Water Depth:	1.75m	Location Description:	
# of Attempts to Obtain Sample:	3	Time of Collection:	1050

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	4-4	orgs |s.lt	aquatic veg	organic	N/A
2	↓	↓	↓	↓	↓
3	↓	↓	↓	↓	↓

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s) Grab 1: 90 Grab 2: 90 Grab 3: 90 Grab 4: / Grab 5: / Grab 6: /

Sediment Horizon Sampled (cm)	Grab 1	Grab 2	Grab 3	Grab 4	Grab 5	Grab 6
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

Photos - N, E, S, W, Grab 1, Grab 2, Grab 3, Composite

QC'd by: RB Date: 7-OCT-21

SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	7-OCT-21	Sampled by:	JF/JS
Station Number (ID):	TCI-SG-013	Sampling Method:	Petite Ponar/Ekman/Tech-Ops Corer
Weather:	Overcast, 18°C, Calm	UTM:	18T 382221 4899994
Water Depth:	2m	Location Description:	
# of Attempts to Obtain Sample:	3	Time of Collection:	1035

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1 2 3	4-4	orgs/silt	aquatic veg	organic	N/A

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s): Grab 1: 90 Grab 2: 90 Grab 3: 90 Grab 4: / Grab 5: / Grab 6: /

Sediment Horizon Sampled (cm)	Grab 1	Grab 2	Grab 3	Grab 4	Grab 5	Grab 6
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

Photos - N, E, S, W, Grab 1, Grab 2, Grab 3, Composite

QC'd by: RB Date: 7-OCT-21

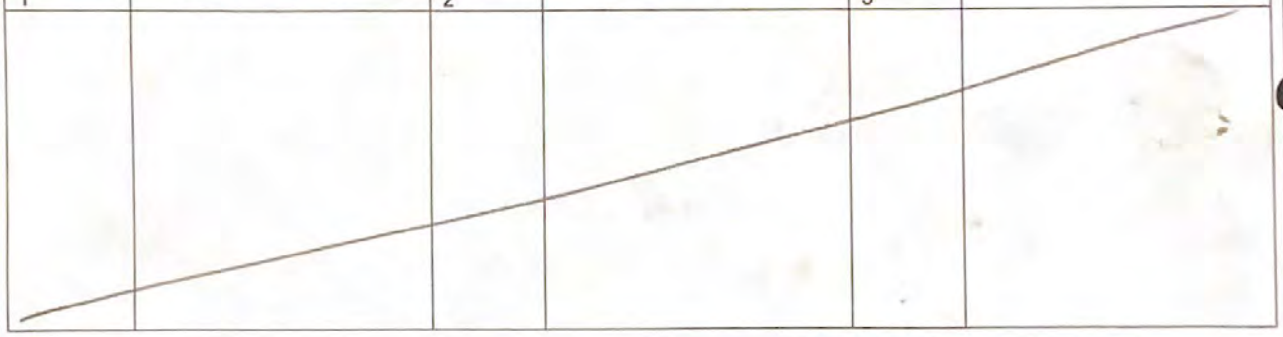
SEDIMENT COLLECTION LOG

Project No: 17783886-8000-8004
Project Title: PSPC Kingston Inner Harbour Sediment Assessment
Date: 28-SEPT-21
Sampled by: JW/RS/SB
Station Number (ID): TC2A-SG-001
Sampling Method: Petite Ponar/Ekman/Tech-Ops Corer
Weather: 14°, 19 km N wind, sunny
UTM: WP 017 381792 4899712
Water Depth: 0.73
Location Description: 10 m from shoreline, S of Woolen Mill
# of Attempts to Obtain Sample: HHT 1 (6)
Time of Collection: 16:55

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	dark olive	Si 95%, Sa 5%	aquatic mac.	min. org. odour	
2 (NOT SUFF.)					
3 (NOT SUFF.)					
4 (NO SED)					
5 (NO SED)					
6 (NOT SUFF.)					
7	dark olive	Si 95%; Sa 5%	aquatic mac.	min. org. odour	zebra mussel shell pieces
8					

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description



☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s): Grab 1: 70; Grab 2: 10; Grab 3: ~~0~~; Grab 4: ~~0~~; Grab 5: ~~0~~; Grab 6: 10; GRAB 7: 40; 8: 40

Sediment Horizon Sampled (cm): Grab 1: • Grab 2: Grab 3: Grab 4: Grab 5: Grab 6:

0 to 0.3 m
0.3 to 0.5 m
0.5 to 0.8 m



Photograph Notes (grab, sampling location, field sampling methods, etc.):
2219 north, 2220 east, 2221 south, 2222 west, 2223 comp. sample

QC'd by: JF Date: 28/09/21

SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	28-SEPT-21	Sampled by:	JW/RS/SB
Station Number (ID):	TC2A-SG-002	Sampling Method:	Petite Ponar /Ekman/Tech-Ops Corer
Weather:	14°, 19 km N wind, sunny	UTM:	WP 016 381837 4899709
Water Depth:	1.29	Location Description:	15 m from Shoreline, S of Woolen Mill
# of Attempts to Obtain Sample:	IIII (4)	Time of Collection:	16:35

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	dark olive	Si 95%; Sa 5%	aquatic mac.	min. org. odour	
2 (NO SED)					
3	dark olive	Si 95%; Sa 5%	aquatic mac.	min. org. odour	
4	↓	↓	↓	↓	

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
	70	~~0~~	60	80	—	—
Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

2214 north, 2215 east, 2216 south, 2217 west, 2218 comp. sample

QC'd by: JF Date: 28/09/21

SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	28-SEPT-21	Sampled by:	JW/RS/SB
Station Number (ID):	TC2A-SG-003	Sampling Method:	Petite Ponar /Ekman/Tech-Ops Corer
Weather:	14°, 19km N wind, sunny	UTM:	WP 015 381942 4899692
Water Depth:	1.79	Location Description:	50 m from Shareline, SE of Woolen Mill
# of Attempts to Obtain Sample:	III (3)	Time of Collection:	16:05

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	dark olive	Si 95%; Sa 5%	aquatic mac.	min. org. odour	
2	↓	↓	↓	↓	
3					

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☑ Duplicate Sample? Duplicate Sample ID: DUP-201

Approx % Collected in Grab Sample(s)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
	60	60	60	—	—	—

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

2209 north, 2210 east, 2211 south, 2212 west, 2213 comp. sample

QC'd by: JF Date: 28/09/21

SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	28 Sep-21	Sampled by:	JF/JS/AR
Station Number (ID):	TC2A-SG-004	Sampling Method:	Petite Ponar /Ekman/Tech-Ops Corer
Weather:	Sunny, light wind	UTM:	18T 0357783 4899669
Water Depth:	1.20m	Location Description:	shallow area w Lily pads
# of Attempts to Obtain Sample:	4	Time of Collection:	1650

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	Poor return, veg in jaws				
2	10YR 2-2	silt/orgs	leaves/sticks	organics	N/A
3	10YR 2-2	silt/orgs	leaves/sticks	organics	N/A
4	10YR 2-2	silt/orgs	leaves/sticks	organic	N/A

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s) Grab 1: 10 Grab 2: 90 Grab 3: 60 Grab 4: 80 Grab 5: Grab 6:

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

Photos N, E, S, W, Grab 2, Grab 3, Grab 4

QC'd by: SB Date: 28-SEPT-21

3 Jars + 1 bag for archive

SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	28 Sep-21	Sampled by:	JF/JS/AR
Station Number (ID):	TC2A-SG-005	Sampling Method:	Petite Ponar / Ekman / Tech-Ops Corer
Weather:	Sunny, light wind	UTM:	18T 0381843 4899671
Water Depth:	1.35m	Location Description:	middle of small bay.
# of Attempts to Obtain Sample:	3	Time of Collection:	1710

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	10YR 2-2	Silt / orgs	leaves sticks	org	N/A
2	10YR 2-2	Silt / orgs	aquatic veg	org	N/A
3	10YR 2-2	Silt / orgs	aquatic veg	org	N/A

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s) Grab 1: 90 Grab 2: 60 Grab 3: 80 Grab 4: Grab 5: Grab 6:

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

Photos - N, E, S, W, Grab 1, Grab 2, Grab 3

QC'd by: SB Date: 28-SEPT-21

3 Jars + 1 bag for Archive

SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	28 Sept 21	Sampled by:	JF/JS/AR
Station Number (ID):	TC2A-SG-006	Sampling Method:	Petite Ponar / (Ekman) / Tech-Ops Corer
Weather:	sunny, light wind	UTM:	18T 0381790 4899619
Water Depth:	1.35m	Location Description:	middle of small bay
# of Attempts to Obtain Sample:	4	Time of Collection:	1525

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	10YR 2-2	Silt/orgs	sticks/leaves	organic	N/A
2	V.sg jammed jaws				
3	10YR 2-2	Silt/orgs	sticks/leaves	org	N/A
4	10YR 2-2	" "	" "	org	N/A

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s) Grab 1: 90 Grab 2: 40 Grab 3: 90 Grab 4: 90 Grab 5: Grab 6:

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

Photos - N, E, S, W, Grab 1, Grab 3, Grab 4

QC'd by: SB Date: 28-SEPT-21

7 Jars + Bag + Archive

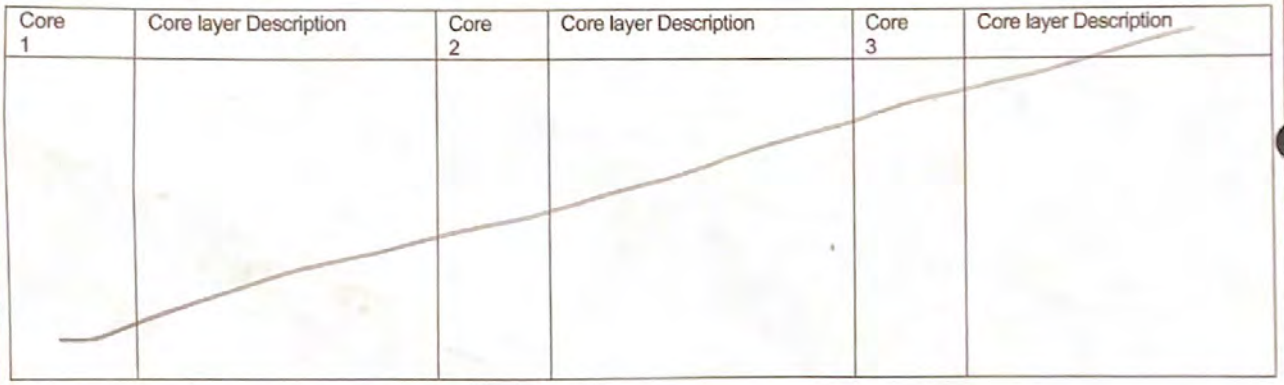
SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	28 SEP-21	Sampled by:	JF/AR/JS
Station Number (ID):	TC2A-SG-007	Sampling Method:	Petite Ponar / Ekman / Tech-Ops Corer
Weather:	Sunny, light wind	UTM:	18T 381843 4899617
Water Depth:	1.69	Location Description:	MIDDLE OF BAY
# of Attempts to Obtain Sample:	5	Time of Collection:	14:15

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
~~2~~	10 YR 2-2	Silt orgs	N/A	organics	NA
~~2~~ 1	aquatic veg jammed	jaws		—	—
~~2~~ 3	" " "	"		—	—
4	10YR 2-2	silt orgs	N/A	organics	N/A
5	10YR 2-2	silt orgs	N/A	organic	N/A

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description



☑ Duplicate Sample? Duplicate Sample ID: DUP-001

Approx % Collected in Grab Sample(s) Grab 1: 30 Grab 2: 60 Grab 3: 30 Grab 4: 80 Grab 5: 70 Grab 6:

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

Photos - N, E, S, W, Grab 2, Grab 4, Grab 5

* AR ~~TC2A~~-DUP-001 *

QC'd by: [illegible] Date: 28-SEPT-21

3 Jars + 1 archive bag

* Dup Collected here

SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	28 Sep - 21	Sampled by:	JF / JS / AR
Station Number (ID):	TC2A-SG-008	Sampling Method:	Petite Ponar / Ekman / Tech-Ops Corer
Weather:	Sunny, Light wind	UTM:	18T 381909 4899605
Water Depth:	1.9 m	Location Description:	Middle of the bay
# of Attempts to Obtain Sample:	5	Time of Collection:	1425

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	Clogged w	weeds	—	—	—
2	10YR 2-2	silt/orgs	Aquatic Veg	orgs	N/A
3	Clogged w	weeds	—	—	—
4	10YR 2-2	silt/orgs	Aquatic Veg	orgs	N/A
5	10YR 2-2	silt/orgs	Aquatic Veg	orgs	N/A

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s) Grab 1: 10 Grab 2: 60 Grab 3: 0 Grab 4: 70 Grab 5: 90 Grab 6:

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

Photos - N, E, S, W, Grab 2, Grab 4, Grab 5

QC'd by: SB Date: 28-SEPT-21

3 x Jars + Bag for Archive

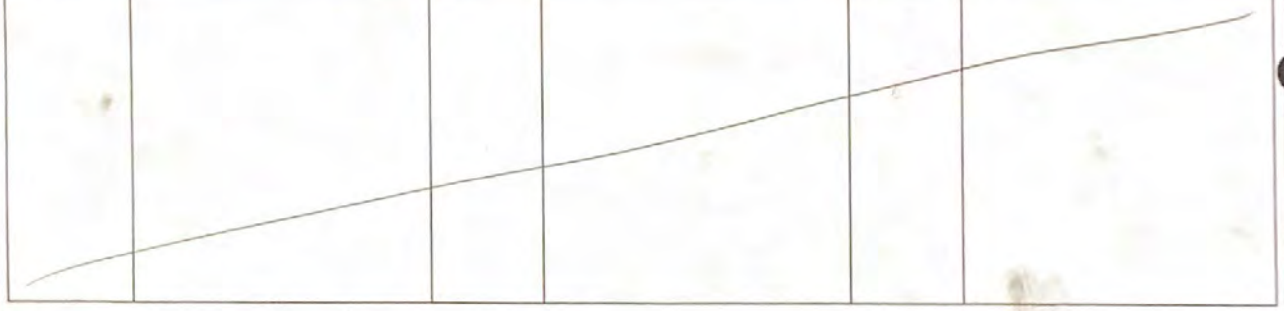
SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	28-Sep-21	Sampled by:	JF/JS/AR
Station Number (ID):	IC2A-SG-009	Sampling Method:	Petite Ponar / (Ekman) / Tech-Ops Corer
Weather:	Sunny Mod wind	UTM:	≈ 40m from shore
Water Depth:	1.05	Location Description:	18T 381782 4899563
# of Attempts to Obtain Sample:	6	Time of Collection:	1400

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	10YR 2-2	S:H /orgs	Aquatic Veg	orgs	N/A
2	VEG jammed	Jaws open	—	—	muscles
3	" "	" "	—	—	—
4	" "	" "	—	—	—
5	10YR 2-2	S.H/orgs	Aquatic Veg	orgs	N/A
6	" "	" "	" "	"	N/A

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description



☐ Duplicate Sample? Duplicate Sample ID: _____

Approx % Collected in Grab Sample(s) Grab 1: 80 Grab 2: 30 Grab 3: 30 Grab 4: 30 Grab 5: 60 Grab 6: 80

Sediment Horizon Sampled (cm) Grab 1: Grab 2: Grab 3: Grab 4: Grab 5: Grab 6:

0 to 0.3 m

0.3 to 0.5 m

0.5 to 0.8 m

Photograph Notes (grab, sampling location, field sampling methods, etc.):

Photos - N, E, S, W, Grab 1, Grab 5, Grab 6

Public walking the shoreline

QC'd by: SB Date: 28-SEPT-21

3x Jars + Bag for archive

Golder Associates

SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	28-Sept-21	Sampled by:	JF/JS/AR
Station Number (ID):	TC2A-SG-010	Sampling Method:	Petite Ponar / Ekman / Tech-Ops Corer
Weather:	Sunny, light wind	UTM:	18T 381896 4899559
Water Depth:	1.93	Location Description:	≈150m offshore
# of Attempts to Obtain Sample:	7	Time of Collection:	1335

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	2.5Y 4-4	Silt/orgs	N/A	organics	N/A
2	Clogged w/ weeds	〃	〃	〃	〃
3	〃	〃	〃	〃	〃
4	2.5Y 4-4	Silt/orgs	N/A	orgs	N/A
5	Clogged w/	weeds	〃	〃	〃
6	〃	〃	〃	〃	〃
7	2.5Y 4-4	Silt	N/A	organics	N/A

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s) Grab 1: 80 Grab 2: 0 Grab 3: 0 Grab 4: 60 Grab 5: 30 Grab 6: 30
Grab 7-50

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):
Photos - N, E, S, W, Grab 1, Grab 4, Grab 7

Active Canoers in the bay.

QC'd by: SB Date: 28-SEPT-21

7 days + bay + Ardrive

SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	28-SEP-21	Sampled by:	JF/AR/JS
Station Number (ID):	TC2A-SG-01	Sampling Method:	Petite Ponar / Ekman / Tech-Ops Corer
Weather:	Sunny, light wind	UTM:	18T 381781 4899508
Water Depth:	1.26m	Location Description:	≈30m off shore
# of Attempts to Obtain Sample:	3	Time of Collection:	1300

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	2.5Y 4-4	Silt/orgs	1 stick	organic	N/A
2	2.5Y 4-4	" "	Leaves/twigs	orgs	N/A
3	2.5Y 4-4	" "	Leaves/sticks	orgs	N/A

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
	80	70	90			

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

Photos - N, E, S, W, Grab 1, Grab 2, Grab 3

- People walking on shoreline Path

QC'd by: SB Date: 28-SEPT-21

3x Jar + Archive

SEDIMENT COLLECTION LOG

pg 1 of 1

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	28-Sep-21	Sampled by:	JF/JS/AR
Station Number (ID):	Sunny, light wind	Sampling Method:	Petite Ponar/Ekman/Tech-Ops Corer
Weather:	TC2A-SG-012	UTM:	18T 0381733 4899565
Water Depth:	0.92	Location Description:	≈ 10m FROM SHORE
# of Attempts to Obtain Sample:	3	Time of Collection:	1430

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	10YR 2-2	silt/orgs/sand	NA	organic	N/A
2	10YR 2-2	silt/orgs/sand	~~no~~ twigs	organic	N/A
3	10YR 2-2	silt/orgs/sand	twigs	organic	snail shell

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s) Grab 1: 90 Grab 2: 90 Grab 3: Grab 4: Grab 5: Grab 6:

Sediment Horizon Sampled (cm) Grab 1: Grab 2: Grab 3: Grab 4: Grab 5: Grab 6:

0 to 0.3 m

0.3 to 0.5 m

0.5 to 0.8 m

Photograph Notes (grab, sampling location, field sampling methods, etc.):

Photos - N, E, S, W, Grab 1, Grab 2, Grab 3

QC'd by: SB Date: 28-SEPT-21

3 x Jar + 1 bag for archive

SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	28 Sept - 21	Sampled by:	JF/JS/AR
Station Number (ID):	TC2A-SG-013	Sampling Method:	(Petite Ponar) Ekman/Tech-Ops Corer
Weather:	Sunny, calm	UTM:	18T 381734 4899617
Water Depth:	0.46	Location Description:	≈10 m from shore
# of Attempts to Obtain Sample:	3	Time of Collection:	1505

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	10YR 2-2	Sandy/silt/orgs	leaves/sticks	organics	NA
2	10YR 2-2	Sandy/silt/orgs	leaves/sticks	organic	NA
3	10YR 2-2	Sandy silt orgs	cigarette butt	organic	NA

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s) Grab 1: 80 Grab 2: 80 Grab 3: 80 Grab 4: Grab 5: Grab 6:

Sediment Horizon Sampled (cm) Grab 1: Grab 2: Grab 3: Grab 4: Grab 5: Grab 6:

0 to 0.3 m

0.3 to 0.5 m

0.5 to 0.8 m

Photograph Notes (grab, sampling location, field sampling methods, etc.):

Photos - N, E, S, W, Grab 1, Grab 2, Grab 3

* too Sandy for * Ekman, used Petite ponar

Path walkers,

QC'd by: Date:

3 x Jars + Bag for Archive

SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	**Project Title:**	PSPC Kingston Inner Harbour Sediment Assessment
Date:	29-SEPT-21	**Sampled by:**	AR/SB
Station Number (ID):	TC3A-SG-001	**Sampling Method:**	Petite Ponar / Ekman / Tech-Ops Corer
Weather:	15°, no wind, sun + cloud	**UTM:**	WP 01 381786 4899462
Water Depth:	1.3	**Location Description:**	E of Douglas Fluter Park
# of Attempts to Obtain Sample:	III	**Time of Collection:**	13:15

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	dark olive	Si 95%, Sa 5%	decaying org.	organic odour	
2	↓	↓	↓	↓	zebra mus. shell
3	↓	↓	↓	↓	↓

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
	90	80	100			

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

1354 N, 1355 E, 1356 S, 1357 W, 1358 aquatic. mac., ~~1360 comp~~ sample
1359 grab #1, 1360 grab #2, 1361 grab #3, 1362 comp. sample

* 3 JARS, 1 BAG ~~(Archive)~~ * No Archive Bag AR QC'd by: Jared Sheath Date: Sept 29/21

SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	29-SEPT-21	Sampled by:	AR/SB
Station Number (ID):	TC3A-SG-002	Sampling Method:	Petite Ponar/Ekman/Tech-Ops Corer
Weather:	16°, sun/cloud (90%)	UTM:	WP 002 381789 4899412
Water Depth:	1.04	Location Description:	E of Douglas Fluerer Park, 10 m from shoreline
# of Attempts to Obtain Sample:	III	Time of Collection:	13:50

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	dark olive	Si 95%, Sa 5%	decaying org.; woody deb.	organic odour	
2	↓	↓	↓	↓	
3					

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
	70	70	70	—	—	—

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

1363 N, 1364 E, 1365 S, 1366 W, 1367 aquatic mac.,
1368 grab #1, 1369 grab #2, 1370 grab #3, 1371 comp. sample

* 3 JARS, 1 BAG (Archive)

QC'd by: Jarad Sheath Date: Sept 29/21

SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	29-SEPT-21	Sampled by:	AR/SB
Station Number (ID):	TC3A-SG-003	Sampling Method:	Petite Ponar /Ekman/Tech-Ops Corer
Weather:	16°, Sun/cloud (90%)	UTM:	WP 003 0381859 4899399
Water Depth:	1.58	Location Description:	E of Douglas Flurer Park, 60 m from shoreline
# of Attempts to Obtain Sample:	III	Time of Collection:	14:15

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	dark olive	Si 95%, Sa 5%	decaying org.	organic odour	zeb. mus. shell
2	↓	↓	↓	↓	↓
3	↓	↓	↓	↓	↓

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
	70	100	100	—	—	—

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

1372 N, 1373 E, 1374 S, 1375 W, 1376 grab #1, 1377 grab #2, 1378 grab #3, 1379 comp. sample

* 7 JARS + 1 ARCHIVE BAG + 1 BAG

QC'd by: Jarad Sleath Date: Sept 29/21

SEDIMENT COLLECTION LOG

Project No:	17783880-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	7-OCT-21	Sampled by:	JF/JS
Station Number (ID):	TC3A-SG-004	Sampling Method:	Petite Ponar/Ekman/Tech-Ops Corer
Weather:	20°C, Sunny, Calm	UTM:	18T 381902 4899473
Water Depth:	1.8m	Location Description:	1
# of Attempts to Obtain Sample:	3	Time of Collection:	1205

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	4-4	orgs/silt	aquatic veg	orgs	NA
2 3	↓	↓	↓	↓	↓

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s): Grab 1: 90 Grab 2: 90 Grab 3: 90 Grab 4: Grab 5: Grab 6:

Sediment Horizon Sampled (cm): Grab 1: Grab 2: Grab 3: Grab 4: Grab 5: Grab 6:

0 to 0.3 m

0.3 to 0.5 m

0.5 to 0.8 m

Photograph Notes (grab, sampling location, field sampling methods, etc.):

Photos - N, E, S, W, Grab 1, Grab 2, Grab 3, Composite

QC'd by: SB Date: 7-OCT-21

SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	7-OCT-21	Sampled by:	AR/SB
Station Number (ID):	TC3B-SG-001	Sampling Method:	Petite Ponar/Ekman/Tech-Ops Corer
Weather:	19°, sun and cloud (60%)	UTM:	WP 022 382144 4899564
Water Depth:	2.35	Location Description:	400 m from shoreline, E of Douglas Fluhrer Park
# of Attempts to Obtain Sample:	III (3)	Time of Collection:	12:00

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	olive	Si, Org	aquatic veg,	organic odour	
2	↓	↓	↓	↓	
3					

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☐ Duplicate Sample? Duplicate Sample ID: —

Approx % Collected in Grab Sample(s)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
	70	80	70	—	—	—

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.)

1747 N, 1747 E, 1748 S, 1749 W, 1750 grab #1, 1751 grab #2, 1752 grab #3, 1753 comp sample

6 JARS, 1 BAG

QC'd by: Jamie Weir Date: 07 Oct 2021

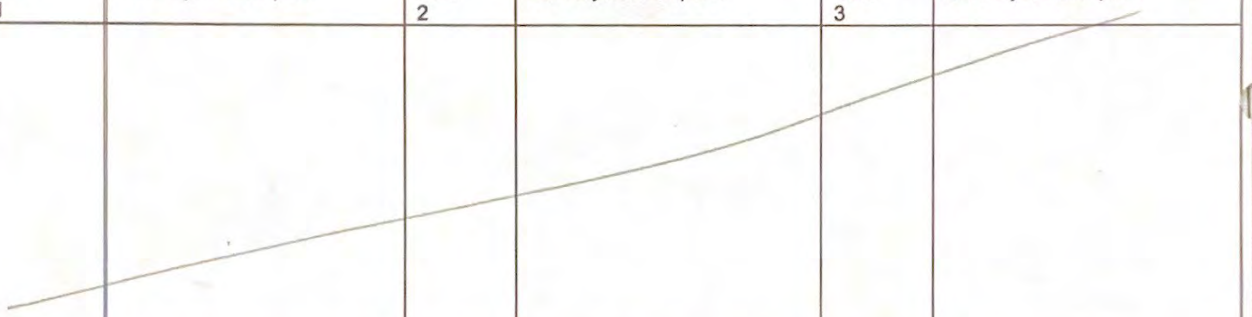
SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	29-SEPT-21	Sampled by:	AR/SB
Station Number (ID):	TC4-SG-001	Sampling Method:	(Petite Ponar)/Ekman/Tech-Ops Corer
Weather:	16°, cloudy (100%)	UTM:	WP 004 0381836 4899332
Water Depth:	0.58	Location Description:	10 m from shoreline, E of Douglas Fluhrer Park
# of Attempts to Obtain Sample:	HHT	Time of Collection:	15:15

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1 (NO SED)					
2 (NO SED)					
3	black brown	Si 70%; Sa 30%	decaying org.	organic odour	zeb mus shells
4	↓	↓	↓	↓	↓
5 (NO SED)					
6	black brown	Si 70%, Sa 30%	decaying org.	organic odour	

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description



☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
	30	0	60	60	—	—

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

1380 N, 1381 E, 1382 S, 1383 W, 1384 grab # 3, 1385 grab # 4
1386 grab # 6, 1387 comp. sample,

* 3 JARS, 1 BAG (ARCHIVE)

QC'd by: Jarad Sheath Date: Sept 29/21

SEDIMENT COLLECTION LOG

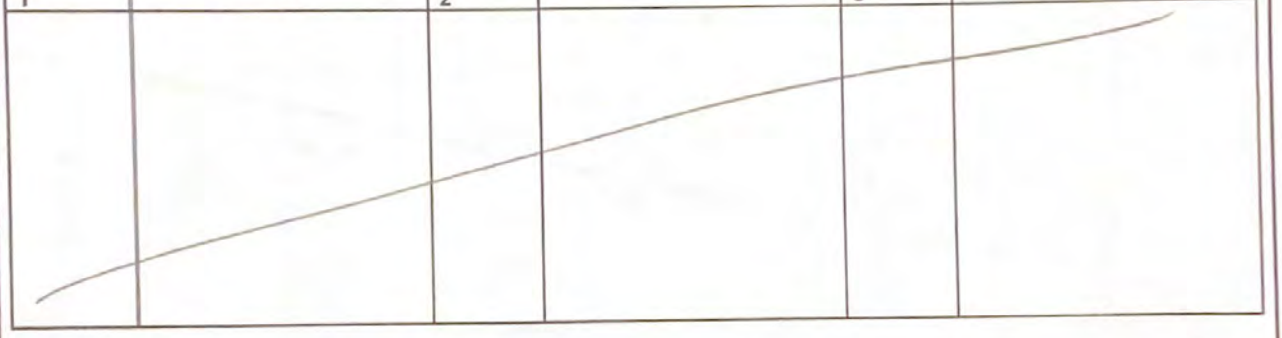
pg 1 of 1

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	29-SEPT-21	Sampled by:	AR/SB
Station Number (ID):	TC4-SG-002	Sampling Method:	Petite Ponar /Ekman/Tech-Ops Corer
Weather:	16°, cloudy (99%), 14km N wind	UTM:	WP 005 381873 4899864
Water Depth:	1.55	Location Description:	60 m from shoreline, E of Douglas Fluhrer Park
# of Attempts to Obtain Sample:	III	Time of Collection:	16:00

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	dark olive	Si 95%, Sa 5%	aquatic mac + decaying org	organic odour	
2	↓	↓	↓	↓	
3					

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description



☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
	95	100	100	—	—	—

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):
1388 N, 1389 E, 1390 S, 1391 W, 1392 grab #1, 1393 grab #2, 1394 grab #3, 1395 comp sample

* 3 JARS, 1 BAG (ARCHIVE)

QC'd by: Jared Sheath Date: Sept 29/21

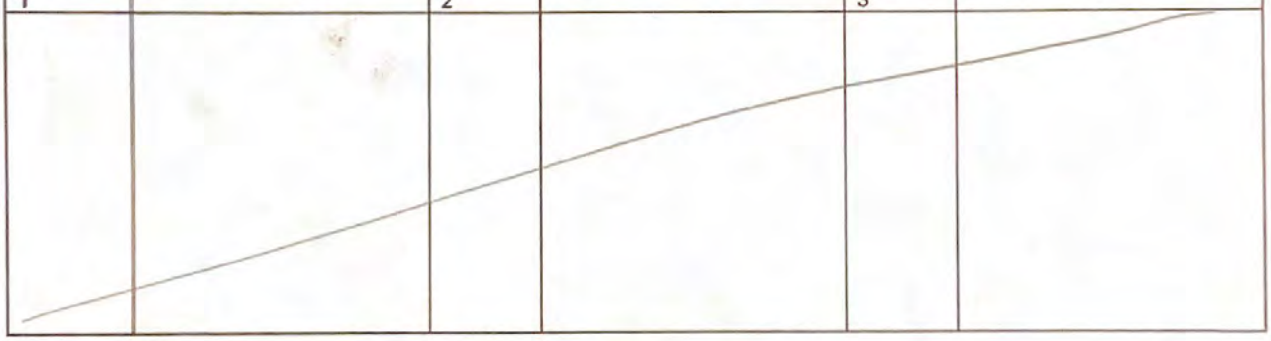
SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	30-SEPT-21	Sampled by:	AR/SB
Station Number (ID):	TC4-SG-004	Sampling Method:	Petite Ponar / Ekman / Tech-Ops Corer
Weather:	13°, 13 km N wind, cloud (100%)	UTM:	WP 007 381982 4899382
Water Depth:	2.14	Location Description:	160 m from shoreline, E of Douglas Fluhrer Park
# of Attempts to Obtain Sample:	HHH (5)	Time of Collection:	11:20

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	olive	Si 95%, Sa 5%	aquatic mac.	organic odour	
2	↓	↓	↓	↓	
3 (NOT SUFF)					
4 (NO SED)					
5	olive	Si 95%, Sa 5%	aquatic mac.	organic odour	blood worm

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description



☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
	60	60	10	0	60	—

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

1406 N, 1407 E, 1408 S, 1409 W, 1410 grab #1, 1411 grab #2, 1412 grab #3, 1413 comp. sample

* 3 JARS, 1 BAG (ARCHIVE)

QC'd by: JFregol Date: 30 Sep/21

SEDIMENT COLLECTION LOG

Project No: 17783886-8000-8004

Project Title: PSPC Kingston Inner Harbour Sediment Assessment

Date: 30-SEPT-21

Sampled by: AR/SB

Station Number (ID): TC4-SG-005

Sampling Method: Petite Ponar /Ekman/Tech-Ops Corer

Weather: 14°, 13 km N wind, sun/cloud (60%)

UTM: WP 008 382029 4899363

Water Depth: 2.23

Location Description: 200 m From Shoreline, E of Douglas Fluhrer Park

# of Attempts to Obtain Sample: III (3)

Time of Collection: 12:00

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	olive	Si 95%; Sa 5%	aquatic veg.	organic odour	
2					
3					

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
	60	70	60	—	—	—

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

1414 N, 1415 E, 1416 S, 1417 W, 1418 grab #1, 1419 grab #2, 1420 grab #3, 1421 comp sample

* 3 JARS, 1 BAG (ARCHIVE)

QC'd by: J-fregol Date: 30 Sep 21

SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	29 Sep 2021	Sampled by:	J. Weir, J. Skeath, R. Stephens
Station Number (ID):	TCH-SG-006	Sampling Method:	Petite Ponar/Ekman/Tech-Ops Corer
Weather:	17°C, mostly cloudy, wind N24km/h	UTM:	wp019 3819016 4899321N
Water Depth:	1.57	Location Description:	approx 30m from shore along weed edge
# of Attempts to Obtain Sample:	3	Time of Collection:	16:37

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	olive	silt/org.	weeds	minor org odour, sheen spotting	zebra mussels
2	↓	↓	↓	↓	↓
3	↓	↓	↓	↓	↓

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☑ Duplicate Sample? Duplicate Sample ID: Dup-002

Approx % Collected in Grab Sample(s)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
	60	80	60			

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

2238 - north, 2239 - east, 2240 - south, 2241 - west, 2242 - Grab #1, 2243 - grab #2, 2244 - grab #2 sheen spot, 2245 grab #3, 2246 - Composite sample after mixing.

QC'd by: Andrew Rous Date: Sept 29/21

SEDIMENT COLLECTION LOG

pg 1 of 1

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	29-SEPT-21	Sampled by:	AR/SB
Station Number (ID):	TC4-SG-007	Sampling Method:	Petite Ponar / Ekman / Tech-Ops Corer
Weather:	14°, 19 km N wind, cloudy (100%)	UTM:	WP 006 381937 4899374
Water Depth:	1.80	Location Description:	100 m from shoreline, E of Douglas Fluhrer Park
# of Attempts to Obtain Sample:	II	Time of Collection:	16:30

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	dk olive	Si 95%, Sa 5%	decaying org.	organic odour	
2	↓	↓	↓	↓	
3					

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☑ Duplicate Sample? Duplicate Sample ID: DUP-202

Approx % Collected in Grab Sample(s)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
	90	100	60	—	—	—

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

1396 N, 1397 E, 1398 S, 1399 W, 1400 grab #1, 1401 grab #2, 1402 grab #3, 1403 comp. sample

* 3 JARS, 1 BAG (ARCHIVE)

QC'd by: Jared Sheath Date: Sept 29/21

SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	30-SEPT-21	Sampled by:	AR/SB
Station Number (ID):	TC4-SG-008	Sampling Method:	Petite Ponar /Ekman/Tech-Ops Corer
Weather:	15°, 10 km wind N, SUN/ cloud (50%)	UTM:	WP 009 381985 4899334
Water Depth:	2.04	Location Description:	100 m from Shoreline, E of Anglin Bay Marina
# of Attempts to Obtain Sample:	111 (3)	Time of Collection:	12:20

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	olive	Si 95%; So 5%	aquatic mac.	organic odour	
2	↓	↓	↓	↓	
3					bloodworm

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
	60	60	60	—	—	—

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

1422 N, 1423 E, 1424 S, 1425 W, 1426 grab #1, 1427 grab #2, 1428 grab #3, 1429 bloodworm, 1430 composite sample

* 3 JARS, 1 BAG (ARCHIVE)

QC'd by: J.Fregoe Date: 30Sep/21

SEDIMENT COLLECTION LOG

Project No: 17783886-8000-8004

Project Title: PSPC Kingston Inner Harbour Sediment Assessment

Date: 30-SEPT-21

Sampled by: AR/SB

Station Number (ID): IC4-SG-011

Sampling Method: Petite Ponar /Ekman/Tech-Ops Corer

Weather: 14°, 15 km N wind, sun/cloud (70%)

UTM: WP 011 381939 4899285

Water Depth: 1.72

Location Description: 15 m from shoreline, E of Anglin Bay Marina

# of Attempts to Obtain Sample: III (3)

Time of Collection: 14:15

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	olive	Si 95%; Sa 5%	decaying organics	organic odour	
2	↓	↓	↓	↓	
3	↓	↓	↓	↓	

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
	90	95	60	—	—	—

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

1440 N, 1441 E, 1442 S, 1443 W, 1444 grab #1, 1445 grab #2, 1446 grab #3, 1447 comp. sample

* 3 JARS, 1 BAG (ARCHIVE)

QC'd by: J. Freyol Date: 30 Sep 21

SEDIMENT COLLECTION LOG

Project No: 17783886-8000-8004
Project Title: PSPC Kingston Inner Harbour Sediment Assessment
Date: 30-SEPT-21
Sampled by: AR/SB
Station Number (ID): TC4-SG-02
Sampling Method: Petite Ponar /Ekman/Tech-Ops Corer
Weather: 15°, 5 km wind N, sun/cloud (60%)
UTM: WP 010 381981 4899283
Water Depth: 2.45
Location Description: 75 m from shoreline, E of Anglin Bay Marina
# of Attempts to Obtain Sample: III (3)
Time of Collection: 12:45

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	olive	Si 95%, Sa 5%	decaying organics	organic odour	
2	↓	↓	↓	↓	
3	↓	↓	↓	↓	

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description



☑ Duplicate Sample? Duplicate Sample ID: DUP-203

Approx % Collected in Grab Sample(s)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
	100	100	100	—	—	—

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):
1431 N, 1432 E, 1433 S, 1434 W, 1435 grab #1, 1436 grab #2, 1437 grab #3, 1438 comp. sample

* 3 JARS, 1 BAG (ARCHIVE)

QC'd by: JFrugol Date: 30 Sep/21

Golder Associates

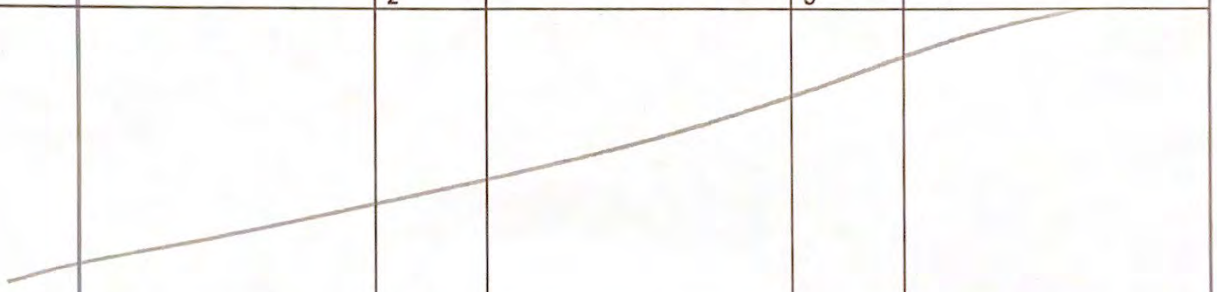
SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	30-SEPT-21	Sampled by:	AR/SB
Station Number (ID):	TC4-SG-013	Sampling Method:	Petite Ponar /Ekman/Tech-Ops Corer
Weather:	14°, 13 km N wind, sun/cloud (75%)	UTM:	WP 012 381887 4899291
Water Depth:	0.75	Location Description:	5m from shoreline, N of Anglin Bay Marina
# of Attempts to Obtain Sample:	HH (5)	Time of Collection:	14:30

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1 (NO SUFF.)					
2 (NO SED.)					
3	dark olive	Si 90%, Sa 10%	decaying veg.	organic odour	
4	↓	↓	↓	↓	
5	↓	↓	↓	↓	

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description



☐ Duplicate Sample? Duplicate Sample ID: _____

Approx % Collected in Grab Sample(s)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
	10	0	60	60	60	—

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

1448 N, 1449 E, 1450 S, 1451 W, 1452 grab #3, 1453 grab #4, 1454 grab #5, 1455 comp. sample

* 3 JARS, 2 BAGS (1 ARCHIVE)

QC'd by: J. Freque Date: 30Sept/21

SEDIMENT COLLECTION LOG

Project No: 17783886-8000-8004

Project Title: PSPC Kingston Inner Harbour Sediment Assessment

Date: 30-SEPT-21

Sampled by: AR/SB

Station Number (ID): TC4-SG-013X

Sampling Method: Petite Ponar/Ekman/Tech-Ops Corer

Weather: 14°, 14 km N wind, sun/cloud (80%)

UTM: WP 014 382136 4899331

Water Depth: 2.40

Location Description: 250 m from shoreline, E of Anglin Bay Marina

# of Attempts to Obtain Sample: 111

Time of Collection: 15:00

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1					
2	olive	Si 95% ; Sa 5%	aquatic veg.	organic odour	
3	↓	↓	↓	↓	
4					

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
	20	80	30	70	—	—

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

1464 N, 1465 E, 1466 S, 1467 W, 1468 grab #2, 1469 grab #3, 1470 grab #4, 1471 comp. sample

* 3 JARS, 1 BAG (ARCHIVE)

QC'd by: J. Fregoe Date: 30/Sep/21

SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	30-SEPT-21	Sampled by:	AB/SB
Station Number (ID):	TC4-SG-014	Sampling Method:	Petite Ponar / Ekman / Tech-Ops Corer
Weather:	14°, 13 km N wind, sun/cloud (75%)	UTM:	WP 013 382080 4899333
Water Depth:	2.20	Location Description:	200m off shoreline, E of Anglin Bay Marina
# of Attempts to Obtain Sample:	HHT (5)	Time of Collection:	14:45

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	olive	Si 95% ; Sa 5%	decaying veg.	organic odour	
2 (NOT SUFF)					
3 (NOT SUFF)					
4	olive	Si 95% ; Sa 5%	decaying veg.	organic odour	zeb. mus. shells
5	↓	↓	↓	↓	↓

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
	90	30	30	80	80	—

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

1456 N, 1457 E, 1458 S, 1459 W, 1460 grab #1, 1461 grab #4, 1462 grab #5, 1463 comp. Sample

* 3 JARS, 1 BAG (ARCHIVE)

QC'd by: J Freyol Date: 30 Sep/21

SEDIMENT COLLECTION LOG

pg 1 of 1

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	30-SEPT-21	Sampled by:	AR/JF/SB
Station Number (ID):	TC5-SG-001	Sampling Method:	Petite Ponar /Ekman/Tech-Ops Corer
Weather:	14°, 14 km N wind, cloud (95%)	UTM:	WP 018 382137 4899388
Water Depth:	2.4	Location Description:	350 m from shoreline NE of Anglin Bay
# of Attempts to Obtain Sample:	III (3)	Time of Collection:	16:20

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	olive	Si 95%; Sa 5%	decaying veg.	organic odour	zeb. mus. shells
2	↓	↓	↓	↓	↓
3					

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☐ Duplicate Sample? Duplicate Sample ID: _____

Approx % Collected in Grab Sample(s)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
	90	90	90			

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

1496 N, 1497 E, 1498 S, 1499 W, 1500 grab #1, 1501 grab #2, 1502 #3, 1503 comp. sample

* 3 JARS, 1 BAG (ARCHIVE)

QC'd by: J. Freyoe Date: 30 Sep/21

SEDIMENT COLLECTION LOG

Project No:	17783686-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	30-SEPT-21	Sampled by:	AR / JF / SB
Station Number (ID):	TC5 - SG-002	Sampling Method:	Petite Ponar / (Ekman) / Tech-Ops Corer
Weather:	14°, 14 km N wind, cloud (95%)	UTM:	WP 017 382146 4899286
Water Depth:	2.60	Location Description:	325 m from Shoreline, E of Anglin Bay
# of Attempts to Obtain Sample:	III (3)	Time of Collection:	16:00

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	olive	Si 95%, Sa 5%	decaying veg	organic odour	
2 (NOT USED)					zeb. mus. shell
3					
4	olive	Si 95%, Sa 5%	decaying veg.	organic odour	

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
	90	80	30	90	—	—

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

1488 N, 1489 E, 1490 S, 1491 W, 1492 grab #1, 1493 grab #2, 1494 grab #4, 1495 comp. sample

* 3 JARS, 2 BAGS (1 ARCHIVE)

QC'd by: T. Fregoe Date: 30 Sep 21

SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	30-SEPT-21	Sampled by:	AR / JF / SB
Station Number (ID):	TC5-SG-003	Sampling Method:	Petite Ponar / Ekman / Tech-Ops Corer
Weather:	14°, 14km N wind, cloud (95%)	UTM:	WP 016 382140 4899236
Water Depth:	5.80	Location Description:	325 m from shoreline, E of Anglin Bay
# of Attempts to Obtain Sample:	111 (3)	Time of Collection:	15:40

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	olive	Si 95%, Sa 5%		organic odour	
2	↓	↓	↓	↓	↓
3					

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☐ Duplicate Sample? Duplicate Sample ID: _____

Approx % Collected in Grab Sample(s)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
	90	90	60			

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

1480 N, 1481 E, 1482 S, 1483 W, 1484 grab #1, 1485 grab #2, 1486 grab #3, 1487 comp. sample

→ rubber mat debris in grab #3

* 3 JARS, 1 BAG (ARCHIVE)

QC'd by: J. Freyol Date: 30 Sep 21

SEDIMENT COLLECTION LOG

PB 1 of 1

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	30-SEPT-21	Sampled by:	AR / JF / SB
Station Number (ID):	IC5-SG-004	Sampling Method:	Petite Ponar / (Ekman) / Tech-Ops Corer
Weather:	14°, 14 km N wind, cloud (90%)	UTM:	WP 015 382089 4899129
Water Depth:	5.85	Location Description:	E of Anglin Bay in channel from marina
# of Attempts to Obtain Sample:	III (3)	Time of Collection:	15:25

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	olive	Si 96%, Sa 5%		organic odour	
2	↓	↓	↓	↓	
3					

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
	80	90	60	—	—	—

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

1472 N, 1473 E, 1474 S, 1475 W, 1476 grab #1, 1477 grab #2, 1478 grab #3, 1479 comp. sample

* 3 JARS, 1 BAG (ARCHIVE)

QC'd by: J Frigon Date: 30 Sept 21

SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	7-OCT-21	Sampled by:	JF/JS/SB
Station Number (ID):	~~PSPC-SED-001~~ TCS-SG-005	Sampling Method:	Petite Ponar /Ekman/Tech-Ops Corer
Weather:	20°C, Sunny, Calm	UTM:	18T 382193 4899404
Water Depth:	4m	Location Description:	
# of Attempts to Obtain Sample:	~~4~~ (3)	Time of Collection:	1150

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1 2 3	4-4	orgs/silt	aquatic veg	organic	N/A

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s) Grab 1: 90 Grab 2: 90 Grab 3: 90 Grab 4: / Grab 5: / Grab 6: /

~~Sediment Horizon Sampled (cm)~~	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
~~0 to 0.3 m~~						
0.3 to 0.5 m						
~~0.5 to 0.8 m~~						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

Photos - N, E, S, W, Grab 1, Grab 2, Grab 3, Composite

QC'd by: SB Date: 7-OCT-21

Grab - 6 x bag

SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	06 Oct 2021	Sampled by:	JW, AR, RS
Station Number (ID):	TC5-SG-006	Sampling Method:	Petite Ponar /Ekman/Tech-Ops Corer
Weather:	20°C, sunny, wind south 11km/h	UTM:	WP06Z 382247E 4899289N
Water Depth:	4.35 m	Location Description:	north of lift bridge
# of Attempts to Obtain Sample:	3	Time of Collection:	17:15

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	Olive	Silt/clay	Zebra mussel fragments	none	none
2	↓	↓	↓	↓	↓
3	↓	↓	↓	↓	↓

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
	80	90	90			

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

2739 - north, 2740 - east, 2741 - south, 2742 - west, 2743 grab1, 2744 grab2
2745 - composite sample

QC'd by: Andrew Rous Date: 06 Oct 21

SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	06 Oct 2021	Sampled by:	J. Wear, A. Rous, R. Stephens
Station Number (ID):	TCS-SG-007	Sampling Method:	Petite Ponar / Ekman / Tech-Ops Corer
Weather:	18°C, sunny, wind NE 17 km/h	UTM:	WPOSS 382197E 4899121
Water Depth:	5.65 m	Location Description:	north of lift bridge
# of Attempts to Obtain Sample:	3	Time of Collection:	13:00

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	olive	si/org	none	none	bloodworms
2	↓	↓	↓	↓	↓
3	↓	↓	↓	↓	↓

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☒ Duplicate Sample? Duplicate Sample ID: DUP-209

Approx % Collected in Grab Sample(s)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
	90	90	70			

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

2691 - north, 2692 - east, 2693 - south, 2694 - west, 2695 - grab #1, 2696 - grab #2, 2697 - grab #3, ~~2698~~ 2699 composite

QC'd by: Andrew Rous Date: 06 Oct 21

SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	2-OCT-21	Sampled by:	JW / RS / SB
Station Number (ID):	TCAB-SG-002	Sampling Method:	Petite Ponar / Ekman / Tech-Ops Corer
Weather:	15°, 10k SW wind, rain	UTM:	WP 028 382095 4899285
Water Depth:	2.61	Location Description:	E of Anglin Bay Marina
# of Attempts to Obtain Sample:	HH II	Time of Collection:	10:00

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	olive	Si; org	zebra mus. shells	sheen spotting	bloodworms
2	↓	↓	↓	↓	↓
3					
4					
5					
6					
7	Olive	Si; org		sheen spotting	bloodworms

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☐ Duplicate Sample? Duplicate Sample ID: _____

Approx % Collected in Grab Sample(s)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:	Grab 7:
	80	60	0	0	0	0	60

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

1516 N, 1517 E, 1518 S, 1519 W, 1520 grab #1, 1521 grab #2, 1522 #7, 1523 comp. sample

QC'd by: Andrew Rous Date: Oct 2/21

SEDIMENT COLLECTION LOG

Page 1 of 1

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	01-OCT-2021	Sampled by:	JF / RS
Station Number (ID):	TCAB-SG-003	Sampling Method:	Petite Ponar/Ekman/Tech-Ops Corer
Weather:	Sunny, light wind, 18°C	UTM:	18T 381986. 4899229
Water Depth:	2.15m	Location Description:	AGLIN BAY MARINA OUTER SLIPS
# of Attempts to Obtain Sample:	4	Time of Collection:	1600

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	OLIVE	SILT / ORGS	AQUATIC VEG	ORGANIC	BLOOD WORMS
2	~~[illegible]~~ "	" "	~~"~~ "	~~"~~ "	~~"~~ "
3	JAWS DID NOT CLOSE			—	—
4	OLIVE	SILT/ORGS	N/A	ORGANIC	BLOOD WORMS

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s) Grab 1: 90 Grab 2: 80 Grab 3: Ø Grab 4: 90 Grab 5: — Grab 6: —

Sediment Horizon Sampled (cm) Grab 1: Grab 2: Grab 3: Grab 4: Grab 5: Grab 6:

0 to 0.3 m

0.3 to 0.5 m

0.5 to 0.8 m

Photograph Notes (grab, sampling location, field sampling methods, etc.):

PHOTOS - N, E, S, W, Grab 1, Grab 2, Grab 4, COMPOSITE

Grab 3 - Jaws did not close, LARGE PIECE OF PLASTIC

QC'd by: Andrew Rous Date: Oct 01/21

3 JARS

Golder Associates

SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	01-OCT-21	Sampled by:	JF/RS
Station Number (ID):	TCAB-SG-004	Sampling Method:	Petite Ponar/Ekman/Tech-Ops Corer
Weather:	Sunny, Light wind, 18C	UTM:	18T 382028 4899251
Water Depth:	2.6m	Location Description:	OUTER DOCKS AGUN BAY MARINA
# of Attempts to Obtain Sample:	3	Time of Collection:	16:20

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	OLIVE	SILT/ORGS	SHELLS	ORGS	BLOODWORMS
2	"	" "	SunGlasse SHELLS	"	BLOODWORMS
3	"	" "	Leaves/SHELLS	"	N/A

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☐ Duplicate Sample? Duplicate Sample ID: _____

Approx % Collected in Grab Sample(s) Grab 1: 70 Grab 2: 60 Grab 3: 90 Grab 4: — Grab 5: — Grab 6: —

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

PHOTOS - N,E,S,W, GRAB 1, GRAB 2, GRAB 3, COMPOSITE

→Sampled right from Dock

QC'd by: Andrew Rous Date: Oct 01/21

3 x JARS

SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	2-OCT-21	Sampled by:	JW / RS / SB
Station Number (ID):	TCAB-SG-005	Sampling Method:	Petite Ponar / Ekman / Tech-Ops Corer
Weather:	15°, SW 10km wind, cloud (100%)	UTM:	WP 027 382082 4289237
Water Depth:	3.73	Location Description:	E of Anglin Bay
# of Attempts to Obtain Sample:	III (3)	Time of Collection:	9.30

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	olive	Si 100%	aquatic veg. zeb. mus. shells	organic odour sheen/ spotting	bloodworms
2	↓	↓	↓	↓	
3					

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
	80	90	60			

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

1507 N, 1508 E, ~~1509~~ S, 1510 W, 1511 grab #1, 1512 grab #2, 1513 grab #3, 1514 comp. sample,

X 7 JARS, 1 BAG

QC'd by: Andrew Rous Date: Oct 2/21

SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	01-OCT-21	Sampled by:	JF/AR/RS
Station Number (ID):	TCAB-SG-0006	Sampling Method:	Petite Ponar / Ekman / Tech-Ops Corer
Weather:	Sunny, Light wind, 18°C	UTM:	18T 381981 4899198
Water Depth:	2.16m	Location Description:	Aglin Bay Marina outer docks
# of Attempts to Obtain Sample:	3	Time of Collection:	1440

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	OLIVE	SILT / ORGS	N/A	ORGANIC	N/A
2	OLIVE	SILT / ORGS	N/A	ORGANIC	N/A
3	OLIVE	SILT / ORGS	N/A	ORGANIC	N/A

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☐ Duplicate Sample? Duplicate Sample ID: _____

Approx % Collected in Grab Sample(s) Grab 1: 90 Grab 2: 90 Grab 3: 90 Grab 4: — Grab 5: — Grab 6: —

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

PHOTOS - N, E, S, W, GRAB 1, GRAB 2, GRAB 3, COMPOSITE

QC'd by: Andrew Rous Date: Oct 01/21

3 x JARS

SEDIMENT COLLECTION LOG

Page 1 of 1

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	01-OCT-21	Sampled by:	JF / RS
Station Number (ID):	TCAB-SG-007	Sampling Method:	Petite Ponar/Ekman/Tech-Ops Corer
Weather:	Sunny, light wind, 18°C	UTM:	18T 382040 4899182
Water Depth:	4.65m	Location Description:	AGLIN BAY MARINA OUTER DOCKS
# of Attempts to Obtain Sample:	11	Time of Collection:	15:25

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	JAWS DID NOT CLOSE			—	—
2	" "	" "		—	—
3	"				
4					
5					
6					
7	olive	silt sand	zebra, plant matter	—	zebra mussel
9 + 11	olive w/ clay chunk silt/sand/clay				

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s) Grab 1: Ø Grab 2: Ø Grab 3: Ø Grab 4: Ø Grab 5: Ø Grab 6: Ø SEE NOTES

Sediment Horizon Sampled (cm) Grab 1: Grab 2: Grab 3: Grab 4: Grab 5: Grab 6:

0 to 0.3 m

0.3 to 0.5 m

0.5 to 0.8 m

Photograph Notes (grab, sampling location, field sampling methods, etc.):

4x unsuccessful grabs w/ ekman (hard bottom) switched to PONAR, NO SUCCESS w/ Ponar (3x) ~~four~~ used Ekman again SUCCESS on pulls

8, 9, +11 @ 60%, 60%, 60%

PHOTOS - N, E, S, W, Grab 8, GRAB 9, GRAB 11, COMPOSITE

QC'd by: Andrew Rous Date: Oct 01/21

3x JARS

SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	01-OCT-21	Sampled by:	JF/RS
Station Number (ID):	TCAB-SG-008	Sampling Method:	Petite Ponar /Ekman/Tech-Ops Corer
Weather:	Sunny, light wind 18°C	UTM:	18T 382087 4899183
Water Depth:	6m	Location Description:	Aglin Bay, outer harbour
# of Attempts to Obtain Sample:	3	Time of Collection:	15:40

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	OLIVE	SILT/ORGS	Zebra Mussle Shells	ORGANIC	Blood worms
2	OLIVE	↓	↓	ORGANIC	↓
3	OLIVE			ORGANIC	

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☐ Duplicate Sample? Duplicate Sample ID: _____

Approx % Collected in Grab Sample(s) Grab 1: 90 Grab 2: 90 Grab 3: 80 Grab 4: — Grab 5: — Grab 6: —

~~Sediment Horizon Sampled (cm)~~	~~Grab 1:~~	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

PHOTOS-N, E, S, W, Grab1, Grab2, Grab3, Composite

QC'd by: Andrew Rous Date: Oct 01/21

3 x JARS

SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	01-OCT-21	Sampled by:	JF/AR/RS
Station Number (ID):	ICAB-SG-009	Sampling Method:	Petite Ponar/Ekman/Tech-Ops Corer
Weather:	Sunny, Calm, 18°C	UTM:	18T 381987 4899132
Water Depth:	6.1.5m	Location Description:	AGLIN BAY ~~KINGSTON~~ Marina Channel
# of Attempts to Obtain Sample:	3	Time of Collection:	11:55

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	OLIVE	SILT/ORGS	N/A	ORGANIC	BLOOD WORMS
2	OLIVE	SILT/ORGS	N/A	ORGANIC	BLOOD WORMS
3	OLIVE	SILT/ORGS	N/A	ORGANIC	BLOOD WORMS

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s) Grab 1: 90 Grab 2: 90 Grab 3: 90 Grab 4: — Grab 5: — Grab 6: —

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

PHOTOS - N, E, S, W, GRAB 1, GRAB 2, GRAB 3, COMPOSITE

QC'd by: Andrew Rous Date: Oct 01/21

7 x JARS + 1 BAG

SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	01-OCT-21	Sampled by:	JF/AR/RS
Station Number (ID):	TCAB-SG-010	Sampling Method:	Petite Ponar / Ekman / Tech-Ops Corer
Weather:	Sunny, light wind, 18C	UTM:	18T 382036 4899131
Water Depth:	6.2m	Location Description:	AGLIN BAY ~~Kingston~~ Marina Channel
# of Attempts to Obtain Sample:	3	Time of Collection:	12:15

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	OLIVE	SILT/ORGS	N/A	ORGS	N/A
2	OLIVE	SILT/ORGS	N/A	ORGS	N/A
3	OLIVE	SILT/ORGS	N/A	ORGS	BLOODWORMS

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s) Grab 1: 90 Grab 2: 80 Grab 3: 90 Grab 4: — Grab 5: — Grab 6: —

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

PHOTOS - N, S, E, W, GRAB 1, GRAB 2, GRAB 3, COMPOSITE

QC'd by: Andrew Rous Date: Oct 01/21

3 X JARS

SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	01-OCT-21	Sampled by:	JF/AR/RS
Station Number (ID):	TCAB-SG-011	Sampling Method:	Petite Ponar/Ekman/Tech-Ops Corer
Weather:	Sunny, light wind, 18°C	UTM:	18T 381929 4899119
Water Depth:	5.3m	Location Description:	Kingston Marina Channel
# of Attempts to Obtain Sample:	5	Time of Collection:	1415

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	OLIVE	SILT / ORGS	N/A	ORGANICS	ZEBRA MUSSLES
2	OLIVE	SILT / ORGS	N/A	ORGANICS	ZEBRA MUSSLES
3	JAWS DID NOT CLOSE	—	—	—	ZEBRA MUSSLES
4	JAWS DID NOT CLOSE	—	—	—	ZEBRA MUSSLES
5	OLIVE	SILT ORGS	N/A	ORGANICS	ZEBRA MUSSLES

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s) Grab 1: 60 Grab 2: 80 Grab 3: ~~0~~ Grab 4: ~~0~~ Grab 5: 60 Grab 6: —

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

PHOTOS - N, S, E, W, Grab 1, Grab 2, Grab 5, Composite

QC'd by: Andrew Rous Date: Oct 01/21

3 x JARS

SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	01-OCT-21	Sampled by:	JF/AR/RS
Station Number (ID):	JCAB-SG-013	Sampling Method:	Petite Ponar/Ekman/Tech-Ops Corer
Weather:	Sunny, light wind, 18°C	UTM:	18T 381846 4899077
Water Depth:	4.70m	Location Description:	AGLINBAY Kingston Marina
# of Attempts to Obtain Sample:	4	Time of Collection:	11:30

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	OLIVE	SILT/ORGS	N/A	ORGANICS	BLOOD WORMS
2	JAWS DID NOT CLOSE				
3	OLIVE	SILT/ORGS	N/A	ORGANIC	BLOOD WORMS
4	OLIVE	SILT/ORGS	N/A	ORGANIC	BLOOD WORMS

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s) Grab 1: 80 Grab 2: Ø Grab 3: 60 Grab 4: 70 Grab 5: Grab 6:

Sediment Horizon Sampled (cm) Grab 1: Grab 2: Grab 3: Grab 4: Grab 5: Grab 6:

0 to 0.3 m

0.3 to 0.5 m

0.5 to 0.8 m

Photograph Notes (grab, sampling location, field sampling methods, etc.):

PHOTOS - N, S, E, W, GRAB 1; GRAB 3, GRAB 4, & COMPOSITE

QC'd by: Andrew Rous Date: Oct 01/21

3 x JARS

SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	01-OCT-21	Sampled by:	JF/AR/RS
Station Number (ID):	TCAB-SG-014	Sampling Method:	Petite Ponar/Ekman/Tech-Ops Corer
Weather:	Sunny, light wind, 18°C	UTM:	18T 381888 4899124
Water Depth:	5.60m	Location Description:	AGLIN BAY ~~Kingston~~ Marina
# of Attempts to Obtain Sample:	3	Time of Collection:	11:15

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	OLIVE	Silt/orgs	NA	organic	Bloodworms
2	OLIVE	Silt/orgs	N/A	organic	BLOOD WORMS
3	OLIVE	Silt/orgs	N/A	organic	BLOODWORMS

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s) Grab 1: 70 Grab 2: 70 Grab 3: 80 Grab 4: — Grab 5: — Grab 6: —

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

Photos - N, S, E, W, GRAB 1, GRAB 2, GRAB 3, COMPOSITE

QC'd by: Andrew Rous Date: Oct 01/21

3 x JARS

SEDIMENT COLLECTION LOG

Project No: 17783886-8000-8004

Project Title: PSPC Kingston Inner Harbour Sediment Assessment

Date: 01-OCT-21

Sampled by: JF/AR/RS

Station Number (ID): TCAB-SG-016

Sampling Method: Petite Ponar/Ekman/Tech-Ops Corer

Weather: Sunny, light wind, 18°C

UTM: 18T 381885 4899177

Water Depth: 3.74

Location Description: AGLIN BAY ~~KINGSTON~~ MARINA

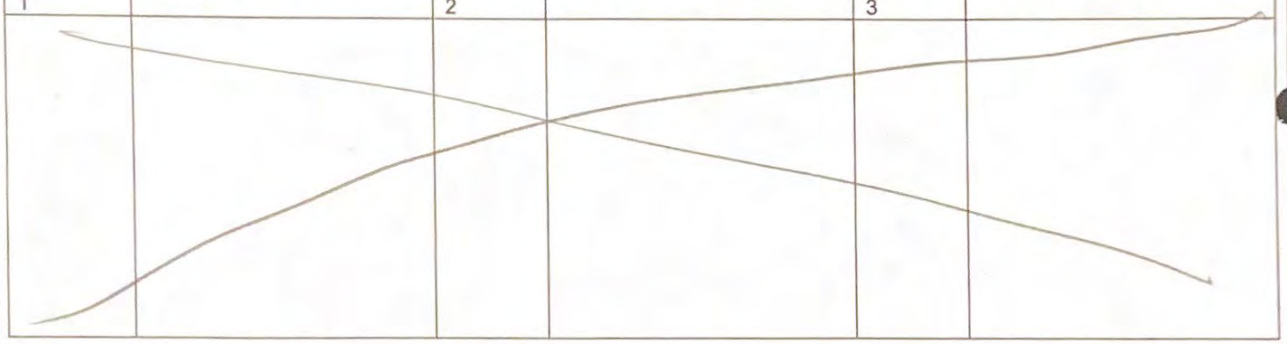
# of Attempts to Obtain Sample: 4

Time of Collection: 11:00

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	OLIVE	SILT/ORGS	N/A	ORGANIC	N/A
2	JAWS DID NOT CLOSE				
3	OLIVE	SILT/ORGS	N/A	ORGANIC	N/A
4	OLIVE	SILT/ORGS	LEAVES/STICKS	ORGANICS	N/A

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description



☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s) Grab 1: 90 Grab 2: Ø Grab 3: 70 Grab 4: 70 Grab 5: — Grab 6: —

Sediment Horizon Sampled (cm) Grab 1: Grab 2: Grab 3: Grab 4: Grab 5: Grab 6:

0 to 0.3 m

0.3 to 0.5 m

0.5 to 0.8 m



Photograph Notes (grab, sampling location, field sampling methods, etc.):

Photos - N, S, E, W, GRAB 1, GRAB 3, GRAB 4, COMPOSITE

QC'd by: Andrew Rous Date: Oct 01/21

3 x JARS

SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	01 OCT, 20	Sampled by:	JF/AR/RS
Station Number (ID):	TCAB-SG-017	Sampling Method:	Petite Ponar / Ekman / Tech-Ops Corer
Weather:	Sunny, Calm, 18°C	UTM:	18T 381816 4899184
Water Depth:	4.67	Location Description:	AGLIN BAY ~~KINGSTON HARBOUR MARINA~~
# of Attempts to Obtain Sample:	3	Time of Collection:	~~1015~~ 1045

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	OLIVE	SILT/ORGS	N/A	ORGANICS	N/A
2	"	"	"	"	
3	"	"	"	"	BLOOD WORMS

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s) Grab 1: 90 Grab 2: 80 Grab 3: 90 Grab 4: — Grab 5: — Grab 6: —

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

Photos, Grab 1, Grab 2, Grab 3, N, E, S, W, Comp

QC'd by: Andrew Ross Date: Oct 01/21

3x JARS + 1 BAG

SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	7-OCT-21	Sampled by:	JF/JS
Station Number (ID):	TCAB-SG-018	Sampling Method:	Petite Ponar /Ekman/Tech-Ops Corer
Weather:	18°C, overcast, calm	UTM:	18T 382027 4894093
Water Depth:	1.45	Location Description:	23m from Shore
# of Attempts to Obtain Sample:	7	Time of Collection:	11:20

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	ZEBRA MUSSLES / RIPRAP AREA				
2					
3					
4					
5					
6					
7					

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s) Grab 1: 10 Grab 2: 10 Grab 3: 10 Grab 4: 10 Grab 5: 10 Grab 6: 10

Sediment Horizon Sampled (cm)	Grab 1	Grab 2	Grab 3	Grab 4	Grab 5	Grab 6
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

Photos - N, E, S, W, Grab 1 / ~~Grab 2~~, ~~Grab 3~~, ~~Composite~~
↳ Zebra mussles + Grab 7

Sean

QC'd by: [illegible] Date: 7-OCT-21

SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	28-SEPT-21	Sampled by:	JW / RS / SB
Station Number (ID):	TCOM-SG-002	Sampling Method:	Petite Ponar / (Ekman) / Tech-Ops Corer
Weather:	14°, 19 km N wind, sunny	UTM:	WP 010, 381938 4900348
Water Depth:	1.27	Location Description:	100 m from shoreline, E of former lead smelting land
# of Attempts to Obtain Sample:	HH (5)	Time of Collection:	13:55

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	olive	Si 95%; Sa 5%	aquatic mac	min. org. odour	
2	↓	↓	↓	↓	
3 (NO SED)					
4	olive	Si 95%; Sa 5%	aquatic mac	min. org. odour	
5	↓	↓	↓	↓	
6					

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
	40	80	~~0~~	40	60	—

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):
2183 north, 2184 east, 2185 south, 2186 west, 2187 comp. sample

QC'd by: JF Date: 28/09/21

SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	28-SEPT-21	Sampled by:	JW / RS / SB
Station Number (ID):	TCOM-SG-003	Sampling Method:	(Petite Ponar) / Ekman / Tech-Ops Corer
Weather:	14°, 19 km N wind, sunny	UTM:	WP 012, 381865 4900295
Water Depth:	0.84	Location Description:	20m from shoreline, E of former lead smelting land
# of Attempts to Obtain Sample:	HH 1 (6)	Time of Collection:	14:50

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	olive	Si 95% ; Sa 5%	aquatic mac.	min. org. odour	
2 (NOT SUFF)					
3	olive	Si 95% ; Sa 5%	aquatic mac.	min. org. odour	
4 (NOT SUFF)					
5 (NOT USED)					
6	olive	Si 95% ; Sa 5%	aquatic mac.	min. org. odour	

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description



☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
	60	40	60	40	~~0~~	60

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

2193 north, 2194 east, 2195 south, 2196 west, 2197 comp. sample

QC'd by: JF Date: 28/09/21

SEDIMENT COLLECTION LOG

Project No: 17783886-8000-8004

Project Title: PSPC Kingston Inner Harbour Sediment Assessment

Date: 28-SEPT-21

Sampled by: JW / RS / SB

Station Number (ID): TCOM-SG-004

Sampling Method: (Petite Ponar) / Ekman/Tech-Ops Corer

Weather: 14°, 19 km N wind, Sunny

UTM: WP 011, 381913 4900298

Water Depth: 1.20

Location Description: 60 m from shoreline, E of former lead smelting land

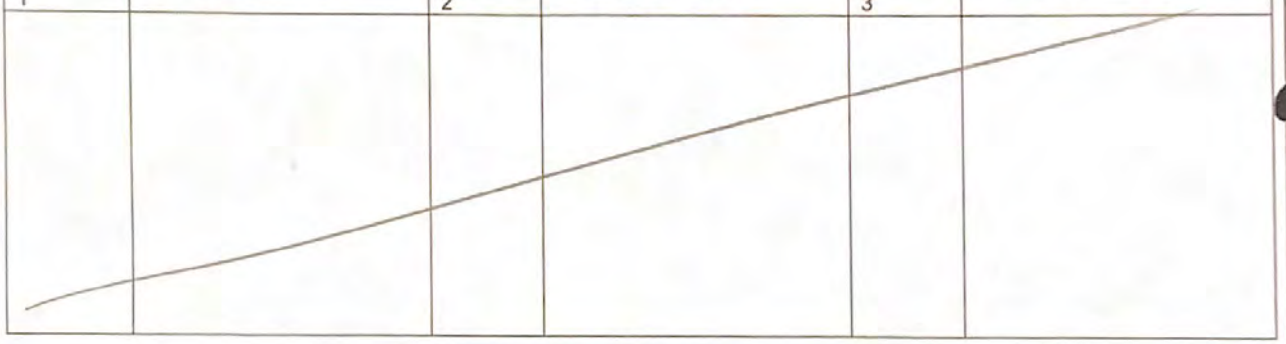
# of Attempts to Obtain Sample: HH 1 (6)

Time of Collection: 14:20

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1 (NO SED)					
2	olive	Si 95%, Sa 5%	aquatic mac.	min. org. odour	
3 (NO SED)					
4	olive	Si 95%; Sa 5%	aquatic mac.	min. org. odour	
5 (NO SED)					
6	olive	Si 95%, Sa 5%	aquatic mac.	min. org. odour	

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description



☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
	0	90	0	70	0	60

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

2188 north, 2189 east, 2190 south, 2191 west, 2192 comp. sample

QC'd by: JF Date: 28/09/21

SEDIMENT COLLECTION LOG

Project No: 17783886-8000-8004

Project Title: PSPC Kingston Inner Harbour Sediment Assessment

Date: 28-SEPT-21

Sampled by: JW / RS / SB

Station Number (ID): TCOM-SG-005

Sampling Method: Petite Ponar / Ekman / Tech-Ops Corer

Weather: 14°, 15 km N wind, sunny

UTM: WP 013 381866 4900247

Water Depth: 0.63

Location Description: 20 m from shoreline, E of former lead smelting land

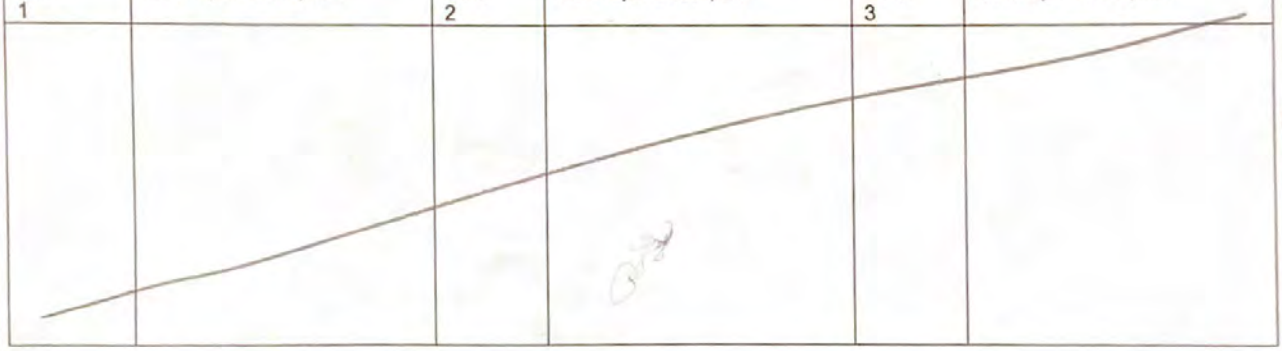
# of Attempts to Obtain Sample: HH II (7)

Time of Collection: 15:07

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	olive	Si 95%, Sa 5%	aquatic mac.	mod. org. odour	
2 (NO SED)					
3 (NO SED)					
4 (NO SED)					
5	olive	Si 95%; Sa 5%	aquatic mac.	mod. org. odour	
6 (NO SED)					
7	olive	Si 95%; Sa 5%	aquatic mac.	mod. org. odour	

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description



☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s): Grab 1: 80; Grab 2: 0; Grab 3: 0; Grab 4: 0; Grab 5: 75; Grab 6: 0; GRAB 7: 90

Sediment Horizon Sampled (cm): Grab 1: 0 to 0.3 m; Grab 2: 0.3 to 0.5 m; Grab 3: 0.5 to 0.8 m; Grab 4:; Grab 5:; Grab 6:

Photograph Notes (grab, sampling location, field sampling methods, etc.):

2198 north, 2199 east, 2200 south, 2201 west, 2202 barrel in water, 2203 comp. sample

QC'd by: JF Date: 29/09/21

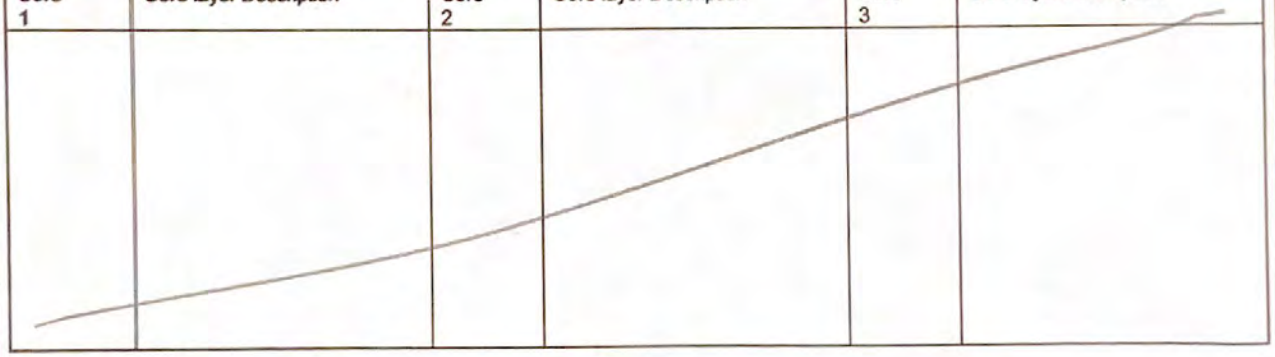
SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	28-SEPT-21	Sampled by:	JW / RS / SB
Station Number (ID):	TCOM-SG-008	Sampling Method:	Petite Ponar / Ekman / Tech-Ops Corer
Weather:	14°, 19 km N wind, sunny	UTM:	WP 014 381914 4900201
Water Depth:	1.28	Location Description:	40 m from shoreline, E of former lead smelting land
# of Attempts to Obtain Sample:	IIII (4)	Time of Collection:	15:35

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	olive	Si 95% ; Sa 5%	aquatic mac.	min. org. odour	
2 (NO SED)					
3	olive	Si 95% ; Sa 5%	aquatic mac.	min. org. odour	
4	↓	↓	↓	↓	

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description



☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
	70	~~0~~	70	60	—	—

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

2204 north, 2205 east, 2206 south, 2207 west, 2208 comp. sample

QC'd by: JF Date: 28/09/21

SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	28-Sep-21	Sampled by:	JF/AR/JS
Station Number (ID):	TCRC-SG-001	Sampling Method:	Petite Ponar/Ekman/Tech-Ops Corer
Weather:	Sunny Mod. Wind	UTM:	18T 0381862 4900091
Water Depth:	0.95	Location Description:	≈15m offshore
# of Attempts to Obtain Sample:	3	Time of Collection:	11:00

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	2.5Y 4-4	silt/orgs	Aquatic Macro	Orgs	N/A
2	2.5Y 4-4	" "	" "	"	"
3	2.5Y 4-4	" "	" "	"	"

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☐ Duplicate Sample? Duplicate Sample ID: _____

Approx % Collected in Grab Sample(s) Grab 1: 70 Grab 2: 60 Grab 3: 60 Grab 4: Grab 5: Grab 6:

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

Photos - N, S, E, W, Grab 1, Grab 2, Grab 3

- People on shore

QC'd by: SB Date: 28-SEPT-21

7 + Jar + Bag + extra bag

SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	28-SEPT-21	Sampled by:	JW/SB/RS
Station Number (ID):	TCRC-SG-002	Sampling Method:	Petite Ponar/Ekman/Tech-Ops Corer
Weather:	15°, 10 km wind N, sunny	UTM:	WP 004, 381911 4900094
Water Depth:	1.32	Location Description:	50 m from shoreline, NE of rowing club
# of Attempts to Obtain Sample:	1 (2)	Time of Collection:	11:00

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	x/live	Si 95%; Sa 5%	aquatic mac.	min org. odor	
2	↓	↓	↓	↓	

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
	60	80	—	—	—	—

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):
2155 north, 2156 east, 2157 south, 2158 west, 2159 aquatic mac., 2160 comp. sample

QC'd by: JF Date: 28/09/21

SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	28-SEPT-21	Sampled by:	JW/SB/RS
Station Number (ID):	TCRC-SG-003	Sampling Method:	Petite Ponar /Ekman/Tech-Ops Corer
Weather:	12°, 13 km wind N, sunny	UTM:	WP 003, 381907 4900050
Water Depth:	1.26	Location Description:	60 m from shoreline, NE of rowing club
# of Attempts to Obtain Sample:	III (3)	Time of Collection:	10:40

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1 (NO SED)					
2	olive	Si 95; Sa 5	aquatic mac.	min org. odor	
3	↓	↓	↓	↓	

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
	0	80	80	—	—	—

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

2149 north, 2150 east, 2151 south, 2152 west, 2153 aquatic mac., 2154 composite sample

QC'd by: JF Date: 28/09/21

SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	28-SEPT-21	Sampled by:	JW/SB/RS
Station Number (ID):	ICRC-SG-005	Sampling Method:	Petite Ponar / Ekman / Tech-Ops Corer
Weather:	9°, 13 km wind N, sunny	UTM:	WP 002 381962 4900020
Water Depth:	1.6	Location Description:	NE of rowing club
# of Attempts to Obtain Sample:	III (3)	Time of Collection:	10:00

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	olive	Si 100	aquatic veg.	mild org. odor	
2	↓	↓	↓	↓	
3	↓	↓	↓	↓	

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
	70	50	80	—	—	—

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

2142 north, 2143 east, 2144 south, 2145 west, 2146 comp. sample

QC'd by: JF Date: 28/09/21

SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	28-Sept-21	Sampled by:	JF/JS/AR
Station Number (ID):	TCRC-SG-006	Sampling Method:	Petite Ponar /Ekman/Tech-Ops Corer
Weather:	Sunny, Moderate Wind	UTM:	18T 381910 4899990
Water Depth:	1.55m	Location Description:	≈ 40m W of shoreline
# of Attempts to Obtain Sample:	5	Time of Collection:	11:30

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	Clogged w/	Weeds	—	—	—
2	2.5Y 4-4	orgs/silt	aquatic Macro	org	N/A
3	2.5Y 4-4	" "	" "	org	N/A
4	Weeds	" "	—	—	—
5	2.5Y 4-4	orgs/silt	aquatic Macro	org	N/A

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s) Grab 1: Ø Grab 2: 80 Grab 3: 80 Grab 4: 20 Grab 5: 60 Grab 6:

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

Photos - N, S, E, W, grab 2, grab 3, grab 5

Joggers on shoreline path

QC'd by: SB Date: 28-SEPT-21

3x Jar + archive

SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	28 Sept/21	Sampled by:	JF/JS/AR
Station Number (ID):	TCRC-SG-007	Sampling Method:	Petite Ponar /Ekman/Tech-Ops Corer
Weather:	Sunny, light wind	UTM:	18T 0381872 4899907
Water Depth:	1.3m	Location Description:	within Rowing club docks
# of Attempts to Obtain Sample:	3	Time of Collection:	1010

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	2.5Y 4-4	Silt/orgs	N/A	orgs	N/A
2	"	"	"	"	"
3	"	"	"	"	"

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
	90	80	80			

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

Photos - N, E, S, W, Grab 1, Grab 2, Grab 3

- Gull eating bullhead on docks

QC'd by: SB Date: 28 SEPT 21

3x Jars + bag + archive

SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	28 SEPT, 2021	Sampled by:	JF/JS/RS
Station Number (ID):	TCRC-SG-008	Sampling Method:	Petite Ponar/Ekman/Tech-Ops Corer
Weather:	sunny, light wind	UTM:	18T 0381914 4899885
Water Depth:	1.45m	Location Description:	50m W of Rowing Club Dock
# of Attempts to Obtain Sample:	7	Time of Collection:	0915

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	DARK BROWN	ORGS/SLT/Sand	aquatic MAC	organics	—
2	"	"	"	"	—
3	"	"	"	"	—
4	NOT CLOSED.				
5	"	"			
6	Dark Brown	orgs/silt/sand	aquatic Macro	organics	—
7	"	"	"	"	—

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s) Grab 1: 60 Grab 2: 60 Grab 3: 60 Grab 4: 60 Grab 5: Grab 6:

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

≈ 50m W of ~~Boa~~ Rowing club dock.

photos - N, E, S, W, Grab 1, Grab 2, Grab 3, Grab #6, Grab # 7

QC'd by: SB Date: 28-SEPT-21

x3 250ml + bag

SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	28-SEPT-21	Sampled by:	JW/BS/SB
Station Number (ID):	TCRC-SG-009	Sampling Method:	Petite Ponar / Ekman / Tech-Ops Corer
Weather:	9°C, wind N 13km, Sunny	UTM:	WP001 381981 E 4899895
Water Depth:	1.6 m	Location Description:	east of rowing club
# of Attempts to Obtain Sample:	HH (5)	Time of Collection:	08:33

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	OLIVE	Silt	Veg.	min. org. odor	
2	"	"	"	"	
3	"	"	"	"	
4	"	"	"	"	
5	"	"	"	"	inverts.

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☐ Duplicate Sample? Duplicate Sample ID: _____

Approx % Collected in Grab Sample(s)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
	80	70	90	60	70	—

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

2137 - north, 2138 - east, 2139 - south, 2140 west, 2141 comp. sample

QC'd by: JF Date: 28/09/21

SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	2-OCT-21	Sampled by:	JW/RS/SB
Station Number (ID):	WM-SG-001	Sampling Method:	Petite Ponar/Ekman/Tech-Ops Corer
Weather:	15° Cloud (100%)	UTM:	WP 031 381877 4899836
Water Depth:	1.1	Location Description:	East of Woolen Mill
# of Attempts to Obtain Sample:	HH 1 (6)	Time of Collection:	12:00

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
3 4 6	olive ↓	Si; org ↓	aquatic veg ↓	organic odour ↓	

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
	0	0	70	60	50	80

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

1550 N, 1551 E, 1552 S, 1553, W, 1555 grab #1, 1556 grab #2, 1557 grab #6

* 3 JARS

QC'd by: Andrew Rous Date: Oct 2/21

SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	30 Sep 2021	Sampled by:	J. Weir, J. Sheath, R. Stephens
Station Number (ID):	WM-SG-002	Sampling Method:	Petite Ponar /Ekman/Tech-Ops Corer
Weather:	15°C, partly cloudy, wind north 13 km/h	UTM:	wp 023 331948E 4899839N
Water Depth:	1.64	Location Description:	Sparse weeds, gravel/rocks on bottom
# of Attempts to Obtain Sample:	5	Time of Collection:	16:25

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
3	olive	si/org	aquatic vegetation	sheen spotting	mussel shells
4	↓	↓	↓	↓	↓
5	↓	↓	↓	↓	↓

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☐ Duplicate Sample? Duplicate Sample ID: _____

Approx % Collected in Grab Sample(s)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
	0	0	60	60	60	—

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

2287 - north, 2288 - east, 2289 - south, 2290 - west, 2291 - grab #1, 2292 - grab #2, 2293 grab #3, 2294 - mussel shells in grabs, 2295 - mussel shells

QC'd by: Jared Sheath Date: 30 Sept 21

SEDIMENT COLLECTION LOG

Pg 1 of 1

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	2-OCT-21	Sampled by:	JW/RS/SB
Station Number (ID):	WM-SG-004	Sampling Method:	Petite Ponar/Ekman/Tech-Ops Corer
Weather:	15°, rain	UTM:	WP 030 381937 4899793
Water Depth:	1.63	Location Description:	E of Woolen Mill
# of Attempts to Obtain Sample:	~~IIII~~ 5	Time of Collection:	11:30

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	olive	Si, Org	zeb. mus. shells	organic odour	
2	↓	↓	aquatic veg.	↓	
5					

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
	60	100	0	0	60	

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

1541 N, 1542 E, 1543 S, 1544 W, 1545 grab #1, 1546 grab #2, 1547 grab # 5, 1548 comp. sample

* 3 JARS

QC'd by: Andrew Rous Date: Oct 2/21

SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	2-OCT-21	Sampled by:	JW/RS/SB
Station Number (ID):	WM-SG-005	Sampling Method:	Petite Ponar/Ekman/Tech-Ops Corer
Weather:	15°, 10 km SW wind, rain	UTM:	WP 029 381891 4899740
Water Depth:	1.12	Location Description:	E OF Wooden Mill
# of Attempts to Obtain Sample:	III (3)	Time of Collection:	10:50

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	olive	Si. Org.	aquatic mac.	org. odour sheen spotting	
2	↓	↓	↓	↓	
3					

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
	70	80	60	—	—	—

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):
1524 N, 1525 E, 1526 S, 1527 W, 1528 grab #1, 1529 grab #2, 1530 grab #3, 1531 comp. sample

* 3 JARS

QC'd by: Andrew Ross Date: Oct 2/21

SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	2-OCT-21	Sampled by:	JW/RS/SB
Station Number (ID):	WM-SG-006	Sampling Method:	Petite Ponar /Ekman/Tech-Ops Corer
Weather:	15°, 10 km SW wind, rain	UTM:	WP 381937 4899739
Water Depth:	1.71	Location Description:	E of Woolen Mill, beside pier
# of Attempts to Obtain Sample:	III (3)	Time of Collection:	11:15.

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	alive	Si, org	zeb. mus. shells	organic odour	
3.	↓	↓	↓	↓	

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
	100	70	80	/	/	/

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

1532 N, 1533 E, 1535 S, 1536 W, 1537 grab #1, 1538 grab #2, 1539 #3, 1540 comp. sample

* 3 JARS, 1 BAG

QC'd by: Andrew Rous Date: Oct 2/21

SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	2-OCT-21	Sampled by:	JW/JS/SB
Station Number (ID):	WM-SG-007	Sampling Method:	Petite Ponar /Ekman/Tech-Ops Corer
Weather:	15°, rain	UTM:	WP 032 381966 4899761
Water Depth:	1.81	Location Description:	E of Woolen Park
# of Attempts to Obtain Sample:	III (3)	Time of Collection:	13:45

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	olive	Si, org	aquatic veg	organic odour	
2	↓	↓	↓	↓	
3					

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description

☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
	80	80	90			

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

1558 N, 1559 E, 1560 S, 1561 W, 1562 grab #1, 1563 grab #2, 1564 grab #3, 1565 comp. sample

X 3 JARS

QC'd by: Andrew Rous Date: Oct 2/21

APPENDIX B

Subsurface Sediment Collection and Processing Logs

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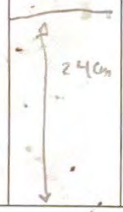
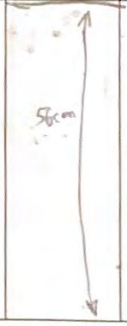
SEDIMENT COLLECTION LOG

1 of 2

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	07 Oct 2021	Sampled by:	Fairin Wen, Rachel Stephens
Station Number (ID):	PCOM - SC-001	Sampling Method:	Petite Ponar / Ekman / Tech-Ops Corer
Weather:	19°C, partly cloudy, calm	UTM:	WP063 381771E 4900537N
Water Depth:	0.3m	Location Description:	Orchard St. marsh
# of Attempts to Obtain Sample:	Cores - 5 grabs - 5	Time of Collection:	cores: 10:00 grabs: 11:30

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
3	olive	si/org	plant matter	slight hydrocarbon odour, sheen	none
4	↓	↓	↓	↓	↓
5	↓	↓	↓	spotting	↓

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description
	7 si/sa 4/4 14cm 4/4 sa/si hydrocarbon odour		24cm sa/si 4/4 hydrocarbon odour		58cm -sa/si -4/4 purple color in water seeping from 5-10 cm horizon hydrocarbon odour

☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
	40	dirt close	60	80	80	

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m	0-5 5	5	5	5		
0.3 to 0.5 m	5-10 5 10-15 5 15-20 5	5 5	5 5	5 5		
0.5 to 0.8 m	20-25 1 25-30 30-40	4	5 20	5 15		

Photograph Notes (grab, sampling location, field sampling methods, etc.):

2746 - north, 2747 - east, 2748 - south, 2749 - west, 2750 - Core #1, 2751 - Core #1 horizon A, 2752 - Core #1 horizon B, 2753 - Core #1 horizon C, 2754 - Core #1 horizon D, 2755 - Core #2, 2756 - Core #3, 2757 - Core #4, 2758 - purple water seeping out of horizon B sample, 2759 - horizon A samples, 2760 - horizon D samples, 2761 - horizon C samples, 2762 horizon D samples, 2763 - horizon E samples, 2764 - horizon F samples, 2765 - horizon G samples, 2766 - grab #3, 2767 - grab #4, 2768 - grab #5, 2769 - grab sample composite

QC'd by: Date:

SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	07 Oct 2021	Sampled by:	See pg 1
Station Number (ID):	PCOM-SC-001	Sampling Method:	Petite Ponar /Ekman/Tech-Ops Corer
Weather:	See pg 1	UTM:	
Water Depth:		Location Description:	
# of Attempts to Obtain Sample:		Time of Collection:	

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
See pg 1 notes					

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description
14cm	si/org 4/4 hydrocarbon odour				
14cm	SA/si 4/4				
17cm	si/org 4/4				

☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s) Grab 1: Grab 2: Grab 3: Grab 4: Grab 5: Grab 6:

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m	See pg 1					
0.3 to 0.5 m						
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

Sample labels - grab sample - PCOM-SG-001X
Horizon A 0-5cm - PCOM-SC-001AX
Horizon B - 5-10cm - PCOM-SC-001BX
Horizon C 10-15cm - PCOM-SC-001CX
Horizon D 15-20cm - PCOM-SC-001DX
Horizon E 20-25cm - PCOM-SC-001EX
Horizon F 25-30cm - PCOM-SC-001FX
Horizon G 30-50cm - PCOM-SC-001GX

QC'd by: Date:

SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	6-OCT-21	Sampled by:	JF/JS/SB
Station Number (ID):	PCW-SC-001	Sampling Method:	Petite Ponar /Ekman/Tech-Ops Corer
Weather:	20°C, Sunny, calm	UTM:	18T 382191 4900604
Water Depth:	0.95	Location Description:	≈ 40m off shore
# of Attempts to Obtain Sample:	Cores 3	Time of Collection:	12:15

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description
14cm	4-4 orgs/silt.	22cm	4-4 orgs/silt	15	4-4 orgs/silt
19cm	7-1 silty clay	15c	7-1 silty clay	13	7-1 silty clay
		1cm	8-4 silty clay		
1cm	Peat	12	Peat	12cm	Peat

☑ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s) Grab 1: Grab 2: Grab 3: Grab 4: Grab 5: Grab 6:

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m	5cm			SEE BACK		
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.)

Photos - N, E, S, W, Core 1, Horizon A, Horizon B, Horizon C, Horizon D, Horizon E, Horizon F, Core 2, A, B, C, D, E, F, G, Core 3, A, B, C, D, E, F, G.

QC'd by: Andrew Rous Date: 06 Oct 21

SEDIMENT COLLECTION LOG

Project No: 17783886-8000-8004

Project Title: PSPC Kingston Inner Harbour Sediment Assessment

Date:

Sampled by:

Station Number (ID):

Sampling Method: Petite Ponar /Ekman/Tech-Ops Corer

Weather:

UTM:

Water Depth: See Pg 1

Location Description: See Pg 1

# of Attempts to Obtain Sample:

Time of Collection:

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description
A	5cm	5 cm		5 cm	
B	5	5		5	
C	5	5		5	
D	5	5			
E	5	5		5	
F	5 PHC odour	5	PHC odour	5	PHC odour
G	4cm PHC odour	18cm	PHC odour	5 12cm	

☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s) Grab 1: Grab 2: Grab 3: Grab 4: Grab 5: Grab 6:

Sediment Horizon Sampled (cm) Grab 1: Grab 2: Grab 3: Grab 4: Grab 5: Grab 6:

0 to 0.3 m

0.3 to 0.5 m

0.5 to 0.8 m

Photograph Notes (grab, sampling location, field sampling methods, etc.):

QC'd by: Andrew Rus Date: 06Oct21

SEDIMENT COLLECTION LOG

Page 1 of 1

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	5-OCT-21	Sampled by:	JF / JS / AR
Station Number (ID):	PCW-SGC-011	Sampling Method:	Petite Ponar / Ekman / Tech-Ops Corer
Weather:	18°C, overcast, light wind	UTM:	18T 381891 4900533
Water Depth:	0.65m	Location Description:	≈50m from shore.
# of Attempts to Obtain Sample:	Cores 3 Grabs 3	Time of Collection:	CORES 1355 / GRAB 1520

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	4-4 2.5Y	orgs/silts	Aquatic Veg.	Orgs	None
2	↓	↓	↓	↓	↓
3					

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description
45	orgs / silt 5-4 2.5YR	10cm	orgs / silt 44-10YR	43	5-4 2.5YR
		38cm	5-4 2.5YR		
5	Peat 4-4 10YR	2cm	4-4 10YR	4cm	4-4 10YR

☑ Duplicate Sample? Duplicate Sample ID: ~~20~~ DUP-204 (Horizon A)

Approx % Collected in Grab Sample(s) Grab 1: 70 Grab 2: 80 Grab 3: 80 Grab 4: Grab 5: Grab 6:

Sediment Horizon Sampled (cm)		Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0.10 to 0.3 m	A	20cm	20cm	20cm			
0.3 to 0.5 m	B	20cm	18cm	16cm			
0.5 to 0.8 m	C	3cm	Ø	—			

Photograph Notes (grab, sampling location, field sampling methods, etc.):

Photos - N, E, S, W, CORE 1, HORIZON A, HORIZON B, HORIZON C
CORE 2, HORIZON A, HORIZON B, CORE 3, HORIZON A, HORIZON B,
Tube recovery → Grab 1, Grab 2, Grab 3

Osprey tower NW of site

QC'd by: Andrew Roas Date: 05 Oct 21

A 7 GRAB 1 + 1
B 3 [redacted]

Golder Associates DUP-204 (Bagged)

SEDIMENT COLLECTION LOG

Pg 1 of 1

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	5-OCT-21	Sampled by:	JF/JS/AR
Station Number (ID):	PCN-SGC-013	Sampling Method:	Petite Ponar / Ekman / Tech-Ops Corer
Weather:	overcast, 18°C, Light wind	UTM:	18T 381978 4900597
Water Depth:	0.65m	Location Description:	≈20m from shore
# of Attempts to Obtain Sample:	Core 3 Grab 3	Time of Collection:	Core 15:45 / GRAB

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	4-4 2.5Y	Orgs / silts	Aquatic Veg.	Orgs	None
3	↓	↓	↓	↓	↓

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description
35cm	5-4 2.5YR orgs/silt	34cm	5-4 2.5YR orgs/silt * inverts	36	5-4 2.5YR orgs/silt
12cm	4-4 10YR Peat	13cm	4-4 10YR Peat	14	4-4 10YR Peat.

☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s): Grab 1: 80 Grab 2: 70 Grab 3: 60 Grab 4: / Grab 5: / Grab 6: /

Sediment Horizon Sampled (cm)		Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0.0 to 0.3 m	A	20cm	20cm	20cm	X	X	X
0.3 to 0.5 m	B	13cm	13cm	7cm			
0.5 to 0.8 m	C	—	—	—			

Photograph Notes (grab, sampling location, field sampling methods, etc.):

Photos - N, E, S, W, CORE 1, HORIZON A, HORIZON B, CORE 2, Horizon A, HORIZON B, Grab 1, Grab 2, Grab 3, Composite

QC'd by: Andrew Rous Date: 05 Oct 21

A 11+1 GRAB 11+1
B 3+1

SEDIMENT COLLECTION LOG

 1345-

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	2 OCT-21	Sampled by:	JF / JS / AR
Station Number (ID):	PPOM-SGC-002	Sampling Method:	Petite Ponar / Ekman / Tech-Ops Corer
Weather:	overcast, light rain 15°C	UTM:	18T 381888 4900449
Water Depth:	0.7m	Location Description:	≈50m offshore
# of Attempts to Obtain Sample:	Grab 3 Core 3	Time of Collection:	CORES 1410 GRAB 1440

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	4-4	silt orgs	sticks/leaves	ORGANIC	NA
2	4-4	11	11	11	NA
3	4-4	11	11	11	NA

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description
		10cm	4-4 orgs/silt	30	4-4 orgs/silt
40cm	4-4 orgs/silt	25cm	5-4 orgs/silt	15	5-4 orgs/silt
10cm	5-4 orgs/silt	15cm	7-1 silty clay	5cm	Brown Peat

HYDROCARBON ODOUR IN EACH LAYER OF ALL GRABS

☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s) Grab 1: 90 Grab 2: 90 Grab 3: 90 Grab 4: X Grab 5: X Grab 6: X

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m	20cm	20	20	X	X	X
0.3 to 0.5 m	20cm	20	20			
0.5 to 0.8 m	3cm	5cm	7cm			

Photograph Notes (grab, sampling location, field sampling methods, etc.):

Photos - N, E, S, W, CORE 1, HORIZON A, HORIZON B, HORIZON C, CORE 2, Horizon A, Horizon B, Horizon C, CORE 3 HORIZON A, HORIZON B, Horizon C, GRAB 1, GRAB 2, GRAB 3

QC'd by: Andrew Rous Date: 20 Oct/21

GRAB 11 + BAG A - 11 + BAG B - 3 + BAG

Golder Associates

SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	02-OCT-21	Sampled by:	JF/AR/JS
Station Number (ID):	PPOM-SGC-004	Sampling Method:	Petite Ponar/Ekman/Tech-Ops Corer
Weather:	OVERCAST, LIGHT WIND 15°C	UTM:	18T 281838 4900400
Water Depth:	0.85	Location Description:	≈ 30m from SHORE
# of Attempts to Obtain Sample:	Core 3 / Ponar 5	Time of Collection:	CORE 1020 / GRAB 1020

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	4-4	silts/orgs	aquatic veg	orgs	N/A
2	4-4	" "	large leaves	orgs	N/A
3	4-4	" "	aquatic veg	orgs	N/A
4	4-4	" "	" "	orgs	N/A
5	4-4	" "	" "	orgs	N/A

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description
6cm	4-4 (2.5Y) silty organic	15cm	4-4 silty organic	16cm	4-4 silty orgs.
14cm	14cm 5-4 silty orgs	28cm	5-4 silty organic	25cm	5-4 silty orgs
25cm	25cm 7-1 silty orgs,		PEAT Brown	1cm	Hydrocarbon odour 4-4 dark dark olive
9cm	9cm Brown Peat	7cm		8cm	Peat

☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s) Grab 1: 90 Grab 2: 70 Grab 3: 80 Grab 4: 60 Grab 5: 80 Grab 6: —

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m	20cm	20cm	20cm	X	X	X
0.3 to 0.5 m	20cm	20cm	20cm			
0.5 to 0.8 m	—	4cm	5cm			

Photograph Notes (grab, sampling location, field sampling methods, etc.):

Photos - Core 1, horizon A, Horizon B, Core 2, Horizon A, Horizon B, Horizon C Core 3, Horizon A, Horizon B, ~~Grab 1~~, Horizon C, Grab 1, Grab 2, Grab 3 Grab 4, Grab 5, N, E, S, W

- Tent w residents on shore, observation well on shore

QC'd by: Andrew Rous Date: Oct 2/21

A 11 + Bag C-3 + ~~Bag~~ 7 Jars

B 3 + Bag, Grab 11 + Bag

SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	6-OCT-21	Sampled by:	JF/JS/SB
Station Number (ID):	TQH-SC-010	Sampling Method:	Petite Ponar /Ekman/Tech-Ops Corer
Weather:	20°C, Light wind, Sunny	UTM:	18T 382027 4899305
Water Depth:	2.25m	Location Description:	≈ 30m NE of outer docks @ AGLIN BAY MARINA
# of Attempts to Obtain Sample:	Cores 3	Time of Collection:	1530

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description
13	4-4 orgs/s.lt	15cm	4-4 orgs/s:lt	11cm	4-4-orgs/ S.lt.
9cm	5-4 orgs/s.lt	7cm	5-4 orgs/silt		

☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s) Grab 1: Grab 2: Grab 3: Grab 4: Grab 5: Grab 6:

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m						
0.3 to 0.5 m	SEE BACK PAGE					
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

Photos - N, E, S, W, Core 1, A, B, C, D, Core 2, A, B, C, D
Core 3, A, B, C

QC'd by: Andrew Rous Date: 06 Oct 21

SEDIMENT COLLECTION LOG

Project No: 17783886-8000-8004

Project Title: PSPC Kingston Inner Harbour Sediment Assessment

Date:

Sampled by:

Station Number (ID):

Sampling Method: Petite Ponar /Ekman/Tech-Ops Corer

Weather: See Pg 1

UTM: See Pg 1

Water Depth:

Location Description:

# of Attempts to Obtain Sample:

Time of Collection:

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description
A	5cm		5cm	5cm	
B	5cm		5cm	5cm	
C	5cm		5cm - BLOOD WORM	0cm	
D	5cm		5cm	—	
E	—		—	—	

☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s) Grab 1: Grab 2: Grab 3: Grab 4: Grab 5: Grab 6:

Sediment Horizon Sampled (cm) Grab 1: Grab 2: Grab 3: Grab 4: Grab 5: Grab 6:

0 to 0.3 m

0.3 to 0.5 m

0.5 to 0.8 m

Photograph Notes (grab, sampling location, field sampling methods, etc.):

QC'd by: Andrew Rous Date: 06 Oct 21

SEDIMENT COLLECTION LOG

1 of 2

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	30 sept 21	Sampled by:	J. Weir, J. Skeath, R. Stephens
Station Number (ID):	TC4-SCG-003	Sampling Method:	Petite Ponar/Ekman/Tech-Ops Corer
Weather:	13°C, partial clouds, North 13km wind	UTM:	WP021 381906E 4899342N
Water Depth:	1.65m	Location Description:	Limited vegetation, north of, marina
# of Attempts to Obtain Sample:	Cores - 6 Grabs - 3	Time of Collection:	Cores - 10:50 grabs - 12:35

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
See	pg 2	of 2			

	Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description
		2.5y		x sample not used x		Sample spilled
Dark	0.08m	4-4 olive	0.01m	5-4 olive - loose organics. 2.5y	0.01	5.4 olive 2.5y
Light	0.14m	6-4 olive - silt + clay (grey tint)	0.13m	-4-4 olive	0.12	4-4 olive
Dark	0.07m	4-4 olive				6-4 olive
Light	0.11m	6-4 olive - silt + clay (tint)	0.14m	-6-4 olive - clay + silt (grey tint)	0.14	
Dark	0.05m	4-4 olive			0.07	4-4 olive
	=0.4	x hydrocarbon smell within 2 lower horizon	=0.28m		=0.34m	

☒ Duplicate Sample? Duplicate Sample ID: DUP-003

Approx % Collected in Grab Sample(s)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m	0.2m	0.2m	X	0.2m		
0.3 to 0.5 m	0.15m	~~[illegible]~~		0.05m		
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

TC4-SC-003 A/B

→ No Hydrocarbon smell within top 0.1m
→ noticeable sheen on top of water when removing sediment

QC'd by: Jared Skeath Date: 30 Sept 21

Golder Associates

CONT.

SEDIMENT COLLECTION LOG

CONT pg 2 -

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	30 Sept 2021	Sampled by:	J. Weir J Skeath R. Stephens
Station Number (ID):	TC4 - SC - 003	Sampling Method:	Petite Ponar /Ekman/Tech-Ops Corer
Weather:	13°C partial clouds, 13Km (N) Winds	UTM:	See pg 1
Water Depth:	1.65m	Location Description:	See pg 1
# of Attempts to Obtain Sample:	See pg 1	Time of Collection:	See pg 1

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	5-4 olive	Silt 95% Sand 5%	organics, plant mat	minor hydrocarbon	Zebra muss
2	↓	↓	↓	↓	↓
3	↓	↓	↓	↓	↓

Core X 4	Core layer Description	Core 2 5	Core layer Description	Core 3 6	Core layer Description
0.105m	2.5y 5-4 olive - organics		*NOT USED*	0.02m	5-4 olive 2.5y - organics
0.09m	4-4 olive - silt + organics -	0.11m	4-4 olive 2.5y	0.14	4-4 olive - silt + organic
0.117m	6-4 olive clay + silt	0.112m	6-4 olive	0.08	6-4 olive - clay + silt
0.105m	4-4 olive - silt + clay	0.08	4-4 olive	0.106	4-4 olive - silt + clay
				0.06	6-4 olive (slightly chunky)
=0.136m		=0.131		=0.133	

☐ Duplicate Sample? Duplicate Sample ID: DUP-003

Approx % Collected in Grab Sample(s)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
	70%	70%	95%			

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0.0 to 0.3 m	0.2m	0.2m	X	0.2m	X	0.2m
0.3 to 0.5 m	0.15m	—		0.05m		0.03m
0.5 to 0.8 m						

Photograph Notes (grab, sampling location, field sampling methods, etc.):

#2259 N, 2260 E, 2261 S, 2262 W,
Core#1 2263, 2264, / Core#2 2265 / Core#3 2266 / Core#4 2267 / Core#5 2268
Core#6 2269 Grab#1 2270 Grab#2 2271 Grab#3 2272, Composite 2273
→ Hydrocarbon Sheen present 0.1m - down

TC4-SC-003 A/B

QC'd by: Jara Skeath Date: 30Sept21

SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	**Project Title:**	PSPC Kingston Inner Harbour Sediment Assessment
Date:	September 29 / 2021	**Sampled by:**	JW / TS / RS
Station Number (ID):	TC4-SGC-009	**Sampling Method:**	Petite Ponar / Ekman / Tech-Ops Corer
Weather:	17°C, Cloudy, 19 N Km Wind	**UTM:**	018 382084E 4899368N
Water Depth:	2.4 m	**Location Description:**	NE of Marina
# of Attempts to Obtain Sample:	Cores - 3 grabs - 3	**Time of Collection:**	14:10 - Cores, 15:30 - grabs

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	olive	silt / organics	little to none	Minor organic odour	None
2	↓	↓	↓	↓	↓
3	↓	↓	↓	↓	↓

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description
↕ 5cm	- zebra mussel shells - loose organics → olive 4-4	↕ 4cm	- olive 4-4 - loose organics	↕ 4cm	- olive 4-4 - loose organics
↕ 12cm	- silt - zebra mussel shells → pale olive 5-4 - sheen spotting	↕ 11cm	- pale olive 5-4 - chunks of wood, garbage - silt - red worms	↕ 12cm	- pale olive 5-4 - silt
↕ 20cm	- silt / → pale olive 6-4	↕ 14cm	- pale olive 6-4 - silt	↕ 12cm	- pale olive - silt.

☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
	70	70	70			

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m	20	20	20			
0.3 to 0.5 m	—	—	—			
0.5 to 0.8 m	—	—	—			

Photograph Notes (grab, sampling location, field sampling methods, etc.):

2227 - Core 1, 2228 - Core 2, 2229 - Core 3, 2230 - ~~North~~ Composite sample, 2231 - ~~East~~ North, 2232 - ~~South~~ East, 2233 - ~~West~~ South, ~~2234~~ 2235 - invertebrate in sample - bloodworm, 2236 - grab #1, 2237 grab #3

~~2234 - West~~ 2234 - West

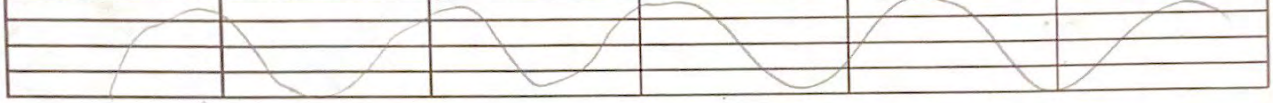
QC'd by: Andrew Rous Date: Sept 29/21

SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	**Project Title:**	PSPC Kingston Inner Harbour Sediment Assessment
Date:	30 Sep 2021	**Sampled by:**	J. Weir, J. Skeath, R. Stephas
Station Number (ID):	TCH-SGC-010	**Sampling Method:**	Petite Ponar / Ekman / Tech-Ops Corer
Weather:	11°C, Mostly cloudy, wind N 15 km	**UTM:**	wp020 382034E 4899304
Water Depth:	2.35	**Location Description:**	East of Marina Boat Launch
# of Attempts to Obtain Sample:	cores - 4 Grabs - 4	**Time of Collection:**	Cores - 09:08 Grabs - 10:00

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	olive	si/org	tapegrass	slight organic odour	none
3	↓	↓	↓	↓	↓
4	↓	↓	↓	↓	↓



Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description
0.02m	2.5Y - colour change - 5-4 olive - zebra mussels - organic debris	0.01m	2.5y 5-4 olive - organics (loose) - zebra mussels	0.01	2.5y 5-4 olive
0.15m	- 4-4 olive - hydrocarbon odor - silt + organics - zebra mussels	0.16m	4-4 olive - silt + organics - zebra mussels - hydrocarbon odor	0.16m	4-4 olive } hydrocarbon odour
0.12m	- 6-4 olive silt clay (greytint) - zebra mussels	0.16m	6-4 olive - silt + clay (greytint) - fibrous material present	0.16m	

- zebra mussels visible in all layers of sediment (partial or whole)
- 0.1-0.3 composite sample has slight hydrocarbon odour

☐ Duplicate Sample? Duplicate Sample ID: —

Approx % Collected in Grab Sample(s)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
	70	30	60	80	—	—

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m	—	20	20	20		
0.3 to 0.5 m	—	—	—	—		
0.5 to 0.8 m	—	—	—	—		

Photograph Notes (grab, sampling location, field sampling methods, etc.):

2248 - north, 2249 - east, 2250 - south, 2251 - west, 2252 - Core #2, 2253 - core #3, 2254 - core #4, 2255 - grab #1, 2256 - grab #3, 2257 - grab #4, 2258 - composite grab sample

TCH-SC-010A

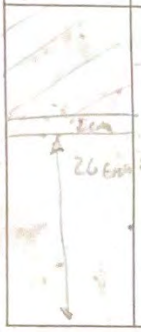
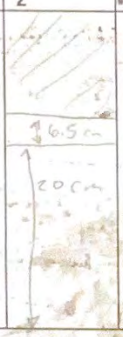
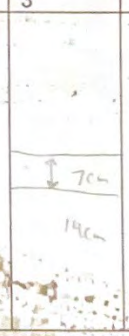
QC'd by: Jared Skeath Date: 30 Sept 21

SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	04 Oct 2021	Sampled by:	JW, AR, SB
Station Number (ID):	TCAB-SGC-001	Sampling Method:	Petite Ponar / Ekman / Tech-Ops Coren
Weather:	12°C, Overcast, wind NE 15km/h	UTM:	WP048 381846E 4899177N
Water Depth:	5.05	Location Description:	NE section of Anglen Bay Marina
# of Attempts to Obtain Sample:	cores - 6 grabs - 3	Time of Collection:	11:20 - cores 12:45 - grabs

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
See pg 2					

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description
	water - light olive, org - olive - silt/org		water - light olive, org - olive, silt/org		- light olive, org

☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
	See pg 2 →					
Sediment Horizon Sampled (cm)	**Grab 1:**	**Grab 2:**	**Grab 3:**	**Grab 4:**	**Grab 5:**	**Grab 6:**
0 to 0.3 m	16	16	9	See pg 2 →		
0.3 to 0.5 m	—	—	—			
0.5 to 0.8 m	—	—	—			

Photograph Notes (grab, sampling location, field sampling methods, etc.):

See pg 2

QC'd by: Andrew Rous Date: 04 Oct 21

SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	**Project Title:**	PSPC Kingston Inner Harbour Sediment Assessment
Date:	See pg 1	**Sampled by:**	See pg 1
Station Number (ID):		**Sampling Method:**	Petite Ponar /Ekman/Tech-Ops Corer
Weather:		**UTM:**	See pg 1
Water Depth:		**Location Description:**	
# of Attempts to Obtain Sample:		**Time of Collection:**	

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	olive	Silt / organics	none	sheen spotting	blood worms
2	↓	↓	↓	↓	↓
3	↓	↓	↓	↓	↓

Core 1 4	Core layer Description	Core 2 5	Core layer Description	Core 3 6	Core layer Description
	Core discarded. Insufficient penetration		- water 3cm - light olive, organics 14cm - olive, org/si.		4cm - light olive - org 21cm - olive, org/si.

☐ Duplicate Sample? Duplicate Sample ID:

	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
Approx % Collected in Grab Sample(s)	80	70	70			
Sediment Horizon Sampled (cm)	Grab 1: 4	Grab 2: 5	Grab 3: 6	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m	—	5	13			
0.3 to 0.5 m	—	—	—			
0.5 to 0.8 m	—	—	—			

Photograph Notes (grab, sampling location, field sampling methods, etc.):
2363 - north, 2364 - east, 2365 - south, 2366 - west, 2367 - core #1, 2368 - core #1 horizon A, 2369 - core #2, 2370 - core #2 horizon A, 2371 - core #3, 2372 - core #3 horizon A, 2373 - core #5, 2374 - core composite sample horizon A, 2375 - core #6, 2376 - core #6 horizon A, 2377 - grab #1, 2378 - grab #2, 2379 - grab #3, 2380 - grab composite

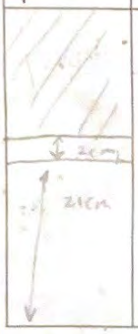
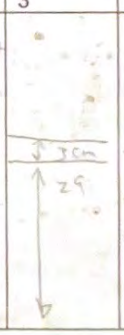
QC'd by: Andrew Ross Date: 04 Oct 21

SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	04 Oct 2021	Sampled by:	JW, SB, AR
Station Number (ID):	TCAB-SGC-012	Sampling Method:	Petite Ponar / Ekman / Tech-Ops Corer
Weather:	12°C, Overcast, wind NE 2W	UTM:	WP050 381868E 4899102N
Water Depth:	5.05	Location Description:	west of south docks - Anglin Bay
# of Attempts to Obtain Sample:	cores - 5 grabs - 5	Time of Collection:	15:50 - cores 18:45 - grabs

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
2	olive	si/org	none	organic odour,	bloodworms
4	↓	↓	↓	sheen spotting	↓
5	↓	↓	↓	↓	↓

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description
	 - wood - light olive - org - olive - si/org		Disgorged - insufficient penetration 		 - light olive, org - olive, si/org

☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
	See pg 2					

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m	13		20			
0.3 to 0.5 m	—		—	See pg 2		
0.5 to 0.8 m	—		—			

Photograph Notes (grab, sampling location, field sampling methods, etc.):

2398 - north, 2399 - east, 2400 - south, 2401 - west, 2402 - core #1, 2403 - core #1 horizon A, 2404 - core #3, 2405 - core #3 horizon A, 2406 - core #4, 2407 - core #4 horizon A, 2408 - core #5, 2409 - core #5 horizon A, 2410 - grab #2, 2411 - grab #4, 2412 - grab #5, 2413 - grab composite

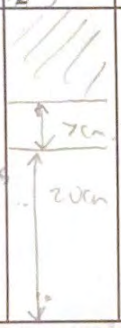
QC'd by: Andrew Rous Date: 04 Oct 21

SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	04 Oct 2021	Sampled by:	See pg 1
Station Number (ID):	TCAB-SC-012A	Sampling Method:	Petite Ponar /Ekman/Tech-Ops Corer
Weather:	See pg 1	UTM:	
Water Depth:		Location Description:	
# of Attempts to Obtain Sample:		Time of Collection:	

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description
	water - light olive, org - bloodworms Olive; Si/org		water - light olive, org - olive; si/org		

☐ Duplicate Sample? Duplicate Sample ID:

	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
Approx % Collected in Grab Sample(s)	—	90	—	80	90	—
Sediment Horizon Sampled (cm)	Grab 1: 4	Grab 2: 5	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m	10	16				
0.3 to 0.5 m	—	—				
0.5 to 0.8 m	—	—				

Photograph Notes (grab, sampling location, field sampling methods, etc.):

See Pg 1

QC'd by: Andrew Rays Date: 04 Oct 21

SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	04 Oct 2021	Sampled by:	JW, SB, AR
Station Number (ID):	TCAB-SGC-015	Sampling Method:	Petite Ponar /Ekman/Tech-Ops Corer
Weather:	14°C, Overcast, wind NE 20 km/h	UTM:	WP049 381850E 4899147
Water Depth:	5.0m	Location Description:	north side of boat slip, 5 slips in to the west
# of Attempts to Obtain Sample:	cores - 4 grabs - 3	Time of Collection:	14:20 - cores 15:20 grabs

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	olive	si/org	none	sheen spots,	none
2	↓	↓	↓	Organic odour	↓
3	↓	↓	↓	↓	↓

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description
8cm 13cm	- light olive, org - olive, si/org	4cm 16cm	light olive - org Olive - si/org	2cm 24cm	- light olive - org - olive - si/org

☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
	90	90	80	\	\	\

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m	4	9	13	9		
0.3 to 0.5 m	—	—	—	—		
0.5 to 0.8 m	—	—	—	—		

Photograph Notes (grab, sampling location, field sampling methods, etc.):

2381 - north, 2382 - east, 2383 - south, 2384 - west, 2385 core #1, 2386 - core #1 horizon A, 2387 - core #2, 2388 - core #2 horizon A, 2389 - core #3, 2390 - core #3 horizon A, 2391 - core #4, 2392 - core #4 horizon A, 2393 - horizon A composite sample, 2394 - grab #1, 2395 - grab #2, 2396 - grab #3, 2397 - grab composite

QC'd by: Andrew Rous Date: 04 Oct 21

SEDIMENT COLLECTION LOG

2 of

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	"	Sampled by:	See pg 1
Station Number (ID):	TCAB-SGC-015A	Sampling Method:	Petite Ponar /Ekman/Tech-Ops Corer
Weather:	See pg 1	UTM:	
Water Depth:		Location Description:	
# of Attempts to Obtain Sample:		Time of Collection:	

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
See pg 1					

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description
5cm 18cm	- light olive, org, blood worms - olive - sl/org				

☐ Duplicate Sample? Duplicate Sample ID: _____

Approx % Collected in Grab Sample(s) Grab 1: Grab 2: Grab 3: Grab 4: Grab 5: Grab 6:

Sediment Horizon Sampled (cm) Grab 1: Grab 2: Grab 3: Grab 4: Grab 5: Grab 6:

0 to 0.3 m

0.3 to 0.5 m

0.5 to 0.8 m

See pg 1

Photograph Notes (grab, sampling location, field sampling methods, etc.):

See Pg 1

QC'd by: Andrew Rous Date: 04 Oct 21

SEDIMENT COLLECTION LOG

Project No: 17783886-8000-8004
Project Title: PSPC Kingston Inner Harbour Sediment Assessment
Date: 6-Oct-21
Sampled by: JF/JS/SB
Station Number (ID): TCOM-SC-0006
Sampling Method: Petite Ponar /Ekman/Tech-Ops Corer
Weather: 20°C, Sunny
UTM: ≈40m from Shore
Water Depth: 1.1m
Location Description: 18T 381914 4900250
# of Attempts to Obtain Sample: Cores 3
Time of Collection: 1338

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description
23cm	4-4 orgs/s.lt	7cm	4-4 orgs/s.lt	19cm	4-4 orgs/s.lt
27cm	7-1 s.lty clay	35cm	5-4 s.lty clay	14cm	5-4 s.lty clay
		8cm	7-1 s.lty clay	3cm	7-1 s.lty clay

☐ Duplicate Sample? Duplicate Sample ID:

~~Approx % Collected in Grab Sample(s)~~ Grab 1: Grab 2: Grab 3: ~~Grab 4:~~ Grab 5: Grab 6:

Sediment Horizon Sampled (cm) Grab 1: Grab 2: Grab 3: Grab 4: Grab 5: Grab 6:

0 to 0.3 m
0.3 to 0.5 m SEE REVERSE
0.5 to 0.8 m

Photograph Notes (grab, sampling location, field sampling methods, etc.):
Photos - N, E, S, W, Core 1, A, B, C, D, E, F, G, Core, A, B, C, D, E, F, G
Core 3, A, B, C, D, E, F, G

QC'd by: Andrew Rous Date 06 Oct 21

SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:		Sampled by:	
Station Number (ID):		Sampling Method:	Petite Ponar /Ekman/Tech-Ops Corer
Weather:		UTM:	
Water Depth:	See Pg 1	Location Description:	See Pg 1
# of Attempts to Obtain Sample:		Time of Collection:	

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description
A	5 cm	5cm		5cm	
B	5	5		5	
C	5	5		5	
D	5	5		5	
E	5	5		5	
F	5	5		5	
G	15cm	17cm	X	6cm	X

☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s) Grab 1: Grab 2: Grab 3: Grab 4: Grab 5: Grab 6:

Sediment Horizon Sampled (cm) Grab 1: Grab 2: Grab 3: Grab 4: Grab 5: Grab 6:

0 to 0.3 m

0.3 to 0.5 m

0.5 to 0.8 m

Photograph Notes (grab, sampling location, field sampling methods, etc.):

QC'd by: Andrew Rous Date: 06 Oct 21

SEDIMENT COLLECTION LOG

11:10-1200

Project No:	17783686-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	02-OCT-21	Sampled by:	JF/JS/AR
Station Number (ID):	TCOM-SGC-001	Sampling Method:	Petite Ponar/Ekman/Tech-Ops Corer
Weather:	overcast, light wind, 5°C	UTM:	18T 381888 4900349
Water Depth:	1.16m	Location Description:	~50m off shore
# of Attempts to Obtain Sample:	Core 3 Ponar 3	Time of Collection:	CORE 1125 GRAB 1200

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	7-1 Grey	Silts/orgs	Aquatic Veg	organics	N/A
2	" "	" "	Sticks	organics	N/A
3	"	" "	Aquatic Veg	orgs	N/A

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description
9cm	4-4 silty orgs - benthics noted 254	16cm	4-4 silty orgs - benthics	16cm	4-4 silty orgs
24cm	- 7-1 grey silt/orgs	24cm	- 7-1 grey S. /orgs	17cm	- 7-1 grey silt/orgs
40cm	- Brown Peat - brick fragments	40cm	- Brown Peat	17cm	Brown Peat

☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s) Grab 1: 90 Grab 2: 90 Grab 3: 90 Grab 4: / Grab 5: / Grab 6: /

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m	20cm	20cm	20cm	X	X	X
0.3 to 0.5 m	11cm	19cm	19cm			
0.5 to 0.8 m	—	—				

Photograph Notes (grab, sampling location, field sampling methods, etc.):

Photos - N, E, S, W; CORE 1, Horizon A, Horizon B; Core 2, Horizon A, Horizon B; CORE 3, Horizon A, HORIZON B, GRAB 1, GRAB 2 GRAB

QC'd by: Andrew Rous Date: Oct 2/21

Horizon A - 7 Jars ~~HORIZON C - 3~~

Horizon B 3 Jars GRAB - 7 Jars

SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	01 Oct 2021	Sampled by:	J. Weir, S. Brenegan, J. Sheath
Station Number (ID):	TCOM-SGC-006	Sampling Method:	Petite Ponar / Ekman / Tech-Ops Corer
Weather:	17°C, Sunny, Wind SW 17km/h	UTM:	18T 381918E 4900249N
Water Depth:	1.25m	Location Description:	sparse weeds
# of Attempts to Obtain Sample:	Cores - 3 grabs - 3	Time of Collection:	Cores - 14:15 grabs 15:15

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	olive	si/org	plant matter	minor organic odour	none
2	↓	↓	↓	↓	↓
3	↓	↓	↓	↓	↓

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description
7 cm	5/3, si/org Full tube 2.5y		- water 2.5y		- water @ 2.5y
37	5/4 si/cl	14cm	5/3 si/org	5cm	5/3 4/4 si/org
		21cm	5/4 si/cl	13cm	5/4 si/cl
6cm	5/3 si			17cm	

☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s)	Grab 1: 80%	Grab 2: 60%	Grab 3: 60%	Grab 4:	Grab 5:	Grab 6:
Sediment Horizon Sampled (cm)	core # Grab 1:	core Grab 2:	core Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m	20	80	20			
0.3 to 0.5 m	18	1	4			
0.5 to 0.8 m	–	—	–			

Photograph Notes (grab, sampling location, field sampling methods, etc.):

2320 - north, 2321 - east, 2322 - south, 2323 - west, 2324 - core #1, 2325 - core 1 horizon A, 2326 - core #1 horizon B, 2327 core #2, 2328 - core #3, 2329 - core #1 horizon A prior to homogenizing, 2330 core B horizon before homogenizing, 2331 grab #1, 2332 - grab #2, 2333 - grab #3, 2334 - grab composite, 2335 - horizon A core composite, 2336 - horizon B core composite

QC'd by: Jared Sheath Date: 10 Oct 21

SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	01 Oct 2021	Sampled by:	J. Weir, S. Brenegan, J. Skeath
Station Number (ID):	TCOM-SGC-007	Sampling Method:	Petite Ponar / Ekman / Tech-Ops Corer
Weather:	17°C, sunny, wind SW 17 km	UTM:	WP 026 381863E 4900202 N
Water Depth:	0.53 m	Location Description:	5m from shoreline in weeds
# of Attempts to Obtain Sample:	corer - 6 grabs - 4	Time of Collection:	16:00 - cores 17:30 - grabs

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	Dark olive	Org/sg/si	stocks, plant matter	minor organic odour	shells
3	↓	↓	↓	↓	↓
4					

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description
	water 2.5y		Water 2.5y		water 2.5y
6cm	organics/detritus 4/4	5 cm	- organics/detritus	18cm	shell fragments, organics, si/sg 4/4
10cm	5/4 - zebra mussel shell fragments, si/sg	10 cm	- 4/4 - shell fragments, si/sg	19c	7/1 - clay
	7/1 - clay	20 cm	7/1 - clay		

☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
	90	—	80	80	—	—

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m	—	—	—	15	18	20
0.3 to 0.5 m	—	—	—	—	—	—
0.5 to 0.8 m	—	—	—	—	—	—

Photograph Notes (grab, sampling location, field sampling methods, etc.):

2337 - north, 2338 - east, 2339 - south, 2340 - west, 2341 - core #1, 2342 - core #1 top layers, 2343 - core #1 bottom layer, 2344 - horizon A sample core 1, 2345 - 2346 - water snake, 2347 - core #2, 2348 - core #2 horizon A sample, 2349 - core #3, 2350 - Core #3 horizon A sample, 2351 - grab #1, 2352 - grab #3, 2354 - grab #4, 2355 - mussel shell in grab, 2356 - grab sample composite, 2357 - core horizon A composite

QC'd by: Jared Skeath Date: 1 Oct 21

SEDIMENT COLLECTION LOG

Page 1 of 1 of 2

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	2 OCT - 21	Sampled by:	JF / JS / AR
Station Number (ID):	TCOM-SGC-009	Sampling Method:	Petite Ponar / Ekman / Tech-Ops Corer
Weather:	overcast, light rain 15°C	UTM:	18T 381915 4900145
Water Depth:	1.32	Location Description:	≈ 50m from Shore
# of Attempts to Obtain Sample:	Grab 3 Core 3	Time of Collection:	CORES 1545 / GRABS - 1610

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	4-4	SILT / orgs	Aquatic Veg	N/a	N/A
2	↓	↓	Zebra mussled	↓	↓
3			Zebra mussles		

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description
7	4-4 orgs/silt -gravel	10	4-4 orgs/silt -gravel	4cm	4-4 orgs/silt -gravel
11cm	4-3 silt/orgs	8	5-4 silt/orgs	16cm	5-4 silt/orgs
		2	7-1 silty clay	1cm	7-1 silty clay

☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s) Grab 1: 90 Grab 2: 90 Grab 3: 80 Grab 4: / Grab 5: / Grab 6: /

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0.0 to 0.3 m	8	10	11			
0.3 to 0.5 m	0	0	0			
0.5 to 0.8 m	0	0	0			

Photograph Notes (grab, sampling location, field sampling methods, etc.):

N, E, S, W, CORE 1, HORIZON A, Core 2, Horizon A
Core 3, Horizon A, Grab 1, Grab 2, Grab 3

QC'd by: Andrew Pous Date: 02 Oct 21

A - 7 Jars
~~B - 3 Jars~~

GRAB - 11 JARS + 1 BAG

Golder Associates

SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	**Project Title:**	PSPC Kingston Inner Harbour Sediment Assessment
Date:	30 Sep 2021	**Sampled by:**	J. Weir, R. Stephens, J. Skeath
Station Number (ID):	TCRC-SGC-004	**Sampling Method:**	Petite Ponar/Ekman/Tech-Ops Corer
Weather:	13°C, partly cloudy, wind NW 11 km/h	**UTM:**	022 381874 E 4900018 N
Water Depth:	1.01	**Location Description:**	0.15m east of shoreline, milfoil and water lilly weedbed
# of Attempts to Obtain Sample:	corer - 3 ponar - 4	**Time of Collection:**	cores 14:30 grabs 15:40

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
2	olive	si/org	aquatic veg, pieces of wood	minor organic odor	none
3	↓	↓	↓	↓	↓
4	↓	↓	↓	↓	↓

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description
	discard		5Y discard		5Y discard
7cm	2.5Y 4/4 - olive - plant roots, si/org	7cm	- 4/4 si/org	11 cm	- 4/4 si/org
11cm	5/4 - olive - si/cl	7	- 5/4 si/cl	10 cm	- 5/4 - si/cl
8cm	7/1 - light grey - clay/si/cl	9	- 7/1 clay/si	7 cm	- 7/1 clay/si/cl
		5	- 5/4 si/cl/cl		

zebra mussels throughout cores, clumps of clay, invertebrates in water on top layer, plant matter in 0.1-0.2 range

☐ Duplicate Sample? Duplicate Sample ID:

Approx % Collected in Grab Sample(s)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
	25	80	80	80		

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0.1 to 0.3 m	11 cm	11 cm	13 cm			
0.3 to 0.5 m	—	—	—			
0.5 to 0.8 m	—	—	—			

Photograph Notes (grab, sampling location, field sampling methods, etc.):

2274 - north, 2275 - east, 2276 - south - 2280 - 2277 - west, 2278 - core #1, 2279 core #1 invertebrates in water above sediment, core #1 0.1-0.3 sample, 2281 - core #2, 2282 - core #3 2283 - 0.1-0.3 horizon cores prior to homogenizing, 2284 - grab #2, 2285 - grab #3, 2286 - grab #4

TCRC-SC-004A

QC'd by: Jared Skeath Date: 30 Sept 21

SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	**Project Title:**	PSPC Kingston Inner Harbour Sediment Assessment
Date:	01 Oct 2021	**Sampled by:**	J. Weir, J. Sheath, S. Brenegar
Station Number (ID):	TCRC-SGC-010	**Sampling Method:**	Petite Ponar/Ekman/Tech-Ops Corer
Weather:	12°C, sunny, wind N 9km/h	**UTM:**	up 024 381872E 4899876N
Water Depth:	1.09 m	**Location Description:**	Just off rowing club docks
# of Attempts to Obtain Sample:	cores - 5 grabs - 3	**Time of Collection:**	10:25 - cores

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1	olive	silt/clay	plant matter, wood chips, clay	minor organic odour	mussel shells
2	↓	↓	↓	↓	↓
3	↓	↓	↓	↓	↓

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description
13cm 5cm	2.5y water 5/4 - olive si 7/1 - light grey clay, firm	13 cm 8 cm	2.5y water 5/4 - olive si 7/1 light grey CL/si, firm	7cm 14cm 4cm	2.5y water 4/4 - olive si/clay 5/4 - olive si 7/1 - clay, firm

☐ Duplicate Sample? Duplicate Sample ID: _____

Approx % Collected in Grab Sample(s)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
	80	80	70			

Sediment Horizon Sampled (cm)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m	5.5	8 cm	13 cm			
0.3 to 0.5 m	—	—	—			
0.5 to 0.8 m	—	—	—			

Photograph Notes (grab, sampling location, field sampling methods, etc.):
2300 - north, 2301 - east, 2302 - south, 2303 - west, 2304 - core #1, 2305 - white turbid water on top of core #1, 2306 - core #1 horizon A sample, 2307 - core #2, 2308 - core #2 horizon A sample, 2309 - core #3, 2310 - core #3, 2311 - core #3 horizon A sample, 2312 - core #4, 2313 - core #5, 2314 - grab #1, 2315 - grab #2, 2316 - grab #3, 2317 - core #4 horizon B sample, 2318 - horizon A composite core sample, 2319 - mussel shells in grab samples

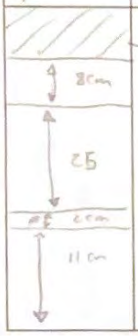
QC'd by: Jared Sheath Date: 10+21

SEDIMENT COLLECTION LOG

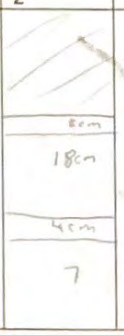
Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	01 Oct 2021	Sampled by:	see pg 1
Station Number (ID):	TCRC-SGC-010	Sampling Method:	Petite Ponar /Ekman/Tech-Ops Corer
Weather:	see pg 1	UTM:	See pg 1
Water Depth:		Location Description:	
# of Attempts to Obtain Sample:		Time of Collection:	

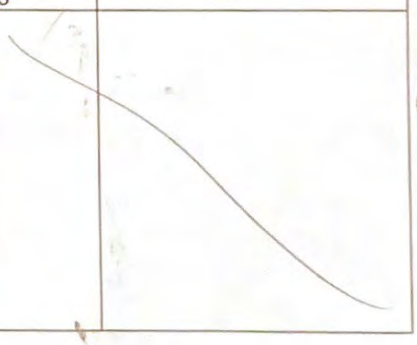
Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota



Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description
	2.5y munsel chart 2.5y water		2.5y water		
8cm	5/4 - broken glass in sample si/org				
25	4/4 si/sa	8cm	4/4 - organics		
		18cm	5/4 - si/clay - rocks, gravel		
2cm	4/3 si	4cm	4/3 si		
11cm	7/1 cl/si, firm	7	7/1 CL/si, firm		





☐ Duplicate Sample? Duplicate Sample ID: _____

Approx % Collected in Grab Sample(s)	Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:

Sediment Horizon Sampled (cm)	Grab ~~1~~ 4	Grab ~~2~~ 5	~~Grab 3:~~	~~Grab 4:~~	~~Grab 5:~~	~~Grab 6:~~
0 to 0.3 m	20 cm	19				
0.3 to 0.5 m	10 cm	—				
0.5 to 0.8 m	—	—				

Photograph Notes (grab, sampling location, field sampling methods, etc.):

- firm bottom. Core samples were obtained by wading in shallow water and using body weight / pounding with weight on core sampler to penetrate the sediment.
- Grab sample label - TCRC-SG-010 - 11 jars, one bag filled
- Core sample horizon A label - TCRC-SC-010A - 11 jars, one bag filled
- Core sample horizon B label - TCRC-SC-010B - 3 jars filled
- Horizon B only obtained from grab #4 Three jars filled, 2 of 3 jars had no headspace, third jar is 3/4 full. Predominantly clay in samples
- firm clay layer at bottom of all cores

QC'd by: Jared Sheath Date: 1 Oct 21

SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	5-Oct-21	Sampled by:	JF/JS/AR
Station Number (ID):	WM-SGC-003	Sampling Method:	(Petite Ponar)/Ekman/(Tech-Ops Corer)
Weather:	overcast, 18°C, light wind	UTM:	18T 351900 4899785
Water Depth:	1.69	Location Description:	~ 20m off shore
# of Attempts to Obtain Sample:	Cores 5 Grabs 3	Time of Collection:	Core 1130 / Grab 1230

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota
1 2 3	4-4 orgs/s.lt ↓	orgs/s.lt ↓	aquatic veg ↓	organic ↓	N/A ↓

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description
9cm	4-4 orgs/s.lt	12cm	4-4 orgs/s.lt	X	
25cm	5-4 silty clay	19cm	5-4 silty clay	7cm	4-4 orgs/s.lt
10cm	3-2 silty clay Possible PHC odour	9cm	3-2 silty clay Possible PHC odour	24cm	5-4 silty clay

☒ Duplicate Sample? Duplicate Sample ID: ★-DUP-206★ (Horizon A)

Approx % Collected in Grab Sample(s) Grab 1: 90% Grab 2: 70% Grab 3: 90% Grab 4: / Grab 5: / Grab 6: /

Sediment Horizon Sampled (cm)		Grab 1:	Grab 2:	Grab 3:	Grab 4:	Grab 5:	Grab 6:
0 to 0.3 m	A	20cm	20cm	18cm	20cm	18cm	X
0.3 to 0.5 m	B	12cm	11cm	—	4cm	—	
0.5 to 0.8 m	C	—	—	—	—	—	

Photograph Notes (grab, sampling location, field sampling methods, etc.):

Photos - N, E, S, W, Core 1, Horizon A, Horizon B, Core 2, Horizon A, Horizon B, Core 3, Horizon A, Core 4, Horizon A, Horizon B Core 5, Horizon A, Grab 1, Grab 2, Grab 3,

QC'd by: Andrew Rous Date: 05 Oct 21

WM-SGC-003 **Golder Associates** A 11+1 GRAB 11+1 B 3+1

SEDIMENT COLLECTION LOG

Project No:	17783886-8000-8004	Project Title:	PSPC Kingston Inner Harbour Sediment Assessment
Date:	5-OCT-21	Sampled by:	JF/JS/AR
Station Number (ID):	WM-SGC-603	Sampling Method:	Petite Ponar /Ekman/Tech-Ops Corer
Weather:	See Pg 1	UTM:	See Pg 1
Water Depth:		Location Description:	
# of Attempts to Obtain Sample:		Time of Collection:	

Sediment Description:

Grab Number	Colour	Particle size	Debris/Organic Material	Odour/Sheen/ Staining	Organisms/ Biota

Core 1	Core layer Description	Core 2	Core layer Description	Core 3	Core layer Description
9	4-4 - orgs/silt	6cm	4-4 - orgs/silt		
20cm	5-4 silty clay	20cm	5-4 silty clay		
4cm	3-2 silty clay				

← possible PHC odour

☐ Duplicate Sample? Duplicate Sample ID: See Pg 1

Approx % Collected in Grab Sample(s) Grab 1: Grab 2: Grab 3: Grab 4: Grab 5: Grab 6:

Sediment Horizon Sampled (cm) Grab 1: Grab 2: Grab 3: Grab 4: Grab 5: Grab 6:

0 to 0.3 m

0.3 to 0.5 m

0.5 to 0.8 m

Photograph Notes (grab, sampling location, field sampling methods, etc.):

QC'd by: Andrew Rous Date: 05Oct21

APPENDIX C

Photo Log
(supplied separately)

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APPENDIX D

Analytical Summary Statistics

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APPENDIX D
Tabulated Summary Statistics - Surficial Samples

Individual Management Units	Area (m^2)	Total PAH (mg/kg)								Total PCB (mg/kg)							
		Average	25th Percentile	75th Percentile	90th Percentile	95th Percentile	Min	Max	SD	Average	25th Percentile	75th Percentile	90th Percentile	95th Percentile	Min	Max	SD
PC-E	95,270	8.6	5.3	8.6	17.9	22.1	4.0	24.4	6.3	0.26	0.19	0.37	0.43	0.43	0.05	0.44	0.12
PC-OM	8,413	30.1	26.4	31.0	38.3	40.7	23.1	43.2	7.8	0.58	0.38	0.74	0.87	0.91	0.29	0.95	0.27
PC-W	2,990	16.2	11.1	21.1	22.6	24.8	5.3	29.6	7.0	0.62	0.36	0.84	1.12	1.28	0.14	1.46	0.38
PPOM	13226	10.7	8.5	13.0	14.0	14.4	5.8	14.9	3.4	0.37	0.21	0.51	0.55	0.56	0.12	0.57	0.19
TC-1	260,987	3.6	3.1	4.0	4.5	4.9	2.4	5.4	0.8	0.34	0.28	0.36	0.48	0.52	0.24	0.57	0.10
TC-2A	50,720	8.3	5.4	9.3	14.5	16.9	4.3	19.3	4.5	0.26	0.16	0.35	0.39	0.43	0.01	0.48	0.13
TC-2B	82,290	4.2	3.7	4.8	4.9	5.0	2.8	5.0	1.2	0.42	0.35	0.50	0.53	0.54	0.25	0.55	0.15
TC-3A	41,283	6.5	5.4	7.0	8.6	9.1	4.7	9.6	2.2	0.45	0.41	0.49	0.49	0.49	0.39	0.49	0.05
TC-3B	30,826	3.8	-	-	-	-	3.8	3.8	0.0	0.20	-	-	-	-	0.20	0.20	0.00
TC-4	42,439	21.6	8.1	18.2	25.0	50.2	6.5	169.9	37.6	0.60	0.16	0.54	1.42	2.55	0.04	2.58	0.76
TC-5	91,852	11.6	9.6	10.7	15.5	17.8	8.5	20.2	4.3	0.15	0.13	0.13	0.20	0.22	0.13	0.24	0.04
TC-AB	43,687	11.2	7.1	13.0	16.1	18.1	5.9	24.8	4.9	0.19	0.14	0.22	0.29	0.34	0.06	0.42	0.09
TC-OM	25,527	40.0	4.1	43.8	102.4	121.9	2.9	141.4	67.7	0.27	0.24	0.33	0.33	0.33	0.19	0.33	0.06
TC-RC	35,679	15.5	2.9	4.4	17.1	69.8	2.1	122.5	37.6	0.27	0.21	0.32	0.37	0.43	0.16	0.49	0.10
WM	18,886	10.9	4.8	14.4	24.9	26.8	4.2	28.8	10.2	0.35	0.23	0.47	0.53	0.53	0.12	0.54	0.16

Individual Management Units	Area (m^2)	Copper (mg/kg)								Lead (mg/kg)							
		Average	25th Percentile	75th Percentile	90th Percentile	95th Percentile	Min	Max	SD	Average	25th Percentile	75th Percentile	90th Percentile	95th Percentile	Min	Max	SD
PC-E	95,270	36.5	31.9	39.2	44.8	49.1	23.8	53.6	7.6	89	72	103	112	124	52	142	23
PC-OM	8,413	83.0	74.0	94.0	96.6	97.6	68.9	98.6	12.7	198	222	371	375	377	207	378	81
PC-W	2,990	59.8	45.8	75.9	81.6	83.0	39.4	85.9	16.6	228	145	317	365	396	79	425	108
PPOM	13226	64.2	55.7	71.2	76.9	79.4	46.6	82.0	12.9	191	168	220	243	253	96	263	58
TC-1	260,987	40.6	37.3	42.8	44.1	46.9	33.7	50.9	4.6	98	92	112	113	121	65	132	18
TC-2A	50,720	65.1	59.5	65.2	77.0	93.4	22.8	117.0	20.4	121	108	131	168	179	20	192	43
TC-2B	82,290	49.9	43.3	55.4	60.1	61.6	38.9	63.2	12.3	88	77	102	106	108	60	109	25
TC-3A	41,283	71.6	58.1	77.7	92.9	97.9	54.9	103.0	21.8	283	179	356	442	471	127	500	163
TC-3B	30,826	26.0	-	-	-	-	26.0	26.0	0.0	38	-	-	-	-	38	38	0
TC-4	42,439	57.5	45.7	62.7	87.3	105.1	25.2	111.0	21.7	145	86	163	274	371	74	399	96
TC-5	91,852	44.2	41.6	44.8	47.8	49.2	40.7	50.6	3.6	64	52	70	90	97	44	104	22
TC-AB	43,687	197.2	63.4	202.0	574.0	674.8	0.3	838.0	240.2	104	76	113	169	190	0	229	52
TC-OM	25,527	48.0	35.5	53.4	69.2	74.4	30.8	79.7	21.9	105	105	106	64	106	21	185	44
TC-RC	35,679	43.1	36.2	48.1	57.5	57.8	33.5	58.2	9.1	108	84	107	121	172	78	222	42
WM	18,886	62.5	48.5	76.0	92.1	92.6	37.6	93.1	21.7	146	133	159	184	197	95	210	36

APPENDIX D
Tabulated Summary Statistics - Surficial Samples

Individual Management Units	Area (m^2)	Antimony (mg/kg)								Arsenic (mg/kg)							
		Average	25th Percentile	75th Percentile	90th Percentile	95th Percentile	Min	Max	SD	Average	25th Percentile	75th Percentile	90th Percentile	95th Percentile	Min	Max	SD
PC-E	95,270	0.96	0.69	1.00	1.65	1.96	0.54	2.14	0.47	5.3	5.0	5.8	6.2	6.6	3.0	6.9	1.0
PC-OM	8,413	4.20	3.40	3.60	5.73	6.44	3.25	7.15	1.65	4.2	3.9	4.3	4.8	5.0	3.4	5.1	0.6
PC-W	2,990	2.49	1.58	3.41	4.00	4.36	0.73	4.66	1.20	7.2	5.8	8.4	9.7	10.1	5.4	10.4	1.7
PPOM	13226	2.11	1.67	2.37	2.95	3.19	1.35	3.42	0.75	6.7	5.6	7.6	8.2	8.4	5.0	8.6	1.4
TC-1	260,987	0.83	0.74	0.95	1.00	1.03	0.50	1.08	0.17	6.7	6.1	7.6	7.8	8.2	4.3	8.7	1.3
TC-2A	50,720	1.14	1.05	1.29	1.41	1.43	0.29	1.44	0.29	11.1	10.4	12.4	15.4	16.2	1.4	17.0	4.1
TC-2B	82,290	0.72	0.65	0.81	0.84	0.85	0.54	0.86	0.16	6.4	6.0	7.0	7.2	7.3	5.4	7.4	1.0
TC-3A	41,283	1.54	1.11	1.82	2.15	2.26	1.00	2.37	0.62	14.2	10.6	16.4	19.5	20.5	9.7	21.5	5.3
TC-3B	30,826	0.40	-	-	-	-	0.40	0.40	0.00	3.7	-	-	-	-	3.7	3.7	0.0
TC-4	42,439	1.11	0.66	1.09	1.95	3.48	0.39	3.68	0.93	10.3	5.5	9.2	14.4	26.0	2.7	56.6	12.2
TC-5	91,852	0.61	0.50	0.55	0.80	0.87	0.47	0.94	0.17	6.3	4.9	5.3	8.7	10.0	4.7	11.3	2.5
TC-AB	43,687	1.00	0.60	1.44	1.53	1.62	0.05	1.78	0.49	7.4	7.0	8.5	9.9	10.3	0.1	10.6	2.5
TC-OM	25,527	1.19	0.63	1.55	1.99	2.13	0.50	2.28	0.81	7.8	7.2	9.0	9.4	9.5	4.7	9.6	2.1
TC-RC	35,679	1.57	0.82	2.47	3.02	3.30	0.63	3.57	1.10	23.5	10.1	28.2	60.1	63.9	7.7	67.6	22.3
WM	18,886	1.79	1.28	2.32	2.99	3.09	0.76	3.19	0.90	26.4	15.1	35.5	49.2	52.1	10.3	54.9	17.1

Individual Management Units	Area (m^2)	Mercury (mg/kg)								Silver (mg/kg)							
		Average	25th Percentile	75th Percentile	90th Percentile	95th Percentile	Min	Max	SD	Average	25th Percentile	75th Percentile	90th Percentile	95th Percentile	Min	Max	SD
PC-E	95,270	0.19	0.16	0.21	0.25	0.28	0.15	0.29	0.04	0.37	0.26	0.34	0.81	1.00	0.10	1.00	0.28
PC-OM	8,413	0.30	0.29	0.35	0.36	0.36	0.19	0.37	0.07	0.73	0.62	0.93	0.94	0.94	0.47	0.94	0.20
PC-W	2,990	0.36	0.25	0.43	0.58	0.62	0.16	0.68	0.16	0.62	0.39	0.75	0.91	1.16	0.25	1.56	0.34
PPOM	13226	0.30	0.28	0.34	0.38	0.39	0.20	0.39	0.07	0.46	0.39	0.52	0.55	0.57	0.32	0.58	0.10
TC-1	260,987	0.26	0.23	0.27	0.31	0.36	0.15	0.45	0.07	0.58	0.40	0.59	0.99	1.00	0.27	1.00	0.25
TC-2A	50,720	0.87	0.66	1.21	1.39	1.55	0.04	1.76	0.45	1.27	1.04	1.31	2.02	2.17	0.10	2.39	0.58
TC-2B	82,290	0.36	0.23	0.46	0.56	0.59	0.17	0.62	0.23	1.05	0.58	1.39	1.75	1.87	0.37	1.99	0.84
TC-3A	41,283	1.11	0.76	1.44	1.55	1.58	0.63	1.62	0.47	1.40	1.06	1.48	1.98	2.14	1.03	2.31	0.61
TC-3B	30,826	0.12	-	-	-	-	0.12	0.12	0.00	0.24	-	-	-	-	0.24	0.24	0.00
TC-4	42,439	0.63	0.25	0.55	1.23	2.50	0.17	3.09	0.79	0.82	0.35	0.94	2.08	2.40	0.05	2.60	0.75
TC-5	91,852	0.18	0.15	0.15	0.24	0.25	0.13	0.26	0.05	0.34	0.30	0.31	0.46	0.48	0.23	0.50	0.10
TC-AB	43,687	0.24	0.19	0.28	0.34	0.38	0.10	0.42	0.08	0.44	0.39	0.58	0.59	0.62	0.05	0.71	0.16
TC-OM	25,527	0.25	0.24	0.27	0.27	0.27	0.23	0.27	0.02	0.29	0.26	0.35	0.39	0.41	0.12	0.42	0.12
TC-RC	35,679	0.51	0.32	0.71	0.87	1.05	0.22	1.22	0.33	0.56	0.51	0.61	0.66	0.74	0.37	0.83	0.12
WM	18,886	0.97	0.69	1.33	1.41	1.44	0.58	1.48	0.39	0.99	0.77	1.04	1.36	1.59	0.48	1.81	0.43

Individual Management Units	Area (m^2)	Chromium (mg/kg)								TOC (mg/kg)							
		Average	25th Percentile	75th Percentile	90th Percentile	95th Percentile	Min	Max	SD	Average	25th Percentile	75th Percentile	90th Percentile	95th Percentile	Min	Max	SD
PC-E	95,270	997	815	1128	1375	1448	670	1500	252	7.0	6.7	7.7	8.0	8.5	2.9	9.4	1.5
PC-OM	8,413	3734	2990	4690	4774	4802	1820	4830	1294	6.3	6.1	6.7	7.2	7.4	5.2	7.6	0.9
PC-W	2,990	2936	1280	4145	5314	6026	895	7650	1993	8.8	7.6	10.4	11.8	12.3	4.2	13.6	2.5
PPOM	13226	2423	1770	3475	3955	3988	737	4020	1290	9.4	8.4	10.7	11.2	11.2	7.4	11.3	1.5
TC-1	260,987	720	633	827	956	986	371	1020	188	8.6	7.7	9.5	10.2	10.6	5.9	11.0	1.4
TC-2A	50,720	308	146	374	684	702	20	712	235	7.9	7.7	8.7	8.9	9.1	2.3	9.4	1.8
TC-2B	82,290	524	446	628	659	669	315	679	188	9.7	9.6	9.9	9.9	9.9	9.5	9.9	0.2
TC-3A	41,283	427	359	467	576	613	264	649	161	9.7	9.2	10.0	10.7	11.0	8.8	11.2	1.0
TC-3B	30,826	166	-	-	-	-	166	166	0	7.5	-	-	-	-	7.5	7.5	0.0
TC-4	42,439	368	202	405	765	877	25	1230	296	8.0	7.7	9.1	9.6	9.7	2.7	10.5	2.1
TC-5	91,852	166	133	157	215	223	123	231	42	9.6	9.3	9.8	10.0	10.1	9.2	10.2	0.4
TC-AB	43,687	193	165	246	303	333	1	339	86	7.9	7.3	8.6	9.3	9.5	5.5	10.1	1.1
TC-OM	25,527	474	313	636	704	726	197	749	247	6.5	4.8	8.0	9.0	9.3	4.0	9.6	2.5
TC-RC	35,679	545	449	653	752	801	259	850	178	6.0	5.4	6.9	7.3	7.4	3.2	7.4	1.4
WM	18,886	675	579	760	863	931	305	1000	222	7.6	7.0	8.4	8.6	8.6	6.2	8.6	0.9

Individual Management Units	Area (m^2)	Zinc (mg/kg)							
		Average	25th Percentile	75th Percentile	90th Percentile	95th Percentile	Min	Max	SD
PC-E	95,270	144	131	153	182	195	106	200	27
PC-OM	8,413	331	286	355	382	391	278	400	51
PC-W	2,990	269	189	351	383	399	147	428	92
PPOM	13226	271	228	307	326	336	193	345	58
TC-1	260,987	179	153	171	186	273	127	400	68
TC-2A	50,720	257	232	266	345	388	70	432	83
TC-2B	82,290	158	149	168	174	176	140	178	19
TC-3A	41,283	309	223	343	442	476	214	509	137
TC-3B	30,826	91	-	-	-	-	91	91	0
TC-4	42,439	200	144	200	312	448	83	489	104
TC-5	91,852	154	146	153	167	168	136	169	12
TC-AB	43,687	247	156	320	408	427	8	457	117
TC-OM	25,527	145	134	153	165	168	124	172	20
TC-RC	35,679	185	148	171	214	318	129	421	85
WM	18,886	244	187	300	360	360	140	361	87

Tabulated Summary Statistics - Sub-surficial Samples

Total PAH (mg/kg)										
Individual Management Units	Vertical Core Depth (m)			Refined Vertical Core Depth (m)						
	0.1-0.3	0.3-0.5	0.5-0.8	0.0-0.05	0.05-0.1	0.1-0.15	0.15-0.2	0.25-0.3	0.3-0.5	<0.5
PCOM - SC-001	-	-	-	35.9	24.2	11.3	10.8	24.4	61.4	84.1
PC-W - SC-001	15.6	2.3	-	7.45	6.82	6.30	5.72	10.8	33.5	20.3
PC-W - SC-005	27.7	20.3	-	-	-	-	-	-	-	-
PC-W - SC-007	31.0	20.7	-	-	-	-	-	-	-	-
PC-W - SC-011	25.1	42.8	-	-	-	-	-	-	-	-
PC-W - SC-013	26.2	-	-	-	-	-	-	-	-	-
PPOM - SC-002	14.1	30.7	13.6	-	-	-	-	-	-	-
PPOM - SC-004	12.5	0.68	0.43	-	-	-	-	-	-	-
TC-4-SC-010	22.7	-	-	9.58	9.74	12.7	13.0	-	-	-
TCAB-SC-001	19.3	-	-	-	-	-	-	-	-	-
TCAB-SC-012	7.21	-	-	-	-	-	-	-	-	-
TCAB-SC-015	9.87	-	-	-	-	-	-	-	-	-
TCOM- SC-001	5.27	0.68	-	-	-	-	-	-	-	-
TCOM- SC-006	6.83	10.5	-	5.26	5.60	6.98	12.0	9.63	10.1	3.69
TCOM- SC-007	6.49	-	-	-	-	-	-	-	-	-
TCOM- SC-009	1.15	-	-	-	-	-	-	-	-	-
TCRC - SC-004	1.54	-	-	-	-	-	-	-	-	-
TCRC - SC-010	3.39	0.98	-	-	-	-	-	-	-	-
WM - SC-003	13.2	25.5	-	-	-	-	-	-	-	-

Copper (mg/kg)										
Individual Management Units	Vertical Core Depth (m)			Refined Vertical Core Depth (m)						
	0.1-0.3	0.3-0.5	0.5-0.8	0.0-0.05	0.05-0.1	0.1-0.15	0.15-0.2	0.25-0.3	0.3-0.5	<0.5
PCOM - SC-001	-	-	-	70.8	66.4	77.5	70.8	78.2	76.6	89.2
PC-W - SC-001	36.5	7.4	-	34.0	38.0	39.0	39.0	45.0	42.0	28.0
PC-W - SC-005	54.5	25.2	-	-	-	-	-	-	-	-
PC-W - SC-007	68.2	36.3	-	-	-	-	-	-	-	-
PC-W - SC-011	81.2	81	-	-	-	-	-	-	-	-
PC-W - SC-013	76.2		-	-	-	-	-	-	-	-
PPOM - SC-002	82.2	65.0	53.7	-	-	-	-	-	-	-
PPOM - SC-004	61.1	45.0	5.73	-	-	-	-	-	-	-
TC-4-SC-010	47.4	-	-	45.3	44.5	52.5	46.3	-	-	-
TCAB-SC-001	528	-	-	-	-	-	-	-	-	-
TCAB-SC-012	143	-	-	-	-	-	-	-	-	-
TCAB-SC-015	197	-	-	-	-	-	-	-	-	-
TCOM- SC-001	47.2	9.00	-	-	-	-	-	-	-	-
TCOM- SC-006	58.5	51.5	-	41.0	40.1	52.0	57.9	50.1	48.5	34.7
TCOM- SC-007	31.3	-	-	-	-	-	-	-	-	-
TCOM- SC-009	36.8	-	-	-	-	-	-	-	-	-
TCRC - SC-004	32.3	-	-	-	-	-	-	-	-	-
TCRC - SC-010	37.4	26.8	-	-	-	-	-	-	-	-
WM - SC-003	68.9	81.1	-	-	-	-	-	-	-	-

Tabulated Summary Statistics - Sub-surficial Samples

Total PCB (mg/kg)										
Individual Management Units	Vertical Core Depth (m)			Refined Vertical Core Depth (m)						
	0.1-0.3	0.3-0.5	0.5-0.8	0.0-0.05	0.05-0.1	0.1-0.15	0.15-0.2	0.25-0.3	0.3-0.5	<0.5
PCOM - SC-001	-	-	-	0.198	0.227	0.172	0.127	0.169	0.811	5.18
PC-W - SC-001	1.650	0.257	-	0.374	0.339	0.315	0.532	1.040	4.050	2.291
PC-W - SC-005	1.910	1.380	-	-	-	-	-	-	-	-
PC-W - SC-007	4.570	0.203	-	-	-	-	-	-	-	-
PC-W - SC-011	1.108	2.210	-	-	-	-	-	-	-	-
PC-W - SC-013	0.706		-	-	-	-	-	-	-	-
PPOM - SC-002	0.877	1.480	0.512	-	-	-	-	-	-	-
PPOM - SC-004	0.349	0.400	0.023	-	-	-	-	-	-	-
TC-4-SC-010	1.354	-	-	0.24	0.295	0.328	0.430	-	-	-
TCAB-SC-001	0.424	-	-	-	-	-	-	-	-	-
TCAB-SC-012	0.135	-	-	-	-	-	-	-	-	-
TCAB-SC-015	0.140	-	-	-	-	-	-	-	-	-
TCOM- SC-001	0.475	0.021	-	-	-	-	-	-	-	-
TCOM- SC-006	0.832	1.152	-	0.376	0.499	0.577	0.758	0.86	0.789	0.260
TCOM- SC-007	0.007	-	-	-	-	-	-	-	-	-
TCOM- SC-009	0.095	-	-	-	-	-	-	-	-	-
TCRC - SC-004	0.147	-	-	-	-	-	-	-	-	-
TCRC - SC-010	0.056	0.005	-	-	-	-	-	-	-	-
WM - SC-003	1.632	1.272	-	-	-	-	-	-	-	-

Lead (mg/kg)										
Individual Management Units	Vertical Core Depth (m)			Refined Vertical Core Depth (m)						
	0.1-0.3	0.3-0.5	0.5-0.8	0.0-0.05	0.05-0.1	0.1-0.15	0.15-0.2	0.25-0.3	0.3-0.5	<0.5
PCOM - SC-001	-	-	-	211	205	200	287	310	423	763
PC-W - SC-001	130	31.2	-	89	83	63	76	150	338	215
PC-W - SC-005	215	217	-	-	-	-	-	-	-	-
PC-W - SC-007	483	438	-	-	-	-	-	-	-	-
PC-W - SC-011	545	624	-	-	-	-	-	-	-	-
PC-W - SC-013	606	-	-	-	-	-	-	-	-	-
PPOM - SC-002	262	549	750	-	-	-	-	-	-	-
PPOM - SC-004	387	433	6.65	-	-	-	-	-	-	-
TC-4-SC-010	130	-	-	65	79	119	166	-	-	-
TCAB-SC-001	169	-	-	-	-	-	-	-	-	-
TCAB-SC-012	118	-	-	-	-	-	-	-	-	-
TCAB-SC-015	125	-	-	-	-	-	-	-	-	-
TCOM- SC-001	190	12.8	-	-	-	-	-	-	-	-
TCOM- SC-006	234	261	-	105	123	179	224	249	246	106
TCOM- SC-007	37.7	-	-	-	-	-	-	-	-	-
TCOM- SC-009	72.7	-	-	-	-	-	-	-	-	-
TCRC - SC-004	69.9	-	-	-	-	-	-	-	-	-
TCRC - SC-010	99.9	16.4	-	-	-	-	-	-	-	-
WM - SC-003	321	457	-	-	-	-	-	-	-	-

Tabulated Summary Statistics - Sub-surficial Samples

Antimony (mg/kg)										
Individual Management Units	Vertical Core Depth (m)			Refined Vertical Core Depth (m)						
	0.1-0.3	0.3-0.5	0.5-0.8	0.0-0.05	0.05-0.1	0.1-0.15	0.15-0.2	0.25-0.3	0.3-0.5	<0.5
PCOM - SC-001	-	-	-	3.95	3.50	3.71	4.92	5.41	5.48	8.85
PC-W - SC-001	1.30	0.47	-	1.00	1.00	1.00	1.00	1.00	3.70	2.90
PC-W - SC-005	2.55	2.23	-	-	-	-	-	-	-	-
PC-W - SC-007	7.48	10.4	-	-	-	-	-	-	-	-
PC-W - SC-011	5.63	6.50	-	-	-	-	-	-	-	-
PC-W - SC-013	5.00	-	-	-	-	-	-	-	-	-
PPOM - SC-002	2.23	9.19	24.6	-	-	-	-	-	-	-
PPOM - SC-004	4.72	7.70	0.19	-	-	-	-	-	-	-
TC-4-SC-010	0.93	-	-	0.43	0.47	0.67	0.77	-	-	-
TCAB-SC-001	1.76	-	-	-	-	-	-	-	-	-
TCAB-SC-012	1.54	-	-	-	-	-	-	-	-	-
TCAB-SC-015	1.35	-	-	-	-	-	-	-	-	-
TCOM- SC-001	1.59	0.27	-	-	-	-	-	-	-	-
TCOM- SC-006	1.98	2.30	-	1.00	0.65	1.42	1.80	2.22	2.90	1.04
TCOM- SC-007	0.34	-	-	-	-	-	-	-	-	-
TCOM- SC-009	0.70	-	-	-	-	-	-	-	-	-
TCRC - SC-004	1.38	-	-	-	-	-	-	-	-	-
TCRC - SC-010	1.91	0.24	-	-	-	-	-	-	-	-
WM - SC-003	4.69	15.6	-	-	-	-	-	-	-	-

Mercury (mg/kg)										
Individual Management Units	Vertical Core Depth (m)			Refined Vertical Core Depth (m)						
	0.1-0.3	0.3-0.5	0.5-0.8	0.0-0.05	0.05-0.1	0.1-0.15	0.15-0.2	0.25-0.3	0.3-0.5	<0.5
PCOM - SC-001	-	-	-	0.248	0.173	0.127	0.118	0.199	0.316	0.803
PC-W - SC-001	0.248	0.085	-	0.201	0.178	0.178	0.204	0.374	0.631	0.371
PC-W - SC-005	0.369	0.365	-	-	-	-	-	-	-	-
PC-W - SC-007	0.683	0.852	-	-	-	-	-	-	-	-
PC-W - SC-011	0.554	0.756	-	-	-	-	-	-	-	-
PC-W - SC-013	0.719	-	-	-	-	-	-	-	-	-
PPOM - SC-002	0.310	0.781	0.921	-	-	-	-	-	-	-
PPOM - SC-004	0.700	0.915	0.037	-	-	-	-	-	-	-
TC-4-SC-010	0.433	-	-	0.194	0.235	0.295	0.472	-	-	-
TCAB-SC-001	0.300	-	-	-	-	-	-	-	-	-
TCAB-SC-012	0.274	-	-	-	-	-	-	-	-	-
TCAB-SC-015	0.294	-	-	-	-	-	-	-	-	-
TCOM- SC-001	0.459	0.059	-	-	-	-	-	-	-	-
TCOM- SC-006	0.593	0.845	-	0.312	0.348	0.497	0.617	0.820	1.63	0.480
TCOM- SC-007	0.0742	-	-	-	-	-	-	-	-	-
TCOM- SC-009	0.188	-	-	-	-	-	-	-	-	-
TCRC - SC-004	0.861	-	-	-	-	-	-	-	-	-
TCRC - SC-010	0.697	0.0530	-	-	-	-	-	-	-	-
WM - SC-003	2.30	12.1	-	-	-	-	-	-	-	-

Tabulated Summary Statistics - Sub-surficial Samples

Arsenic (mg/kg)										
Individual Management Units	Vertical Core Depth (m)			Refined Vertical Core Depth (m)						
	0.1-0.3	0.3-0.5	0.5-0.8	0.0-0.05	0.05-0.1	0.1-0.15	0.15-0.2	0.25-0.3	0.3-0.5	<0.5
PCOM - SC-001	-	-	-	3.28	2.82	2.48	2.23	3.10	3.91	6.71
PC-W - SC-001	7.39	5.75	-	5.10	6.10	5.70	6.20	7.80	10.60	7.40
PC-W - SC-005	8.44	10.9	-	-	-	-	-	-	-	-
PC-W - SC-007	17.2	20.3	-	-	-	-	-	-	-	-
PC-W - SC-011	10.1	12.0	-	-	-	-	-	-	-	-
PC-W - SC-013	14.6	-	-	-	-	-	-	-	-	-
PPOM - SC-002	6.84	20.8	38.6	-	-	-	-	-	-	-
PPOM - SC-004	18.3	19.9	1.26	-	-	-	-	-	-	-
TC-4-SC-010	9.13	-	-	4.70	5.12	6.98	10.80	-	-	-
TCAB-SC-001	9.88	-	-	-	-	-	-	-	-	-
TCAB-SC-012	7.10	-	-	-	-	-	-	-	-	-
TCAB-SC-015	9.13	-	-	-	-	-	-	-	-	-
TCOM- SC-001	13.3	5.08	-	-	-	-	-	-	-	-
TCOM- SC-006	18.0	20.7	-	8.00	11.00	15.80	19.60	23.00	42.90	16.10
TCOM- SC-007	4.30	-	-	-	-	-	-	-	-	-
TCOM- SC-009	8.43	-	-	-	-	-	-	-	-	-
TCRC - SC-004	23.9	-	-	-	-	-	-	-	-	-
TCRC - SC-010	41.2	7.19	-	-	-	-	-	-	-	-
WM - SC-003	61.7	349	-	-	-	-	-	-	-	-

Silver (mg/kg)										
Individual Management Units	Vertical Core Depth (m)			Refined Vertical Core Depth (m)						
	0.1-0.3	0.3-0.5	0.5-0.8	0.0-0.05	0.05-0.1	0.1-0.15	0.15-0.2	0.25-0.3	0.3-0.5	<0.5
PCOM - SC-001	-	-	-	0.54	0.38	0.40	0.30	0.52	0.76	3.01
PC-W - SC-001	0.47	0.10	-	1.0	1.0	1.0	1.0	1.0	1.0	1.0
PC-W - SC-005	0.60	0.35	-	-	-	-	-	-	-	-
PC-W - SC-007	1.09	0.50	-	-	-	-	-	-	-	-
PC-W - SC-011	1.34	1.00	-	-	-	-	-	-	-	-
PC-W - SC-013	1.44	-	-	-	-	-	-	-	-	-
PPOM - SC-002	0.70	1.02	0.66	-	-	-	-	-	-	-
PPOM - SC-004	0.85	2.00	0.05	-	-	-	-	-	-	-
TC-4-SC-010	0.70	-	-	0.37	0.42	0.71	0.74	-	-	-
TCAB-SC-001	0.60	-	-	-	-	-	-	-	-	-
TCAB-SC-012	0.61	-	-	-	-	-	-	-	-	-
TCAB-SC-015	0.64	-	-	-	-	-	-	-	-	-
TCOM- SC-001	0.60	0.10	-	-	-	-	-	-	-	-
TCOM- SC-006	0.86	0.83	-	1.00	0.47	0.72	0.72	0.82	0.84	0.34
TCOM- SC-007	0.05	-	-	-	-	-	-	-	-	-
TCOM- SC-009	0.27	-	-	-	-	-	-	-	-	-
TCRC - SC-004	0.54	-	-	-	-	-	-	-	-	-
TCRC - SC-010	0.69	0.05	-	-	-	-	-	-	-	-
WM - SC-003	1.98	3.95	-	-	-	-	-	-	-	-

Tabulated Summary Statistics - Sub-surficial Samples

Chromium (mg/kg)										
Individual Management Units	Vertical Core Depth (m)			Refined Vertical Core Depth (m)						
	0.1-0.3	0.3-0.5	0.5-0.8	0.0-0.05	0.05-0.1	0.1-0.15	0.15-0.2	0.25-0.3	0.3-0.5	<0.5
PCOM - SC-001	-	-	-	2230	2310	1470	1600	3490	4620	15500
PC-W - SC-001	2070	501	-	1020	872	697	1130	3140	5470	2950
PC-W - SC-005	4090	2410	-	-	-	-	-	-	-	-
PC-W - SC-007	9810	8540	-	-	-	-	-	-	-	-
PC-W - SC-011	9790	10400	-	-	-	-	-	-	-	-
PC-W - SC-013	5950	-	-	-	-	-	-	-	-	-
PPOM - SC-002	2950	6120	16400	-	-	-	-	-	-	-
PPOM - SC-004	5150	7400	82	-	-	-	-	-	-	-
TC-4-SC-010	445	-	-	188	220	296	386	-	-	-
TCAB-SC-001	255	-	-	-	-	-	-	-	-	-
TCAB-SC-012	227	-	-	-	-	-	-	-	-	-
TCAB-SC-015	289	-	-	-	-	-	-	-	-	-
TCOM- SC-001	1810	136	-	-	-	-	-	-	-	-
TCOM- SC-006	2350	2980	-	709	866	1540	2510	2650	2290	809
TCOM- SC-007	73	-	-	-	-	-	-	-	-	-
TCOM- SC-009	499	-	-	-	-	-	-	-	-	-
TCRC - SC-004	391	-	-	-	-	-	-	-	-	-
TCRC - SC-010	127	45.0	-	-	-	-	-	-	-	-
WM - SC-003	1830	1140	-	-	-	-	-	-	-	-

Zinc (mg/kg)										
Individual Management Units	Vertical Core Depth (m)			Refined Vertical Core Depth (m)						
	0.1-0.3	0.3-0.5	0.5-0.8	0.0-0.05	0.05-0.1	0.1-0.15	0.15-0.2	0.25-0.3	0.3-0.5	<0.5
PCOM - SC-001	-	-	-	280	238	187	166	220	299	401
PC-W - SC-001	150	28	-	134	152	141	132	196	253	201
PC-W - SC-005	181	111	-	-	-	-	-	-	-	-
PC-W - SC-007	318	214	-	-	-	-	-	-	-	-
PC-W - SC-011	386	391	-	-	-	-	-	-	-	-
PC-W - SC-013	392	-	-	-	-	-	-	-	-	-
PPOM - SC-002	333	317	299	-	-	-	-	-	-	-
PPOM - SC-004	269	218	16	-	-	-	-	-	-	-
TC-4-SC-010	184	-	-	137	149	164	185	-	-	-
TCAB-SC-001	421	-	-	-	-	-	-	-	-	-
TCAB-SC-012	346	-	-	-	-	-	-	-	-	-
TCAB-SC-015	334	-	-	-	-	-	-	-	-	-
TCOM- SC-001	201	17	-	-	-	-	-	-	-	-
TCOM- SC-006	246	236	-	160	164	220	257	235	223	135
TCOM- SC-007	90	-	-	-	-	-	-	-	-	-
TCOM- SC-009	138	-	-	-	-	-	-	-	-	-
TCRC - SC-004	130	-	-	-	-	-	-	-	-	-
TCRC - SC-010	220	78	-	-	-	-	-	-	-	-
WM - SC-003	287	413	-	-	-	-	-	-	-	-

Tabulated Summary Statistics - Sub-surficial Samples

TOC (mg/kg)										
Individual Managament Units	Vertical Core Depth (m)			Refined Vertical Core Depth (m)						
	0.1-0.3	0.3-0.5	0.5-0.8	0.0-0.05	0.05-0.1	0.1-0.15	0.15-0.2	0.25-0.3	0.3-0.5	>0.5
PCOM - SC-001	-	-	-	-	-	-	-	-	-	-
PC-W - SC-001	6.88	36.5	-	-	-	-	-	-	-	-
PC-W - SC-005	6.29	28.9	-	-	-	-	-	-	-	-
PC-W - SC-007	12.6	30.4	-	-	-	-	-	-	-	-
PC-W - SC-011	8.49	10.1	-	-	-	-	-	-	-	-
PC-W - SC-013	12.7	-	-	-	-	-	-	-	-	-
PPOM - SC-002	7.33	8.59	15.3	-	-	-	-	-	-	-
PPOM - SC-004	10.8	22.7	37.2	-	-	-	-	-	-	-
TC-4-SC-010	7.63	-	-	-	-	-	-	-	-	-
TCAB-SC-001	6.92	-	-	-	-	-	-	-	-	-
TCAB-SC-012	7.69	-	-	-	-	-	-	-	-	-
TCAB-SC-015	7.42	-	-	-	-	-	-	-	-	-
TCOM- SC-001	7.51	39.2	-	-	-	-	-	-	-	-
TCOM- SC-006	7.48	7.25	-	-	-	-	-	-	-	-
TCOM- SC-007	1.48	-	-	-	-	-	-	-	-	-
TCOM- SC-009	2.82	-	-	-	-	-	-	-	-	-
TCRC - SC-004	2.09	-	-	-	-	-	-	-	-	-
TCRC - SC-010	1.70	0.72	-	-	-	-	-	-	-	-
WM - SC-003	7.48	9.70	-	-	-	-	-	-	-	-

APPENDIX E

Detailed Screening Results

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Parameter	CCME Sediment ISQG Freshwater	CCME Sediment PEL Freshwater	MOE 93 - Sediment - LEL	MOE 93 - Sediment - SEL	Unit	MCS	MCS Name	CAS_RN	Location	DUP-001	DUP-002	DUP-003	DUP-004	DUP-005	DUP-006	DUP-007	DUP-008	DUP-201	DUP-202	DUP-203	DUP-204	DUP-205	DUP-206	DUP-207	DUP-208	DUP-209
									Sample Name	DUP-001	DUP-002	DUP-003	DUP-004	DUP-005	DUP-006	DUP-007	DUP-008	DUP-201	DUP-202	DUP-203	DUP-204	DUP-205	DUP-206	DUP-207	DUP-208	DUP-209
									Sample Date	2021-09-28	2021-09-29	2021-09-30	2021-10-03	2021-10-03	2021-10-03	2021-10-04	2021-10-04	2021-09-28	2021-09-29	2021-09-30	2021-10-05	2021-10-03	2021-10-05	2021-10-05	2021-10-05	2021-10-06
									FIELD_SDG	L2646459	L2646722	L2646743	L2648161	L2648161	L2648161	L2647880	L2647880	L2646459	L2646722	L2646743	L2650176	L2648161	L2650176	L2650176	L2650176	L2650174
									PARENT_SAMPLE_CODE	L2646459-13	L2646722-6	L2646743-19	L2648161-15	L2648161-13	L2648161-11	L2647880-7	L2647880-16	L2646459-8	L2646722-8	L2646743-4	L2650176-8	L2648161-1	L2650176-5	L2650176-2	L2650176-17	L2650174-4
									SAMPLE_TYPE_CODE	FD	FD	FD	FD	FD	FD	FD	FD	FD	FD	FD	FD	FD	FD	FD	FD	FD
									SYS_SAMPLE_CODE	L2646459-14	L2646722-7	L2646743-22	L2648161-21	L2648161-20	L2648161-12	L2647880-19	L2647880-20	L2646459-9	L2646722-9	L2646743-13	L2650176-13	L2648161-4	L2650176-14	L2650176-15	L2650176-16	L2650174-8
Field and Physical																										
Moisture, Percent					%			MOIST		86.1	84.2	73.6	82.5	66.1	75.4	72.2	81.7	86.2	83.7	86.0	74.7	64.6	76.8	70.6	70.3	86.3
Sieve - #200 (>0.075mm)					%			SIEVE>0.075MM		-	-	-	4.2	-	-	-	-	-	-	-	-	8.7	1.2	18.6	-	< 1.0
Index of Additive Cancer Risk (IACR)					none			PAH_IACR		11.6	12.7	48.2	13.6	33.7	12.4	28.1	23.7	11.2	20.7	12.3	54.0	15.4	28.4	63.7	54.3	17.0
Hydrocarbons																										
Acenaphthene	**0.00671**	**0.0889**			mg/kg	0.00671	CCME Sediment ISQG Freshwater	83-32-9		**< 0.038**	**0.054**	**0.49**	**0.05**	**0.09**	**0.04**	**0.11**	**0.20**	**0.06**	**0.059**	**0.065**	**0.655**	**0.072**	**0.167**	**1.14**	**0.508**	**0.121**
Acenaphthylene	**0.00587**	**0.128**			mg/kg	0.00587	CCME Sediment ISQG Freshwater	208-96-8		**0.08**	**0.179**	**0.97**	**0.40**	**0.89**	**0.33**	**0.80**	**0.68**	**0.18**	**0.417**	**0.306**	**1.75**	**0.523**	**0.654**	**1.85**	**1.48**	**0.358**
Acridine					mg/kg			260-94-6		< 0.075	< 0.060	1.70	< 0.050	< 0.060	< 0.050	0.05	< 0.27	< 0.075	< 0.050	< 0.075	0.275	< 0.090	0.628	0.364	0.242	< 0.075
Anthracene	**0.0469**	**0.245**	**0.220**	370.0	mg/kg	0.0469	CCME Sediment ISQG Freshwater	120-12-7		**0.09**	**0.16**	**0.83**	**0.21**	**0.48**	**0.13**	**0.41**	**0.33**	**0.14**	**0.203**	**0.256**	**0.933**	**0.216**	**0.418**	**1.73**	**0.984**	**0.837**
Benz(a)anthracene	**0.0317**	**0.385**	**0.320**	1480	mg/kg	0.0317	CCME Sediment ISQG Freshwater	56-55-3		**0.48**	**0.63**	**2.60**	**0.71**	**2.17**	**0.66**	**1.59**	**1.05**	**0.54**	**1.04**	**0.582**	**2.55**	**0.933**	**1.42**	**3.58**	**2.62**	**0.981**
Benzo(a)pyrene Total Potency Equivalence (TPE)					mg/kg			PAH_TPE		0.93	1.12	4.50	1.38	3.46	1.25	2.90	2.18	0.99	2.04	1.21	5.38	1.61	2.57	6.23	5.11	1.66
Benzo(g,h,i)perylene			**0.170**	320.0	mg/kg	0.170	MOE 93 - Sediment - LEL	191-24-2		**0.49**	**0.54**	**2.03**	0.62	1.35	0.58	**1.09**	**0.97**	**0.53**	**0.918**	**0.608**	**2.13**	0.665	**1.02**	**2.23**	**2.03**	**0.628**
Benzo(a)pyrene	**0.0319**	**0.782**	**0.370**	1440	mg/kg	0.0319	CCME Sediment ISQG Freshwater	50-32-8		**0.59**	**0.75**	**3.05**	**0.98**	**2.44**	**0.87**	**2.09**	**1.52**	**0.65**	**1.43**	**0.835**	**3.86**	**1.15**	**1.76**	**4.45**	**3.60**	**1.20**
Benzo(b,j) fluoranthene					mg/kg			Benz_Fluo_bj		0.90	0.87	3.12	0.87	2.08	0.85	1.88	1.79	0.81	1.37	0.804	3.69	0.974	1.97	4.24	3.78	1.02
Fluoranthene	**0.111**	**2.355**	**0.750**	1020	mg/kg	0.111	CCME Sediment ISQG Freshwater	206-44-0		**1.03**	**1.06**	**3.62**	**0.68**	**1.87**	**0.65**	**1.30**	**1.52**	**0.89**	**1.10**	**0.741**	**3.42**	**0.935**	**2.12**	**6.04**	**4.71**	**1.23**
Indeno(1,2,3-c,d)pyrene			**0.200**	320.0	mg/kg	0.200	MOE 93 - Sediment - LEL	193-39-5		**0.46**	**0.42**	**1.86**	0.46	1.26	0.47	**0.88**	**0.71**	**0.46**	**0.716**	**0.506**	**2.02**	0.559	**1.03**	**2.26**	**1.95**	**0.458**
Naphthalene	**0.0346**	**0.391**			mg/kg	0.0346	CCME Sediment ISQG Freshwater	91-20-3		**< 0.038**	0.03	**0.29**	0.03	0.03	0.02	0.03	**0.07**	**< 0.038**	< 0.025	**0.040**	**0.213**	0.022	**0.115**	**0.223**	**0.102**	**0.042**
Pyrene	**0.053**	**0.875**	**0.490**	850.0	mg/kg	0.053	CCME Sediment ISQG Freshwater	129-00-0		**0.92**	**1.07**	**4.91**	**1.02**	**2.42**	**0.96**	**1.82**	**2.11**	**0.90**	**1.40**	**0.943**	**5.44**	**1.52**	**2.94**	**8.91**	**6.19**	**1.72**
2-methylnaphthalene	**0.0202**	**0.201**			mg/kg	0.0202	CCME Sediment ISQG Freshwater	91-57-6		**< 0.038**	**< 0.025**	**< 0.22**	**0.03**	**0.03**	0.02	**0.03**	**0.07**	**< 0.038**	**< 0.025**	**< 0.038**	**0.176**	**0.030**	**0.106**	**0.231**	**0.098**	**< 0.038**
Dibenz(a,h)anthracene	**0.00622**	**0.135**	**0.0600**	130.0	mg/kg	0.00622	CCME Sediment ISQG Freshwater	53-70-3		**0.12**	**0.13**	**0.52**	**0.15**	**0.37**	**0.14**	**0.30**	**0.23**	**0.12**	**0.225**	**0.140**	**0.518**	**0.169**	**0.272**	**0.564**	**0.492**	**< 0.32**
Index of Additive Cancer Risk (IACR)					none			PAH_IACR		11.60	12.70	48.20	13.60	33.70	12.40	28.10	23.70	11.20	20.7	12.3	54.0	15.4	28.4	63.7	54.3	17.0
Quinoline					mg/kg			91-22-5		< 0.038	< 0.025	0.04	< 0.025	< 0.010	< 0.015	< 0.015	< 0.025	< 0.038	< 0.025	< 0.038	< 0.030	< 0.010	< 0.015	< 0.060	< 0.030	< 0.038
Fluorene	**0.0212**	**0.144**	**0.190**	160.0	mg/kg	0.0212	CCME Sediment ISQG Freshwater	86-73-7		**0.05**	**0.07**	**0.62**	**0.07**	**0.14**	**0.06**	**0.15**	**0.20**	**0.07**	**0.083**	**0.088**	**0.568**	**0.084**	**0.186**	**0.865**	**0.457**	**0.110**
Total Organic Carbon			**1.00**	**10.0**	%	1.00	MOE 93 - Sediment - LEL	TOC		**8.74**	**8.23**	**9.90**	7.61	2.81	8.12	**5.25**	**7.21**	**8.69**	**8.64**	**10.1**	**8.41**	5.98	**7.60**	**6.24**	**7.90**	**10.5**
1-Methylnaphthalene					mg/kg			90-12-0		< 0.038	< 0.025	< 0.24	< 0.025	0.02	< 0.015	0.02	0.06	< 0.038	< 0.025	< 0.038	0.147	0.022	0.070	0.393	0.137	< 0.038
Chrysene	**0.0571**	**0.862**	**0.340**	460.0	mg/kg	0.0571	CCME Sediment ISQG Freshwater	218-01-9		**0.72**	**0.74**	**3.11**	**0.78**	**1.89**	**0.69**	**1.74**	**1.35**	**0.61**	**1.11**	**0.680**	**2.93**	**0.880**	**1.69**	**3.88**	**3.21**	**1.39**
Phenanthrene	**0.0419**	**0.515**	**0.560**	950.0	mg/kg	0.0419	CCME Sediment ISQG Freshwater	85-01-8		**0.40**	**0.51**	**2.35**	**0.25**	**0.66**	**0.22**	**0.52**	**0.71**	**0.47**	**0.354**	**0.290**	**2.35**	**0.330**	**1.03**	**4.54**	**2.44**	**0.496**
Benzo(k)fluoranthene			**0.240**	1340	mg/kg	0.240	MOE 93 - Sediment - LEL	207-08-9		**0.30**	**0.34**	**1.25**	0.35	0.70	0.24	**0.52**	**0.52**	**0.28**	**0.522**	**0.324**	**1.29**	0.300	**0.724**	**1.43**	**1.32**	**0.458**
Metals																										
Aluminum					mg/kg			7429-90-5		14200	14300	23300	15500	15900	15300	15300	12100	18800	18400	21900	9130	17900	20400	7350	8700	23300
Antimony					mg/kg			7440-36-0		1.37	0.81	3.90	0.69	0.66	1.17	0.71	1.98	1.22	0.68	0.68	0.79	1.31	4.62	6.21	0.68	0.42
Arsenic	**5.9**	**17**	**6.00**	**33.0**	mg/kg	5.9	CCME Sediment ISQG Freshwater	7440-38-2		**12.0**	**8.09**	**29.4**	5.03	5.09	**6.07**	5.11	5.64	**15.1**	**7.41**	5.86	5.03	**6.97**	**64.2**	3.96	3.11	4.95
Barium					mg/kg			7440-39-3		206	257	509	241	212	254	223	235	285	274	262	302	264	314	189	228	272
Beryllium					mg/kg			7440-41-7		0.58	0.58	0.92	0.58	0.56	0.63	0.61	0.45	0.70	0.64	0.71	0.39	0.63	0.71	0.30	0.37	0.79
Bismuth					mg/kg			7440-69-9		0.74	0.99	7.66	0.23	< 0.20	< 0.40	< 0.20	0.65	0.74	0.68	0.46	0.65	0.32	1.67	0.61	0.65	0.23
Boron|H.W.E Boron					mg/kg			7440-42-8		14	11.7	12.6	1.00|8.8	8.0	11	9.4	10.4	11.6	8.6	11	8.2	0.71|7.1	0.31|10	0.39|11	9.6	
Cadmium	**0.6**	3.5	**0.600**	10.0	mg/kg	0.6	CCME Sediment ISQG Freshwater	7440-43-9		**0.786**	**0.777**	**2.68**	0.490	0.381	**0.668**	0.447	**1.03**	**0.903**	**0.804**	**0.800**	**1.94**	0.538	**1.46**	**1.03**	**1.66**	**0.674**
Calcium					mg/kg			7440-70-2		99700	129000	32400	69900	37100	111000	40400	146000	80300	72300	36100	104000	37500	50800	122000	116000	16500
Chromium			**26.0**	**110.0**	mg/kg	26.0	MOE 93 - Sediment - LEL	7440-47-3		**321**	**268**	**1230**	885	739	1190	**1000**	**2460**	**683**	**463**	**298**	**8940**	2080	**1840**	**3640**	**4100**	**115**
Chromium Trivalent (Cr(III))					mg/kg			16065-83-1		-	-	-	878	-	-	-	-	-	-	-	-	-	1830	3620	-	-
Chromium Hexavalent (Cr(VI))					mg/kg			18540-29-9		-	-	-	7.3	-	-	-	-	-	-	-	-	15.7	12.1	18.1	-	-
Cobalt					mg/kg			7440-48-4		12.8	10.6	20.8	10.4	13.3	11.2	12.4	10.2	16.3	12.1	12.9	7.24	12.8	40.2	6.60	6.88	13.0
Copper	**35.7**	**197**	**16.0**	**110.0**	mg/kg	16.0	MOE 93 - Sediment - LEL	7440-50-8		**64.6**	**54.2**	**128**	32.4	35.1	**42.5**	**35.7**	**64.8**	**54.8**	**47.8**	**58.9**	**69.2**	35.5	**70.7**	**69.4**	**74.6**	**42.0**
Iron			**20000**	**40000**	mg/kg	20000	MOE 93 - Sediment - LEL	7439-89-6		**23200**	**22800**	**32900**	23500	25900	25000	**25400**	**22000**	**28300**	**25700**	**29300**	16700	26800	**29600**	18300	17600	**30800**
Lead	**35**	**91.3**	**31.0**	**250.0**	mg/kg	31.0	MOE 93 - Sediment - LEL	7439-92-1		**115**	**116**	**1200**	**71.4**	**97.8**	**111**	**85.7**	**213**	**143**	**93.1**	**86.7**	**504**	**128**	**321**	**352**	**320**	**50.2**
Lithium					mg/kg			7439-93-2		14.7	13.3	20.3	10.9	11.2	12.4	14.7	10.8	16.4	13.0	15.6	8.2	13.0	14.6	7.0	8.5	19.9
Magnesium					mg/kg			7439-95-4		14500	11100	15600	13400	16300	13100	15300	14600	14700	11600	11700	10800	14400	15500	16200	13900	11300
Manganese			**460.0**	**1100.0**	mg/kg	460.0	MOE 93 - Sediment - LEL	7439-96-5		**715**	**819**	**613**	670	428	761	**510**	**585**	**953**	**873**	**910**	393	547	**641**	286	325	**1450**
Mercury	**0.17**	**0.486**	**0.200**	**2.00**	mg/kg	0.17	CCME Sediment ISQG Freshwater	7439-97-6		**0.619**	**0.563**	**2.31**	0.154	0.169	**0.249**	0.159	**0.257**	**0.754**	**0.402**	**0.312**	0.0845	**0.224**	**2.52**	**0.260**	0.160	0.136
Molybdenum					mg/kg			7439-98-7		1.68	1.03	1.17	0.84	0.73	0.93	0.78	1.44	1.24	0.96	0.94	0.51	1.01	1.11	1.71	0.52	0.89
Nickel			**16.0**	**75.0**	mg/kg	16.0	MOE 93 - Sediment - LEL	7440-02-0		**24.8**	**22.1**	**42.5**	21.6	23.2	22.5	**22.9**	**20.7**	**29.1**	**26.1**	**29.5**	**17.2**	25.2	**46.1**	**16.1**	**16.5**	**31.3**
Phosphorus			**600.0**	**2000.0**	mg/kg	600.0	MOE 93 - Sediment - LEL	7723-14-0		**1100**	**1270**	**1690**	1090	1340	1160	**1280**	**1420**	**1280**	**1130**	**1020**	**1660**	1130	**1340**	**1450**	**1510**	**1060**
Potassium					mg/kg			7440-09-7		3190	3220	5100	3550	3820	3350	3920	2790	4350	3640	4390	1720	4230	4910	1740	1660	4160
Selenium					mg/kg			7782-49-2		1.66	1.32	1.59	0.74	0.48	0.98	0.53	0.87	1.37	1.24	1.43	< 0.20	0.53	1.25	0.62	< 0.20	1.34
Silver					mg/kg			7440-22-4		1.31	0.79	2.60	0.26	0.16	0.34	0.24	0.51	1.06	0.65	0.52	0.79	0.38	1.69	0.61	0.73	0.27
Sodium					mg/kg			7440-23-5		650	550	663	527	517	600	559	574	672	545	590	469	572	650	450	439	555
Strontium					mg/kg			7440-24-6		401	611	147	434	150	670	171	794	455	370	194	562	177	297	424	567	99.5
Sulphur (S8)					mg/kg			7704-34-9		9700	8600	6300	5200	3600	6800	3800	6100	8700	9300	7700	< 1000	3400	6300	3800	< 1000	6900
Thallium					mg/kg			7440-28-0		0.28	0.286	0.540	0.234	0.263	0.24	0.248	0.242	0.326	0.274	0.36	0.235	0.282	0.38	0.24	0.263	0.281
Tin					mg/kg			7440-31-5		6.2	7.2	32.4	3.6	6.4	4.3	5.9	7.6	7.8	5.9	4.7	7.9	5.4	19.3	8.6	5.4	2.7
Titanium					mg/kg			7440-32-6		796	866	1520	1030	1030	913	1000	586	1110	973	1280	376	1270	1360	396	350	1170
Tungsten					mg/kg			7440-33-7		2.0	0.66	0.81	< 0.50	< 0.50	< 1.0	< 0.50	2.98	0.53	< 0.50	< 1.0	< 0.50	< 0.50	< 0.50	2.9	< 0.50	< 0.50
Uranium					mg/kg			7440-61-1		0.99	0.863	0.985	0.703	0.555	0.62	0.557	0.521	0.977	0.872	0.96	0.450	0.759	0.87	0.46	0.375	0.911
Vanadium					mg/kg			7440-62-2		42.3	36.7	56.5	41.6	39.1	41.9	41.6	35.6	50.1	40.6	47.9	25.0	47.5	53.7	25.0	22.5	45.7
Zinc	**123**	**315**	**120.0**	820.0	mg/kg	120.0	MOE 93 - Sediment - LEL	7440-66-6		**250**	**196**	**559**	**125**	**145**	**166**	**150**	**294**	**210**	**172**	**173**	**349**	**140**	**314**	**291**	**351**	**147**
Zirconium					mg/kg			7440-67-7		2.6	2.4	3.7	4.3	4.6	3.2	4.8	1.8	4.5	3.1	4.3	< 1.0	5.7	4.9	< 2.0	< 1.0	5.6
pH					pH units			pH		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PCBs																										
Total Polychlorinated Biphenyls (PCBs)	**0.0341**	**0.277**			mg/kg	0.0341	CCME Sediment ISQG Freshwater	1336-36-3		**0.150**	**0.477**	**4.59**	**0.396**	**0.189**	**0.304**	**0.166**	**0.423**	**0.355**	**0.465**	**0.263**	**1.20**	**1.11**	**1.365**	**0.472**	**0.653**	**0.53**
Aroclor 1016			**0.00700**	53.0	mg/kg	0.00700	MOE 93 - Sediment - LEL	12674-11-2		**< 0.023**	**< 0.023**	**< 0.014**	< 0.015	< 0.0090	< 0.014	**< 0.070**	**< 0.12**	**< 0.023**	**< 0.023**	**< 0.12**	**< 0.0090**	< 0.0090	**< 0.0090**	**< 0.0090**	**< 0.0090**	**< 0.036**
Aroclor 1221					mg/kg			11104-28-2		< 0.023	< 0.023	< 0.014	< 0.015	< 0.0090	< 0.014	< 0.070	< 0.12	< 0.023	< 0.023	< 0.12	< 0.0090	< 0.0090	< 0.0090	< 0.0090	< 0.0090	< 0.036
Aroclor 1232					mg/kg			11141-16-5		< 0.023	< 0.023	< 0.014	< 0.015	< 0.0090	< 0.014	< 0.070	< 0.12	< 0.023	< 0.023	< 0.12	< 0.0090	< 0.0090	< 0.0090	< 0.0090	< 0.0090	< 0.036
Aroclor 1242					mg/kg			53469-21-9		< 0.023	< 0.023	< 0.22	< 0.015	< 0.0090	< 0.020	< 0.070	< 0.12	< 0.023	< 0.023	< 0.12	< 0.035	0.0165	< 0.026	< 0.042	< 0.045	< 0.036
Aroclor 1248			**0.0300**	150.0	mg/kg	0.0300	MOE 93 - Sediment - LEL	12672-29-6		< 0.023	< 0.023	< 0.014	< 0.015	< 0.0090	< 0.014	**< 0.070**	**< 0.12**	< 0.023	< 0.023	**< 0.12**	< 0.0090	< 0.0090	< 0.0090	< 0.0090	< 0.0090	**< 0.036**
Aroclor 1254	**0.06**	**0.34**	**0.0600**	34.0	mg/kg	0.06	CCME Sediment ISQG Freshwater	11097-69-1		**0.083**	**0.298**	**3.18**	**0.157**	**0.0869**	**0.122**	**0.076**	**0.143**	**0.166**	**0.243**	**0.133**	**0.427**	**0.386**	**0.917**	**0.186**	**0.250**	**0.194**
Aroclor 1260			**0.00500**	24.0	mg/kg	0.00500	MOE 93 - Sediment - LEL	11096-82-5		**0.067**	**0.179**	**1.41**	0.239	0.102	0.182	**0.090**	**0.280**	**0.190**	**0.222**	**0.130**	**0.773**	0.707	**0.448**	**0.286**	**0.403**	**0.308**
Aroclor 1262					mg/kg			37324-23-5		< 0.023	< 0.023	< 0.014	< 0.014	< 0.0090	< 0.014	< 0.014	< 0.023	< 0.023	< 0.023	< 0.023	< 0.0090	< 0.0090	< 0.0090	< 0.0090	< 0.0090	< 0.036
Aroclor 1268					mg/kg			11100-14-4		< 0.023	< 0.023	< 0.014	< 0.014	< 0.0090	< 0.014	< 0.014	< 0.023	< 0.023	< 0.023	< 0.023	< 0.0090	< 0.0090	< 0.0090	< 0.0090	< 0.0090	< 0.036
Physical																										
Texture					none			Texture		-	-	-	Fine	-	-	-	-	-	-	-	-	Fine	Fine	Fine	-	Fine
Ungrouped Analytes																										
Fraction Organic Carbon					g/g			FOC		0.0874	0.0823	0.0990	0.0761	0.0281	0.0812	0.0525	0.0721	0.0869	0.0864	0.101	0.0841	0.0598	0.0760	0.0624	0.0790	0.105
Initial pH					pH units			pH_INITIAL		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MOISTURE AT LIQUID LIMIT					%			MOIST_LL		-	-	-	-	-	-	-	-	-	-	-	98	75	93	-	-	-
Moisture at Plastic Limit					%			MOIST_PL		-	-	-	-	-	-	-	-	-	-	-	88	58	61	-	-	-
Plasticity Index					%			PLAST_INDEX		-	-	-	-	-	-	-	-	-	-	-	10	17	32	-	-	-

Canadian Sediment Quality Guidelines for the Protection of Aquatic Life - Interim freshwater sediment quality guidelines
Canadian Sediment Quality Guidelines for the Protection of Aquatic Life - Probable effect levels - Freshwater
MOE 93 - Sediment - LEL
MOE 93 - Sediment - SEL
< Indicates parameter was below laboratory equipment detection limit.
> Indicates parameter detected above equipment analytical range.
- Chemical not analyzed or criteria not defined.
Output generated by GalReport.

Location																					
Sample Name									DUP-210	PCE-SG-001	PCE-SG-002	PCE-SG-003	PCE-SG-004	PCE-SG-005	PCE-SG-006	PCE-SG-007	PCE-SG-008	PCE-SG-009	PCE-SG-010	PCE-SG-011	PCE-SG-012	PCE-SG-013	PCE-SG-014	PCOM-SC-001A	PCOM-SC-001B
Sample Date									2021-10-06	2021-10-02	2021-10-02	2021-10-02	2021-10-03	2021-10-03	2021-10-03	2021-10-03	2021-10-03	2021-10-03	2021-10-03	2021-10-03	2021-10-04	2021-10-06	2021-10-06	2021-10-07	2021-10-07
FIELD_SDG									L2650174	L2647897	L2647897	L2647897	L2648161	L2648161	L2648161	L2648161	L2648161	L2648161	L2648161	L2648161	L2647880	L2650174	L2650174	L2650175	L2650175
PARENT_SAMPLE_CODE									L2650174-7																
SAMPLE_TYPE_CODE									FD	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SYS_SAMPLE_CODE									L2650174-9	L2647897-12	L2647897-14	L2647897-13	L2648161-19	L2648161-15	L2648161-18	L2648161-17	L2648161-16	L2648161-14	L2648161-13	L2648161-11	L2647880-15	L2650174-6	L2650174-7	L2650175-12	L2650175-14
Parameter	**CCME Sediment ISQG Freshwater**	**CCME Sediment PEL Freshwater**	**MOE 93 - Sediment - LEL**	**MOE 93 - Sediment - SEL**	**Unit**	**MCS**	**MCS Name**	**CAS_RN**																	
Field and Physical																									
Moisture, Percent					%			MOIST	79.7	83.0	82.6	82.2	83.2	82.0	72.7	67.2	72.0	77.2	70.1	71.9	83.7	84.3	78.8	58.7	50.4
Sieve - #200 (>0.075mm)					%			SIEVE>0.075MM	2.2	1.4	-	-	-	4.1	-	-	-	-	-	-	-	1.4	2.1	-	-
Index of Additive Cancer Risk (IACR)					none			PAH_IACR	17.3	9.35	11.3	15.5	10.7	14.4	41.6	11.7	12.9	21.4	39.7	8.08	11.3	8.28	18.2	51.5	37.1
Hydrocarbons																									
Acenaphthene	**0.00671**	**0.0889**			mg/kg	0.00671	CCME Sediment ISQG Freshwater	83-32-9	**0.047**	**0.033**	**0.038**	**0.044**	**0.041**	**0.058**	**0.294**	**0.034**	**0.044**	**0.067**	**0.163**	**0.031**	**0.065**	**0.033**	**0.062**	**0.563**	**0.412**
Acenaphthylene	**0.00587**	**0.128**			mg/kg	0.00587	CCME Sediment ISQG Freshwater	208-96-8	**0.431**	**0.248**	**0.323**	**0.412**	**0.338**	**0.405**	**0.741**	**0.397**	**0.443**	**0.578**	**0.987**	**0.232**	**0.227**	**0.169**	**0.509**	**0.543**	**0.591**
Acridine					mg/kg			260-94-6	< 0.040	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.150	< 0.030	< 0.050	< 0.050	0.119	< 0.030	< 0.050	< 0.050	< 0.040	0.333	0.194
Anthracene	**0.0469**	**0.245**	**0.220**	370.0	mg/kg	0.0469	CCME Sediment ISQG Freshwater	120-12-7	**0.202**	**0.090**	**0.112**	**0.136**	**0.123**	**0.211**	**0.851**	**0.169**	**0.164**	**0.297**	**0.798**	**0.081**	**0.129**	**0.090**	**0.224**	**1.20**	**0.631**
Benz(a)anthracene	**0.0317**	**0.385**	**0.320**	1480	mg/kg	0.0317	CCME Sediment ISQG Freshwater	56-55-3	**0.865**	**0.457**	**0.583**	**0.818**	**0.573**	**0.839**	**2.87**	**0.684**	**0.744**	**1.32**	**2.64**	**0.412**	**0.469**	**0.321**	**0.878**	**2.89**	**1.97**
Benzo(a)pyrene Total Potency Equivalence (TPE)					mg/kg			PAH_TPE	1.74	0.910	1.11	1.53	1.09	1.45	4.04	1.23	1.39	2.22	4.02	0.821	1.01	0.773	1.87	4.47	3.32
Benzo(g,h,i)perylene			**0.170**	320.0	mg/kg	0.170	MOE 93 - Sediment - LEL	191-24-2	**0.747**	**0.421**	**0.474**	**0.655**	0.501	0.620	1.56	0.518	0.584	0.904	1.58	0.395	**0.513**	**0.405**	**0.799**	**2.12**	**1.52**
Benzo(a)pyrene	**0.0319**	**0.782**	**0.370**	1440	mg/kg	0.0319	CCME Sediment ISQG Freshwater	50-32-8	**1.25**	**0.637**	**0.780**	**1.09**	**0.764**	**1.01**	**2.77**	**0.875**	**0.993**	**1.57**	**2.82**	**0.573**	**0.680**	**0.533**	**1.35**	**2.98**	**2.26**
Benzo(b,j) fluoranthene					mg/kg			Benz_Fluo_bj	1.06	0.683	0.780	1.07	0.721	0.950	2.62	0.757	0.807	1.38	2.45	0.554	0.892	0.531	1.12	3.52	2.50
Fluoranthene	**0.111**	**2.355**	**0.750**	1020	mg/kg	0.111	CCME Sediment ISQG Freshwater	206-44-0	**0.840**	**0.489**	**0.563**	**0.894**	**0.540**	**0.883**	**3.74**	**0.553**	**0.646**	**1.26**	**2.53**	**0.418**	**0.691**	**0.430**	**0.886**	**6.88**	**4.27**
Indeno(1,2,3-c,d)pyrene			**0.200**	320.0	mg/kg	0.200	MOE 93 - Sediment - LEL	193-39-5	**0.505**	**0.377**	**0.432**	**0.563**	0.403	0.545	1.37	0.421	0.478	0.745	1.32	0.314	**0.412**	**0.310**	**0.607**	**1.68**	**1.26**
Naphthalene	**0.0346**	**0.391**			mg/kg	0.0346	CCME Sediment ISQG Freshwater	91-20-3	0.032	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	**0.089**	0.016	0.020	0.020	**0.061**	< 0.015	0.026	< 0.025	0.031	**0.167**	**0.137**
Pyrene	**0.053**	**0.875**	**0.490**	850.0	mg/kg	0.053	CCME Sediment ISQG Freshwater	129-00-0	**1.28**	**0.676**	**0.817**	**1.47**	**0.812**	**1.14**	**3.90**	**0.794**	**0.944**	**1.56**	**2.97**	**0.620**	**0.893**	**0.591**	**1.30**	**6.62**	**4.78**
2-methylnaphthalene	**0.0202**	**0.201**			mg/kg	0.0202	CCME Sediment ISQG Freshwater	91-57-6	**0.025**	**< 0.025**	**< 0.025**	**< 0.025**	**< 0.025**	**< 0.025**	**0.051**	0.016	< 0.015	0.017	**0.060**	< 0.015	**0.028**	**< 0.025**	**0.027**	**0.117**	**0.097**
Dibenz(a,h)anthracene	**0.00622**	**0.135**	**0.0600**	130.0	mg/kg	0.00622	CCME Sediment ISQG Freshwater	53-70-3	**< 0.36**	**0.094**	**0.114**	**0.155**	**0.123**	**0.156**	**0.460**	**0.133**	**0.149**	**0.241**	**0.440**	**0.095**	**0.119**	**< 0.18**	**< 0.40**	**0.492**	**0.352**
Index of Additive Cancer Risk (IACR)					none			PAH_IACR	17.3	9.35	11.3	15.5	10.7	14.4	41.6	11.7	12.9	21.4	39.7	8.08	11.3	8.28	18.2	51.5	37.1
Quinoline					mg/kg			91-22-5	< 0.015	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.015	< 0.010	< 0.015	< 0.015	< 0.015	< 0.015	< 0.025	< 0.025	< 0.015	< 0.030	< 0.030
Fluorene	**0.0212**	**0.144**	**0.190**	160.0	mg/kg	0.0212	CCME Sediment ISQG Freshwater	86-73-7	**0.073**	**0.043**	**0.052**	**0.061**	**0.052**	**0.093**	**0.363**	**0.061**	**0.072**	**0.109**	**0.260**	**0.040**	**0.066**	**0.036**	**0.086**	**0.535**	**0.354**
Total Organic Carbon			**1.00**	**10.0**	%	1.00	MOE 93 - Sediment - LEL	TOC	**6.84**	**7.24**	**7.76**	**6.76**	9.38	7.41	6.24	6.74	7.66	5.79	2.93	8.01	**7.86**	**7.13**	**6.67**	-	-
1-Methylnaphthalene					mg/kg			90-12-0	0.021	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	0.046	0.014	< 0.015	0.016	0.059	< 0.015	0.025	< 0.025	0.025	0.151	0.112
Chrysene	**0.0571**	**0.862**	**0.340**	460.0	mg/kg	0.0571	CCME Sediment ISQG Freshwater	218-01-9	**1.05**	**0.485**	**0.579**	**0.852**	**0.566**	**0.781**	**2.51**	**0.630**	**0.710**	**1.21**	**2.30**	**0.439**	**0.633**	**0.485**	**1.15**	**3.22**	**2.29**
Phenanthrene	**0.0419**	**0.515**	**0.560**	950.0	mg/kg	0.0419	CCME Sediment ISQG Freshwater	85-01-8	**0.317**	**0.175**	**0.195**	**0.264**	**0.191**	**0.407**	**2.04**	**0.195**	**0.251**	**0.525**	**1.21**	**0.143**	**0.314**	**0.188**	**0.346**	**4.72**	**2.41**
Benzo(k)fluoranthene			**0.240**	1340	mg/kg	0.240	MOE 93 - Sediment - LEL	207-08-9	**0.486**	0.182	**0.242**	**0.319**	0.220	0.297	0.812	0.223	0.272	0.404	0.805	0.164	0.233	**0.284**	**0.509**	**1.29**	**0.976**
Metals																									
Aluminum					mg/kg			7429-90-5	15700	18600	18000	18200	14800	15200	13100	13700	12900	9920	11300	14600	14900	14900	15300	6520	5280
Antimony					mg/kg			7440-36-0	< 2.0	0.75	0.68	0.73	0.83	0.63	2.14	0.73	0.80	0.54	0.66	1.15	1.86	< 2.0	< 2.0	3.95	3.50
Arsenic	**5.9**	**17**	**6.00**	**33.0**	mg/kg	5.9	CCME Sediment ISQG Freshwater	7440-38-2	5.4	5.45	5.24	5.72	**6.39**	4.95	5.85	4.69	5.14	2.98	3.45	5.90	**6.90**	5.7	5.6	3.28	2.82
Barium					mg/kg			7440-39-3	203	264	240	271	246	243	193	195	202	135	144	244	266	234	206	162	141
Beryllium					mg/kg			7440-41-7	< 2.0	0.70	0.71	0.70	0.58	0.54	0.53	0.54	0.50	0.39	0.45	0.52	0.60	< 2.0	< 2.0	0.31	0.28
Bismuth					mg/kg			7440-69-9	< 4.0	< 0.40	< 0.40	< 0.40	0.29	0.21	0.20	0.36	0.25	< 0.40	< 0.40	< 0.40	0.45	< 4.0	< 4.0	0.56	1.84
Boron|H.W.E Boron					mg/kg			7440-42-8	< 100	12	11	12	8.4	0.81|7.7	8.9	7.7	8.4	< 10	< 10	11	13.6	< 100	< 100	10.6	8.3
Cadmium	**0.6**	3.5	**0.600**	10.0	mg/kg	0.6	CCME Sediment ISQG Freshwater	7440-43-9	0.57	0.544	0.564	0.594	**0.616**	0.494	0.466	0.518	0.569	0.310	0.281	**0.640**	**0.743**	0.46	**0.62**	**0.835**	**0.900**
Calcium					mg/kg			7440-70-2	44000	90000	65400	99800	80000	72200	38500	43600	61300	33600	27500	102000	131000	78000	44100	115000	100000
Chromium			**26.0**	**110.0**	mg/kg	26.0	MOE 93 - Sediment - LEL	7440-47-3	**963**	**752**	**946**	**800**	941	913	938	1420	1500	775	858	1170	**1270**	**670**	**1000**	**2230**	**2310**
Chromium Trivalent (Cr(III))					mg/kg			16065-83-1	-	-	-	-	-	906	-	-	-	-	-	-	-	-	-	-	-
Chromium Hexavalent (Cr(VI))					mg/kg			18540-29-9	-	-	-	-	-	7.1	-	-	-	-	-	-	-	-	-	-	-
Cobalt					mg/kg			7440-48-4	11.6	11.9	11.7	12.1	11.5	10.0	11.6	10.6	10.4	8.72	10.5	11.0	11.3	12.1	11.8	6.10	4.99
Copper	**35.7**	**197**	**16.0**	**110.0**	mg/kg	16.0	MOE 93 - Sediment - LEL	7440-50-8	**33**	**37.4**	**35.7**	**39.3**	**38.5**	31.6	**53.6**	31.5	32.8	26.8	23.8	**40.3**	**46.7**	**39**	**34**	**70.8**	**66.4**
Iron			**20000**	**40000**	mg/kg	20000	MOE 93 - Sediment - LEL	7439-89-6	**25200**	**27500**	**26400**	**27500**	24400	22200	25100	21300	21500	19100	19500	24000	**24100**	**26400**	**26100**	17600	14200
Lead	**35**	**91.3**	**31.0**	**250.0**	mg/kg	31.0	MOE 93 - Sediment - LEL	7439-92-1	**90**	**70.9**	**76.6**	**76.1**	**98.1**	**71.2**	**115**	**91.4**	**104**	**51.8**	**70.3**	**106**	**142**	**82**	**85**	**211**	**205**
Lithium					mg/kg			7439-93-2	< 40	14.5	14.0	14.2	10.4	10.2	9.8	9.1	9.4	8.2	9.6	11.3	15.5	< 40	< 40	7.7	5.9
Magnesium					mg/kg			7439-95-4	14000	15700	14800	15000	14300	13300	15200	15300	13500	13000	11900	12900	13100	12700	14300	12800	12700
Manganese			**460.0**	**1100.0**	mg/kg	460.0	MOE 93 - Sediment - LEL	7439-96-5	**600**	**770**	**726**	**771**	786	658	418	679	761	295	286	723	**743**	**724**	**627**	256	231
Mercury	**0.17**	**0.486**	**0.200**	**2.00**	mg/kg	0.17	CCME Sediment ISQG Freshwater	7439-97-6	**0.207**	**0.209**	**0.205**	**0.195**	0.155	0.153	0.157	**0.181**	**0.204**	0.153	0.164	**0.285**	**0.208**	**0.179**	**0.271**	**0.248**	**0.173**
Molybdenum					mg/kg			7439-98-7	< 2.0	0.97	0.90	0.92	1.02	0.80	1.02	0.80	0.87	0.65	0.61	0.89	1.30	< 2.0	< 2.0	1.61	1.53
Nickel			**16.0**	**75.0**	mg/kg	16.0	MOE 93 - Sediment - LEL	7440-02-0	**23**	**25.2**	**23.9**	**25.5**	22.7	20.7	20.8	19.4	19.3	14.7	17.4	21.7	**22.7**	**24**	**24**	15.0	14.3
Phosphorus			**600.0**	**2000.0**	mg/kg	600.0	MOE 93 - Sediment - LEL	7723-14-0	**1000**	**1210**	**1140**	**1190**	1380	1080	1390	1340	1330	1150	970	1210	**1230**	**1000**	**1000**	**1270**	**1100**
Potassium					mg/kg			7440-09-7	3300	4380	3980	4230	3480	3230	2950	2880	2760	2370	2900	3350	3400	3600	3200	1550	1220
Selenium					mg/kg			7782-49-2	< 4.0	0.93	0.92	0.81	0.88	0.72	0.59	0.68	0.70	0.40	< 0.40	1.05	1.06	< 4.0	< 4.0	0.64	0.47
Silver					mg/kg			7440-22-4	< 2.0	0.28	0.34	0.29	0.32	0.25	0.22	0.28	0.30	< 0.20	< 0.20	0.31	0.35	< 2.0	< 2.0	0.54	0.38
Sodium					mg/kg			7440-23-5	< 1000	670	590	660	574	514	488	451	455	400	410	600	739	< 1000	< 1000	370	288
Strontium					mg/kg			7440-24-6	245	530	372	608	500	427	173	225	353	166	113	636	799	540	237	392	294
Sulphur (S8)					mg/kg			7704-34-9	< 20000	6600	6200	5600	7700	5300	4400	5000	5900	3300	2600	6400	7900	< 20000	< 20000	4100	3100
Thallium					mg/kg			7440-28-0	< 1.0	0.26	0.26	0.25	0.242	0.223	0.252	0.235	0.221	0.18	0.21	0.24	0.242	< 1.0	< 1.0	0.227	0.169
Tin					mg/kg			7440-31-5	< 40	< 4.0	< 4.0	< 4.0	4.4	3.4	14.7	4.9	5.2	< 4.0	4.7	4.1	4.9	< 40	< 40	6.6	6.4
Titanium					mg/kg			7440-32-6	1000	1270	1240	1260	849	967	862	762	740	751	860	877	768	939	968	323	284
Tungsten					mg/kg			7440-33-7	< 10	< 1.0	< 1.0	< 1.0	< 0.50	< 0.50	0.59	< 0.50	< 0.50	< 1.0	< 1.0	< 1.0	1.68	< 10	< 10	4.49	2.69
Uranium					mg/kg			7440-61-1	< 1.0	0.77	0.74	0.75	0.762	0.661	0.611	0.542	0.563	0.51	0.55	0.62	0.664	< 1.0	< 1.0	0.407	0.410
Vanadium					mg/kg			7440-62-2	42.0	50.1	47.4	49.6	40.2	38.7	36.9	33.2	33.4	30.2	30.2	40.1	42.3	41.9	41.1	23.0	20.7
Zinc	**123**	**315**	**120.0**	820.0	mg/kg	120.0	MOE 93 - Sediment - LEL	7440-66-6	**140**	**132**	**131**	**138**	**145**	119	**192**	**141**	**143**	106	110	**158**	**200**	**153**	**152**	**280**	**238**
Zirconium					mg/kg			7440-67-7	< 20	4.6	4.6	4.7	4.7	3.7	4.0	3.7	3.7	2.3	3.2	3.3	2.7	< 20	< 20	< 1.0	< 1.0
pH					pH units			pH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PCBs																									
Total Polychlorinated Biphenyls (PCBs)	**0.0341**	**0.277**			mg/kg	0.0341	CCME Sediment ISQG Freshwater	1336-36-3	**0.370**	**0.232**	**0.145**	**0.104**	**0.417**	**0.292**	**0.441**	**0.18**	**0.233**	**0.387**	**0.208**	**0.240**	**0.336**	**0.429**	**0.0544**	**0.198**	**0.227**
Aroclor 1016			**0.00700**	53.0	mg/kg	0.00700	MOE 93 - Sediment - LEL	12674-11-2	**< 0.014**	**< 0.023**	< 0.0045	< 0.0045	< 0.023	< 0.023	< 0.014	< 0.0090	< 0.014	< 0.014	< 0.014	< 0.014	**< 0.12**	**< 0.024**	< 0.0030	**< 0.0090**	**< 0.0090**
Aroclor 1221					mg/kg			11104-28-2	< 0.014	< 0.023	< 0.0045	< 0.0045	< 0.023	< 0.023	< 0.014	< 0.0090	< 0.014	< 0.014	< 0.014	< 0.014	< 0.12	< 0.024	< 0.0030	< 0.0090	< 0.0090
Aroclor 1232					mg/kg			11141-16-5	< 0.014	< 0.023	< 0.0045	< 0.0045	< 0.023	< 0.023	< 0.014	< 0.0090	< 0.014	< 0.014	< 0.014	< 0.014	< 0.12	< 0.024	< 0.0030	< 0.0090	< 0.0090
Aroclor 1242					mg/kg			53469-21-9	< 0.014	< 0.023	< 0.0045	< 0.0045	< 0.023	< 0.023	< 0.22	< 0.010	< 0.014	< 0.020	< 0.014	< 0.014	< 0.12	< 0.024	< 0.0030	< 0.0090	< 0.0090
Aroclor 1248			**0.0300**	150.0	mg/kg	0.0300	MOE 93 - Sediment - LEL	12672-29-6	< 0.014	< 0.023	< 0.0045	< 0.0045	< 0.023	< 0.023	< 0.014	< 0.0090	< 0.014	< 0.014	< 0.014	< 0.014	**< 0.12**	< 0.024	< 0.0030	< 0.0090	< 0.0090
Aroclor 1254	**0.06**	**0.34**	**0.0600**	34.0	mg/kg	0.06	CCME Sediment ISQG Freshwater	11097-69-1	**0.137**	**0.086**	**0.0733**	0.0540	**0.171**	**0.113**	**0.262**	**0.0712**	**0.085**	**0.065**	**0.077**	**0.093**	**0.146**	**0.146**	0.0251	**0.0750**	**0.102**
Aroclor 1260			**0.00500**	24.0	mg/kg	0.00500	MOE 93 - Sediment - LEL	11096-82-5	**0.233**	**0.146**	**0.0713**	**0.0503**	0.247	0.179	0.179	0.104	0.149	0.322	0.131	0.147	**0.190**	**0.283**	**0.0294**	**0.123**	**0.125**
Aroclor 1262					mg/kg			37324-23-5	< 0.014	< 0.023	< 0.0045	< 0.0045	< 0.023	< 0.023	< 0.014	< 0.0090	< 0.014	< 0.014	< 0.014	< 0.014	< 0.023	< 0.024	< 0.0030	< 0.0068	< 0.0090
Aroclor 1268					mg/kg			11100-14-4	< 0.014	< 0.023	< 0.0045	< 0.0045	< 0.023	< 0.023	< 0.014	< 0.0090	< 0.014	< 0.014	< 0.014	< 0.014	< 0.023	< 0.024	< 0.0030	< 0.0068	< 0.0090
Physical																									
Texture					none			Texture	Fine	Fine	-	-	-	Fine	-	-	-	-	-	-	-	-	Fine	Fine	-	-
Ungrouped Analytes																									
Fraction Organic Carbon					g/g			FOC	0.0684	0.0724	0.0776	0.0676	0.0938	0.0741	0.0624	0.0674	0.0766	0.0579	0.0293	0.0801	0.0786	0.0713	0.0667	-	-
Initial pH					pH units			pH_INITIAL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MOISTURE AT LIQUID LIMIT					%			MOIST_LL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Moisture at Plastic Limit					%			MOIST_PL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Plasticity Index					%			PLAST_INDEX	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Canadian Sediment Quality Guidelines for the Protection of Aquatic Life - Interim freshwater sediment quality guidelines
Canadian Sediment Quality Guidelines for the Protection of Aquatic Life - Probable effect levels - Freshwater
MOE 93 - Sediment - LEL
MOE 93 - Sediment - SEL
< Indicates parameter was below laboratory equipment detection limit.
> Indicates parameter detected above equipment analytical range.
- Chemical not analyzed or criteria not defined.
Output generated by GalReport.

Parameter	CCME Sediment ISQG Freshwater	CCME Sediment PEL Freshwater	MOE 93 - Sediment - LEL	MOE 93 - Sediment - SEL	Unit	MCS	MCS Name	CAS_RN	Location	PCOM-SC-001C	PCOM-SC-001D	PCOM-SC-001E	PCOM-SC-001F	PCOM-SC-001G	PCOM-SG-001	PCOM-SG-001	PCOM-SG-001	PCOM-SG-002	PCOM-SG-003	PCW-SC-001	PCW-SC-001A	PCW-SC-001AX	PCW-SC-001B	PCW-SC-001BX	PCW-SC-001CX	PCW-SC-001DX
									Sample Name	PCOM-SC-001C	PCOM-SC-001D	PCOM-SC-001E	PCOM-SC-001F	PCOM-SC-001G	PCOM-SG-001	PCOM-SG-001	PCOM-SG-001	PCOM-SG-002	PCOM-SG-003	PCW-SC-001	PCW-SC-001A	PCW-SC-001AX	PCW-SC-001B	PCW-SC-001BX	PCW-SC-001CX	PCW-SC-001DX
									Sample Date	2021-10-07	2021-10-07	2021-10-07	2021-10-07	2021-10-07	2021-10-05	2021-10-05	2021-10-07	2021-10-05	2021-10-05	2021-10-03	2021-10-03	2021-10-06	2021-10-03	2021-10-06	2021-10-06	2021-10-06
									FIELD_SDG	L2650175	L2650175	L2650175	L2650175	L2650175	L2650176	L2650176	L2650175	L2650176	L2650176	L2648161	L2648161	L2650174	L2648161	L2650174	L2650174	L2650174
									PARENT_SAMPLE_CODE																	
									SAMPLE_TYPE_CODE	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
									SYS_SAMPLE_CODE	L2650175-15	L2650175-16	L2650175-17	L2650175-18	L2650175-19	L2650176-17	L2650176-1	L2650175-13	L2650176-2	L2650176-3	L2648161-3	L2648161-1	L2650174-14	L2648161-2	L2650174-15	L2650174-16	L2650174-17
Field and Physical																										
Moisture, Percent					%			MOIST		37.3	23.1	33.2	48.9	59.8	68.5	71.0	70.2	68.0	70.1	82.1	77.1	78.6	86.3	71.5	64.8	60.2
Sieve - #200 (>0.075mm)					%			SIEVE>0.075MM		-	-	-	-	-	-	-	25.9	18.8	-	3.8	8.2	-	13.9	-	-	-
Index of Additive Cancer Risk (IACR)					none			PAH_IACR		16.4	16.0	33.1	89.6	98.0	52.0	46.9	42.2	63.8	40.9	17.4	28.3	14.9	3.65	13.3	12.3	10.5
Hydrocarbons																										
Acenaphthene	**0.00671**	**0.0889**			mg/kg	0.00671	CCME Sediment ISQG Freshwater	83-32-9		**0.230**	**0.240**	**0.704**	**1.73**	**5.32**	**0.510**	**0.420**	**0.500**	**1.12**	**0.386**	**0.058**	**0.127**	**0.045**	**< 0.038**	**0.038**	**0.033**	**0.059**
Acenaphthylene	**0.00587**	**0.128**			mg/kg	0.00587	CCME Sediment ISQG Freshwater	208-96-8		**0.185**	**0.244**	**0.616**	**2.12**	**3.26**	**1.27**	**1.16**	**0.667**	**1.54**	**0.970**	**0.509**	**1.03**	**0.429**	**0.148**	**0.331**	**0.270**	**0.280**
Acridine					mg/kg			260-94-6		0.085	0.066	0.196	0.505	1.47	< 0.29	0.216	0.205	0.331	0.145	< 0.050	< 0.15	< 0.060	< 0.075	< 0.070	< 0.080	< 0.10
Anthracene	**0.0469**	**0.245**	**0.220**	370.0	mg/kg	0.0469	CCME Sediment ISQG Freshwater	120-12-7		**0.317**	**0.312**	**0.824**	**2.14**	**3.41**	**0.961**	**0.773**	**0.695**	**1.42**	**0.626**	**0.221**	**0.387**	**0.165**	**0.055**	**0.155**	**0.132**	**0.116**
Benz(a)anthracene	**0.0317**	**0.385**	**0.320**	1480	mg/kg	0.0317	CCME Sediment ISQG Freshwater	56-55-3		**0.871**	**0.876**	**1.91**	**4.85**	**6.12**	**3.03**	**2.17**	**2.17**	**3.57**	**2.03**	**1.03**	**1.75**	**0.747**	**0.236**	**0.719**	**0.717**	**0.560**
Benzo(a)pyrene Total Potency Equivalence (TPE)					mg/kg			PAH_TPE		1.43	1.43	3.06	8.23	10.3	4.74	4.32	3.74	6.05	3.96	1.77	2.96	1.54	0.375	1.33	1.20	1.02
Benzo(g,h,i)perylene			**0.170**	320.0	mg/kg	0.170	MOE 93 - Sediment - LEL	191-24-2		**0.669**	**0.663**	**1.37**	**3.81**	**4.30**	**2.06**	**1.84**	**1.84**	**2.33**	**1.52**	0.785	1.24	**0.648**	0.153	**0.526**	**0.467**	**0.406**
Benzo(a)pyrene	**0.0319**	**0.782**	**0.370**	1440	mg/kg	0.0319	CCME Sediment ISQG Freshwater	50-32-8		**0.962**	**0.974**	**2.11**	**5.69**	**7.51**	**3.22**	**2.97**	**2.53**	**4.26**	**2.84**	**1.24**	**2.13**	**1.12**	**0.267**	**0.949**	**0.863**	**0.740**
Benzo(b,j) fluoranthene					mg/kg			Benz_Fluo_bj		1.13	1.10	2.18	5.95	5.85	3.36	3.34	2.88	4.26	2.83	1.12	1.71	0.918	0.225	0.815	0.749	0.652
Fluoranthene	**0.111**	**2.355**	**0.750**	1020	mg/kg	0.111	CCME Sediment ISQG Freshwater	206-44-0		**2.10**	**1.90**	**4.17**	**9.36**	**10.0**	**4.44**	**4.03**	**4.39**	**6.44**	**3.16**	**0.916**	**1.70**	**0.779**	**0.319**	**0.781**	**0.771**	**0.703**
Indeno(1,2,3-c,d)pyrene			**0.200**	320.0	mg/kg	0.200	MOE 93 - Sediment - LEL	193-39-5		**0.553**	**0.513**	**1.08**	**2.83**	**2.89**	**2.00**	**1.85**	**1.34**	**2.21**	**1.44**	0.630	0.936	**0.471**	0.132	**0.409**	**0.353**	**0.281**
Naphthalene	**0.0346**	**0.391**			mg/kg	0.0346	CCME Sediment ISQG Freshwater	91-20-3		**0.052**	0.028	**0.052**	**0.303**	**0.307**	**0.129**	**0.102**	**0.131**	**0.166**	**0.063**	< 0.025	**0.049**	< 0.015	**< 0.038**	0.022	0.023	0.026
Pyrene	**0.053**	**0.875**	**0.490**	850.0	mg/kg	0.053	CCME Sediment ISQG Freshwater	129-00-0		**2.18**	**2.13**	**4.70**	**11.7**	**15.3**	**5.86**	**5.13**	**5.17**	**8.75**	**4.34**	**1.32**	**2.89**	**1.21**	**0.493**	**1.21**	**1.26**	**1.18**
2-methylnaphthalene	**0.0202**	**0.201**			mg/kg	0.0202	CCME Sediment ISQG Freshwater	91-57-6		**0.034**	**0.026**	**0.055**	**0.223**	**0.287**	**0.140**	**0.098**	**0.107**	**0.189**	**0.075**	**< 0.025**	**0.057**	0.018	**< 0.038**	**0.022**	**0.025**	**0.028**
Dibenz(a,h)anthracene	**0.00622**	**0.135**	**0.0600**	130.0	mg/kg	0.00622	CCME Sediment ISQG Freshwater	53-70-3		**0.155**	**0.149**	**0.312**	**0.850**	**0.963**	**0.493**	**0.447**	**0.413**	**0.573**	**0.362**	**0.196**	**0.292**	**< 0.30**	**0.038**	**< 0.27**	**< 0.23**	**< 0.20**
Index of Additive Cancer Risk (IACR)					none			PAH_IACR		16.4	16.0	33.1	89.6	98.0	52.0	46.9	42.2	63.8	40.9	17.4	28.3	14.9	3.65	13.3	12.3	10.5
Quinoline					mg/kg			91-22-5		< 0.013	< 0.013	< 0.020	< 0.040	< 0.090	< 0.025	< 0.030	< 0.030	< 0.050	< 0.030	< 0.025	< 0.015	< 0.015	< 0.038	< 0.015	< 0.010	< 0.010
Fluorene	**0.0212**	**0.144**	**0.190**	160.0	mg/kg	0.0212	CCME Sediment ISQG Freshwater	86-73-7		**0.164**	**0.183**	**0.506**	**1.22**	**3.30**	**0.469**	**0.364**	**0.364**	**0.839**	**0.328**	**0.075**	**0.159**	**0.062**	**0.040**	**0.056**	**0.046**	**0.054**
Total Organic Carbon			**1.00**	**10.0**	%	1.00	MOE 93 - Sediment - LEL	TOC		-	-	-	-	-	**7.57**	**6.15**	**5.15**	**6.09**	**6.72**	6.63	6.88	-	36.5	-	-	-
1-Methylnaphthalene					mg/kg			90-12-0		0.048	0.040	0.124	0.223	0.341	0.148	0.105	0.179	0.371	0.124	< 0.025	0.041	0.016	< 0.038	< 0.015	0.016	0.028
Chrysene	**0.0571**	**0.862**	**0.340**	460.0	mg/kg	0.0571	CCME Sediment ISQG Freshwater	218-01-9		**1.02**	**0.995**	**2.09**	**5.16**	**5.89**	**2.69**	**2.70**	**2.53**	**3.84**	**2.37**	**0.991**	**1.68**	**0.942**	**0.214**	**0.877**	**0.722**	**0.682**
Phenanthrene	**0.0419**	**0.515**	**0.560**	950.0	mg/kg	0.0419	CCME Sediment ISQG Freshwater	85-01-8		**1.37**	**1.21**	**3.12**	**7.33**	**13.3**	**2.49**	**2.03**	**2.51**	**4.60**	**1.68**	**0.336**	**0.583**	**0.273**	**0.098**	**0.238**	**0.195**	**0.250**
Benzo(k)fluoranthene			**0.240**	1340	mg/kg	0.240	MOE 93 - Sediment - LEL	207-08-9		**0.428**	**0.384**	**0.804**	**2.33**	**2.23**	**1.39**	**1.15**	**1.11**	**1.50**	**0.958**	0.367	0.627	**0.398**	0.075	**0.366**	**0.330**	**0.287**
Metals																										
Aluminum					mg/kg			7429-90-5		4790	3820	4020	4910	5270	9230	8240	6850	7780	6890	14200	19500	11800	2840	17200	20000	22000
Antimony					mg/kg			7440-36-0		3.71	4.92	5.41	5.48	8.85	3.60	3.44	3.58	7.15	3.25	0.83	1.30	< 2.0	0.47	< 2.0	< 2.0	< 2.0
Arsenic	**5.9**	**17**	**6.00**	**33.0**	mg/kg	5.9	CCME Sediment ISQG Freshwater	7440-38-2		2.48	2.23	3.10	3.91	**6.71**	5.14	4.25	3.44	4.27	3.86	5.41	**7.39**	5.1	5.75	**6.1**	5.7	**6.2**
Barium					mg/kg			7440-39-3		113	94.2	153	222	441	277	233	165	222	172	231	267	198	53.5	238	251	280
Beryllium					mg/kg			7440-41-7		0.22	0.21	0.24	0.28	0.25	0.43	0.44	0.33	0.36	0.32	0.52	0.66	< 2.0	< 0.20	< 2.0	< 2.0	< 2.0
Bismuth					mg/kg			7440-69-9		0.34	1.72	0.35	0.53	1.49	0.81	0.68	0.51	0.66	0.71	0.28	0.31	< 4.0	< 0.40	< 4.0	< 4.0	< 4.0
Boron|H.W.E Boron					mg/kg			7440-42-8		7.7	6.8	7.0	8.3	10.1	11.3	11.9	10.9	1.08|13	9.9	1.01|8.2	0.72|8.2	< 100	< 10	< 100	< 100	< 100
Cadmium	**0.6**	3.5	**0.600**	10.0	mg/kg	0.6	CCME Sediment ISQG Freshwater	7440-43-9		0.568	**0.731**	**0.951**	**1.52**	**1.91**	**1.59**	**1.38**	**0.857**	**1.22**	**0.929**	0.530	0.550	0.51	0.181	0.54	0.50	< 0.40
Calcium					mg/kg			7440-70-2		102000	93500	87000	83800	104000	133000	116000	126000	132000	102000	63800	36900	65000	14900	55400	36600	31800
Chromium			**26.0**	**110.0**	mg/kg	26.0	MOE 93 - Sediment - LEL	7440-47-3		**1470**	**1600**	**3490**	**4620**	**15500**	**4830**	**4340**	**1820**	**4690**	**2990**	1180	2070	**1020**	501	**872**	**697**	**1130**
Chromium Trivalent (Cr(III))					mg/kg			16065-83-1		-	-	-	-	-	-	-	-	4670	-	1170	2050	-	-	-	-	-
Chromium Hexavalent (Cr(VI))					mg/kg			18540-29-9		-	-	-	-	-	-	-	-	16.1	-	10.0	22.1	-	-	-	-	-
Cobalt					mg/kg			7440-48-4		4.54	3.83	4.03	4.91	4.23	9.79	8.10	6.39	7.35	6.73	10.7	13.3	10.3	2.78	13.0	14.7	15.8
Copper	**35.7**	**197**	**16.0**	**110.0**	mg/kg	16.0	MOE 93 - Sediment - LEL	7440-50-8		**77.5**	**70.8**	**78.2**	**76.6**	**89.2**	**93.6**	**79.7**	**74.1**	**98.6**	**68.9**	33.8	**36.5**	**34**	7.4	**38**	**39**	**39**
Iron			**20000**	**40000**	mg/kg	20000	MOE 93 - Sediment - LEL	7439-89-6		14100	13600	12500	14400	17000	**21200**	17900	19000	**20300**	15700	22800	27100	**22200**	4940	**29600**	**32300**	**35400**
Lead	**35**	**91.3**	**31.0**	**250.0**	mg/kg	31.0	MOE 93 - Sediment - LEL	7439-92-1		**200**	**287**	**310**	**423**	**763**	**371**	**313**	**207**	**378**	**222**	**88.4**	**130**	**89**	31.2	**83**	**63**	**76**
Lithium					mg/kg			7439-93-2		5.8	4.9	4.9	5.1	4.3	9.9	8.8	8.0	8.0	7.4	10.2	13.5	< 40	< 4.0	< 40	< 40	< 40
Magnesium					mg/kg			7439-95-4		12900	12700	10700	10600	6530	15000	13000	15100	16300	12000	14000	15000	12100	2280	14800	15500	16600
Manganese			**460.0**	**1100.0**	mg/kg	460.0	MOE 93 - Sediment - LEL	7439-96-5		225	216	213	247	349	356	324	281	300	312	579	581	**552**	180	**597**	**609**	**667**
Mercury	**0.17**	**0.486**	**0.200**	**2.00**	mg/kg	0.17	CCME Sediment ISQG Freshwater	7439-97-6		0.127	0.118	**0.199**	**0.316**	**0.803**	**0.368**	**0.349**	**0.186**	**0.290**	**0.301**	**0.192**	**0.248**	**0.201**	0.085	**0.178**	**0.178**	**0.204**
Molybdenum					mg/kg			7439-98-7		1.25	1.28	1.69	1.76	4.90	2.34	1.83	1.63	2.27	1.47	0.84	1.02	< 2.0	0.62	< 2.0	< 2.0	< 2.0
Nickel			**16.0**	**75.0**	mg/kg	16.0	MOE 93 - Sediment - LEL	7440-02-0		11.9	10.6	11.8	13.6	14.9	**21.4**	**18.2**	16.0	**18.1**	15.0	21.0	26.0	**20**	5.1	**26**	**30**	**32**
Phosphorus			**600.0**	**2000.0**	mg/kg	600.0	MOE 93 - Sediment - LEL	7723-14-0		**1030**	**995**	**1120**	**1320**	**2870**	**1770**	**1540**	**1370**	**1720**	**1260**	1210	1260	**1200**	410	**1100**	**< 1000**	**1000**
Potassium					mg/kg			7440-09-7		1090	850	900	1110	1030	2070	2020	1630	1760	1640	3330	4510	2600	480	3900	4400	5100
Selenium					mg/kg			7782-49-2		0.34	0.22	0.36	0.42	0.53	0.94	0.72	0.62	0.69	0.57	0.74	0.56	< 4.0	0.40	< 4.0	< 4.0	< 4.0
Silver					mg/kg			7440-22-4		0.40	0.30	0.52	0.76	3.01	0.94	0.70	0.47	0.93	0.62	0.26	0.47	< 2.0	< 0.20	< 2.0	< 2.0	< 2.0
Sodium					mg/kg			7440-23-5		241	217	262	338	592	507	437	357	530	377	527	621	< 1000	220	< 1000	< 1000	< 1000
Strontium					mg/kg			7440-24-6		283	231	281	350	555	658	560	416	474	426	349	174	380	123	283	171	140
Sulphur (S8)					mg/kg			7704-34-9		2600	1900	2600	2800	7100	6200	4500	4100	4700	3500	4900	3900	< 20000	4700	< 20000	< 20000	< 20000
Thallium					mg/kg			7440-28-0		0.151	0.115	0.143	0.174	0.201	0.320	0.281	0.235	0.27	0.219	0.236	0.287	< 1.0	< 0.10	< 1.0	< 1.0	< 1.0
Tin					mg/kg			7440-31-5		5.4	5.7	9.6	9.0	18.2	10.1	8.6	6.6	9.6	6.5	7.8	5.5	< 40	< 4.0	< 40	< 40	< 40
Titanium					mg/kg			7440-32-6		274	292	225	250	210	454	402	331	412	336	964	1360	768	148	1170	1370	1530
Tungsten					mg/kg			7440-33-7		1.53	0.76	0.69	< 0.50	< 0.50	2.47	2.05	3.20	2.9	2.37	< 0.50	< 0.50	< 10	< 1.0	< 10	< 10	< 10
Uranium					mg/kg			7440-61-1		0.373	0.397	0.337	0.305	0.428	0.482	0.428	0.427	0.49	0.355	0.624	0.796	< 1.0	0.29	< 1.0	1.0	1.1
Vanadium					mg/kg			7440-62-2		19.6	20.0	16.7	19.5	19.7	29.5	26.4	24.8	26.9	22.4	39.8	49.8	35.6	7.70	50.1	56.9	61.5
Zinc	**123**	**315**	**120.0**	820.0	mg/kg	120.0	MOE 93 - Sediment - LEL	7440-66-6		**187**	**166**	**220**	**299**	**401**	**400**	**355**	**286**	**337**	**278**	**139**	**150**	**134**	28.4	**152**	**141**	**132**
Zirconium					mg/kg			7440-67-7		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1.9	1.4	1.0	< 2.0	1.1	3.8	5.7	< 20	< 2.0	< 20	< 20	< 20
pH					pH units			pH		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PCBs																										
Total Polychlorinated Biphenyls (PCBs)	**0.0341**	**0.277**			mg/kg	0.0341	CCME Sediment ISQG Freshwater	1336-36-3		**0.172**	**0.127**	**0.169**	**0.811**	**5.18**	**0.951**	**0.742**	**0.294**	**0.547**	**0.377**	**0.523**	**1.65**	**0.374**	**0.257**	**0.339**	**0.315**	**0.532**
Aroclor 1016			**0.00700**	53.0	mg/kg	0.00700	MOE 93 - Sediment - LEL	12674-11-2		< 0.0045	< 0.0045	< 0.0045	< 0.0050	**< 0.050**	**< 0.030**	**< 0.0090**	**< 0.014**	< 0.0060	**< 0.0090**	< 0.023	< 0.014	**< 0.014**	< 0.023	**< 0.014**	**< 0.0090**	**< 0.0090**
Aroclor 1221					mg/kg			11104-28-2		< 0.0045	< 0.0045	< 0.0045	< 0.0050	< 0.050	< 0.030	< 0.0090	< 0.014	< 0.0060	< 0.0090	< 0.023	< 0.014	< 0.014	< 0.023	< 0.014	< 0.0090	< 0.0090
Aroclor 1232					mg/kg			11141-16-5		< 0.0045	< 0.0045	< 0.0045	< 0.0050	< 0.050	< 0.030	< 0.0090	< 0.014	< 0.0060	< 0.0090	< 0.023	< 0.014	< 0.014	< 0.023	< 0.014	< 0.0090	< 0.0090
Aroclor 1242					mg/kg			53469-21-9		< 0.0045	< 0.0045	< 0.0045	< 0.0050	< 0.050	< 0.080	< 0.12	< 0.014	< 0.076	< 0.055	< 0.025	< 0.020	< 0.014	< 0.023	< 0.014	< 0.0090	< 0.018
Aroclor 1248			**0.0300**	150.0	mg/kg	0.0300	MOE 93 - Sediment - LEL	12672-29-6		< 0.0045	< 0.0045	< 0.0045	< 0.0050	**< 0.050**	< 0.030	< 0.0090	< 0.014	< 0.0060	< 0.0090	< 0.023	< 0.014	< 0.014	< 0.023	< 0.014	< 0.0090	< 0.0090
Aroclor 1254	**0.06**	**0.34**	**0.0600**	34.0	mg/kg	0.06	CCME Sediment ISQG Freshwater	11097-69-1		0.0465	0.0499	**0.0717**	**0.381**	**2.14**	**0.351**	**0.264**	**0.122**	**0.196**	**0.155**	**0.199**	**0.629**	**0.144**	**0.097**	**0.131**	**0.139**	**0.205**
Aroclor 1260			**0.00500**	24.0	mg/kg	0.00500	MOE 93 - Sediment - LEL	11096-82-5		**0.126**	**0.0776**	**0.0972**	**0.430**	**3.04**	**0.600**	**0.478**	**0.172**	**0.351**	**0.222**	0.324	1.02	**0.230**	0.161	**0.208**	**0.177**	**0.327**
Aroclor 1262					mg/kg			37324-23-5		< 0.0045	< 0.0045	< 0.0045	< 0.0045	< 0.014	< 0.0060	< 0.0090	< 0.014	< 0.0060	< 0.0090	< 0.023	< 0.014	< 0.014	< 0.023	< 0.014	< 0.0090	< 0.0090
Aroclor 1268					mg/kg			11100-14-4		< 0.0045	< 0.0045	< 0.0045	< 0.0045	< 0.014	< 0.0060	< 0.0090	< 0.014	< 0.0060	< 0.0090	< 0.023	< 0.014	< 0.014	< 0.023	< 0.014	< 0.0090	< 0.0090
Physical																										
Texture					none			Texture		-	-	-	-	-	-	-	Fine	Fine	-	Fine	Fine	-	Fine	-	-	-
Ungrouped Analytes																										
Fraction Organic Carbon					g/g			FOC		-	-	-	-	-	-	0.0757	0.0615	0.0515	0.0609	0.0672	0.0663	0.0688	-	0.365	-	-	-
Initial pH					pH units			pH_INITIAL		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MOISTURE AT LIQUID LIMIT					%			MOIST_LL		-	-	-	-	-	-	-	-	-	-	86	78	-	-	-	-	-
Moisture at Plastic Limit					%			MOIST_PL		-	-	-	-	-	-	-	-	-	-	79	55	-	-	-	-	-
Plasticity Index					%			PLAST_INDEX		-	-	-	-	-	-	-	-	-	-	7	23	-	-	-	-	-

Canadian Sediment Quality Guidelines for the Protection of Aquatic Life - Interim freshwater sediment quality guidelines
Canadian Sediment Quality Guidelines for the Protection of Aquatic Life - Probable effect levels - Freshwater
MOE 93 - Sediment - LEL
MOE 93 - Sediment - SEL
< Indicates parameter was below laboratory equipment detection limit.
> Indicates parameter detected above equipment analytical range.
- Chemical not analyzed or criteria not defined.
Output generated by GalReport.

Location																						
Sample Name	PCW-SC-001EX	PCW-SC-001FX	PCW-SC-001GX	PCW-SC-005A	PCW-SC-005B	PCW-SC-007A	PCW-SC-007B	PCW-SC-011A	PCW-SC-011B	PCW-SC-013A	PCW-SG-002	PCW-SG-003	PCW-SG-004	PCW-SG-005	PCW-SG-006	PCW-SG-007	PCW-SG-008					
Sample Date	2021-10-06	2021-10-06	2021-10-06	2021-10-03	2021-10-03	2021-10-03	2021-10-03	2021-10-05	2021-10-05	2021-10-05	2021-10-04	2021-10-04	2021-10-04	2021-10-03	2021-10-04	2021-10-03	2021-10-04					
FIELD_SDG	L2650174	L2650174	L2650174	L2648161	L2648161	L2648161	L2648161	L2650176	L2650176	L2650176	L2647880	L2647880	L2647880	L2648161	L2647880	L2648161	L2647880					
PARENT_SAMPLE_CODE																						
SAMPLE_TYPE_CODE	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N					
SYS_SAMPLE_CODE	L2650174-18	L2650174-19	L2650174-20	L2648161-5	L2648161-6	L2648161-8	L2648161-9	L2650176-8	L2650176-9	L2650176-11	L2647880-8	L2647880-10	L2647880-9	L2648161-7	L2647880-7	L2648161-10	L2647880-11					
Parameter	**CCME Sediment ISQG Freshwater**	**CCME Sediment PEL Freshwater**	**MOE 93 - Sediment - LEL**	**MOE 93 - Sediment - SEL**	**Unit**	**MCS**	**MCS Name**	**CAS_RN**														
Field and Physical																						
Moisture, Percent					%			MOIST	64.6	80.4	87.1	65.8	84.2	76.8	86.2	69.9	70.9	76.9	77.4	81.0	86.3	86.2	69.0	85.5	82.3	
Sieve - #200 (>0.075mm)					%			SIEVE>0.075MM	-	-	-	19.7	-	13.0	1.9	-	-	2.4	-	-	-	16.6	-	5.0	-	
Index of Additive Cancer Risk (IACR)					none			PAH_IACR	18.6	53.9	34.6	48.7	27.0	46.1	28.5	43.4	72.0	49.8	11.6	24.0	47.5	62.8	22.7	36.6	38.0	
Hydrocarbons																						
Acenaphthene	**0.00671**	**0.0889**			mg/kg	0.00671	CCME Sediment ISQG Freshwater	83-32-9	**0.173**	**0.506**	**0.251**	**0.354**	**0.338**	**0.518**	**0.263**	**0.550**	**1.17**	**0.225**	**0.048**	**0.086**	**0.191**	**0.179**	**0.117**	**0.182**	**0.578**	
Acenaphthylene	**0.00587**	**0.128**			mg/kg	0.00587	CCME Sediment ISQG Freshwater	208-96-8	**0.611**	**2.01**	**1.32**	**1.27**	**0.946**	**1.65**	**0.625**	**1.50**	**2.68**	**2.03**	**0.336**	**0.710**	**1.60**	**1.76**	**0.665**	**1.47**	**2.18**	
Acridine					mg/kg			260-94-6	< 0.23	< 1.2	< 0.84	0.325	0.314	0.740	0.549	0.218	< 0.37	0.167	< 0.030	< 0.050	< 0.090	< 0.18	0.041	< 0.19	< 0.13	
Anthracene	**0.0469**	**0.245**	**0.220**	370.0	mg/kg	0.0469	CCME Sediment ISQG Freshwater	120-12-7	**0.271**	**0.959**	**0.441**	**0.686**	**0.515**	**0.768**	**0.361**	**0.794**	**1.30**	**0.707**	**0.141**	**0.313**	**0.613**	**0.667**	**0.327**	**0.491**	**0.811**	
Benz(a)anthracene	**0.0317**	**0.385**	**0.320**	1480	mg/kg	0.0317	CCME Sediment ISQG Freshwater	56-55-3	**1.11**	**3.30**	**2.21**	**3.56**	**1.87**	**3.30**	**2.15**	**2.08**	**4.49**	**2.73**	**0.608**	**1.20**	**2.31**	**3.27**	**1.30**	**2.07**	**1.98**	
Benzo(a)pyrene Total Potency Equivalence (TPE)					mg/kg			PAH_TPE	1.85	5.36	3.58	4.86	2.74	4.77	2.77	4.22	7.50	5.16	1.13	2.40	4.84	6.55	2.34	3.90	4.05	
Benzo(g,h,i)perylene			**0.170**	320.0	mg/kg	0.170	MOE 93 - Sediment - LEL	191-24-2	**0.726**	**2.07**	**1.42**	1.81	1.08	1.92	1.07	**1.55**	**3.05**	**2.00**	**0.453**	**1.02**	**2.08**	2.92	**0.940**	1.78	**1.82**	
Benzo(a)pyrene	**0.0319**	**0.782**	**0.370**	1440	mg/kg	0.0319	CCME Sediment ISQG Freshwater	50-32-8	**1.34**	**3.91**	**2.64**	**3.39**	**1.93**	**3.40**	**1.93**	**3.05**	**5.40**	**3.76**	**0.809**	**1.71**	**3.47**	**4.54**	**1.67**	**2.76**	**2.91**	
Benzo(b,j) fluoranthene					mg/kg			Benz_Fluo_bj	1.23	3.25	2.22	2.89	1.69	2.72	1.71	3.04	4.19	3.19	0.826	1.73	3.29	4.24	1.51	2.32	2.57	
Fluoranthene	**0.111**	**2.355**	**0.750**	1020	mg/kg	0.111	CCME Sediment ISQG Freshwater	206-44-0	**1.29**	**4.11**	**2.38**	**3.36**	**3.21**	**4.15**	**3.01**	**2.95**	**4.57**	**2.87**	**0.716**	**1.14**	**2.10**	**2.74**	**1.25**	**2.02**	**1.79**	
Indeno(1,2,3-c,d)pyrene			**0.200**	320.0	mg/kg	0.200	MOE 93 - Sediment - LEL	193-39-5	**0.501**	**1.38**	**0.919**	1.71	0.996	1.62	0.921	**1.47**	**2.73**	**1.61**	**0.357**	**0.825**	**1.55**	2.85	**0.732**	1.55	**1.31**	
Naphthalene	**0.0346**	**0.391**			mg/kg	0.0346	CCME Sediment ISQG Freshwater	91-20-3	**0.064**	**0.095**	**0.065**	**0.099**	**0.052**	**0.149**	**0.062**	**0.172**	**0.172**	**0.049**	0.015	**0.046**	**0.083**	**0.064**	0.022	**0.058**	**0.096**	
Pyrene	**0.053**	**0.875**	**0.490**	850.0	mg/kg	0.053	CCME Sediment ISQG Freshwater	129-00-0	**2.22**	**7.08**	**4.24**	**5.09**	**4.31**	**6.66**	**5.59**	**4.67**	**7.55**	**4.38**	**1.11**	**1.83**	**3.21**	**4.09**	**1.70**	**2.84**	**3.25**	
2-methylnaphthalene	**0.0202**	**0.201**			mg/kg	0.0202	CCME Sediment ISQG Freshwater	91-57-6	**0.071**	**0.150**	**0.091**	**0.086**	**0.056**	**0.130**	**0.058**	**0.153**	**0.186**	**0.073**	0.017	**0.045**	**0.075**	**0.050**	**0.025**	**0.058**	**0.103**	
Dibenz(a,h)anthracene	**0.00622**	**0.135**	**0.0600**	130.0	mg/kg	0.00622	CCME Sediment ISQG Freshwater	53-70-3	**< 0.33**	**< 1.0**	**< 0.62**	**0.511**	**0.274**	**0.477**	**0.268**	**0.378**	**0.706**	**0.486**	**0.105**	**0.252**	**0.515**	**0.795**	**0.246**	**0.435**	**0.444**	
Index of Additive Cancer Risk (IACR)					none			PAH_IACR	18.6	53.9	34.6	48.7	27.0	46.1	28.5	43.4	72.0	49.8	11.6	24.0	47.5	62.8	22.7	36.6	38.0	
Quinoline					mg/kg			91-22-5	< 0.010	< 0.025	< 0.038	< 0.010	< 0.025	< 0.020	< 0.038	< 0.030	< 0.050	< 0.015	< 0.015	< 0.025	< 0.038	< 0.038	< 0.010	< 0.038	< 0.025	
Fluorene	**0.0212**	**0.144**	**0.190**	160.0	mg/kg	0.0212	CCME Sediment ISQG Freshwater	86-73-7	**0.154**	**0.527**	**0.287**	**0.331**	**0.329**	**0.387**	**0.155**	**0.499**	**0.803**	**0.289**	**0.061**	**0.110**	**0.282**	**0.282**	**0.139**	**0.226**	**0.478**	
Total Organic Carbon			**1.00**	**10.0**	%	1.00	MOE 93 - Sediment - LEL	TOC	-	-	-	6.29	28.9	12.6	30.4	**8.49**	**10.1**	**12.7**	**6.16**	**7.64**	**11.7**	7.74	**4.22**	13.6	**9.27**	
1-Methylnaphthalene					mg/kg			90-12-0	0.052	0.117	< 0.060	0.058	0.041	< 0.11	0.038	0.122	0.148	0.059	< 0.015	0.030	0.054	0.042	0.019	0.052	0.070	
Chrysene	**0.0571**	**0.862**	**0.340**	460.0	mg/kg	0.0571	CCME Sediment ISQG Freshwater	218-01-9	**1.19**	**3.45**	**1.96**	**3.14**	**1.74**	**2.93**	**2.14**	**2.50**	**3.88**	**2.77**	**0.710**	**1.34**	**2.59**	**3.21**	**1.38**	**1.95**	**2.16**	
Phenanthrene	**0.0419**	**0.515**	**0.560**	950.0	mg/kg	0.0419	CCME Sediment ISQG Freshwater	85-01-8	**0.612**	**2.25**	**1.18**	**1.47**	**2.26**	**2.18**	**1.61**	**1.93**	**2.49**	**1.16**	**0.245**	**0.388**	**0.866**	**0.985**	**0.491**	**0.846**	**0.920**	
Benzo(k)fluoranthene			**0.240**	1340	mg/kg	0.240	MOE 93 - Sediment - LEL	207-08-9	**0.368**	**1.36**	**0.651**	0.962	0.482	0.892	0.542	**1.00**	**1.81**	**1.14**	0.223	**0.439**	**0.987**	1.23	**0.422**	0.757	**0.700**	
Metals																						
Aluminum					mg/kg			7429-90-5	21000	10400	5500	17900	5350	13100	6960	9840	8500	13400	23500	18900	14300	14800	18000	10900	17900	
Antimony					mg/kg			7440-36-0	< 2.0	3.7	2.9	2.55	2.23	7.48	10.4	5.63	6.5	5.00	0.73	1.23	1.76	1.57	1.20	2.93	2.47	
Arsenic	**5.9**	**17**	**6.00**	**33.0**	mg/kg	5.9	CCME Sediment ISQG Freshwater	7440-38-2	**7.8**	**10.6**	**7.4**	**8.44**	**10.9**	**17.2**	**20.3**	**10.1**	**12.0**	**14.6**	**5.91**	**7.37**	**7.17**	**7.05**	5.64	**8.11**	**9.49**	
Barium					mg/kg			7440-39-3	301	235	172	289	111	341	188	320	333	352	331	284	267	237	261	257	324	
Beryllium					mg/kg			7440-41-7	< 2.0	< 2.0	< 2.0	0.62	0.24	0.50	0.28	0.42	< 2.0	0.63	0.84	0.61	0.57	0.56	0.73	0.50	0.67	
Bismuth					mg/kg			7440-69-9	< 4.0	< 4.0	< 4.0	< 0.40	< 0.40	1.05	0.29	1.06	< 4.0	1.01	0.29	0.42	0.50	< 0.40	0.24	0.81	0.60	
Boron|H.W.E Boron					mg/kg			7440-42-8	< 100	< 100	< 100	11	< 10	0.83|8.4	0.78|8.0	9.4	< 100	1.05|12.8	10.2	9.9	12.1	13	10.8	1.41|11.5	13.6	
Cadmium	**0.6**	3.5	**0.600**	10.0	mg/kg	0.6	CCME Sediment ISQG Freshwater	7440-43-9	**0.62**	**1.15**	**0.67**	**0.605**	0.448	**1.65**	**1.75**	**1.96**	**2.02**	**1.91**	0.510	**0.780**	**1.02**	**0.990**	0.490	**1.09**	**1.14**	
Calcium					mg/kg			7440-70-2	28000	31900	25700	40100	24300	44400	17500	111000	106000	80600	62600	69800	40300	42700	43500	42600	93400	
Chromium			**26.0**	**110.0**	mg/kg	26.0	MOE 93 - Sediment - LEL	7440-47-3	**3140**	**5470**	**2950**	4090	2410	9810	8540	**9790**	**10400**	**5950**	**895**	**1110**	**1340**	2650	**1220**	5290	**3090**	
Chromium Trivalent (Cr(III))					mg/kg			16065-83-1	-	-	-	-	-	9740	8120	-	-	5940	-	-	-	-	-	5250	-	
Chromium Hexavalent (Cr(VI))					mg/kg			18540-29-9	-	-	-	-	-	70.2	423	-	-	14.8	-	-	-	-	-	36.7	-	
Cobalt					mg/kg			7440-48-4	16.4	11.5	6.1	14.7	8.71	16.3	11.9	9.55	9.3	15.2	14.8	13.2	12.8	13.5	14.2	12.5	14.3	
Copper	**35.7**	**197**	**16.0**	**110.0**	mg/kg	16.0	MOE 93 - Sediment - LEL	7440-50-8	**45**	**42**	**28**	**54.5**	25.2	**68.2**	**36.3**	**81.2**	**81**	**76.2**	**41.5**	**47.3**	**55.5**	**47.7**	**39.4**	**58.0**	**59.3**	
Iron			**20000**	**40000**	mg/kg	20000	MOE 93 - Sediment - LEL	7439-89-6	**28600**	16700	9300	27300	8130	20800	11800	20000	19100	**24000**	**32900**	**28200**	**24800**	24500	**29100**	21200	**28600**	
Lead	**35**	**91.3**	**31.0**	**250.0**	mg/kg	31.0	MOE 93 - Sediment - LEL	7439-92-1	**150**	**338**	**215**	**215**	**217**	**483**	**438**	**545**	**624**	**606**	**78.5**	**114**	**179**	**160**	**110**	**259**	**234**	
Lithium					mg/kg			7439-93-2	< 40	< 40	< 40	13.5	< 4.0	8.4	2.6	8.4	< 40	11.8	18.1	11.4	9.6	11.3	13.4	8.0	12.4	
Magnesium					mg/kg			7439-95-4	15500	8670	4730	14500	3240	9540	2760	12000	10000	11500	18200	15800	12900	13200	16800	10800	15100	
Manganese			**460.0**	**1100.0**	mg/kg	460.0	MOE 93 - Sediment - LEL	7439-96-5	**617**	318	279	487	159	443	173	444	385	**488**	**767**	**747**	**653**	501	**594**	492	**866**	
Mercury	**0.17**	**0.486**	**0.200**	**2.00**	mg/kg	0.17	CCME Sediment ISQG Freshwater	7439-97-6	**0.374**	**0.631**	**0.371**	**0.369**	**0.365**	**0.683**	**0.852**	**0.554**	**0.756**	**0.719**	0.158	**0.263**	**0.356**	**0.369**	**0.179**	**0.481**	**0.369**	
Molybdenum					mg/kg			7439-98-7	< 2.0	< 2.0	< 2.0	1.78	1.31	2.51	1.09	2.53	2.7	2.60	0.89	1.02	1.57	1.36	1.07	2.26	1.50	
Nickel			**16.0**	**75.0**	mg/kg	16.0	MOE 93 - Sediment - LEL	7440-02-0	**32**	**18**	11	26.5	10.8	23.1	16.4	**20.2**	**20**	**25.5**	**31.4**	**26.9**	**23.8**	22.8	**26.0**	21.2	**27.3**	
Phosphorus			**600.0**	**2000.0**	mg/kg	600.0	MOE 93 - Sediment - LEL	7723-14-0	**1300**	**1900**	**1100**	1330	950	2090	1300	**2050**	**1800**	**2340**	**1170**	**1320**	**1770**	1580	**1470**	1790	**1740**	
Potassium					mg/kg			7440-09-7	5100	< 2000	< 2000	4270	1020	2520	900	1970	< 2000	3010	6310	4220	3210	3800	4920	2390	4120	
Selenium					mg/kg			7782-49-2	< 4.0	< 4.0	< 4.0	0.62	0.73	1.02	1.29	0.82	< 4.0	1.30	0.62	1.01	1.19	0.86	0.66	1.19	1.17	
Silver					mg/kg			7440-22-4	< 2.0	< 2.0	< 2.0	0.60	0.35	1.09	0.50	1.34	< 2.0	1.44	0.29	0.41	0.53	0.37	0.25	0.74	0.57	
Sodium					mg/kg			7440-23-5	< 1000	< 1000	< 1000	640	310	458	262	481	< 1000	546	854	641	560	580	689	466	683	
Strontium					mg/kg			7440-24-6	137	184	190	184	195	264	245	618	631	533	330	427	244	250	202	294	555	
Sulphur (S8)					mg/kg			7704-34-9	< 20000	< 20000	< 20000	4400	7600	8900	13100	5800	< 20000	10700	3400	6400	7900	7200	3900	9100	8300	
Thallium					mg/kg			7440-28-0	< 1.0	< 1.0	< 1.0	0.30	0.15	0.332	0.256	0.279	< 1.0	0.350	0.333	0.324	0.298	0.28	0.338	0.299	0.360	
Tin					mg/kg			7440-31-5	< 40	< 40	< 40	10.3	8.8	28.9	22.2	13.8	< 40	17.8	3.7	4.9	7.8	9.7	6.1	12.2	8.4	
Titanium					mg/kg			7440-32-6	1420	574	294	1330	316	781	341	464	436	702	1730	1260	940	1000	1410	676	1100	
Tungsten					mg/kg			7440-33-7	< 10	< 10	< 10	< 1.0	< 1.0	< 0.50	< 0.50	1.26	< 10	0.81	< 0.50	0.64	0.84	< 1.0	< 0.50	0.94	1.21	
Uranium					mg/kg			7440-61-1	< 1.0	< 1.0	< 1.0	0.68	0.59	0.780	1.00	0.548	< 1.0	0.759	0.899	0.778	0.763	0.66	0.753	0.694	0.839	
Vanadium					mg/kg			7440-62-2	56.8	24.7	13.1	48.2	14.8	33.7	19.0	29.4	26.9	38.3	63.0	50.2	40.4	40.9	49.7	33.0	48.7	
Zinc	**123**	**315**	**120.0**	820.0	mg/kg	120.0	MOE 93 - Sediment - LEL	7440-66-6	**196**	**253**	**201**	**181**	111	**318**	**214**	**386**	**391**	**392**	**147**	**180**	**243**	**205**	**166**	**282**	**257**	
Zirconium					mg/kg			7440-67-7	< 20	< 20	< 20	5.2	< 2.0	2.8	2.3	1.6	< 20	4.1	7.1	4.4	3.6	4.0	5.4	3.1	4.3	
pH					pH units			pH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
PCBs																						
Total Polychlorinated Biphenyls (PCBs)	**0.0341**	**0.277**			mg/kg	0.0341	CCME Sediment ISQG Freshwater	1336-36-3	**1.04**	**4.05**	**2.291**	**1.91**	**1.38**	**4.57**	**0.203**	**1.108**	**2.21**	**0.706**	**0.398**	**0.592**	**0.487**	**1.00**	**0.165**	**1.46**	**0.69**	
Aroclor 1016			**0.00700**	53.0	mg/kg	0.00700	MOE 93 - Sediment - LEL	12674-11-2	**< 0.0090**	**< 0.023**	**< 0.024**	< 0.0090	< 0.015	< 0.014	< 0.034	**< 0.0090**	**< 0.23**	**< 0.0090**	**< 0.070**	**< 0.070**	**< 0.12**	< 0.034	**< 0.070**	< 0.034	**< 0.075**	
Aroclor 1221					mg/kg			11104-28-2	< 0.0090	< 0.023	< 0.024	< 0.0090	< 0.015	< 0.014	< 0.034	< 0.0090	< 0.23	< 0.0090	< 0.070	< 0.070	< 0.12	< 0.034	< 0.070	< 0.034	< 0.075	
Aroclor 1232					mg/kg			11141-16-5	< 0.0090	< 0.023	< 0.024	< 0.0090	< 0.015	< 0.014	< 0.034	< 0.0090	< 0.23	< 0.0090	< 0.070	< 0.070	< 0.12	< 0.034	< 0.070	< 0.034	< 0.075	
Aroclor 1242					mg/kg			53469-21-9	< 0.0090	< 0.023	< 0.075	< 0.015	< 0.020	< 0.070	< 0.034	< 0.020	< 0.23	< 0.030	< 0.070	< 0.070	< 0.12	< 0.034	< 0.070	< 0.045	< 0.075	
Aroclor 1248			**0.0300**	150.0	mg/kg	0.0300	MOE 93 - Sediment - LEL	12672-29-6	< 0.0090	< 0.023	< 0.024	< 0.0090	< 0.015	< 0.014	< 0.034	< 0.0090	**< 0.23**	< 0.0090	**< 0.070**	**< 0.070**	**< 0.12**	< 0.034	**< 0.070**	< 0.034	**< 0.075**	
Aroclor 1254	**0.06**	**0.34**	**0.0600**	34.0	mg/kg	0.06	CCME Sediment ISQG Freshwater	11097-69-1	**0.419**	**1.62**	**0.981**	**0.567**	**0.382**	**1.35**	**< 0.075**	**0.393**	**0.645**	**0.259**	**0.150**	**0.243**	**0.204**	**0.340**	**0.073**	**0.440**	**0.239**	
Aroclor 1260			**0.00500**	24.0	mg/kg	0.00500	MOE 93 - Sediment - LEL	11096-82-5	**0.621**	**2.43**	**1.31**	1.34	0.995	3.22	0.203	**0.715**	**1.57**	**0.447**	**0.247**	**0.349**	**0.283**	0.657	**0.092**	1.02	**0.451**	
Aroclor 1262					mg/kg			37324-23-5	< 0.0090	< 0.023	< 0.024	< 0.0090	< 0.015	< 0.014	< 0.034	< 0.0090	< 0.045	< 0.0090	< 0.014	< 0.014	< 0.023	< 0.034	< 0.014	< 0.034	< 0.015	
Aroclor 1268					mg/kg			11100-14-4	< 0.0090	< 0.023	< 0.024	< 0.0090	< 0.015	< 0.014	< 0.034	< 0.0090	< 0.045	< 0.0090	< 0.014	< 0.014	< 0.023	< 0.034	< 0.014	< 0.034	< 0.015	
Physical																						
Texture					none			Texture	-	-	-	Fine	-	Fine	Fine	-	-	Fine	-	-	-	-	Fine	-	Fine	-
Ungrouped Analytes																						
Fraction Organic Carbon					g/g			FOC	-	-	-	0.0629	0.289	0.126	0.304	0.0849	0.101	0.127	0.0616	0.0764	0.117	0.0774	0.0422	0.136	0.0927	
Initial pH					pH units			pH_INITIAL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
MOISTURE AT LIQUID LIMIT					%			MOIST_LL	-	-	-	76	-	116	-	97	-	N/A	-	-	-	114	-	136	-	
Moisture at Plastic Limit					%			MOIST_PL	-	-	-	58	-	105	-	88	-	N/A	-	-	-	93	-	127	-	
Plasticity Index					%			PLAST_INDEX	-	-	-	18	-	11	-	9	-	N/A	-	-	-	21	-	10	-	

Canadian Sediment Quality Guidelines for the Protection of Aquatic Life - Interim freshwater sediment quality guidelines
Canadian Sediment Quality Guidelines for the Protection of Aquatic Life - Probable effect levels - Freshwater
MOE 93 - Sediment - LEL
MOE 93 - Sediment - SEL
< Indicates parameter was below laboratory equipment detection limit.
> Indicates parameter detected above equipment analytical range.
- Chemical not analyzed or criteria not defined.
Output generated by GalReport.

Parameter	CCME Sediment ISQG Freshwater	CCME Sediment PEL Freshwater	MOE 93 - Sediment - LEL	MOE 93 - Sediment - SEL	Unit	MCS	MCS Name	CAS_RN	PCW-SG-009	PCW-SG-010	PCW-SG-011	PCW-SG-012	PCW-SG-013	PCW-SG-014	PCW-SG-015	PCW-SG-016	PPOM-SC-002A	PPOM-SC-002B	PPOM-SC-002C	PPOM-SC-004A	PPOM-SC-004B	PPOM-SC-004C	PPOM-SG-001	PPOM-SG-002	PPOM-SG-003
Location																									
Sample Name									PCW-SG-009	PCW-SG-010	PCW-SG-011	PCW-SG-012	PCW-SG-013	PCW-SG-014	PCW-SG-015	PCW-SG-016	PPOM-SC-002A	PPOM-SC-002B	PPOM-SC-002C	PPOM-SC-004A	PPOM-SC-004B	PPOM-SC-004C	PPOM-SG-001	PPOM-SG-002	PPOM-SG-003
Sample Date									2021-10-04	2021-10-04	2021-10-05	2021-10-04	2021-10-05	2021-10-04	2021-10-04	2021-10-04	2021-10-02	2021-10-02	2021-10-02	2021-10-02	2021-10-02	2021-10-02	2021-10-02	2021-10-02	2021-10-02
FIELD_SDG									L2647880	L2647880	L2650176	L2647880	L2650176	L2647880	L2647880	L2647880	L2647897	L2647897	L2647897	L2647897	L2647897	L2647897	L2647897	L2647897	L2647897
PARENT_SAMPLE_CODE																									
SAMPLE_TYPE_CODE									N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SYS_SAMPLE_CODE									L2647880-14	L2647880-13	L2650176-7	L2647880-12	L2650176-10	L2647880-17	L2647880-16	L2647880-18	L2647897-25	L2647897-26	L2647897-28	L2647897-15	L2647897-16	L2647897-17	L2647897-8	L2647897-27	L2647897-9
Field and Physical																									
Moisture, Percent					%			MOIST	83.3	82.2	74.1	82.8	81.4	73.4	80.4	82.4	70.6	73.3	79.2	72.8	85.7	84.4	79.8	79.8	83.1
Sieve - #200 (>0.075mm)					%			SIEVE>0.075MM	-	-	1.7	-	2.7	-	-	-	1.6	-	-	< 1.0	< 1.0	-	-	1.3	-
Index of Additive Cancer Risk (IACR)					none			PAH_IACR	18.7	32.0	32.8	39.0	38.0	40.4	20.7	10.9	26.0	48.2	17.9	23.0	0.82	< 0.50	24.3	27.6	24.7
Hydrocarbons																									
Acenaphthene	**0.00671**	**0.0889**			mg/kg	0.00671	CCME Sediment ISQG Freshwater	83-32-9	**0.094**	**0.208**	**0.241**	**0.264**	**0.225**	**0.389**	**0.134**	**0.062**	**0.200**	**0.788**	**0.586**	**0.205**	**0.038**	**0.044**	**0.140**	**0.200**	**0.168**
Acenaphthylene	**0.00587**	**0.128**			mg/kg	0.00587	CCME Sediment ISQG Freshwater	208-96-8	**0.584**	**1.18**	**0.944**	**1.67**	**1.64**	**1.15**	**0.421**	**0.209**	**0.578**	**1.64**	**0.526**	**0.661**	**< 0.038**	**< 0.025**	**0.536**	**0.498**	**0.746**
Acridine					mg/kg			260-94-6	< 0.050	< 0.10	0.125	< 0.10	0.132	< 0.14	< 0.10	< 0.050	0.087	0.365	0.164	0.083	< 0.075	< 0.050	< 0.060	0.082	< 0.070
Anthracene	**0.0469**	**0.245**	**0.220**	370.0	mg/kg	0.0469	CCME Sediment ISQG Freshwater	120-12-7	**0.213**	**0.400**	**0.468**	**0.607**	**0.436**	**0.622**	**0.243**	**0.115**	**0.311**	**1.08**	**0.409**	**0.284**	< 0.030	< 0.020	**0.244**	**0.315**	**0.286**
Benz(a)anthracene	**0.0317**	**0.385**	**0.320**	1480	mg/kg	0.0317	CCME Sediment ISQG Freshwater	56-55-3	**0.827**	**1.35**	**1.43**	**1.88**	**1.81**	**1.87**	**0.898**	**0.430**	**1.14**	**2.75**	**1.08**	**1.15**	**< 0.075**	**< 0.050**	**1.18**	**1.17**	**1.15**
Benzo(a)pyrene Total Potency Equivalence (TPE)					mg/kg			PAH_TPE	1.80	3.13	3.10	3.95	3.99	3.78	1.85	0.944	2.34	4.80	1.71	2.10	0.078	< 0.036	2.33	2.44	2.35
Benzo(g,h,i)perylene			**0.170**	320.0	mg/kg	0.170	MOE 93 - Sediment - LEL	191-24-2	**0.889**	**1.51**	**1.29**	**1.85**	**1.54**	**1.78**	**0.928**	**0.496**	**1.19**	**1.83**	**0.722**	**0.909**	< 0.075	< 0.050	**1.09**	**1.30**	**1.19**
Benzo(a)pyrene	**0.0319**	**0.782**	**0.370**	1440	mg/kg	0.0319	CCME Sediment ISQG Freshwater	50-32-8	**1.26**	**2.18**	**2.18**	**2.84**	**2.93**	**2.61**	**1.24**	**0.626**	**1.59**	**3.44**	**1.22**	**1.45**	**0.044**	**< 0.025**	**1.61**	**1.64**	**1.63**
Benzo(b,j) fluoranthene					mg/kg			Benz_Fluo_bj	1.38	2.37	2.31	2.70	2.50	3.02	1.55	0.876	1.87	3.16	1.21	1.70	< 0.075	< 0.050	1.68	1.96	1.73
Fluoranthene	**0.111**	**2.355**	**0.750**	1020	mg/kg	0.111	CCME Sediment ISQG Freshwater	206-44-0	**0.950**	**1.68**	**2.16**	**2.25**	**1.90**	**3.08**	**1.45**	**0.730**	**1.92**	**3.76**	**2.06**	**1.65**	0.089	0.045	**1.59**	**2.16**	**1.64**
Indeno(1,2,3-c,d)pyrene			**0.200**	320.0	mg/kg	0.200	MOE 93 - Sediment - LEL	193-39-5	**0.677**	**1.25**	**1.22**	**1.25**	**1.25**	**1.47**	**0.812**	**0.417**	**0.937**	**1.64**	**0.503**	**0.832**	< 0.075	< 0.050	**0.965**	**0.962**	**0.980**
Naphthalene	**0.0346**	**0.391**			mg/kg	0.0346	CCME Sediment ISQG Freshwater	91-20-3	**0.044**	**0.135**	**0.078**	**0.103**	**0.059**	**0.132**	**0.044**	< 0.025	**0.055**	**0.096**	**0.063**	**0.100**	**< 0.038**	< 0.025	**0.063**	**0.059**	**0.076**
Pyrene	**0.053**	**0.875**	**0.490**	850.0	mg/kg	0.053	CCME Sediment ISQG Freshwater	129-00-0	**1.44**	**2.49**	**3.04**	**3.27**	**3.25**	**4.13**	**1.85**	**0.902**	**2.70**	**6.23**	**2.93**	**2.59**	**0.091**	0.039	**2.21**	**2.77**	**2.15**
2-methylnaphthalene	**0.0202**	**0.201**			mg/kg	0.0202	CCME Sediment ISQG Freshwater	91-57-6	**0.043**	**0.103**	**0.080**	**0.110**	**0.078**	**0.123**	**0.048**	**0.025**	**0.061**	**0.096**	**0.056**	**0.088**	**< 0.038**	**< 0.025**	**0.051**	**0.063**	**0.061**
Dibenz(a,h)anthracene	**0.00622**	**0.135**	**0.0600**	130.0	mg/kg	0.00622	CCME Sediment ISQG Freshwater	53-70-3	**0.202**	**0.347**	**0.307**	**0.408**	**0.381**	**0.413**	**0.213**	**0.111**	**0.258**	**0.452**	**0.157**	**0.212**	**< 0.038**	**< 0.025**	**0.247**	**0.287**	**0.253**
Index of Additive Cancer Risk (IACR)					none			PAH_IACR	18.7	32.0	32.8	39.0	38.0	40.4	20.7	10.9	26.0	48.2	17.9	23.0	0.82	< 0.50	24.3	27.6	24.7
Quinoline					mg/kg			91-22-5	< 0.025	< 0.025	< 0.030	< 0.025	< 0.025	< 0.038	< 0.025	< 0.025	< 0.038	< 0.030	< 0.015	< 0.015	< 0.038	< 0.025	< 0.015	< 0.038	< 0.025
Fluorene	**0.0212**	**0.144**	**0.190**	160.0	mg/kg	0.0212	CCME Sediment ISQG Freshwater	86-73-7	**0.115**	**0.252**	**0.228**	**0.325**	**0.263**	**0.351**	**0.135**	**0.072**	**0.171**	**0.590**	**0.304**	**0.143**	**0.050**	**0.041**	**0.133**	**0.173**	**0.174**
Total Organic Carbon			**1.00**	**10.0**	%	1.00	MOE 93 - Sediment - LEL	TOC	**8.25**	**9.28**	**8.02**	**11.6**	**11.8**	**8.18**	**7.54**	**7.20**	**7.33**	**8.59**	**15.3**	**10.8**	**22.7**	**37.2**	**11.0**	**7.36**	**8.31**
1-Methylnaphthalene					mg/kg			90-12-0	0.034	0.084	0.071	0.093	0.063	0.142	0.055	< 0.025	0.064	0.095	0.048	0.060	< 0.038	< 0.025	0.046	0.060	0.060
Chrysene	**0.0571**	**0.862**	**0.340**	460.0	mg/kg	0.0571	CCME Sediment ISQG Freshwater	218-01-9	**0.994**	**1.66**	**1.84**	**2.14**	**2.08**	**2.21**	**1.20**	**0.605**	**1.46**	**3.01**	**1.28**	**1.28**	**< 0.075**	< 0.050	**1.34**	**1.63**	**1.27**
Phenanthrene	**0.0419**	**0.515**	**0.560**	950.0	mg/kg	0.0419	CCME Sediment ISQG Freshwater	85-01-8	**0.393**	**0.830**	**1.07**	**1.18**	**0.839**	**1.69**	**0.674**	**0.308**	**0.871**	**2.34**	**1.42**	**0.571**	**0.087**	**0.058**	**0.563**	**0.948**	**0.832**
Benzo(k)fluoranthene			**0.240**	1340	mg/kg	0.240	MOE 93 - Sediment - LEL	207-08-9	**0.383**	**0.683**	**0.842**	**0.833**	**0.900**	**0.823**	**0.473**	0.235	**0.671**	**1.05**	**0.345**	**0.469**	< 0.075	< 0.050	**0.577**	**0.762**	**0.607**
Metals																									
Aluminum					mg/kg			7429-90-5	11700	12500	8850	14700	12900	9820	12100	11500	13300	13100	7500	18100	11100	1130	12500	11400	13500
Antimony					mg/kg			7440-36-0	1.82	3.65	3.27	3.55	4.66	4.23	2.68	1.59	2.23	9.19	24.6	4.72	7.7	0.19	2.48	1.73	3.42
Arsenic	**5.9**	**17**	**6.00**	**33.0**	mg/kg	5.9	CCME Sediment ISQG Freshwater	7440-38-2	**5.91**	**9.90**	5.35	**8.63**	**10.4**	5.46	5.53	5.90	**6.84**	**20.8**	**38.6**	**18.3**	**19.9**	1.26	**6.65**	4.95	**7.07**
Barium					mg/kg			7440-39-3	221	352	244	348	329	269	258	266	245	303	426	306	211	73.5	266	213	331
Beryllium					mg/kg			7440-41-7	0.47	0.51	0.43	0.57	0.60	0.47	0.49	0.46	0.51	0.54	0.36	0.76	< 4.0	< 0.10	0.51	0.45	0.58
Bismuth					mg/kg			7440-69-9	0.41	1.06	0.70	0.95	1.69	0.78	0.69	0.42	0.72	0.94	1.98	0.86	< 8.0	< 0.20	0.56	0.55	0.65
Boron|H.W.E Boron					mg/kg			7440-42-8	10.9	9.6	0.84|9.6	11.9	0.60|14	13.1	13.0	11.2	0.39|9.9	11.2	17.5	0.98|14	< 200	29.6	12.8	0.43|9.7	16
Cadmium	**0.6**	3.5	**0.600**	10.0	mg/kg	0.6	CCME Sediment ISQG Freshwater	7440-43-9	**0.761**	**1.74**	**1.37**	**1.70**	**1.78**	**1.28**	**1.04**	**0.727**	**1.37**	**1.80**	**1.77**	**1.91**	**1.91**	0.191	**1.41**	**1.08**	**1.32**
Calcium					mg/kg			7440-70-2	96100	112000	102000	79400	87300	149000	158000	164000	132000	91900	98600	58800	28100	30000	129000	131000	169000
Chromium			**26.0**	**110.0**	mg/kg	26.0	MOE 93 - Sediment - LEL	7440-47-3	**1790**	**5330**	**3910**	**2250**	**7650**	**4380**	**2050**	**1090**	**2950**	**6120**	**16400**	**5150**	**7400**	**81.5**	**4020**	**1950**	**3890**
Chromium Trivalent (Cr(III))					mg/kg			16065-83-1	-	-	3880	-	7650	-	-	-	2940	-	-	5130	-	-	-	1930	-
Chromium Hexavalent (Cr(VI))					mg/kg			18540-29-9	-	-	33.3	-	< 1.0	-	-	-	13.6	-	-	17.9	-	-	-	18.3	-
Cobalt					mg/kg			7440-48-4	9.07	14.1	8.81	13.9	13.7	9.03	9.62	9.67	11.2	16.7	13.6	17.9	15.1	1.15	11.7	9.64	11.6
Copper	**35.7**	**197**	**16.0**	**110.0**	mg/kg	16.0	MOE 93 - Sediment - LEL	7440-50-8	**40.0**	**81.8**	**74.4**	**85.9**	**77.4**	**81.4**	**63.2**	**44.3**	**82.2**	**65.0**	**53.7**	**61.1**	**45**	5.73	**82.0**	**71.7**	**69.7**
Iron			**20000**	**40000**	mg/kg	20000	MOE 93 - Sediment - LEL	7439-89-6	18700	**25300**	17900	**26400**	**23900**	**20900**	**21400**	20000	**24000**	**21000**	14000	**28700**	**20200**	4100	**25000**	**21400**	**24800**
Lead	**35**	**91.3**	**31.0**	**250.0**	mg/kg	31.0	MOE 93 - Sediment - LEL	7439-92-1	**157**	**338**	**304**	**383**	**425**	**330**	**223**	**132**	**262**	**549**	**750**	**387**	**433**	6.65	**223**	**196**	**263**
Lithium					mg/kg			7439-93-2	10.7	9.1	9.2	9.5	13.0	10.5	12.3	10.5	12.4	11.7	5.9	16.9	< 80	< 2.0	9.6	11.1	15.2
Magnesium					mg/kg			7439-95-4	10500	13900	12100	13600	11800	14300	13700	11600	16000	11000	6420	13700	8130	3240	15700	15400	15300
Manganese			**460.0**	**1100.0**	mg/kg	460.0	MOE 93 - Sediment - LEL	7439-96-5	**637**	**607**	373	**563**	**552**	421	**556**	**611**	**531**	**480**	445	**571**	401	232	**525**	**495**	**803**
Mercury	**0.17**	**0.486**	**0.200**	**2.00**	mg/kg	0.17	CCME Sediment ISQG Freshwater	7439-97-6	**0.271**	**0.556**	**0.376**	**0.594**	**0.681**	**0.334**	**0.241**	**0.177**	**0.310**	**0.781**	**0.921**	**0.700**	**0.915**	0.037	**0.289**	**0.278**	**0.295**
Molybdenum					mg/kg			7439-98-7	1.10	1.65	1.81	2.31	2.16	2.13	1.52	1.28	1.72	2.12	1.51	1.70	< 4.0	2.10	1.82	1.42	1.94
Nickel			**16.0**	**75.0**	mg/kg	16.0	MOE 93 - Sediment - LEL	7440-02-0	**18.1**	**25.4**	**18.7**	**26.3**	**24.3**	**19.6**	**20.8**	**19.0**	**23.9**	**24.3**	15.9	**31.7**	**< 20**	2.20	**25.1**	**21.0**	**23.4**
Phosphorus			**600.0**	**2000.0**	mg/kg	600.0	MOE 93 - Sediment - LEL	7723-14-0	**1060**	**2060**	**1580**	**2180**	**2120**	**1660**	**1300**	**1100**	**1490**	**1580**	**1720**	**1530**	**< 2000**	339	**1430**	**1210**	**1810**
Potassium					mg/kg			7440-09-7	2900	2920	2070	3160	2910	2350	2940	3020	2710	2810	1500	4230	< 4000	220	3140	2580	3160
Selenium					mg/kg			7782-49-2	0.71	1.18	0.75	1.30	1.19	0.73	0.80	0.90	0.88	0.91	0.84	1.18	< 8.0	0.55	1.17	0.79	1.15
Silver					mg/kg			7440-22-4	0.42	0.79	0.74	0.99	1.56	0.75	0.51	0.34	0.70	1.02	0.66	0.85	< 4.0	< 0.10	0.52	0.51	0.58
Sodium					mg/kg			7440-23-5	518	609	457	562	490	425	515	571	528	565	729	720	< 2000	761	674	489	610
Strontium					mg/kg			7440-24-6	594	713	559	522	516	691	841	1040	727	490	573	420	338	539	808	675	917
Sulphur (S8)					mg/kg			7704-34-9	5400	8000	4600	8900	8200	4900	5800	6700	5500	6500	10700	9100	< 40000	16300	9100	5100	7400
Thallium					mg/kg			7440-28-0	0.223	0.338	0.261	0.376	0.33	0.319	0.274	0.236	0.257	0.323	0.256	0.37	< 2.0	< 0.050	0.323	0.239	0.29
Tin					mg/kg			7440-31-5	5.6	12.3	9.4	13.7	15.6	12.6	7.8	4.6	7.9	20.6	36.6	13.6	< 80	< 2.0	7.3	6.4	8.2
Titanium					mg/kg			7440-32-6	649	655	443	755	671	444	553	571	568	693	462	1210	759	44.2	672	493	711
Tungsten					mg/kg			7440-33-7	1.13	2.07	1.85	1.61	1.2	3.55	3.14	2.19	1.53	< 0.50	< 0.50	< 1.0	< 20	< 0.50	2.25	2.27	2.7
Uranium					mg/kg			7440-61-1	0.504	0.585	0.417	0.661	0.59	0.483	0.560	0.613	0.534	0.614	0.661	0.80	< 2.0	0.873	0.590	0.460	0.64
Vanadium					mg/kg			7440-62-2	32.4	37.5	27.4	39.7	36.0	30.6	35.0	35.6	37.4	37.7	22.7	54.2	33.3	4.16	41.4	32.6	42.7
Zinc	**123**	**315**	**120.0**	820.0	mg/kg	120.0	MOE 93 - Sediment - LEL	7440-66-6	**183**	**378**	**327**	**428**	**387**	**374**	**290**	**195**	**333**	**317**	**299**	**269**	**218**	16.3	**345**	**307**	**305**
Zirconium					mg/kg			7440-67-7	2.8	2.6	1.7	3.1	2.9	2.2	2.4	2.6	3.0	3.3	2.6	5.9	< 40	< 1.0	3.2	2.5	2.3
pH					pH units			pH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PCBs																									
Total Polychlorinated Biphenyls (PCBs)	**0.0341**	**0.277**			mg/kg	0.0341	CCME Sediment ISQG Freshwater	1336-36-3	**0.421**	**0.539**	**0.814**	**0.863**	**1.205**	**< 0.52**	**0.318**	**< 0.27**	**0.877**	**1.48**	**0.512**	**0.349**	**< 0.80**	**< 0.045**	**0.445**	**0.534**	**< 0.23**
Aroclor 1016			**0.00700**	53.0	mg/kg	0.00700	MOE 93 - Sediment - LEL	12674-11-2	**< 0.12**	**< 0.12**	**< 0.0090**	**< 0.12**	**< 0.015**	**< 0.23**	**< 0.12**	**< 0.12**	**< 0.014**	**< 0.014**	**< 0.0090**	< 0.0030	**< 0.012**	**< 0.015**	**< 0.015**	**< 0.014**	**< 0.0090**
Aroclor 1221					mg/kg			11104-28-2	< 0.12	< 0.12	< 0.0090	< 0.12	< 0.015	< 0.23	< 0.12	< 0.12	< 0.014	< 0.014	< 0.0090	< 0.0030	< 0.012	< 0.015	< 0.015	< 0.014	< 0.0090
Aroclor 1232					mg/kg			11141-16-5	< 0.12	< 0.12	< 0.0090	< 0.12	< 0.015	< 0.23	< 0.12	< 0.12	< 0.014	< 0.014	< 0.0090	< 0.0030	< 0.012	< 0.015	< 0.015	< 0.014	< 0.0090
Aroclor 1242					mg/kg			53469-21-9	< 0.12	< 0.12	< 0.060	< 0.12	< 0.040	< 0.23	< 0.12	< 0.12	< 0.014	< 0.014	< 0.030	< 0.0030	< 0.012	< 0.015	< 0.015	< 0.014	< 0.0090
Aroclor 1248			**0.0300**	150.0	mg/kg	0.0300	MOE 93 - Sediment - LEL	12672-29-6	**< 0.12**	**< 0.12**	< 0.0090	**< 0.12**	< 0.015	**< 0.23**	**< 0.12**	**< 0.12**	< 0.014	< 0.014	< 0.0090	< 0.0030	< 0.012	< 0.015	< 0.015	< 0.014	< 0.0090
Aroclor 1254	**0.06**	**0.34**	**0.0600**	34.0	mg/kg	0.06	CCME Sediment ISQG Freshwater	11097-69-1	**0.171**	**0.204**	**0.285**	**0.301**	**0.391**	**0.124**	**0.128**	**0.107**	**0.362**	**0.607**	**0.209**	**0.160**	**< 0.40**	< 0.015	**0.165**	**0.237**	**< 0.14**
Aroclor 1260			**0.00500**	24.0	mg/kg	0.00500	MOE 93 - Sediment - LEL	11096-82-5	**0.250**	**0.335**	**0.529**	**0.562**	**0.814**	**0.160**	**0.190**	**< 0.065**	**0.515**	**0.874**	**0.303**	**0.189**	**< 0.65**	**< 0.015**	**0.280**	**0.296**	**< 0.18**
Aroclor 1262					mg/kg			37324-23-5	< 0.023	< 0.023	< 0.0090	< 0.023	< 0.015	< 0.014	< 0.023	< 0.023	< 0.014	< 0.014	< 0.0090	< 0.0030	< 0.012	< 0.015	< 0.015	< 0.014	< 0.0090
Aroclor 1268					mg/kg			11100-14-4	< 0.023	< 0.023	< 0.0090	< 0.023	< 0.015	< 0.014	< 0.023	< 0.023	< 0.014	< 0.014	< 0.0090	< 0.0030	< 0.012	< 0.015	< 0.015	< 0.014	< 0.0090
Physical																									
Texture					none			Texture	-	-	Fine	-	Fine	-	-	-	Fine	-	-	Fine	Fine	-	-	Fine	-
Ungrouped Analytes																									
Fraction Organic Carbon					g/g			FOC	0.0825	0.0928	0.0802	0.116	0.118	0.0818	0.0754	0.0720	0.0733	0.0859	0.153	0.108	0.227	0.372	0.110	0.0736	0.0831
Initial pH					pH units			pH_INITIAL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MOISTURE AT LIQUID LIMIT					%			MOIST_LL	-	-	99	-	121	-	-	-	92	-	-	101	-	-	-	96	-
Moisture at Plastic Limit					%			MOIST_PL	-	-	80	-	105	-	-	-	71	-	-	89	-	-	-	77	-
Plasticity Index					%			PLAST_INDEX	-	-	19	-	16	-	-	-	21	-	-	11	-	-	-	19	-

Canadian Sediment Quality Guidelines for the Protection of Aquatic Life - Interim freshwater sediment quality guidelines
Canadian Sediment Quality Guidelines for the Protection of Aquatic Life - Probable effect levels - Freshwater
MOE 93 - Sediment - LEL
MOE 93 - Sediment - SEL
< Indicates parameter was below laboratory equipment detection limit.
> Indicates parameter detected above equipment analytical range.
- Chemical not analyzed or criteria not defined.
Output generated by GalReport.

Parameter	CCME Sediment ISQG Freshwater	CCME Sediment PEL Freshwater	MOE 93 - Sediment - LEL	MOE 93 - Sediment - SEL	Unit	MCS	MCS Name	CAS_RN	Location	PPOM-SG-004	PPOM-SG-005	PPOM-SG-006	TC0M-SG-002	TC0M-SG-003	TC0M-SG-004	TC0M-SG-005	TC0M-SG-008	TC1-SG-001	TC1-SG-002	TC1-SG-003	TC1-SG-004	TC1-SG-005	TC1-SG-006	TC1-SG-007	TC1-SG-008	TC1-SG-009
									Sample Name	PPOM-SG-004	PPOM-SG-005	PPOM-SG-006	TC0M-SG-002	TC0M-SG-003	TC0M-SG-004	TC0M-SG-005	TC0M-SG-008	TC1-SG-001	TC1-SG-002	TC1-SG-003	TC1-SG-004	TC1-SG-005	TC1-SG-006	TC1-SG-007	TC1-SG-008	TC1-SG-009
									Sample Date	2021-10-02	2021-10-02	2021-10-02	2021-09-28	2021-09-28	2021-09-28	2021-09-28	2021-09-28	2021-09-28	2021-09-28	2021-09-28	2021-09-28	2021-09-28	2021-10-06	2021-10-06	2021-10-06	2021-10-07
									FIELD_SDG	L2647897	L2647897	L2647897	L2646459	L2646459	L2646459	L2646459	L2646459	L2646459	L2646459	L2646459	L2646459	L2646459	L2650174	L2650174	L2650174	L2650175
									PARENT_SAMPLE_CODE																	
									SAMPLE_TYPE_CODE	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
									SYS_SAMPLE_CODE	L2647897-18	L2647897-10	L2647897-11	L2646459-21	L2646459-22	L2646459-23	L2646459-24	L2646459-25	L2646459-1	L2646459-2	L2646459-3	L2646459-4	L2646459-5	L2650174-1	L2650174-2	L2650174-5	L2650175-2
Field and Physical																										
Moisture, Percent					%			MOIST		82.3	87.3	83.2	86.6	85.1	87.6	80.5	86.9	85.5	88.3	85.8	87.6	83.8	84.5	85.7	85.3	86.4
Sieve - #200 (>0.075mm)					%			SIEVE>0.075MM		< 1.0	-	-	-	-	-	-	-	-	-	< 1.0	-	-	< 1.0	< 1.0	1.2	1.2
Index of Additive Cancer Risk (IACR)					none			PAH_IACR		19.3	11.9	15.3	8.62	11.2	9.27	17.9	11.9	7.70	6.74	6.52	6.44	4.83	7.35	11.5	7.27	8.68
Hydrocarbons																										
Acenaphthene	**0.00671**	**0.0889**			mg/kg	0.00671	CCME Sediment ISQG Freshwater	83-32-9		**0.127**	**0.072**	**0.109**	**0.042**	**0.096**	**0.057**	**0.263**	**0.072**	**< 0.038**	**< 0.038**	**< 0.038**	**0.041**	**< 0.025**	**0.031**	**< 0.038**	**< 0.038**	**0.039**
Acenaphthylene	**0.00587**	**0.128**			mg/kg	0.00587	CCME Sediment ISQG Freshwater	208-96-8		**0.540**	**0.171**	**0.418**	**0.137**	**0.336**	**0.215**	**0.700**	**0.278**	**0.140**	**0.141**	**0.137**	**0.130**	**0.101**	**0.200**	**0.300**	**0.192**	**0.238**
Acridine					mg/kg			260-94-6		< 0.050	< 0.075	< 0.050	< 0.075	< 0.075	< 0.075	0.056	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.050	< 0.050	< 0.075	< 0.075	< 0.075
Anthracene	**0.0469**	**0.245**	**0.220**	370.0	mg/kg	0.0469	CCME Sediment ISQG Freshwater	120-12-7		**0.211**	**0.099**	**0.173**	**0.080**	**0.129**	**0.089**	**0.267**	**0.099**	**0.069**	**0.069**	**0.065**	**0.079**	**0.054**	**0.077**	**0.125**	**0.083**	**0.094**
Benz(a)anthracene	**0.0317**	**0.385**	**0.320**	1480	mg/kg	0.0317	CCME Sediment ISQG Freshwater	56-55-3		**0.855**	**0.461**	**0.672**	**0.360**	**0.477**	**0.366**	**0.904**	**0.530**	**0.304**	**0.270**	**0.288**	**0.303**	**0.233**	**0.285**	**0.498**	**0.313**	**0.342**
Benzo(a)pyrene Total Potency Equivalence (TPE)					mg/kg			PAH_TPE		1.72	0.976	1.34	0.730	0.989	0.811	1.66	1.11	0.673	0.599	0.591	0.581	0.438	0.724	1.14	0.686	0.844
Benzo(g,h,i)perylene			**0.170**	320.0	mg/kg	0.170	MOE 93 - Sediment - LEL	191-24-2		**0.859**	**0.583**	**0.688**	**0.355**	**0.407**	**0.376**	**0.627**	**0.623**	**0.383**	**0.337**	**0.315**	**0.300**	**0.223**	**0.386**	**0.550**	**0.313**	**0.384**
Benzo(a)pyrene	**0.0319**	**0.782**	**0.370**	1440	mg/kg	0.0319	CCME Sediment ISQG Freshwater	50-32-8		**1.14**	**0.624**	**0.896**	**0.484**	**0.676**	**0.550**	**1.16**	**0.761**	**0.444**	**0.396**	**0.393**	**0.386**	**0.294**	**0.505**	**0.806**	**0.488**	**0.584**
Benzo(b,j) fluoranthene					mg/kg			Benz_Fluo_bj		1.40	0.919	1.12	0.596	0.754	0.633	1.11	0.806	0.593	0.509	0.477	0.475	0.354	0.492	0.730	0.484	0.623
Fluoranthene	**0.111**	**2.355**	**0.750**	1020	mg/kg	0.111	CCME Sediment ISQG Freshwater	206-44-0		**1.35**	**0.829**	**1.05**	**0.512**	**0.794**	**0.544**	**1.40**	**0.798**	**0.465**	**0.398**	**0.379**	**0.449**	**0.323**	**0.364**	**0.546**	**0.372**	**0.434**
Indeno(1,2,3-c,d)pyrene			**0.200**	320.0	mg/kg	0.200	MOE 93 - Sediment - LEL	193-39-5		**0.805**	**0.484**	**0.585**	**0.323**	**0.400**	**0.331**	**0.607**	**0.455**	**0.297**	**0.289**	**0.275**	**0.248**	0.182	**0.283**	**0.398**	**0.220**	**0.360**
Naphthalene	**0.0346**	**0.391**			mg/kg	0.0346	CCME Sediment ISQG Freshwater	91-20-3		**0.056**	**< 0.038**	**0.054**	**< 0.038**	**< 0.038**	**< 0.038**	**0.039**	**< 0.038**	**< 0.038**	**< 0.038**	**< 0.038**	**< 0.038**	< 0.025	< 0.025	**< 0.038**	**< 0.038**	**< 0.038**
Pyrene	**0.053**	**0.875**	**0.490**	850.0	mg/kg	0.053	CCME Sediment ISQG Freshwater	129-00-0		**1.83**	**0.996**	**1.40**	**0.621**	**0.984**	**0.685**	**1.63**	**0.994**	**0.566**	**0.467**	**0.461**	**0.484**	**0.373**	**0.513**	**0.782**	**0.529**	**0.580**
2-methylnaphthalene	**0.0202**	**0.201**			mg/kg	0.0202	CCME Sediment ISQG Freshwater	91-57-6		**0.049**	**< 0.038**	**0.051**	**< 0.038**	**< 0.038**	**< 0.038**	**0.028**	**< 0.038**	**< 0.038**	**< 0.038**	**< 0.038**	**< 0.038**	**< 0.025**	**< 0.025**	**< 0.038**	**< 0.038**	**< 0.038**
Dibenz(a,h)anthracene	**0.00622**	**0.135**	**0.0600**	130.0	mg/kg	0.00622	CCME Sediment ISQG Freshwater	53-70-3		**0.198**	**0.122**	**0.154**	**0.082**	**0.104**	**0.088**	**0.171**	**0.126**	**0.084**	**0.074**	**0.072**	**0.072**	**0.052**	**< 0.17**	**< 0.26**	**< 0.15**	**0.098**
Index of Additive Cancer Risk (IACR)					none			PAH_IACR		19.3	11.9	15.3	8.62	11.2	9.27	17.9	11.9	7.70	6.74	6.52	6.44	4.83	7.35	11.5	7.27	8.68
Quinoline					mg/kg			91-22-5		< 0.025	< 0.038	< 0.025	< 0.038	< 0.038	< 0.038	< 0.025	< 0.038	< 0.038	< 0.038	< 0.038	< 0.038	< 0.025	< 0.025	< 0.038	< 0.038	< 0.038
Fluorene	**0.0212**	**0.144**	**0.190**	160.0	mg/kg	0.0212	CCME Sediment ISQG Freshwater	86-73-7		**0.138**	**0.068**	**0.115**	**0.051**	**0.085**	**0.062**	**0.164**	**0.066**	**0.039**	**0.039**	**< 0.038**	**0.047**	**0.030**	**0.039**	**0.056**	**0.039**	**0.050**
Total Organic Carbon			**1.00**	**10.0**	%	1.00	MOE 93 - Sediment - LEL	TOC		**9.73**	**8.86**	**11.3**	**7.59**	**9.76**	**7.81**	**8.89**	**7.64**	**7.85**	**8.07**	**7.42**	**7.73**	**5.92**	**7.50**	**8.31**	**9.33**	**9.42**
1-Methylnaphthalene					mg/kg			90-12-0		0.044	< 0.038	0.039	< 0.038	< 0.038	< 0.038	0.038	< 0.038	< 0.038	< 0.038	< 0.038	< 0.038	< 0.025	< 0.025	< 0.038	< 0.038	< 0.038
Chrysene	**0.0571**	**0.862**	**0.340**	460.0	mg/kg	0.0571	CCME Sediment ISQG Freshwater	218-01-9		**1.08**	**0.659**	**0.856**	**0.494**	**0.648**	**0.511**	**1.03**	**0.680**	**0.407**	**0.351**	**0.331**	**0.340**	**0.247**	**0.419**	**0.631**	**0.436**	**0.429**
Phenanthrene	**0.0419**	**0.515**	**0.560**	950.0	mg/kg	0.0419	CCME Sediment ISQG Freshwater	85-01-8		**0.473**	**0.333**	**0.424**	**0.206**	**0.356**	**0.219**	**0.635**	**0.305**	**0.188**	**0.166**	**0.155**	**0.216**	**0.141**	**0.158**	**0.226**	**0.156**	**0.188**
Benzo(k)fluoranthene			**0.240**	1340	mg/kg	0.240	MOE 93 - Sediment - LEL	207-08-9		**0.495**	**0.314**	**0.392**	**0.277**	**0.360**	**0.307**	**0.558**	**0.328**	0.184	0.164	0.157	0.145	0.109	0.212	**0.341**	0.215	0.216
Metals																										
Aluminum					mg/kg			7429-90-5		12100	12300	12200	10200	14300	15400	20200	13400	16100	16600	16400	15600	18800	18700	17900	17700	21800
Antimony					mg/kg			7440-36-0		2.03	1.35	1.65	0.97	1.21	1.07	1.28	1.44	0.94	0.89	0.82	0.82	0.63	0.70	< 2.0	< 2.0	0.95
Arsenic	**5.9**	**17**	**6.00**	**33.0**	mg/kg	5.9	CCME Sediment ISQG Freshwater	7440-38-2		**8.59**	5.29	**7.84**	5.21	**10.2**	**8.85**	**12.7**	**9.27**	**7.63**	**7.14**	**7.81**	**7.19**	**7.58**	**7.29**	5.6	4.7	**7.30**
Barium					mg/kg			7440-39-3		250	230	235	204	247	276	286	222	264	279	286	273	285	287	236	241	297
Beryllium					mg/kg			7440-41-7		0.47	0.46	0.53	0.42	0.57	0.58	0.80	0.56	0.61	0.64	0.63	0.61	0.69	0.73	< 2.0	< 2.0	0.69
Bismuth					mg/kg			7440-69-9		0.50	< 0.40	0.51	< 0.40	0.34	0.32	0.46	< 0.40	0.35	0.36	0.37	0.42	0.31	0.40	< 4.0	< 4.0	0.43
Boron|H.W.E Boron					mg/kg			7440-42-8		0.96|10.3	13	14	< 10	12.3	10.7	12.3	< 10	12.6	15.2	11.6	11.2	10.7	11.4	< 100	< 100	12
Cadmium	**0.6**	3.5	**0.600**	10.0	mg/kg	0.6	CCME Sediment ISQG Freshwater	7440-43-9		**1.21**	**0.629**	**0.899**	0.480	**0.812**	**0.741**	**0.917**	**0.656**	**0.688**	**0.666**	**0.665**	**0.632**	0.557	**0.776**	**0.69**	**0.70**	**0.833**
Calcium					mg/kg			7440-70-2		97700	122000	113000	123000	103000	137000	74100	99000	103000	102000	107000	88000	80300	85700	37000	32400	68100
Chromium			**26.0**	**110.0**	mg/kg	26.0	MOE 93 - Sediment - LEL	7440-47-3		**2230**	**737**	**1710**	**525**	**1100**	**824**	**1720**	**857**	**693**	**661**	**717**	**618**	**475**	**928**	**816**	**633**	**963**
Chromium Trivalent (Cr(III))					mg/kg			16065-83-1		2220	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium Hexavalent (Cr(VI))					mg/kg			18540-29-9		13.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cobalt					mg/kg			7440-48-4		12.0	9.88	12.2	8.24	15.6	12.4	26.8	12.2	11.3	11.8	11.6	12.4	13.5	13.2	12.6	12.0	13.5
Copper	**35.7**	**197**	**16.0**	**110.0**	mg/kg	16.0	MOE 93 - Sediment - LEL	7440-50-8		**61.3**	**46.6**	**53.8**	**31.2**	**49.0**	**44.6**	**57.3**	**38.1**	**40.9**	**41.4**	**39.3**	**37.3**	**33.7**	**42.8**	**40**	**37**	**44.3**
Iron			**20000**	**40000**	mg/kg	20000	MOE 93 - Sediment - LEL	7439-89-6		**22000**	**22500**	**23300**	18300	**25500**	**25800**	**34100**	**22500**	**24900**	**26100**	**26100**	**26200**	**28700**	**29300**	**28100**	**27600**	**30000**
Lead	**35**	**91.3**	**31.0**	**250.0**	mg/kg	31.0	MOE 93 - Sediment - LEL	7439-92-1		**210**	**95.7**	**158**	**67.3**	**134**	**107**	**185**	**103**	**101**	**98.1**	**101**	**96.6**	**78.6**	**112**	**93**	**75**	**113**
Lithium					mg/kg			7439-93-2		9.8	10.9	11.5	10.7	12.8	14.3	18.0	13.4	14.9	15.5	15.1	14.3	16.0	17.2	< 40	< 40	15.0
Magnesium					mg/kg			7439-95-4		13300	12500	12500	10600	13000	13800	14700	12600	13000	13000	12800	12100	13400	15200	13200	12200	14600
Manganese			**460.0**	**1100.0**	mg/kg	460.0	MOE 93 - Sediment - LEL	7439-96-5		**551**	**632**	**526**	**565**	**711**	**744**	**588**	**676**	**731**	**885**	**840**	**993**	**945**	**954**	**833**	**827**	**1020**
Mercury	**0.17**	**0.486**	**0.200**	**2.00**	mg/kg	0.17	CCME Sediment ISQG Freshwater	7439-97-6		**0.361**	**0.196**	**0.393**	0.145	**0.339**	**0.261**	**0.486**	**0.330**	**0.226**	**0.215**	**0.261**	**0.254**	**0.269**	**0.229**	**0.235**	**0.175**	**0.310**
Molybdenum					mg/kg			7439-98-7		1.36	1.30	1.18	0.98	1.09	1.22	0.98	0.98	1.53	1.36	1.39	1.31	0.89	1.17	< 2.0	< 2.0	1.27
Nickel			**16.0**	**75.0**	mg/kg	16.0	MOE 93 - Sediment - LEL	7440-02-0		**23.3**	**20.3**	**22.0**	**16.6**	**24.9**	**24.2**	**33.9**	**21.7**	**23.9**	**24.8**	**24.3**	**24.4**	**26.1**	**28.2**	**27**	**26**	**28.9**
Phosphorus			**600.0**	**2000.0**	mg/kg	600.0	MOE 93 - Sediment - LEL	7723-14-0		**1320**	**1140**	**1240**	**840**	**1150**	**1050**	**1330**	**950**	**1260**	**1260**	**1160**	**1160**	**1260**	**1270**	**1000**	**< 1000**	**1200**
Potassium					mg/kg			7440-09-7		2960	2940	2900	2550	3250	3850	4240	3120	3740	3910	3800	3820	4390	4280	3700	3500	5190
Selenium					mg/kg			7782-49-2		1.06	0.95	1.19	0.84	1.10	1.16	1.05	0.82	1.16	1.26	1.21	1.14	0.88	1.19	< 4.0	< 4.0	1.31
Silver					mg/kg			7440-22-4		0.46	0.32	0.37	0.22	0.36	0.37	0.40	0.39	0.39	0.40	0.47	0.48	0.38	0.46	< 2.0	< 2.0	0.59
Sodium					mg/kg			7440-23-5		599	560	600	510	634	657	1030	550	743	733	674	650	720	776	< 1000	< 1000	760
Strontium					mg/kg			7440-24-6		645	728	756	811	690	884	651	630	652	668	693	572	477	528	197	216	445
Sulphur (S8)					mg/kg			7704-34-9		8100	6900	9800	6000	10000	9300	12900	6400	9300	9700	9900	10300	7200	9800	< 20000	< 20000	9700
Thallium					mg/kg			7440-28-0		0.277	0.22	0.26	0.16	0.270	0.222	0.372	0.23	0.241	0.250	0.250	0.263	0.290	0.282	< 1.0	< 1.0	0.30
Tin					mg/kg			7440-31-5		7.0	< 4.0	5.9	< 4.0	6.0	4.7	11.5	4.7	4.1	4.4	4.9	4.2	5.6	4.4	< 40	< 40	5.1
Titanium					mg/kg			7440-32-6		696	611	729	603	791	871	1170	907	895	908	984	904	1230	1130	1040	985	1320
Tungsten					mg/kg			7440-33-7		1.18	1.9	1.2	1.3	0.70	0.75	0.55	< 1.0	0.93	0.81	0.56	< 0.50	< 0.50	< 0.50	< 10	< 10	< 1.0
Uranium					mg/kg			7440-61-1		0.585	0.59	0.61	0.50	0.692	0.675	0.646	0.60	0.819	0.802	0.860	0.830	0.731	0.815	< 1.0	< 1.0	1.00
Vanadium					mg/kg			7440-62-2		37.4	38.3	36.9	32.1	39.7	45.1	45.7	39.4	46.4	45.9	46.3	43.1	48.2	47.5	44.2	41.9	52.1
Zinc	**123**	**315**	**120.0**	820.0	mg/kg	120.0	MOE 93 - Sediment - LEL	7440-66-6		**260**	**193**	**217**	**130**	**196**	**176**	**247**	**152**	**168**	**165**	**159**	**153**	**400**	**171**	**151**	**142**	**177**
Zirconium					mg/kg			7440-67-7		2.8	2.5	2.9	< 2.0	4.1	3.0	6.2	2.6	3.0	3.2	3.2	3.5	4.3	4.3	< 20	< 20	4.3
pH					pH units			pH		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PCBs																										
Total Polychlorinated Biphenyls (PCBs)	**0.0341**	**0.277**			mg/kg	0.0341	CCME Sediment ISQG Freshwater	1336-36-3		**0.565**	**0.141**	**0.402**	**0.263**	**0.442**	**0.443**	**0.314**	**0.504**	**0.240**	**0.259**	**0.299**	**0.276**	**0.278**	**0.339**	**0.35**	**0.30**	**0.47**
Aroclor 1016			**0.00700**	53.0	mg/kg	0.00700	MOE 93 - Sediment - LEL	12674-11-2		**< 0.023**	< 0.0060	**< 0.023**	**< 0.023**	**< 0.023**	**< 0.023**	**< 0.023**	**< 0.023**	**< 0.023**	**< 0.023**	**< 0.023**	**< 0.023**	**< 0.015**	**< 0.024**	**< 0.036**	**< 0.036**	**< 0.034**
Aroclor 1221					mg/kg			11104-28-2		< 0.023	< 0.0060	< 0.023	< 0.023	< 0.023	< 0.023	< 0.023	< 0.023	< 0.023	< 0.023	< 0.023	< 0.023	< 0.015	< 0.024	< 0.036	< 0.036	< 0.034
Aroclor 1232					mg/kg			11141-16-5		< 0.023	< 0.0060	< 0.023	< 0.023	< 0.023	< 0.023	< 0.023	< 0.023	< 0.023	< 0.023	< 0.023	< 0.023	< 0.015	< 0.024	< 0.036	< 0.036	< 0.034
Aroclor 1242					mg/kg			53469-21-9		< 0.023	< 0.0060	< 0.023	< 0.023	< 0.023	< 0.023	< 0.023	< 0.023	< 0.023	< 0.023	< 0.023	< 0.023	< 0.015	< 0.024	< 0.036	< 0.036	< 0.034
Aroclor 1248			**0.0300**	150.0	mg/kg	0.0300	MOE 93 - Sediment - LEL	12672-29-6		< 0.023	< 0.0060	< 0.023	< 0.023	< 0.023	< 0.023	< 0.023	< 0.023	< 0.023	< 0.023	< 0.023	< 0.023	< 0.015	< 0.024	**< 0.036**	**< 0.036**	**< 0.034**
Aroclor 1254	**0.06**	**0.34**	**0.0600**	34.0	mg/kg	0.06	CCME Sediment ISQG Freshwater	11097-69-1		**0.206**	**0.0633**	**0.160**	**0.106**	**0.163**	**0.183**	**0.110**	**0.181**	**0.092**	**0.087**	**0.110**	**0.091**	**0.149**	**0.112**	**0.113**	**0.107**	**0.143**
Aroclor 1260			**0.00500**	24.0	mg/kg	0.00500	MOE 93 - Sediment - LEL	11096-82-5		**0.359**	**0.0780**	**0.242**	**0.158**	**0.280**	**0.260**	**0.204**	**0.324**	**0.149**	**0.172**	**0.189**	**0.185**	**0.129**	**0.227**	**0.240**	**0.191**	**0.323**
Aroclor 1262					mg/kg			37324-23-5		< 0.023	< 0.0060	< 0.023	< 0.023	< 0.023	< 0.023	< 0.023	< 0.023	< 0.023	< 0.023	< 0.023	< 0.023	< 0.015	< 0.024	< 0.036	< 0.036	< 0.034
Aroclor 1268					mg/kg			11100-14-4		< 0.023	< 0.0060	< 0.023	< 0.023	< 0.023	< 0.023	< 0.023	< 0.023	< 0.023	< 0.023	< 0.023	< 0.023	< 0.015	< 0.024	< 0.036	< 0.036	< 0.034
Physical																										
Texture					none			Texture		Fine	-	-	-	-	-	-	-	-	-	Fine	-	-	Fine	Fine	Fine	Fine
Ungrouped Analytes																										
Fraction Organic Carbon					g/g			FOC		0.0973	0.0886	0.113	0.0759	0.0976	0.0781	0.0889	0.0764	0.0785	0.0807	0.0742	0.0773	0.0592	0.0750	0.0831	0.0933	0.0942
Initial pH					pH units			pH_INITIAL		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MOISTURE AT LIQUID LIMIT					%			MOIST_LL		110	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Moisture at Plastic Limit					%			MOIST_PL		95	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Plasticity Index					%			PLAST_INDEX		15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Canadian Sediment Quality Guidelines for the Protection of Aquatic Life - Interim freshwater sediment quality guidelines
Canadian Sediment Quality Guidelines for the Protection of Aquatic Life - Probable effect levels - Freshwater
MOE 93 - Sediment - LEL
MOE 93 - Sediment - SEL
< Indicates parameter was below laboratory equipment detection limit.
> Indicates parameter detected above equipment analytical range.
- Chemical not analyzed or criteria not defined.
Output generated by GalReport.

Parameter	CCME Sediment ISQG Freshwater	CCME Sediment PEL Freshwater	MOE 93 - Sediment - LEL	MOE 93 - Sediment - SEL	Unit	MCS	MCS Name	CAS_RN														
Location																						
Sample Name									TC1-SG-010	TC1-SG-011	TC1-SG-012	TC1-SG-013	TC2A-SG-001	TC2A-SG-002	TC2A-SG-003	TC2A-SG-004	TC2A-SG-005	TC2A-SG-006	TC2A-SG-007	TC2A-SG-008	TC2A-SG-009	TC2A-SG-010	TC2A-SG-011	TC2A-SG-012	TC2A-SG-013
Sample Date									2021-10-07	2021-10-07	2021-10-07	2021-10-07	2021-09-28	2021-09-28	2021-09-28	2021-09-28	2021-09-28	2021-09-28	2021-09-28	2021-09-28	2021-09-28	2021-09-28	2021-09-28	2021-09-28	2021-09-28
FIELD_SDG									L2650175	L2650175	L2650175	L2650175	L2646459	L2646459	L2646459	L2646459	L2646459	L2646459	L2646459	L2646459	L2646459	L2646459	L2646459	L2646459	L2646459
PARENT_SAMPLE_CODE																						
SAMPLE_TYPE_CODE									N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SYS_SAMPLE_CODE									L2650175-1	L2650175-3	L2650175-5	L2650175-4	L2646459-6	L2646459-7	L2646459-8	L2646459-10	L2646459-11	L2646459-12	L2646459-13	L2646459-15	L2646459-16	L2646459-17	L2646459-18	L2646459-19	L2646459-20
Field and Physical																						
Moisture, Percent					%			MOIST	86.5	88.3	85.8	88.3	83.0	85.1	86.0	85.7	87.5	79.0	87.0	87.2	86.9	88.8	88.8	86.8	50.2
Sieve - #200 (>0.075mm)					%			SIEVE>0.075MM	< 1.0	< 1.0	1.3	< 1.0	-	-	-	-	-	6.0	-	-	-	< 1.0	-	-	-
Index of Additive Cancer Risk (IACR)					none			PAH_IACR	8.73	5.00	10.2	6.87	35.2	18.1	10.6	15.2	9.91	14.4	12.0	9.07	21.7	11.1	11.6	31.5	9.95
Hydrocarbons																						
Acenaphthene	**0.00671**	**0.0889**			mg/kg	0.00671	CCME Sediment ISQG Freshwater	83-32-9	**< 0.038**	**< 0.038**	**0.041**	**< 0.038**	**0.132**	**0.064**	**0.044**	**0.046**	**< 0.038**	**0.040**	**< 0.038**	**0.038**	**0.098**	**0.048**	**0.043**	**0.142**	**0.0544**
Acenaphthylene	**0.00587**	**0.128**			mg/kg	0.00587	CCME Sediment ISQG Freshwater	208-96-8	**0.252**	**0.139**	**0.274**	**0.169**	**0.228**	**0.173**	**0.153**	**0.097**	**0.089**	**0.042**	**0.076**	**0.148**	**0.051**	**0.184**	**0.087**	**0.234**	**0.0260**
Acridine					mg/kg			260-94-6	< 0.075	< 0.075	< 0.075	< 0.075	0.120	< 0.075	< 0.075	< 0.075	< 0.075	0.064	< 0.075	< 0.075	0.132	< 0.075	< 0.075	0.145	0.067
Anthracene	**0.0469**	**0.245**	**0.220**	370.0	mg/kg	0.0469	CCME Sediment ISQG Freshwater	120-12-7	**0.101**	**0.055**	**0.120**	**0.085**	**0.460**	**0.189**	**0.117**	**0.135**	**0.089**	**0.108**	**0.089**	**0.092**	**0.302**	**0.143**	**0.111**	**0.325**	**0.105**
Benz(a)anthracene	**0.0317**	**0.385**	**0.320**	1480	mg/kg	0.0317	CCME Sediment ISQG Freshwater	56-55-3	**0.348**	**0.207**	**0.416**	**0.278**	**2.03**	**0.946**	**0.481**	**0.656**	**0.413**	**0.629**	**0.490**	**0.399**	**1.14**	**0.492**	**0.460**	**1.33**	**0.449**
Benzo(a)pyrene Total Potency Equivalence (TPE)					mg/kg			PAH_TPE	0.848	0.486	0.985	0.634	2.84	1.50	0.945	1.22	0.818	1.10	0.945	0.809	1.73	0.984	0.892	2.43	0.759
Benzo(g,h,i)perylene			**0.170**	320.0	mg/kg	0.170	MOE 93 - Sediment - LEL	191-24-2	**0.345**	**0.189**	**0.397**	**0.260**	**1.15**	**0.683**	**0.523**	**0.718**	**0.508**	**0.582**	**0.469**	**0.379**	**0.740**	**0.430**	**0.445**	**1.13**	**0.337**
Benzo(a)pyrene	**0.0319**	**0.782**	**0.370**	1440	mg/kg	0.0319	CCME Sediment ISQG Freshwater	50-32-8	**0.597**	**0.348**	**0.698**	**0.438**	**1.80**	**0.957**	**0.615**	**0.753**	**0.508**	**0.679**	**0.601**	**0.513**	**1.11**	**0.634**	**0.562**	**1.54**	**0.483**
Benzo(b,j) fluoranthene					mg/kg			Benz_Fluo_bj	0.646	0.357	0.741	0.500	2.56	1.34	0.777	1.15	0.757	1.13	0.934	0.658	1.62	0.811	0.900	2.42	0.761
Fluoranthene	**0.111**	**2.355**	**0.750**	1020	mg/kg	0.111	CCME Sediment ISQG Freshwater	206-44-0	**0.427**	**0.310**	**0.504**	**0.362**	**3.71**	**1.66**	**0.786**	**1.36**	**0.803**	**1.61**	**1.08**	**0.603**	**2.18**	**0.744**	**0.953**	**2.66**	**1.28**
Indeno(1,2,3-c,d)pyrene			**0.200**	320.0	mg/kg	0.200	MOE 93 - Sediment - LEL	193-39-5	**0.317**	0.160	**0.348**	**0.245**	**1.24**	**0.646**	**0.442**	**0.629**	**0.448**	**0.543**	**0.449**	**0.349**	**0.685**	**0.401**	**0.400**	**1.10**	**0.330**
Naphthalene	**0.0346**	**0.391**			mg/kg	0.0346	CCME Sediment ISQG Freshwater	91-20-3	**< 0.038**	**< 0.038**	**< 0.038**	**< 0.038**	**0.080**	**0.039**	**< 0.038**	**< 0.038**	**< 0.038**	0.025	**< 0.038**	**< 0.038**	**< 0.038**	**< 0.038**	**< 0.038**	**< 0.038**	**0.079**	0.0262
Pyrene	**0.053**	**0.875**	**0.490**	850.0	mg/kg	0.053	CCME Sediment ISQG Freshwater	129-00-0	**0.584**	**0.377**	**0.694**	**0.458**	**3.15**	**1.54**	**0.817**	**1.21**	**0.748**	**1.30**	**0.969**	**0.658**	**1.86**	**0.790**	**0.869**	**2.37**	**0.985**
2-methylnaphthalene	**0.0202**	**0.201**			mg/kg	0.0202	CCME Sediment ISQG Freshwater	91-57-6	**< 0.038**	**< 0.038**	**< 0.038**	**< 0.038**	**0.065**	**< 0.038**	**< 0.038**	**< 0.038**	**< 0.038**	0.018	**< 0.038**	**< 0.038**	**< 0.038**	**< 0.038**	**< 0.038**	**< 0.038**	**0.076**	0.0195
Dibenz(a,h)anthracene	**0.00622**	**0.135**	**0.0600**	130.0	mg/kg	0.00622	CCME Sediment ISQG Freshwater	53-70-3	**0.093**	**0.049**	**0.102**	**0.069**	**0.340**	**0.186**	**0.123**	**0.164**	**0.112**	**0.140**	**0.113**	**0.124**	**0.206**	**0.142**	**0.110**	**0.287**	**0.0855**
Index of Additive Cancer Risk (IACR)					none			PAH_IACR	8.73	5.00	10.2	6.87	35.2	18.1	10.6	15.2	9.91	14.4	12.0	9.07	21.7	11.1	11.6	31.5	9.95
Quinoline					mg/kg			91-22-5	< 0.038	< 0.038	< 0.038	< 0.038	< 0.025	< 0.038	< 0.038	< 0.038	< 0.038	< 0.015	< 0.038	< 0.038	< 0.038	< 0.038	< 0.038	< 0.038	< 0.0075
Fluorene	**0.0212**	**0.144**	**0.190**	160.0	mg/kg	0.0212	CCME Sediment ISQG Freshwater	86-73-7	**0.051**	**< 0.038**	**0.055**	**0.045**	**0.226**	**0.078**	**0.057**	**0.065**	**0.043**	**0.065**	**0.048**	**0.049**	**0.135**	**0.069**	**0.061**	**0.213**	**0.0649**
Total Organic Carbon			**1.00**	**10.0**	%	1.00	MOE 93 - Sediment - LEL	TOC	**9.49**	**9.69**	**10.3**	**11.0**	**7.95**	**8.50**	**7.69**	**8.70**	**8.67**	**6.99**	**8.75**	**8.70**	**7.72**	**8.90**	**8.41**	**9.38**	**2.33**
1-Methylnaphthalene					mg/kg			90-12-0	< 0.038	< 0.038	< 0.038	< 0.038	0.054	< 0.038	< 0.038	< 0.038	< 0.038	0.018	< 0.038	< 0.038	< 0.038	< 0.038	< 0.038	0.062	0.0156
Chrysene	**0.0571**	**0.862**	**0.340**	460.0	mg/kg	0.0571	CCME Sediment ISQG Freshwater	218-01-9	**0.428**	**0.273**	**0.495**	**0.332**	**2.05**	**1.06**	**0.591**	**0.962**	**0.596**	**0.993**	**0.738**	**0.472**	**1.43**	**0.573**	**0.699**	**1.88**	**0.616**
Phenanthrene	**0.0419**	**0.515**	**0.560**	950.0	mg/kg	0.0419	CCME Sediment ISQG Freshwater	85-01-8	**0.179**	**0.122**	**0.209**	**0.146**	**1.89**	**0.686**	**0.367**	**0.586**	**0.342**	**0.697**	**0.419**	**0.263**	**1.11**	**0.362**	**0.440**	**1.06**	**0.725**
Benzo(k)fluoranthene			**0.240**	1340	mg/kg	0.240	MOE 93 - Sediment - LEL	207-08-9	0.200	0.124	**0.257**	0.181	**0.820**	**0.427**	**0.252**	**0.397**	**0.246**	**0.361**	**0.315**	0.227	**0.511**	**0.278**	**0.325**	**0.883**	**0.271**
Metals																						
Aluminum					mg/kg			7429-90-5	20700	19600	22900	24000	12900	14600	18000	11300	14800	11900	14500	19500	11700	21600	13300	15000	3930
Antimony					mg/kg			7440-36-0	0.74	0.50	1.08	0.75	1.19	1.20	1.21	1.01	1.29	1.15	1.38	1.21	1.42	1.05	1.03	1.44	0.29
Arsenic	**5.9**	**17**	**6.00**	**33.0**	mg/kg	5.9	CCME Sediment ISQG Freshwater	7440-38-2	**6.09**	4.30	**8.66**	**6.09**	**12.4**	**17.0**	**14.5**	**10.4**	**15.6**	**6.19**	**12.3**	**12.2**	**8.08**	**11.1**	**11.5**	**11.3**	1.43
Barium					mg/kg			7440-39-3	265	267	292	302	205	241	280	211	250	173	225	268	185	299	235	215	51.7
Beryllium					mg/kg			7440-41-7	0.83	0.71	0.78	0.75	0.58	0.59	0.69	0.51	0.57	0.46	0.56	0.72	0.50	0.73	0.59	0.68	< 0.20
Bismuth					mg/kg			7440-69-9	0.44	0.23	0.57	< 0.40	0.69	0.88	0.71	0.94	0.67	0.59	0.78	0.64	0.66	0.73	0.87	1.45	< 0.40
Boron|H.W.E Boron					mg/kg			7440-42-8	12.5	11.4	13	13	13.2	12.1	11.5	12.9	13	0.77|14.2	13	13	15	0.73|12.5	14	13.0	< 10
Cadmium	**0.6**	3.5	**0.600**	10.0	mg/kg	0.6	CCME Sediment ISQG Freshwater	7440-43-9	**0.880**	**0.741**	**0.946**	**0.874**	**1.49**	**1.07**	**0.888**	**0.801**	**0.777**	0.486	**0.791**	**0.908**	0.548	**1.05**	**0.855**	1.32	0.080
Calcium					mg/kg			7440-70-2	36300	44600	44800	40600	75100	71000	76200	93100	109000	145000	103000	84600	138000	76900	146000	106000	101000
Chromium			**26.0**	**110.0**	mg/kg	26.0	MOE 93 - Sediment - LEL	7440-47-3	**827**	**371**	**1020**	**634**	**146**	**247**	**642**	**185**	**374**	**81.3**	**328**	**695**	**117**	**712**	**275**	**187**	20.4
Chromium Trivalent (Cr(III))					mg/kg			16065-83-1	-	-	-	-	-	-	-	-	-	81	-	-	-	708	-	-	-
Chromium Hexavalent (Cr(VI))					mg/kg			18540-29-9	-	-	-	-	-	-	-	-	-	0.54	-	-	-	4.5	-	-	-
Cobalt					mg/kg			7440-48-4	12.8	11.6	15.3	13.7	14.5	13.0	15.9	10.7	13.6	10.4	13.0	15.6	10.8	16.7	12.5	14.8	4.87
Copper	**35.7**	**197**	**16.0**	**110.0**	mg/kg	16.0	MOE 93 - Sediment - LEL	7440-50-8	**42.6**	**34.5**	**50.9**	**43.5**	**77.7**	**74.1**	**53.4**	**64.9**	**59.5**	**64.5**	**65.1**	**55.9**	**63.5**	**62.8**	**65.2**	**117**	**22.8**
Iron			**20000**	**40000**	mg/kg	20000	MOE 93 - Sediment - LEL	7439-89-6	**29200**	**26600**	**32100**	**31900**	**22800**	**23100**	**27000**	18400	**24400**	18800	**23800**	**28300**	**21000**	**30400**	**23200**	**25900**	11400
Lead	**35**	**91.3**	**31.0**	**250.0**	mg/kg	31.0	MOE 93 - Sediment - LEL	7439-92-1	**113**	**65.4**	**132**	**91.8**	**192**	**155**	**131**	**128**	**113**	**73.7**	**108**	**129**	**106**	**127**	**115**	**171**	20.1
Lithium					mg/kg			7439-93-2	17.7	15.0	17.0	16.1	12.8	13.2	16.6	12.2	14.7	12.9	14.2	17.9	13.1	17.9	14.6	15.6	5.7
Magnesium					mg/kg			7439-95-4	12800	11300	14700	13500	15300	13100	13500	12700	13700	18200	15200	14500	15900	15500	13600	17500	12500
Manganese			**460.0**	**1100.0**	mg/kg	460.0	MOE 93 - Sediment - LEL	7439-96-5	**801**	**868**	**1000**	**1110**	**475**	**600**	**880**	**480**	**662**	438	**728**	**930**	**504**	**960**	**580**	427	171
Mercury	**0.17**	**0.486**	**0.200**	**2.00**	mg/kg	0.17	CCME Sediment ISQG Freshwater	7439-97-6	**0.304**	0.150	**0.446**	**0.272**	**1.21**	**1.33**	**0.725**	**1.41**	**0.658**	**0.869**	**0.699**	**0.628**	**0.618**	**0.661**	**0.677**	**1.76**	0.0415
Molybdenum					mg/kg			7439-98-7	1.22	1.10	1.23	1.24	1.02	1.37	1.26	1.26	1.60	1.34	1.66	1.35	1.54	1.35	1.46	1.51	0.48
Nickel			**16.0**	**75.0**	mg/kg	16.0	MOE 93 - Sediment - LEL	7440-02-0	**29.0**	**25.7**	**31.7**	**30.7**	**24.9**	**25.6**	**28.9**	**20.5**	**25.4**	**19.6**	**24.9**	**29.5**	**21.6**	**33.0**	**24.4**	**30.9**	8.8
Phosphorus			**600.0**	**2000.0**	mg/kg	600.0	MOE 93 - Sediment - LEL	7723-14-0	**1100**	**1040**	**1240**	**1210**	**1100**	**1160**	**1160**	**1040**	**1150**	**1090**	**1170**	**1210**	**1180**	**1330**	**1220**	**1300**	**660**
Potassium					mg/kg			7440-09-7	4380	3930	5210	5110	3180	3300	4160	2760	3290	2610	3260	4050	2620	4710	3030	3330	960
Selenium					mg/kg			7782-49-2	1.27	1.24	1.49	1.49	1.25	1.44	1.24	1.41	1.72	1.07	1.57	1.53	1.73	1.78	2.02	2.10	< 0.40
Silver					mg/kg			7440-22-4	0.55	0.27	0.95	0.58	1.22	2.03	1.04	1.97	1.16	1.07	1.28	0.93	0.94	1.11	1.31	2.39	< 0.20
Sodium					mg/kg			7440-23-5	621	586	800	770	1150	563	637	540	620	561	640	660	550	737	730	568	220
Strontium					mg/kg			7440-24-6	235	296	272	268	269	345	415	379	541	406	436	431	460	392	647	351	216
Sulphur (S8)					mg/kg			7704-34-9	9700	9300	10700	10500	6800	8000	8700	7200	10200	5900	9700	9600	8000	11500	11000	9600	< 2000
Thallium					mg/kg			7440-28-0	0.329	0.278	0.35	0.32	0.398	0.321	0.305	0.315	0.26	0.279	0.27	0.30	0.27	0.317	0.28	0.520	0.11
Tin					mg/kg			7440-31-5	5.2	3.4	6.1	4.8	24.8	10.7	9.4	8.7	6.4	5.1	6.3	7.2	5.3	7.2	6.5	18.4	< 4.0
Titanium					mg/kg			7440-32-6	1210	1120	1460	1460	806	790	1060	629	828	568	826	1120	609	1080	675	734	339
Tungsten					mg/kg			7440-33-7	< 0.50	< 0.50	< 1.0	< 1.0	0.96	0.80	0.53	1.74	1.3	3.75	1.9	< 1.0	3.4	0.63	-	2.32	< 1.0
Uranium					mg/kg			7440-61-1	1.02	0.940	1.08	1.15	0.783	0.891	0.894	0.774	1.00	0.679	0.96	1.01	0.82	1.03	0.98	0.840	0.36
Vanadium					mg/kg			7440-62-2	49.5	44.3	54.9	53.7	39.8	42.3	48.2	33.1	43.6	37.2	43.2	47.9	38.4	50.2	37.0	44.0	23.6
Zinc	**123**	**315**	**120.0**	820.0	mg/kg	120.0	MOE 93 - Sediment - LEL	7440-66-6	**158**	**127**	**188**	**164**	**358**	**293**	**208**	**262**	**232**	**258**	**247**	**214**	**266**	**239**	**262**	**432**	70.1
Zirconium					mg/kg			7440-67-7	5.5	5.3	4.8	4.9	4.4	3.8	4.3	2.5	2.9	2.0	2.6	3.7	2.1	4.6	2.8	4.3	< 2.0
pH					pH units			pH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PCBs																						
Total Polychlorinated Biphenyls (PCBs)	**0.0341**	**0.277**			mg/kg	0.0341	CCME Sediment ISQG Freshwater	1336-36-3	**0.48**	**0.24**	**0.57**	**0.36**	**0.276**	**0.347**	**0.480**	**0.243**	**0.299**	**0.0985**	**0.141**	**0.174**	**0.164**	**0.395**	**0.328**	**0.377**	< 0.015
Aroclor 1016			**0.00700**	53.0	mg/kg	0.00700	MOE 93 - Sediment - LEL	12674-11-2	**< 0.034**	**< 0.034**	**< 0.034**	**< 0.034**	**< 0.015**	**< 0.023**	**< 0.023**	**< 0.023**	**< 0.023**	**< 0.0090**	**< 0.023**	**< 0.023**	**< 0.023**	**< 0.023**	**< 0.023**	**< 0.023**	< 0.0045
Aroclor 1221					mg/kg			11104-28-2	< 0.034	< 0.034	< 0.034	< 0.034	< 0.015	< 0.023	< 0.023	< 0.023	< 0.023	< 0.0090	< 0.023	< 0.023	< 0.023	< 0.023	< 0.023	< 0.023	< 0.0045
Aroclor 1232					mg/kg			11141-16-5	< 0.034	< 0.034	< 0.034	< 0.034	< 0.015	< 0.023	< 0.023	< 0.023	< 0.023	< 0.0090	< 0.023	< 0.023	< 0.023	< 0.023	< 0.023	< 0.023	< 0.0045
Aroclor 1242					mg/kg			53469-21-9	< 0.034	< 0.034	< 0.034	< 0.034	< 0.017	< 0.023	< 0.023	< 0.023	< 0.023	< 0.015	< 0.023	< 0.023	< 0.023	< 0.023	< 0.023	< 0.055	< 0.0045
Aroclor 1248			**0.0300**	150.0	mg/kg	0.0300	MOE 93 - Sediment - LEL	12672-29-6	**< 0.034**	**< 0.034**	**< 0.034**	**< 0.034**	< 0.015	< 0.023	< 0.023	< 0.023	< 0.023	< 0.0090	< 0.023	< 0.023	< 0.023	< 0.023	< 0.023	< 0.023	< 0.0045
Aroclor 1254	**0.06**	**0.34**	**0.0600**	34.0	mg/kg	0.06	CCME Sediment ISQG Freshwater	11097-69-1	**0.158**	**0.085**	**0.197**	**0.126**	**0.165**	**0.193**	**0.257**	**0.146**	**0.133**	0.0475	**0.077**	**0.090**	**0.096**	**0.178**	**0.174**	**0.231**	< 0.0067
Aroclor 1260			**0.00500**	24.0	mg/kg	0.00500	MOE 93 - Sediment - LEL	11096-82-5	**0.327**	**0.159**	**0.370**	**0.234**	**0.111**	**0.154**	**0.224**	**0.097**	**0.166**	**0.0510**	**0.064**	**0.085**	**0.068**	**0.217**	**0.154**	**0.146**	< 0.0045
Aroclor 1262					mg/kg			37324-23-5	< 0.034	< 0.034	< 0.034	< 0.034	< 0.015	< 0.023	< 0.023	< 0.023	< 0.023	< 0.0090	< 0.023	< 0.023	< 0.023	< 0.023	< 0.023	< 0.023	< 0.0045
Aroclor 1268					mg/kg			11100-14-4	< 0.034	< 0.034	< 0.034	< 0.034	< 0.015	< 0.023	< 0.023	< 0.023	< 0.023	< 0.0090	< 0.023	< 0.023	< 0.023	< 0.023	< 0.023	< 0.023	< 0.0045
Physical																						
Texture					none			Texture	Fine	Fine	Fine	Fine	-	-	-	-	-	Fine	-	-	-	-	Fine	-	-	-
Ungrouped Analytes																						
Fraction Organic Carbon					g/g			FOC	0.0949	0.0969	0.103	0.110	0.0795	0.0850	0.0769	0.0870	0.0867	0.0699	0.0875	0.0870	0.0772	0.0890	0.0841	0.0938	0.0233
Initial pH					pH units			pH_INITIAL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MOISTURE AT LIQUID LIMIT					%			MOIST_LL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Moisture at Plastic Limit					%			MOIST_PL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Plasticity Index					%			PLAST_INDEX	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Canadian Sediment Quality Guidelines for the Protection of Aquatic Life - Interim freshwater sediment quality guidelines
Canadian Sediment Quality Guidelines for the Protection of Aquatic Life - Probable effect levels - Freshwater
MOE 93 - Sediment - LEL
MOE 93 - Sediment - SEL
< Indicates parameter was below laboratory equipment detection limit.
> Indicates parameter detected above equipment analytical range.
- Chemical not analyzed or criteria not defined.
Output generated by GalReport.

Parameter	CCME Sediment ISQG Freshwater	CCME Sediment PEL Freshwater	MOE 93 - Sediment - LEL	MOE 93 - Sediment - SEL	Unit	MCS	MCS Name	CAS_RN														
Location									TC2B-SG-001	TC2B-SG-002	TC2B-SG-003	TC3A-SG-001	TC3A-SG-002	TC3A-SG-003	TC3A-SG-004	TC3B-SG-001	TC4-SC-010A	TC4-SC-010AX	TC4-SC-010BX	TC4-SC-010CX	TC4-SC-010DX	TC4-SG-001	TC4SG-002	TC4-SG-003	TC4-SG-003A
Sample Name									TC2B-SG-001	TC2B-SG-002	TC2B-SG-003	TC3A-SG-001	TC3A-SG-002	TC3A-SG-003	TC3A-SG-004	TC3B-SG-001	TC4-SC-010A	TC4-SC-010AX	TC4-SC-010BX	TC4-SC-010CX	TC4-SC-010DX	TC4-SG-001	TC4SG-002	TC4-SG-003	TC4-SG-003A
Sample Date									2021-10-07	2021-10-07	2021-10-07	2021-09-29	2021-09-29	2021-09-29	2021-10-07	2021-10-07	2021-09-30	2021-10-06	2021-10-06	2021-10-06	2021-10-06	2021-09-29	2021-09-29	2021-09-30	2021-09-30
FIELD_SDG									L2650175	L2650175	L2650175	L2646722	L2646722	L2646722	L2650175	L2650175	L2646743	L2650174	L2650174	L2650174	L2650174	L2646722	L2646722	L2646743	L2646743
PARENT_SAMPLE_CODE																									
SAMPLE_TYPE_CODE									N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SYS_SAMPLE_CODE									L2650175-10	L2650175-8	L2650175-9	L2646722-1	L2646722-2	L2646722-3	L2650175-7	L2650175-11	L2646743-17	L2650174-10	L2650174-11	L2650174-12	L2650174-13	L2646722-4	L2646722-5	L2646743-21	L2646743-19
Field and Physical																									
Moisture, Percent					%			MOIST	86.4	87.2	86.8	85.2	80.8	84.6	86.4	84.8	71.6	86.3	84.3	80.0	72.3	38.3	85.8	83.0	70.8
Sieve - #200 (>0.075mm)					%			SIEVE>0.075MM	< 1.0	1.1	1.4	10.0	-	3.8	1.7	3.8	-	-	-	-	-	-	-	-	-
Index of Additive Cancer Risk (IACR)					none			PAH_IACR	10.2	5.67	9.84	9.14	16.6	11.2	13.2	7.34	43.6	18.6	19.7	25.3	24.9	220	20.5	24.5	39.8
Hydrocarbons																									
Acenaphthene	**0.00671**	**0.0889**			mg/kg	0.00671	CCME Sediment ISQG Freshwater	83-32-9	**0.049**	**< 0.038**	**0.046**	**0.039**	**0.121**	**0.043**	**0.065**	**0.040**	**0.241**	**0.084**	**0.129**	**0.112**	**0.128**	**2.83**	**0.074**	**0.099**	**0.339**
Acenaphthylene	**0.00587**	**0.128**			mg/kg	0.00587	CCME Sediment ISQG Freshwater	208-96-8	**0.225**	**0.116**	**0.290**	**0.116**	**0.208**	**0.177**	**0.309**	**0.185**	**1.26**	**0.429**	**0.539**	**0.599**	**0.621**	**0.153**	**0.227**	**0.609**	**0.899**
Acridine					mg/kg			260-94-6	< 0.075	< 0.075	< 0.075	< 0.075	0.111	< 0.050	< 0.075	< 0.050	0.170	< 0.075	< 0.050	< 0.080	< 0.090	0.908	< 0.075	< 0.11	1.22
Anthracene	**0.0469**	**0.245**	**0.220**	370.0	mg/kg	0.0469	CCME Sediment ISQG Freshwater	120-12-7	**0.127**	**0.073**	**0.132**	**0.081**	**0.248**	**0.100**	**0.159**	**0.095**	**0.634**	**0.241**	**0.284**	**0.309**	**0.392**	**10.5**	**0.217**	**0.341**	**0.733**
Benz(a)anthracene	**0.0317**	**0.385**	**0.320**	1480	mg/kg	0.0317	CCME Sediment ISQG Freshwater	56-55-3	**0.456**	**0.255**	**0.415**	**0.377**	**0.833**	**0.505**	**0.542**	**0.385**	**2.33**	**0.990**	**1.09**	**1.46**	**1.25**	**16.1**	**0.977**	**1.12**	**2.19**
Benzo(a)pyrene Total Potency Equivalence (TPE)					mg/kg			PAH_TPE	0.963	0.532	0.985	0.761	1.36	1.01	1.27	0.751	4.72	1.97	2.12	2.59	2.62	17.3	1.74	2.40	3.77
Benzo(g,h,i)perylene			**0.170**	320.0	mg/kg	0.170	MOE 93 - Sediment - LEL	191-24-2	**0.483**	**0.284**	**0.480**	**0.478**	**0.749**	**0.549**	**0.547**	**0.343**	**2.08**	**0.854**	**0.940**	**1.07**	**1.18**	**5.89**	**0.843**	**1.23**	**1.70**
Benzo(a)pyrene	**0.0319**	**0.782**	**0.370**	1440	mg/kg	0.0319	CCME Sediment ISQG Freshwater	50-32-8	**0.666**	**0.363**	**0.694**	**0.485**	**0.869**	**0.670**	**0.876**	**0.537**	**3.40**	**1.44**	**1.54**	**1.86**	**1.88**	**10.9**	**1.15**	**1.63**	**2.58**
Benzo(b,j) fluoranthene					mg/kg			Benz_Fluo_bj	0.704	0.387	0.708	0.662	1.18	0.809	0.958	0.465	2.60	1.15	1.15	1.52	1.56	14.6	1.45	1.60	2.62
Fluoranthene	**0.111**	**2.355**	**0.750**	1020	mg/kg	0.111	CCME Sediment ISQG Freshwater	206-44-0	**0.653**	**0.369**	**0.501**	**0.728**	**1.68**	**0.779**	**0.716**	**0.450**	**2.04**	**1.08**	**0.907**	**1.48**	**1.39**	**34.2**	**1.48**	**1.37**	**2.86**
Indeno(1,2,3-c,d)pyrene			**0.200**	320.0	mg/kg	0.200	MOE 93 - Sediment - LEL	193-39-5	**0.331**	0.195	**0.350**	**0.362**	**0.604**	**0.466**	**0.487**	**0.231**	**1.69**	**0.573**	**0.628**	**0.775**	**0.825**	**5.85**	**0.634**	**1.07**	**1.50**
Naphthalene	**0.0346**	**0.391**			mg/kg	0.0346	CCME Sediment ISQG Freshwater	91-20-3	**< 0.038**	**< 0.038**	**< 0.038**	**< 0.038**	**0.070**	**0.040**	**0.057**	< 0.025	**0.209**	**0.074**	**0.046**	**0.036**	**0.086**	**0.612**	**0.042**	**0.089**	**0.210**
Pyrene	**0.053**	**0.875**	**0.490**	850.0	mg/kg	0.053	CCME Sediment ISQG Freshwater	129-00-0	**0.772**	**0.438**	**0.692**	**0.727**	**1.53**	**0.825**	**0.904**	**0.608**	**3.64**	**1.52**	**1.42**	**2.20**	**2.14**	**25.8**	**1.46**	**1.77**	**3.94**
2-methylnaphthalene	**0.0202**	**0.201**			mg/kg	0.0202	CCME Sediment ISQG Freshwater	91-57-6	**< 0.038**	**< 0.038**	**< 0.038**	**< 0.038**	**0.083**	**0.025**	**0.050**	**< 0.025**	**0.163**	**0.054**	**0.055**	**0.041**	**0.068**	**0.532**	**< 0.038**	**0.090**	**0.176**
Dibenz(a,h)anthracene	**0.00622**	**0.135**	**0.0600**	130.0	mg/kg	0.00622	CCME Sediment ISQG Freshwater	53-70-3	**0.111**	**0.064**	**0.112**	**0.099**	**0.170**	**0.127**	**0.148**	**0.080**	**0.499**	**< 0.41**	**< 0.44**	**< 0.53**	**< 0.60**	**2.00**	**0.208**	**0.298**	**0.422**
Index of Additive Cancer Risk (IACR)					none			PAH_IACR	10.2	5.67	9.84	9.14	16.6	11.2	13.2	7.34	43.6	18.6	19.7	25.3	24.9	220	20.5	24.5	39.8
Quinoline					mg/kg			91-22-5	< 0.038	< 0.038	< 0.038	< 0.038	< 0.025	< 0.025	< 0.038	< 0.025	< 0.015	< 0.038	< 0.025	< 0.025	< 0.015	0.032	< 0.038	< 0.025	0.026
Fluorene	**0.0212**	**0.144**	**0.190**	160.0	mg/kg	0.0212	CCME Sediment ISQG Freshwater	86-73-7	**0.056**	**0.038**	**0.056**	**0.045**	**0.161**	**0.056**	**0.075**	**0.044**	**0.262**	**0.095**	**0.108**	**0.096**	**0.114**	**4.44**	**0.089**	**0.128**	**0.542**
Total Organic Carbon			**1.00**	**10.0**	%	1.00	MOE 93 - Sediment - LEL	TOC	**9.47**	**9.92**	**9.82**	**9.58**	**11.2**	**9.28**	**8.82**	**7.54**	**7.63**	-	-	-	-	**2.81**	**7.98**	**7.44**	**9.61**
1-Methylnaphthalene					mg/kg			90-12-0	< 0.038	< 0.038	< 0.038	< 0.038	0.063	< 0.025	< 0.038	< 0.025	0.108	0.042	0.053	0.031	0.050	0.567	< 0.038	0.061	< 0.18
Chrysene	**0.0571**	**0.862**	**0.340**	460.0	mg/kg	0.0571	CCME Sediment ISQG Freshwater	218-01-9	**0.514**	**0.299**	**0.482**	**0.559**	**1.01**	**0.619**	**0.632**	**0.404**	**2.39**	**1.05**	**0.970**	**1.31**	**1.41**	**14.9**	**1.13**	**1.31**	**2.54**
Phenanthrene	**0.0419**	**0.515**	**0.560**	950.0	mg/kg	0.0419	CCME Sediment ISQG Freshwater	85-01-8	**0.286**	**0.139**	**0.180**	**0.309**	**0.915**	**0.371**	**0.327**	**0.163**	**0.919**	**0.495**	**0.397**	**0.493**	**0.653**	**30.6**	**0.690**	**0.614**	**1.89**
Benzo(k)fluoranthene			**0.240**	1340	mg/kg	0.240	MOE 93 - Sediment - LEL	207-08-9	**0.269**	0.154	0.220	**0.263**	**0.447**	**0.271**	**0.322**	0.182	**1.09**	**0.449**	**0.521**	**0.650**	**0.616**	**5.12**	**0.570**	**0.677**	**0.951**
Metals																									
Aluminum					mg/kg			7429-90-5	19700	24800	22200	14700	12700	16500	20300	15500	18500	18300	17500	19200	20600	4870	15100	13000	18400
Antimony					mg/kg			7440-36-0	0.86	0.54	0.76	1.64	2.37	1.15	1.00	0.40	0.93	0.43	0.47	0.67	0.77	1.31	1.22	0.88	3.68
Arsenic	**5.9**	**17**	**6.00**	**33.0**	mg/kg	5.9	CCME Sediment ISQG Freshwater	7440-38-2	**7.35**	5.35	**6.58**	**14.7**	**21.5**	**10.9**	**9.72**	3.65	**9.13**	4.70	5.12	**6.98**	**10.8**	2.67	**9.61**	**9.50**	**20.6**
Barium					mg/kg			7440-39-3	262	315	283	253	215	261	295	263	249	253	253	255	267	62.1	235	231	332
Beryllium					mg/kg			7440-41-7	0.66	0.74	0.72	0.85	0.67	0.67	0.73	0.42	0.74	0.63	0.65	0.67	0.75	0.26	0.57	0.48	0.70
Bismuth					mg/kg			7440-69-9	0.76	< 0.40	0.48	1.54	1.98	2.08	0.69	< 0.40	0.75	0.33	0.40	0.51	0.64	7.29	2.09	1.20	6.32
Boron|H.W.E Boron					mg/kg			7440-42-8	11	13	13	13	14	0.23|12.1	11	< 10	10	8.7	8.6	7.8	8.7	7.5	12.4	< 10	10
Cadmium	**0.6**	3.5	**0.600**	10.0	mg/kg	0.6	CCME Sediment ISQG Freshwater	7440-43-9	**0.864**	**0.684**	**0.830**	**1.09**	**1.36**	**0.919**	**0.931**	0.422	**0.903**	**0.629**	**0.670**	**0.839**	**0.848**	0.255	**1.18**	**0.808**	**2.41**
Calcium					mg/kg			7440-70-2	39500	47500	52800	121000	72600	98400	93200	164000	48400	81300	67900	55400	42000	56800	101000	88700	28700
Chromium			**26.0**	**110.0**	mg/kg	26.0	MOE 93 - Sediment - LEL	7440-47-3	**679**	**315**	**577**	**390**	**264**	**406**	**649**	**166**	**445**	**188**	**220**	**296**	**386**	**36.7**	**345**	**421**	**1230**
Chromium Trivalent (Cr(III))					mg/kg			16065-83-1	-	-	-	-	-	405	-	-	-	-	-	-	-	-	-	-	-	-
Chromium Hexavalent (Cr(VI))					mg/kg			18540-29-9	-	-	-	-	-	0.96	-	-	-	-	-	-	-	-	-	-	-	-
Cobalt					mg/kg			7440-48-4	13.7	13.8	12.6	13.7	15.7	13.7	14.2	7.73	13.1	11.1	11.2	12.7	14.0	5.48	13.0	11.3	16.3
Copper	**35.7**	**197**	**16.0**	**110.0**	mg/kg	16.0	MOE 93 - Sediment - LEL	7440-50-8	**63.2**	**38.9**	**47.6**	**69.2**	**103**	**59.1**	**54.9**	**25.8**	**47.4**	**45.3**	**44.5**	**52.5**	**46.3**	**80.2**	**64.8**	**50.8**	**111**
Iron			**20000**	**40000**	mg/kg	20000	MOE 93 - Sediment - LEL	7439-89-6	**28400**	**32100**	**28100**	**26000**	**27600**	**26100**	**28900**	18800	**27000**	**25600**	**25300**	**28200**	**29200**	14500	**23800**	**20700**	**26600**
Lead	**35**	**91.3**	**31.0**	**250.0**	mg/kg	31.0	MOE 93 - Sediment - LEL	7439-92-1	**109**	**59.7**	**94.1**	**500**	**308**	**196**	**127**	**37.7**	**130**	**65.0**	**78.5**	**119**	**166**	**174**	**234**	**142**	**399**
Lithium					mg/kg			7439-93-2	14.5	17.4	16.1	14.5	12.6	15.3	15.4	9.5	15.8	14.8	15.5	16.0	17.7	5.7	13.3	10.5	15.2
Magnesium					mg/kg			7439-95-4	13300	13700	12600	13000	11400	12000	13300	8710	10900	10300	9910	11000	11500	9710	11400	10500	12500
Manganese			**460.0**	**1100.0**	mg/kg	460.0	MOE 93 - Sediment - LEL	7439-96-5	**925**	**1230**	**957**	**546**	**469**	**719**	**971**	**786**	**631**	**954**	**780**	**666**	**666**	185	**586**	**672**	**522**
Mercury	**0.17**	**0.486**	**0.200**	**2.00**	mg/kg	0.17	CCME Sediment ISQG Freshwater	7439-97-6	**0.622**	0.165	**0.300**	**1.62**	**1.38**	**0.802**	**0.634**	0.115	**0.433**	**0.194**	**0.235**	**0.295**	**0.472**	**0.203**	**0.729**	**0.653**	**2.39**
Molybdenum					mg/kg			7439-98-7	1.32	1.07	1.25	1.90	1.28	1.25	1.37	0.92	0.87	0.94	1.00	1.02	0.95	0.44	1.11	0.74	1.07
Nickel			**16.0**	**75.0**	mg/kg	16.0	MOE 93 - Sediment - LEL	7440-02-0	**29.2**	**30.6**	**29.3**	**26.3**	**28.2**	**26.3**	**30.0**	**18.4**	**28.5**	**24.8**	**25.3**	**27.8**	**31.1**	9.88	**24.9**	**22.1**	**32.9**
Phosphorus			**600.0**	**2000.0**	mg/kg	600.0	MOE 93 - Sediment - LEL	7723-14-0	**1150**	**1170**	**1080**	**1280**	**1250**	**1220**	**1430**	**840**	**1130**	**954**	**847**	**866**	**970**	**886**	**1150**	**970**	**1410**
Potassium					mg/kg			7440-09-7	4670	5020	4780	3230	2590	3650	4490	2950	4060	3450	3460	3750	4000	1080	3490	2990	4040
Selenium					mg/kg			7782-49-2	1.37	1.29	1.27	2.09	2.00	1.47	1.58	1.01	1.19	1.19	1.29	1.25	1.16	0.22	1.48	1.07	1.57
Silver					mg/kg			7440-22-4	1.99	0.37	0.78	2.31	1.20	1.03	1.07	0.24	0.70	0.37	0.42	0.71	0.74	0.12	0.99	0.75	2.60
Sodium					mg/kg			7440-23-5	670	820	710	670	480	605	740	750	550	598	550	542	552	199	592	440	500
Strontium					mg/kg			7440-24-6	268	255	301	613	340	447	477	793	237	375	333	301	225	109	481	471	139
Sulphur (S8)					mg/kg			7704-34-9	9700	8000	8900	12600	9600	11000	9500	5800	5900	7900	8000	7500	6400	1200	9100	6000	5500
Thallium					mg/kg			7440-28-0	0.34	0.32	0.32	0.58	0.42	0.328	0.33	0.20	0.35	0.286	0.300	0.309	0.330	0.102	0.348	0.29	0.46
Tin					mg/kg			7440-31-5	6.8	< 4.0	5.0	10.2	28.4	9.4	7.0	< 4.0	8.7	3.4	4.6	5.1	6.4	10.9	10.1	9.1	31.5
Titanium					mg/kg			7440-32-6	1320	1500	1340	874	699	999	1160	899	1230	926	912	1010	1160	424	945	770	1140
Tungsten					mg/kg			7440-33-7	< 1.0	< 1.0	< 1.0	1.3	< 1.0	0.60	< 1.0	< 1.0	< 1.0	< 0.50	< 0.50	< 0.50	< 0.50	0.61	0.62	< 1.0	< 1.0
Uranium					mg/kg			7440-61-1	1.02	1.11	1.09	1.30	0.82	0.870	1.04	0.82	0.83	0.893	0.897	0.924	0.849	0.416	0.783	0.69	0.85
Vanadium					mg/kg			7440-62-2	48.9	54.6	49.5	41.8	36.9	41.9	47.1	32.4	44.8	37.4	37.9	43.4	47.8	19.0	39.0	32.6	46.1
Zinc	**123**	**315**	**120.0**	820.0	mg/kg	120.0	MOE 93 - Sediment - LEL	7440-66-6	**178**	**140**	**157**	**287**	**509**	**226**	**214**	91.3	**184**	**137**	**149**	**164**	**185**	**142**	**257**	**195**	**489**
Zirconium					mg/kg			7440-67-7	3.9	4.6	4.0	3.0	2.8	3.5	3.5	2.2	4.5	3.5	4.2	4.9	6.1	1.5	3.0	2.5	3.3
pH					pH units			pH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PCBs																									
Total Polychlorinated Biphenyls (PCBs)	**0.0341**	**0.277**			mg/kg	0.0341	CCME Sediment ISQG Freshwater	1336-36-3	**0.55**	**0.25**	**0.45**	**0.388**	**0.492**	**0.42**	**0.49**	**0.203**	**1.354**	**0.24**	**0.295**	**0.328**	**0.430**	**0.059**	**0.56**	**0.911**	**2.544**
Aroclor 1016			**0.00700**	53.0	mg/kg	0.00700	MOE 93 - Sediment - LEL	12674-11-2	**< 0.034**	**< 0.034**	**< 0.034**	**< 0.023**	**< 0.015**	**< 0.034**	**< 0.034**	**< 0.023**	**< 0.075**	**< 0.034**	**< 0.023**	**< 0.023**	**< 0.014**	**< 0.0095**	**< 0.034**	**< 0.075**	**< 0.090**
Aroclor 1221					mg/kg			11104-28-2	< 0.034	< 0.034	< 0.034	< 0.023	< 0.015	< 0.034	< 0.034	< 0.023	< 0.075	< 0.034	< 0.023	< 0.023	< 0.014	< 0.0095	< 0.034	< 0.075	< 0.090
Aroclor 1232					mg/kg			11141-16-5	< 0.034	< 0.034	< 0.034	< 0.023	< 0.015	< 0.034	< 0.034	< 0.023	< 0.075	< 0.034	< 0.023	< 0.023	< 0.014	< 0.0095	< 0.034	< 0.075	< 0.090
Aroclor 1242					mg/kg			53469-21-9	< 0.034	< 0.034	< 0.034	< 0.023	< 0.015	< 0.034	< 0.034	< 0.023	< 0.075	< 0.034	< 0.023	< 0.023	< 0.014	< 0.0095	< 0.034	< 0.075	< 0.16
Aroclor 1248			**0.0300**	150.0	mg/kg	0.0300	MOE 93 - Sediment - LEL	12672-29-6	**< 0.034**	**< 0.034**	**< 0.034**	< 0.023	< 0.015	**< 0.034**	**< 0.034**	< 0.023	**< 0.075**	**< 0.034**	< 0.023	< 0.023	< 0.014	< 0.0095	**< 0.034**	**< 0.075**	**< 0.090**
Aroclor 1254	**0.06**	**0.34**	**0.0600**	34.0	mg/kg	0.06	CCME Sediment ISQG Freshwater	11097-69-1	**0.194**	**0.091**	**0.151**	**0.208**	**0.327**	**0.196**	**0.218**	**0.072**	**0.824**	**0.106**	**0.172**	**0.159**	**0.230**	0.0414	**0.316**	**0.556**	**1.77**
Aroclor 1260			**0.00500**	24.0	mg/kg	0.00500	MOE 93 - Sediment - LEL	11096-82-5	**0.355**	**0.161**	**0.304**	**0.180**	**0.165**	**0.227**	**0.270**	**0.131**	**0.530**	**0.134**	**0.123**	**0.169**	**0.199**	**0.0184**	**0.241**	**0.355**	**0.774**
Aroclor 1262					mg/kg			37324-23-5	< 0.034	< 0.034	< 0.034	< 0.023	< 0.015	< 0.034	< 0.034	< 0.023	< 0.015	< 0.034	< 0.023	< 0.023	< 0.014	< 0.0045	< 0.034	< 0.015	< 0.090
Aroclor 1268					mg/kg			11100-14-4	< 0.034	< 0.034	< 0.034	< 0.023	< 0.015	< 0.034	< 0.034	< 0.023	< 0.015	< 0.034	< 0.023	< 0.023	< 0.014	< 0.0045	< 0.034	< 0.015	< 0.090
Physical																									
Texture					none			Texture	Fine	Fine	Fine	Fine	-	Fine	Fine	Fine	-	-	-	-	-	-	-	-	-
Ungrouped Analytes																									
Fraction Organic Carbon					g/g			FOC	0.0947	0.0992	0.0982	0.0958	0.112	0.0928	0.0882	0.0754	0.0763	-	-	-	-	0.0281	0.0798	0.0744	0.0961
Initial pH					pH units			pH_INITIAL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MOISTURE AT LIQUID LIMIT					%			MOIST_LL	-	-	-	-	-	-	-	-	85	-	-	-	-	-	-	-	-
Moisture at Plastic Limit					%			MOIST_PL	-	-	-	-	-	-	-	-	72	-	-	-	-	-	-	-	-
Plasticity Index					%			PLAST_INDEX	-	-	-	-	-	-	-	-	14	-	-	-	-	-	-	-	-

Canadian Sediment Quality Guidelines for the Protection of Aquatic Life - Interim freshwater sediment quality guidelines
Canadian Sediment Quality Guidelines for the Protection of Aquatic Life - Probable effect levels - Freshwater
MOE 93 - Sediment - LEL
MOE 93 - Sediment - SEL
< Indicates parameter was below laboratory equipment detection limit.
> Indicates parameter detected above equipment analytical range.
- Chemical not analyzed or criteria not defined.
Output generated by GalReport.

Parameter	CCME Sediment ISQG Freshwater	CCME Sediment PEL Freshwater	MOE 93 - Sediment - LEL	MOE 93 - Sediment - SEL	Unit	MCS	MCS Name	CAS_RN	
Location									
Sample Name									TC4-SG-003B
Sample Date									2021-09-30
FIELD_SDG									L2646743
PARENT_SAMPLE_CODE									
SAMPLE_TYPE_CODE									N
SYS_SAMPLE_CODE									L2646743-20
Field and Physical									
Moisture, Percent					%			MOIST	74.6
Sieve - #200 (>0.075mm)					%			SIEVE>0.075MM	-
Index of Additive Cancer Risk (IACR)					none			PAH_IACR	45.5
Hydrocarbons									
Acenaphthene	**0.00671**	**0.0889**			mg/kg	0.00671	CCME Sediment ISQG Freshwater	83-32-9	**0.511**
Acenaphthylene	**0.00587**	**0.128**			mg/kg	0.00587	CCME Sediment ISQG Freshwater	208-96-8	**1.00**
Acridine					mg/kg			260-94-6	2.01
Anthracene	**0.0469**	**0.245**	**0.220**	370.0	mg/kg	0.0469	CCME Sediment ISQG Freshwater	120-12-7	**0.896**
Benz(a)anthracene	**0.0317**	**0.385**	**0.320**	1480	mg/kg	0.0317	CCME Sediment ISQG Freshwater	56-55-3	**2.59**
Benzo(a)pyrene Total Potency Equivalence (TPE)					mg/kg			PAH_TPE	4.24
Benzo(g,h,i)perylene			**0.170**	320.0	mg/kg	0.170	MOE 93 - Sediment - LEL	191-24-2	**1.83**
Benzo(a)pyrene	**0.0319**	**0.782**	**0.370**	1440	mg/kg	0.0319	CCME Sediment ISQG Freshwater	50-32-8	**2.88**
Benzo(b,j) fluoranthene					mg/kg			Benz_Fluo_bj	2.79
Fluoranthene	**0.111**	**2.355**	**0.750**	1020	mg/kg	0.111	CCME Sediment ISQG Freshwater	206-44-0	**3.91**
Indeno(1,2,3-c,d)pyrene			**0.200**	320.0	mg/kg	0.200	MOE 93 - Sediment - LEL	193-39-5	**1.67**
Naphthalene	**0.0346**	**0.391**			mg/kg	0.0346	CCME Sediment ISQG Freshwater	91-20-3	**0.318**
Pyrene	**0.053**	**0.875**	**0.490**	850.0	mg/kg	0.053	CCME Sediment ISQG Freshwater	129-00-0	**5.24**
2-methylnaphthalene	**0.0202**	**0.201**			mg/kg	0.0202	CCME Sediment ISQG Freshwater	91-57-6	**< 0.26**
Dibenz(a,h)anthracene	**0.00622**	**0.135**	**0.0600**	130.0	mg/kg	0.00622	CCME Sediment ISQG Freshwater	53-70-3	**0.481**
Index of Additive Cancer Risk (IACR)					none			PAH_IACR	45.5
Quinoline					mg/kg			91-22-5	0.057
Fluorene	**0.0212**	**0.144**	**0.190**	160.0	mg/kg	0.0212	CCME Sediment ISQG Freshwater	86-73-7	**0.614**
Total Organic Carbon			**1.00**	**10.0**	%	1.00	MOE 93 - Sediment - LEL	TOC	**10.5**
1-Methylnaphthalene					mg/kg			90-12-0	< 0.31
Chrysene	**0.0571**	**0.862**	**0.340**	460.0	mg/kg	0.0571	CCME Sediment ISQG Freshwater	218-01-9	**3.16**
Phenanthrene	**0.0419**	**0.515**	**0.560**	950.0	mg/kg	0.0419	CCME Sediment ISQG Freshwater	85-01-8	**2.64**
Benzo(k)fluoranthene			**0.240**	1340	mg/kg	0.240	MOE 93 - Sediment - LEL	207-08-9	**1.28**
Metals									
Aluminum					mg/kg			7429-90-5	17800
Antimony					mg/kg			7440-36-0	3.44
Arsenic	**5.9**	**17**	**6.00**	**33.0**	mg/kg	5.9	CCME Sediment ISQG Freshwater	7440-38-2	**56.6**
Barium					mg/kg			7440-39-3	320
Beryllium					mg/kg			7440-41-7	0.66
Bismuth					mg/kg			7440-69-9	5.22
Boron|H.W.E Boron					mg/kg			7440-42-8	< 10
Cadmium	**0.6**	3.5	**0.600**	10.0	mg/kg	0.6	CCME Sediment ISQG Freshwater	7440-43-9	**1.67**
Calcium					mg/kg			7440-70-2	23400
Chromium			**26.0**	**110.0**	mg/kg	26.0	MOE 93 - Sediment - LEL	7440-47-3	**815**
Chromium Trivalent (Cr(III))					mg/kg			16065-83-1	-
Chromium Hexavalent (Cr(VI))					mg/kg			18540-29-9	-
Cobalt					mg/kg			7440-48-4	21.8
Copper	**35.7**	**197**	**16.0**	**110.0**	mg/kg	16.0	MOE 93 - Sediment - LEL	7440-50-8	**104**
Iron			**20000**	**40000**	mg/kg	20000	MOE 93 - Sediment - LEL	7439-89-6	**27300**
Lead	**35**	**91.3**	**31.0**	**250.0**	mg/kg	31.0	MOE 93 - Sediment - LEL	7439-92-1	**366**
Lithium					mg/kg			7439-93-2	13.9
Magnesium					mg/kg			7439-95-4	11100
Manganese			**460.0**	**1100.0**	mg/kg	460.0	MOE 93 - Sediment - LEL	7439-96-5	**497**
Mercury	**0.17**	**0.486**	**0.200**	**2.00**	mg/kg	0.17	CCME Sediment ISQG Freshwater	7439-97-6	**3.09**
Molybdenum					mg/kg			7439-98-7	1.09
Nickel			**16.0**	**75.0**	mg/kg	16.0	MOE 93 - Sediment - LEL	7440-02-0	**36.0**
Phosphorus			**600.0**	**2000.0**	mg/kg	600.0	MOE 93 - Sediment - LEL	7723-14-0	**1270**
Potassium					mg/kg			7440-09-7	3830
Selenium					mg/kg			7782-49-2	1.50
Silver					mg/kg			7440-22-4	2.37
Sodium					mg/kg			7440-23-5	450
Strontium					mg/kg			7440-24-6	115
Sulphur (S8)					mg/kg			7704-34-9	6100
Thallium					mg/kg			7440-28-0	0.41
Tin					mg/kg			7440-31-5	26.3
Titanium					mg/kg			7440-32-6	1100
Tungsten					mg/kg			7440-33-7	< 1.0
Uranium					mg/kg			7440-61-1	0.85
Vanadium					mg/kg			7440-62-2	42.3
Zinc	**123**	**315**	**120.0**	820.0	mg/kg	120.0	MOE 93 - Sediment - LEL	7440-66-6	**441**
Zirconium					mg/kg			7440-67-7	3.4
pH					pH units			pH	-
PCBs									
Total Polychlorinated Biphenyls (PCBs)	**0.0341**	**0.277**			mg/kg	0.0341	CCME Sediment ISQG Freshwater	1336-36-3	**2.577**
Aroclor 1016			**0.00700**	53.0	mg/kg	0.00700	MOE 93 - Sediment - LEL	12674-11-2	**< 0.090**
Aroclor 1221					mg/kg			11104-28-2	< 0.090
Aroclor 1232					mg/kg			11141-16-5	< 0.090
Aroclor 1242					mg/kg			53469-21-9	< 0.12
Aroclor 1248			**0.0300**	150.0	mg/kg	0.0300	MOE 93 - Sediment - LEL	12672-29-6	**< 0.090**
Aroclor 1254	**0.06**	**0.34**	**0.0600**	34.0	mg/kg	0.06	CCME Sediment ISQG Freshwater	11097-69-1	**1.93**
Aroclor 1260			**0.00500**	24.0	mg/kg	0.00500	MOE 93 - Sediment - LEL	11096-82-5	**0.647**
Aroclor 1262					mg/kg			37324-23-5	< 0.090
Aroclor 1268					mg/kg			11100-14-4	< 0.090
Physical									
Texture					none			Texture	-
Ungrouped Analytes									
Fraction Organic Carbon					g/g			FOC	0.105
Initial pH					pH units			pH_INITIAL	-
MOISTURE AT LIQUID LIMIT					%			MOIST_LL	-
Moisture at Plastic Limit					%			MOIST_PL	-
Plasticity Index					%			PLAST_INDEX	-

Parameter	TC4-SG-004	TC4-SG-005	TC4-SG-006	TC4-SG-007	TC4-SG-008	TC4-SG-009	TC4-SG-009A	TC4-SG-010	TC4-SG-011	TC4-SG-012	TC4-SG-013	TC4-SG-013X	TC4-SG-014	TC5-SG-002	TC5-SG-003	TC5-SG-004
Sample Date	2021-09-30	2021-09-30	2021-09-29	2021-09-29	2021-09-30	2021-09-29	2021-09-29	2021-09-30	2021-09-30	2021-09-30	2021-09-30	2021-09-30	2021-09-30	2021-09-30	2021-09-30	2021-09-30
FIELD_SDG	L2646743	L2646743	L2646722	L2646722	L2646743	L2646722	L2646722	L2646743	L2646743	L2646743	L2646743	L2646743	L2646743	L2646743	L2646743	L2646743
SAMPLE_TYPE_CODE	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SYS_SAMPLE_CODE	L2646743-1	L2646743-2	L2646722-6	L2646722-8	L2646743-3	L2646722-10	L2646722-11	L2646743-18	L2646743-5	L2646743-4	L2646743-6	L2646743-8	L2646743-7	L2646743-11	L2646743-10	L2646743-9
Moisture, Percent	86.9	85.0	85.1	82.6	84.7	85.3	73.0	85.1	82.6	86.0	61.2	83.8	82.5	85.0	85.7	86.2
Sieve - #200 (>0.075mm)	-	-	-	-	-	10.2	4.0	5.6	-	-	45.9	-	-	13.0	-	-
Index of Additive Cancer Risk (IACR)	14.6	16.5	13.9	13.5	18.9	24.3	44.3	16.0	25.9	13.9	14.1	36.7	37.8	17.4	19.7	19.7
Acenaphthene	**0.066**	**0.078**	**0.053**	**0.049**	**0.084**	**0.108**	**0.178**	**0.079**	**0.089**	**0.051**	**0.070**	**0.124**	**0.116**	**0.099**	**0.111**	**0.104**
Acenaphthylene	**0.466**	**0.431**	**0.236**	**0.321**	**0.491**	**0.487**	**1.00**	**0.440**	**0.233**	**0.270**	**0.072**	**0.855**	**0.874**	**0.371**	**0.471**	**0.418**
Acridine	< 0.075	< 0.050	< 0.075	< 0.050	< 0.050	< 0.075	< 0.14	< 0.075	0.096	< 0.075	0.039	< 0.070	< 0.060	< 0.050	< 0.075	< 0.075
Anthracene	**0.179**	**0.238**	**0.181**	**0.176**	**0.314**	**0.291**	**0.741**	**0.277**	**0.300**	**0.169**	**0.220**	**0.803**	**0.469**	**0.387**	**0.517**	**0.510**
Benz(a)anthracene	**0.704**	**0.840**	**0.697**	**0.653**	**1.07**	**1.36**	**2.39**	**0.826**	**1.38**	**0.684**	**0.840**	**2.10**	**2.19**	**1.06**	**1.24**	**1.16**
Benzo(a)pyrene Total Potency Equivalence (TPE)	1.59	1.71	1.30	1.37	1.96	2.57	4.64	1.67	2.31	1.32	1.15	3.86	4.02	1.76	1.99	1.96
Benzo(g,h,i)perylene	**0.888**	**0.781**	**0.632**	**0.645**	**0.893**	**1.05**	**1.98**	**0.735**	**0.985**	**0.607**	**0.474**	**1.55**	**1.62**	**0.674**	**0.729**	**0.787**
Benzo(a)pyrene	**1.12**	**1.21**	**0.894**	**0.975**	**1.39**	**1.87**	**3.33**	**1.19**	**1.56**	**0.916**	**0.736**	**2.78**	**2.91**	**1.26**	**1.43**	**1.40**
Benzo(b,j) fluoranthene	0.925	1.04	0.907	0.905	1.19	1.48	2.72	0.983	1.80	0.966	0.983	2.21	2.32	1.03	1.20	1.20
Fluoranthene	**0.670**	**0.872**	**0.919**	**0.717**	**1.03**	**1.21**	**2.09**	**0.851**	**2.17**	**0.776**	**1.59**	**1.78**	**1.75**	**1.13**	**1.30**	**1.29**
Indeno(1,2,3-c,d)pyrene	**0.674**	**0.595**	**0.443**	**0.428**	**0.640**	**0.781**	**1.49**	**0.606**	**0.828**	**0.463**	**0.426**	**1.22**	**1.21**	**0.532**	**0.545**	**0.587**
Naphthalene	**< 0.038**	**0.036**	**< 0.038**	0.026	**0.039**	**0.042**	**0.106**	**< 0.038**	**0.040**	**< 0.038**	**0.041**	**0.072**	**0.078**	0.028	**< 0.038**	**< 0.038**
Pyrene	**0.958**	**1.17**	**1.03**	**0.971**	**1.46**	**1.79**	**3.61**	**1.22**	**2.04**	**0.942**	**1.31**	**2.78**	**2.70**	**1.62**	**1.86**	**1.83**
2-methylnaphthalene	**< 0.038**	**0.025**	**< 0.038**	**< 0.025**	**0.025**	**< 0.038**	**0.100**	**< 0.038**	**0.040**	**< 0.038**	**0.038**	**0.063**	**0.064**	**< 0.025**	**< 0.038**	**< 0.038**
Dibenz(a,h)anthracene	**0.193**	**0.193**	**0.150**	**0.156**	**0.218**	**0.258**	**0.496**	**0.174**	**0.268**	**0.150**	**0.136**	**0.402**	**0.420**	**0.175**	**0.196**	**0.198**
Index of Additive Cancer Risk (IACR)	14.6	16.5	13.9	13.5	18.9	24.3	44.3	16.0	25.9	13.9	14.1	36.7	37.8	17.4	19.7	19.7
Quinoline	< 0.038	< 0.025	< 0.038	< 0.025	< 0.025	< 0.038	< 0.015	< 0.038	< 0.025	< 0.038	< 0.010	< 0.025	< 0.025	< 0.025	< 0.038	< 0.038
Fluorene	**0.086**	**0.092**	**0.079**	**0.070**	**0.101**	**0.102**	**0.180**	**0.093**	**0.118**	**0.068**	**0.106**	**0.164**	**0.143**	**0.094**	**0.108**	**0.113**
Total Organic Carbon	**8.90**	**9.60**	**7.67**	**8.05**	**8.47**	**9.17**	**8.94**	**8.97**	**7.36**	**9.44**	**2.68**	**8.83**	**7.95**	**9.20**	**10.2**	**9.35**
1-Methylnaphthalene	< 0.038	0.025	< 0.038	< 0.025	0.030	< 0.038	0.087	< 0.038	0.027	< 0.038	0.036	0.048	0.052	< 0.025	< 0.038	< 0.038
Chrysene	**0.739**	**0.871**	**0.787**	**0.728**	**1.08**	**1.32**	**2.48**	**0.870**	**1.49**	**0.751**	**0.836**	**2.17**	**2.04**	**1.11**	**1.27**	**1.25**
Phenanthrene	**0.257**	**0.356**	**0.442**	**0.294**	**0.402**	**0.426**	**0.873**	**0.336**	**0.874**	**0.271**	**0.885**	**0.599**	**0.579**	**0.410**	**0.445**	**0.451**
Benzo(k)fluoranthene	**0.344**	**0.407**	**0.385**	**0.307**	**0.425**	**0.586**	**1.09**	**0.415**	**0.637**	**0.321**	**0.352**	**0.890**	**0.842**	**0.435**	**0.449**	**0.509**
Aluminum	20300	20600	14000	19900	18400	20900	21200	20100	13700	23200	7670	18100	17800	22900	24700	22500
Antimony	0.71	0.68	0.77	0.90	0.66	0.57	1.07	0.67	1.09	0.78	0.39	0.57	0.55	0.49	0.56	0.66
Arsenic	**6.71**	**5.93**	**8.10**	**8.17**	**6.79**	5.37	**11.7**	5.06	**7.56**	**6.62**	2.72	**6.60**	5.32	4.69	5.36	**6.08**
Barium	263	254	257	308	259	288	249	261	223	291	92.6	240	235	311	293	266
Beryllium	0.74	0.76	0.59	0.75	0.75	0.82	0.93	0.79	0.59	0.88	0.34	0.69	0.65	0.74	0.83	0.82
Bismuth	0.49	0.41	0.87	0.90	0.48	0.33	1.11	0.33	0.96	0.56	< 0.20	< 0.40	0.31	0.24	< 0.40	< 0.40
Boron|H.W.E Boron	13	13	10.8	13.3	11	0.29|13.5	0.27|12.5	12.4	9.9	14.3	6.8	10	9.6	12.6	13	13
Cadmium	**0.767**	**0.680**	**0.796**	**0.894**	**0.735**	**0.723**	**1.17**	0.578	**0.714**	**0.786**	0.170	**0.653**	0.590	**0.613**	**0.665**	**0.757**
Calcium	58200	52400	136000	106000	62200	77200	26200	66500	119000	53200	30700	63000	77100	56500	17700	26500
Chromium	**355**	**255**	**266**	**481**	**316**	**221**	**743**	**185**	**183**	**311**	25.1	**242**	**195**	**129**	**144**	**199**
Chromium Trivalent (Cr(III))	-	-	-	-	-	220	741	-	-	-	-	-	-	-	-	-
Chromium Hexavalent (Cr(VI))	-	-	-	-	-	0.69	1.83	-	-	-	-	-	-	-	-	-
Cobalt	12.5	12.1	10.4	13.1	12.4	12.1	13.9	11.5	10.2	13.8	5.49	12.5	11.3	12.0	13.7	13.2
Copper	**46.1**	**45.5**	**53.4**	**53.0**	**48.3**	**48.7**	**54.7**	**45.6**	**62.6**	**62.7**	**25.2**	**40.6**	**37.8**	**41.0**	**43.2**	**50.6**
Iron	**27700**	**27700**	**21700**	**29100**	**27300**	**28800**	**28900**	**27700**	**22800**	**31900**	17100	**26200**	**24300**	**30800**	**32200**	**30100**
Lead	**85.4**	**79.6**	**115**	**114**	**81.8**	**77.8**	**170**	**74.0**	**137**	**94.3**	**87.6**	**89.9**	**92.4**	**44.2**	**55.4**	**75.2**
Lithium	18.0	18.9	13.4	17.8	17.3	18.9	21.7	17.7	13.2	21.2	7.5	15.1	13.5	18.1	19.8	18.5
Magnesium	12000	11200	11200	12900	11700	11500	12900	11100	11500	12900	9740	10500	10600	11400	12400	11700
Manganese	**850**	**924**	**807**	**921**	**819**	**1020**	**610**	**917**	**673**	**982**	240	**847**	**829**	**1190**	**1460**	**1190**
Mercury	**0.315**	**0.291**	**0.473**	**0.422**	**0.319**	**0.192**	**0.570**	**0.174**	**0.468**	**0.347**	**0.252**	**0.263**	**0.201**	0.146	0.159	**0.215**
Molybdenum	1.29	1.25	1.03	1.23	0.99	1.16	0.87	1.05	0.99	1.14	0.47	0.84	0.88	0.87	0.86	1.04
Nickel	**27.5**	**27.3**	**21.6**	**28.6**	**27.1**	**28.1**	**31.6**	**27.1**	**20.9**	**31.6**	11.4	**26.8**	**25.0**	**29.9**	**32.2**	**31.4**
Phosphorus	**1030**	**1010**	**1260**	**1320**	**1080**	**1110**	**1090**	**976**	**1240**	**1280**	**1250**	**950**	**996**	**1080**	**1090**	**1070**
Potassium	4250	4160	3070	4310	3910	4310	4700	4140	2990	4990	1670	3880	3770	4430	4890	4680
Selenium	1.58	1.46	1.44	1.46	1.43	1.42	1.28	1.38	1.29	1.85	0.33	1.33	1.27	1.34	1.44	1.47
Silver	0.52	0.46	0.78	0.76	0.49	0.36	1.12	0.33	1.96	0.55	< 0.10	0.34	0.29	0.23	0.31	0.42
Sodium	630	600	578	704	580	727	555	654	534	759	290	570	674	750	630	630
Strontium	292	254	650	496	295	349	121	334	539	256	96.8	291	349	240	110	132
Sulphur (S8)	9600	8800	8000	10300	8700	9200	5700	7700	7300	9600	< 1000	7900	7300	8000	6300	6400
Thallium	0.34	0.34	0.287	0.332	0.32	0.317	0.388	0.313	0.293	0.362	0.108	0.34	0.288	0.274	0.35	0.32
Tin	4.7	4.3	7.2	7.0	4.5	3.5	8.3	4.1	7.0	5.1	5.0	< 4.0	3.3	2.7	< 4.0	< 4.0
Titanium	1210	1240	813	1280	1110	1330	1390	1290	845	1450	635	1170	1180	1410	1490	1410
Tungsten	< 1.0	< 1.0	0.63	< 0.50	< 1.0	< 0.50	< 0.50	< 0.50	0.55	0.54	< 0.50	< 1.0	< 0.50	< 0.50	< 1.0	< 1.0
Uranium	1.07	1.03	0.826	0.974	0.96	0.991	0.798	0.909	0.800	1.01	0.490	0.90	0.769	0.789	1.01	1.00
Vanadium	46.2	46.1	35.7	48.1	43.1	46.7	51.8	44.2	35.9	52.5	27.9	42.8	40.5	46.5	53.2	50.5
Zinc	**161**	**150**	**192**	**180**	**160**	**137**	**201**	**135**	**215**	**180**	82.5	**157**	**134**	**136**	**150**	**169**
Zirconium	4.1	3.8	2.5	3.8	3.9	3.8	5.9	3.3	2.9	4.6	1.4	4.0	2.7	3.0	4.9	4.4
pH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Polychlorinated Biphenyls (PCBs)	**0.322**	**< 0.26**	**0.39**	**0.486**	**0.268**	**0.32**	**0.943**	**< 0.26**	**< 0.85**	**< 0.26**	**< 0.070**	**0.359**	**0.256**	**< 0.26**	**< 0.26**	**< 0.26**
Aroclor 1016	**< 0.12**	**< 0.12**	**< 0.034**	**< 0.023**	**< 0.12**	**< 0.034**	**< 0.014**	**< 0.12**	**< 0.38**	**< 0.12**	**< 0.030**	**< 0.075**	**< 0.075**	**< 0.12**	**< 0.12**	**< 0.12**
Aroclor 1221	< 0.12	< 0.12	< 0.034	< 0.023	< 0.12	< 0.034	< 0.014	< 0.12	< 0.38	< 0.12	< 0.030	< 0.075	< 0.075	< 0.12	< 0.12	< 0.12
Aroclor 1232	< 0.12	< 0.12	< 0.034	< 0.023	< 0.12	< 0.034	< 0.014	< 0.12	< 0.38	< 0.12	< 0.030	< 0.075	< 0.075	< 0.12	< 0.12	< 0.12
Aroclor 1242	< 0.12	< 0.12	< 0.034	< 0.023	< 0.12	< 0.034	< 0.042	< 0.12	< 0.38	< 0.12	< 0.030	< 0.075	< 0.075	< 0.12	< 0.12	< 0.12
Aroclor 1248	**< 0.12**	**< 0.12**	**< 0.034**	< 0.023	**< 0.12**	**< 0.034**	< 0.014	**< 0.12**	**< 0.38**	**< 0.12**	< 0.030	**< 0.075**	**< 0.075**	**< 0.12**	**< 0.12**	**< 0.12**
Aroclor 1254	**0.166**	**0.127**	**0.206**	**0.262**	**0.143**	**0.175**	**0.519**	**0.104**	**0.086**	**0.113**	0.0233	**0.214**	**0.152**	**0.084**	0.059	**0.096**
Aroclor 1260	**0.156**	**0.115**	**0.188**	**0.224**	**0.125**	**0.141**	**0.424**	**0.079**	**0.094**	**0.127**	**0.0196**	**0.145**	**0.104**	**0.060**	**0.057**	**0.094**
Aroclor 1262	< 0.023	< 0.023	< 0.034	< 0.023	< 0.023	< 0.034	< 0.014	< 0.023	< 0.015	< 0.023	< 0.0060	< 0.015	< 0.015	< 0.023	< 0.023	< 0.023
Aroclor 1268	< 0.023	< 0.023	< 0.034	< 0.023	< 0.023	< 0.034	< 0.014	< 0.023	< 0.015	< 0.023	< 0.0060	< 0.015	< 0.015	< 0.023	< 0.023	< 0.023
Texture	-	-	-	-	-	Fine	Fine	Fine	-	-	Fine	-	-	Fine	-	-
Fraction Organic Carbon	0.0890	0.0960	0.0767	0.0805	0.0847	0.0917	0.0894	0.0897	0.0736	0.0944	0.0268	0.0883	0.0795	0.0920	0.102	0.0935
Initial pH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MOISTURE AT LIQUID LIMIT	-	-	-	-	-	157	86	97	-	-	-	-	-	-	-	-
Moisture at Plastic Limit	-	-	-	-	-	83	74	89	-	-	-	-	-	-	-	-
Plasticity Index	-	-	-	-	-	75	11	9	-	-	-	-	-	-	-	-

Canadian Sediment Quality Guidelines for the Protection of Aquatic Life - Interim freshwater sediment quality guidelines
Canadian Sediment Quality Guidelines for the Protection of Aquatic Life - Probable effect levels - Freshwater
MOE 93 - Sediment - LEL
MOE 93 - Sediment - SEL
< Indicates parameter was below laboratory equipment detection limit.
> Indicates parameter detected above equipment analytical range.
- Chemical not analyzed or criteria not defined.
Output generated by GalReport.

Parameter	CCME Sediment ISQG Freshwater	CCME Sediment PEL Freshwater	MOE 93 - Sediment - LEL	MOE 93 - Sediment - SEL	Unit	MCS	MCS Name	CAS_RN	Location	TC5-SG-005	TC5-SG-006	TC5-SG-007	TCAB-SC-001A	TCAB-SC-015A	TCAB-SC12A	TCAB-SG-001	TCAB-SG-002	TCAB-SG-003	TCAB-SG-004	TCAB-SG-005	TCAB-SG-006	TCAB-SG-007	TCAB-SG-008	TCAB-SG-009	TCAB-SG-010	TCAB-SG-011
									Sample Name	TC5-SG-005	TC5-SG-006	TC5-SG-007	TCAB-SC-001A	TCAB-SC-015A	TCAB-SC12A	TCAB-SG-001	TCAB-SG-002	TCAB-SG-003	TCAB-SG-004	TCAB-SG-005	TCAB-SG-006	TCAB-SG-007	TCAB-SG-008	TCAB-SG-009	TCAB-SG-010	TCAB-SG-011
									Sample Date	2021-10-07	2021-10-06	2021-10-06	2021-10-04	2021-10-04	2021-10-04	2021-10-04	2021-10-02	2021-10-01	2021-10-01	2021-10-02	2021-10-01	2021-10-01	2021-10-01	2021-10-01	2021-10-01	2021-10-01
									FIELD_SDG	L2650175	L2650174	L2650174	L2647880	L2647880	L2647880	L2647880	L2647897	L2647638	L2647638	L2647897	L2647638	L2647638	L2647638	L2647638	L2647638	L2647638
									PARENT_SAMPLE_CODE																	
									SAMPLE_TYPE_CODE	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
									SYS_SAMPLE_CODE	L2650175-6	L2650174-3	L2650174-4	L2647880-1	L2647880-3	L2647880-5	L2647880-2	L2647897-2	L2647638-11	L2647638-12	L2647897-1	L2647638-8	L2647638-9	L2647638-10	L2647638-3	L2647638-4	L2647638-7
Field and Physical																										
Moisture, Percent					%			MOIST		86.9	83.0	86.2	80.3	81.4	78.8	83.2	80.3	87.4	80.8	82.6	88.1	85.6	87.9	86.3	88.7	84.0
Sieve - #200 (>0.075mm)					%			SIEVE>0.075MM		5.5	4.9	< 1.0	4.2	-	< 1.0	4.2	-	-	-	12.4	-	-	-	1.5	-	-
Index of Additive Cancer Risk (IACR)					none			PAH_IACR		19.6	37.0	13.7	36.9	14.0	18.6	22.2	44.4	16.0	31.3	23.2	13.2	21.8	31.8	11.9	16.7	10.9
Hydrocarbons																										
Acenaphthene	**0.00671**	**0.0889**			mg/kg	0.00671	CCME Sediment ISQG Freshwater	83-32-9		**0.099**	**0.205**	**0.120**	**0.211**	**0.109**	**0.130**	**0.147**	**0.590**	**0.079**	**0.177**	**0.125**	**0.065**	**0.131**	**0.147**	**0.065**	**0.108**	**0.066**
Acenaphthylene	**0.00587**	**0.128**			mg/kg	0.00587	CCME Sediment ISQG Freshwater	208-96-8		**0.491**	**0.958**	**0.311**	**0.461**	**0.225**	**0.229**	**0.376**	**1.22**	**0.359**	**0.735**	**0.526**	**0.282**	**0.512**	**0.856**	**0.221**	**0.346**	**0.167**
Acridine					mg/kg			260-94-6		< 0.075	< 0.080	< 0.075	0.110	< 0.050	< 0.060	< 0.060	< 0.10	< 0.075	0.058	< 0.050	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.050
Anthracene	**0.0469**	**0.245**	**0.220**	370.0	mg/kg	0.0469	CCME Sediment ISQG Freshwater	120-12-7		**0.619**	**0.707**	**0.647**	**0.627**	**0.221**	**0.283**	**0.339**	**1.04**	**0.262**	**0.499**	**0.687**	**0.226**	**0.558**	**0.784**	**0.254**	**0.523**	**0.264**
Benz(a)anthracene	**0.0317**	**0.385**	**0.320**	1480	mg/kg	0.0317	CCME Sediment ISQG Freshwater	56-55-3		**1.12**	**2.18**	**0.827**	**1.95**	**0.648**	**0.851**	**1.07**	**2.75**	**0.832**	**1.81**	**1.51**	**0.667**	**1.31**	**1.76**	**0.571**	**0.892**	**0.630**
Benzo(a)pyrene Total Potency Equivalence (TPE)					mg/kg			PAH_TPE		2.05	3.86	1.37	3.21	1.26	1.64	2.02	4.59	1.56	3.25	2.38	1.25	2.21	3.45	1.12	1.61	0.958
Benzo(g,h,i)perylene			**0.170**	320.0	mg/kg	0.170	MOE 93 - Sediment - LEL	191-24-2		**0.682**	**1.57**	**0.526**	**1.42**	**0.628**	**0.788**	**0.974**	**1.95**	**0.728**	**1.40**	**0.998**	**0.568**	**0.868**	**1.42**	**0.555**	**0.717**	**0.482**
Benzo(a)pyrene	**0.0319**	**0.782**	**0.370**	1440	mg/kg	0.0319	CCME Sediment ISQG Freshwater	50-32-8		**1.49**	**2.77**	**0.989**	**2.16**	**0.843**	**1.10**	**1.38**	**3.26**	**1.08**	**2.33**	**1.71**	**0.870**	**1.59**	**2.52**	**0.745**	**1.10**	**0.630**
Benzo(b,j) fluoranthene					mg/kg			Benz_Fluo_bj		1.28	2.19	0.782	2.59	1.05	1.42	1.61	2.75	1.05	1.92	1.44	0.866	1.29	1.92	0.811	1.08	0.724
Fluoranthene	**0.111**	**2.355**	**0.750**	1020	mg/kg	0.111	CCME Sediment ISQG Freshwater	206-44-0		**1.17**	**2.38**	**1.07**	**3.02**	**0.998**	**1.55**	**1.49**	**2.69**	**1.08**	**1.86**	**1.53**	**0.903**	**1.36**	**1.39**	**0.835**	**1.16**	**1.33**
Indeno(1,2,3-c,d)pyrene			**0.200**	320.0	mg/kg	0.200	MOE 93 - Sediment - LEL	193-39-5		**0.608**	**1.17**	**0.378**	**1.19**	**0.504**	**0.643**	**0.732**	**1.64**	**0.541**	**1.05**	**0.772**	**0.466**	**0.704**	**1.02**	**0.477**	**0.636**	**0.414**
Naphthalene	**0.0346**	**0.391**			mg/kg	0.0346	CCME Sediment ISQG Freshwater	91-20-3		**< 0.038**	**0.050**	**< 0.038**	**0.120**	**0.067**	**0.067**	**0.169**	**0.358**	**< 0.038**	**0.075**	**0.105**	**< 0.038**	**< 0.038**	**< 0.038**	**0.040**	**0.049**	**0.059**
Pyrene	**0.053**	**0.875**	**0.490**	850.0	mg/kg	0.053	CCME Sediment ISQG Freshwater	129-00-0		**1.71**	**3.59**	**1.51**	**3.17**	**1.19**	**1.69**	**1.80**	**3.81**	**1.38**	**2.69**	**2.29**	**1.13**	**2.00**	**2.05**	**0.963**	**1.51**	**1.37**
2-methylnaphthalene	**0.0202**	**0.201**			mg/kg	0.0202	CCME Sediment ISQG Freshwater	91-57-6		**< 0.038**	**0.046**	**< 0.038**	**0.110**	**0.065**	**0.066**	**0.143**	**0.260**	**< 0.038**	**0.050**	**0.082**	**< 0.038**	**< 0.038**	**< 0.038**	**0.041**	**0.052**	**0.082**
Dibenz(a,h)anthracene	**0.00622**	**0.135**	**0.0600**	130.0	mg/kg	0.00622	CCME Sediment ISQG Freshwater	53-70-3		**0.197**	**0.400**	**< 0.26**	**0.344**	**0.151**	**0.191**	**0.234**	**0.470**	**0.173**	**0.336**	**0.230**	**0.136**	**0.216**	**0.348**	**0.145**	**0.180**	**0.111**
Index of Additive Cancer Risk (IACR)					none			PAH_IACR		19.6	37.0	13.7	36.9	14.0	18.6	22.2	44.4	16.0	31.3	23.2	13.2	21.8	31.8	11.9	16.7	10.9
Quinoline					mg/kg			91-22-5		< 0.038	< 0.025	< 0.038	< 0.025	< 0.025	< 0.030	< 0.025	< 0.025	< 0.038	< 0.025	< 0.025	< 0.038	< 0.038	< 0.038	< 0.038	< 0.038	< 0.025
Fluorene	**0.0212**	**0.144**	**0.190**	160.0	mg/kg	0.0212	CCME Sediment ISQG Freshwater	86-73-7		**0.107**	**0.193**	**0.092**	**0.193**	**0.087**	**0.126**	**0.143**	**0.396**	**0.095**	**0.165**	**0.114**	**0.080**	**0.126**	**0.160**	**0.083**	**0.122**	**0.079**
Total Organic Carbon			**1.00**	**10.0**	%	1.00	MOE 93 - Sediment - LEL	TOC		**9.48**	**9.26**	**9.84**	**6.92**	**7.42**	**7.69**	**7.74**	**7.48**	**8.58**	**7.27**	**7.53**	**9.22**	**7.43**	**9.32**	**9.27**	**10.1**	**7.84**
1-Methylnaphthalene					mg/kg			90-12-0		< 0.038	0.054	< 0.038	0.096	0.050	0.049	0.101	0.200	< 0.038	0.052	0.064	< 0.038	< 0.038	< 0.038	< 0.038	0.038	0.053
Chrysene	**0.0571**	**0.862**	**0.340**	460.0	mg/kg	0.0571	CCME Sediment ISQG Freshwater	218-01-9		**1.25**	**2.26**	**1.09**	**2.02**	**0.778**	**1.13**	**1.22**	**2.48**	**0.952**	**1.76**	**1.43**	**0.779**	**1.37**	**2.19**	**0.716**	**1.08**	**0.689**
Phenanthrene	**0.0419**	**0.515**	**0.560**	950.0	mg/kg	0.0419	CCME Sediment ISQG Freshwater	85-01-8		**0.419**	**0.860**	**0.440**	**1.46**	**0.464**	**0.698**	**0.755**	**1.22**	**0.427**	**0.729**	**0.499**	**0.330**	**0.523**	**0.465**	**0.351**	**0.473**	**0.458**
Benzo(k)fluoranthene			**0.240**	1340	mg/kg	0.240	MOE 93 - Sediment - LEL	207-08-9		**0.389**	**0.917**	**0.377**	**0.944**	**0.294**	**0.398**	**0.518**	**0.960**	**0.406**	**0.745**	**0.465**	**0.345**	**0.560**	**0.724**	**0.305**	**0.422**	**0.283**
Metals																										
Aluminum					mg/kg			7429-90-5		23000	23000	24700	27900	29700	24600	27900	21400	24800	19800	22900	24400	25500	147	25200	25500	25700
Antimony					mg/kg			7440-36-0		0.54	0.94	0.47	1.76	1.35	1.54	1.58	0.56	0.75	0.60	0.52	0.84	0.42	< 0.10	1.00	0.88	0.93
Arsenic	**5.9**	**17**	**6.00**	**33.0**	mg/kg	5.9	CCME Sediment ISQG Freshwater	7440-38-2		4.81	**11.3**	5.32	**9.88**	**9.13**	**7.10**	**9.65**	**6.99**	**8.19**	**7.55**	**6.19**	**9.40**	4.97	< 0.10	**8.37**	**7.86**	**7.44**
Barium					mg/kg			7440-39-3		285	267	288	328	346	293	328	278	312	287	276	324	314	1.52	303	307	360
Beryllium					mg/kg			7440-41-7		0.72	0.83	0.87	0.79	0.89	0.76	0.87	0.61	0.88	0.70	0.78	0.83	0.85	< 0.10	0.89	0.99	0.90
Bismuth					mg/kg			7440-69-9		< 0.40	0.38	0.25	0.66	0.57	0.85	0.37	0.58	0.38	< 0.40	0.70	0.25	< 0.20	0.60	0.54	0.46	
Boron|H.W.E Boron					mg/kg			7440-42-8		12	10.7	11.9	0.92|13.1	13.8	0.77|13.5	0.79|14.7	8.7	13.8	9.4	1.17|13	13.7	11.1	< 5.0	1.17|14.6	16.1	12.9
Cadmium	**0.6**	3.5	**0.600**	10.0	mg/kg	0.6	CCME Sediment ISQG Freshwater	7440-43-9		**0.693**	**0.965**	**0.700**	**1.11**	**1.18**	**1.05**	**0.882**	**0.646**	**1.01**	**0.795**	**0.648**	**1.04**	**0.619**	< 0.020	**0.905**	**0.900**	**0.849**
Calcium					mg/kg			7440-70-2		64200	28700	18100	28800	42900	56300	37400	65500	50200	71700	78300	52800	66300	114	33300	31400	48300
Chromium			**26.0**	**110.0**	mg/kg	26.0	MOE 93 - Sediment - LEL	7440-47-3		**169**	**231**	**123**	**255**	**289**	**227**	**179**	**207**	**332**	**246**	**170**	**339**	**145**	0.93	**268**	**283**	**180**
Chromium Trivalent (Cr(III))					mg/kg			16065-83-1		-	-	-	255	-	226	179	-	-	-	169	-	-	-	266	-	-
Chromium Hexavalent (Cr(VI))					mg/kg			18540-29-9		-	-	-	< 1.0	-	0.77	< 1.0	-	-	-	1.23	-	-	-	1.5	-	-
Cobalt					mg/kg			7440-48-4		12.5	14.9	13.9	14.7	15.5	13.9	14.7	12.6	14.5	11.9	12.6	15.2	13.5	< 0.10	14.8	14.8	15.1
Copper	**35.7**	**197**	**16.0**	**110.0**	mg/kg	16.0	MOE 93 - Sediment - LEL	7440-50-8		**40.7**	**44.9**	**44.6**	**528**	**197**	**143**	**534**	**44.7**	**133**	**50.2**	**42.7**	**73.7**	**63.4**	< 0.50	**80.2**	**63.6**	**99.8**
Iron			**20000**	**40000**	mg/kg	20000	MOE 93 - Sediment - LEL	7439-89-6		**29900**	**32900**	**32900**	**38000**	**41300**	**32900**	**38600**	**27900**	**33600**	**29200**	**30400**	**33900**	**32200**	84	**34100**	**34000**	**38200**
Lead	**35**	**91.3**	**31.0**	**250.0**	mg/kg	31.0	MOE 93 - Sediment - LEL	7439-92-1		**51.6**	**104**	**53.0**	**169**	**125**	**118**	**134**	**75.1**	**99.7**	**180**	**75.8**	**112**	**51.0**	< 0.50	**106**	**97.5**	**96.9**
Lithium					mg/kg			7439-93-2		16.5	21.0	22.2	17.8	19.7	16.9	18.7	11.7	21.5	15.8	18.8	20.8	19.6	< 2.0	22.2	24.0	22.3
Magnesium					mg/kg			7439-95-4		11800	12300	12200	16600	18100	20400	17200	11300	13200	10800	11700	14300	11400	79	14700	13900	16000
Manganese			**460.0**	**1100.0**	mg/kg	460.0	MOE 93 - Sediment - LEL	7439-96-5		**1210**	**1230**	**1560**	**907**	**922**	**888**	**1300**	**1130**	**1250**	**907**	**1400**	**1280**	**1320**	6.5	**1160**	**1290**	**1450**
Mercury	**0.17**	**0.486**	**0.200**	**2.00**	mg/kg	0.17	CCME Sediment ISQG Freshwater	7439-97-6		0.147	**0.264**	0.134	**0.300**	**0.294**	**0.274**	**0.247**	**0.266**	**0.314**	**0.275**	0.169	**0.424**	0.126	0.156	**0.370**	**0.305**	**0.187**
Molybdenum					mg/kg			7439-98-7		1.08	1.16	0.97	1.99	1.62	1.51	1.69	0.94	0.94	0.93	0.83	1.11	0.74	< 0.10	1.24	1.19	1.19
Nickel			**16.0**	**75.0**	mg/kg	16.0	MOE 93 - Sediment - LEL	7440-02-0		**29.8**	**33.9**	**33.3**	**37.0**	**38.2**	**33.8**	**36.3**	**27.7**	**33.1**	**26.9**	**29.9**	**33.4**	**30.9**	< 0.50	**33.5**	**33.8**	**36.2**
Phosphorus			**600.0**	**2000.0**	mg/kg	600.0	MOE 93 - Sediment - LEL	7723-14-0		**1130**	**1040**	**1100**	**1520**	**1370**	**1260**	**1700**	**1120**	**1330**	**1100**	**1200**	**1590**	**1190**	< 50	**1250**	**1290**	**1480**
Potassium					mg/kg			7440-09-7		4560	4440	4650	5790	6240	5270	6150	4100	4740	3770	4590	4720	4480	< 100	4710	4890	4730
Selenium					mg/kg			7782-49-2		1.45	1.46	1.39	1.55	1.63	1.26	1.47	1.53	1.64	1.20	1.27	1.72	1.11	< 0.20	1.61	1.65	1.48
Silver					mg/kg			7440-22-4		0.29	0.50	0.31	0.60	0.64	0.61	0.47	0.39	0.58	0.45	0.36	0.71	0.27	< 0.10	0.58	0.60	0.41
Sodium					mg/kg			7440-23-5		760	609	611	1180	940	665	1140	674	712	662	760	687	706	< 50	659	650	711
Strontium					mg/kg			7440-24-6		294	161	108	113	169	143	138	303	232	327	327	237	263	< 0.50	152	160	177
Sulphur (S8)					mg/kg			7704-34-9		8400	10900	7400	6400	8000	5200	5200	8400	8200	7300	7300	9200	6100	< 1000	8800	9200	6500
Thallium					mg/kg			7440-28-0		0.32	0.321	0.317	0.377	0.405	0.376	0.412	0.338	0.367	0.304	0.33	0.374	0.319	< 0.050	0.379	0.374	0.369
Tin					mg/kg			7440-31-5		< 4.0	4.9	2.9	12.6	7.2	6.5	8.7	4.1	5.9	4.7	< 4.0	6.7	3.0	< 2.0	6.4	6.3	5.4
Titanium					mg/kg			7440-32-6		1340	1310	1290	1510	1650	1380	1470	1280	1400	1130	1390	1300	1410	7.7	1330	1370	1400
Tungsten					mg/kg			7440-33-7		< 1.0	< 0.50	< 0.50	0.68	0.77	1.66	1.31	< 0.50	< 0.50	< 0.50	< 1.0	0.71	< 0.50	< 0.50	0.97	0.70	0.78
Uranium					mg/kg			7440-61-1		1.03	1.09	0.990	0.903	1.07	0.887	0.850	0.846	0.931	0.819	0.90	0.970	0.853	< 0.050	1.03	1.09	0.934
Vanadium					mg/kg			7440-62-2		48.1	51.5	49.0	61.4	65.4	58.5	59.7	43.9	53.9	43.6	49.0	53.4	52.6	0.26	54.2	54.2	58.4
Zinc	**123**	**315**	**120.0**	820.0	mg/kg	120.0	MOE 93 - Sediment - LEL	7440-66-6		**145**	**165**	**156**	**421**	**334**	**346**	**420**	**147**	**212**	**156**	**141**	**229**	**137**	7.7	**230**	**204**	**239**
Zirconium					mg/kg			7440-67-7		3.9	7.3	6.2	3.6	4.0	4.1	3.2	3.2	5.1	4.4	4.7	5.3	5.2	< 1.0	5.4	5.7	5.6
pH					pH units			pH		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PCBs																										
Total Polychlorinated Biphenyls (PCBs)	**0.0341**	**0.277**			mg/kg	0.0341	CCME Sediment ISQG Freshwater	1336-36-3		**0.15**	**0.137**	**0.24**	**0.424**	**< 0.27**	**< 0.27**	**< 0.27**	**0.134**	**< 0.40**	**0.42**	**< 0.27**	**0.186**	**< 0.11**	**< 0.40**	**0.270**	**0.321**	**< 0.20**
Aroclor 1016			**0.00700**	53.0	mg/kg	0.00700	MOE 93 - Sediment - LEL	12674-11-2		**< 0.034**	**< 0.015**	**< 0.036**	**< 0.032**	**< 0.12**	**< 0.12**	**< 0.12**	**< 0.014**	**< 0.17**	**< 0.023**	**< 0.12**	**< 0.034**	**< 0.034**	**< 0.17**	**< 0.061**	**< 0.034**	**< 0.023**
Aroclor 1221					mg/kg			11104-28-2		< 0.034	< 0.015	< 0.036	< 0.032	< 0.12	< 0.12	< 0.12	< 0.014	< 0.17	< 0.023	< 0.12	< 0.034	< 0.034	< 0.17	< 0.061	< 0.034	< 0.023
Aroclor 1232					mg/kg			11141-16-5		< 0.034	< 0.015	< 0.036	< 0.032	< 0.12	< 0.12	< 0.12	< 0.014	< 0.17	< 0.023	< 0.12	< 0.034	< 0.034	< 0.17	< 0.061	< 0.034	< 0.023
Aroclor 1242					mg/kg			53469-21-9		< 0.034	< 0.015	< 0.036	< 0.032	< 0.12	< 0.12	< 0.12	< 0.014	< 0.17	< 0.027	< 0.12	< 0.065	< 0.034	< 0.17	< 0.061	< 0.034	< 0.040
Aroclor 1248			**0.0300**	150.0	mg/kg	0.0300	MOE 93 - Sediment - LEL	12672-29-6		**< 0.034**	< 0.015	**< 0.036**	**< 0.032**	**< 0.12**	**< 0.12**	**< 0.12**	< 0.014	**< 0.17**	< 0.023	**< 0.12**	**< 0.034**	**< 0.034**	**< 0.17**	**< 0.061**	**< 0.034**	< 0.023
Aroclor 1254	**0.06**	**0.34**	**0.0600**	34.0	mg/kg	0.06	CCME Sediment ISQG Freshwater	11097-69-1		0.056	**0.087**	**0.081**	**0.248**	**0.112**	**0.126**	**0.108**	**0.134**	**0.148**	**0.222**	**0.081**	**0.186**	< 0.045	0.048	**0.135**	**0.143**	**< 0.15**
Aroclor 1260			**0.00500**	24.0	mg/kg	0.00500	MOE 93 - Sediment - LEL	11096-82-5		**0.092**	**0.049**	**0.160**	**0.176**	**0.088**	**0.099**	**< 0.090**	**< 0.014**	**0.125**	**0.198**	**0.094**	**< 0.14**	**< 0.034**	**0.085**	**0.135**	**0.178**	**< 0.077**
Aroclor 1262					mg/kg			37324-23-5		< 0.034	< 0.015	< 0.036	< 0.023	< 0.023	< 0.023	< 0.023	< 0.014	< 0.034	< 0.023	< 0.023	< 0.034	< 0.034	< 0.034	< 0.034	< 0.034	< 0.023
Aroclor 1268					mg/kg			11100-14-4		< 0.034	< 0.015	< 0.036	< 0.023	< 0.023	< 0.023	< 0.023	< 0.014	< 0.034	< 0.023	< 0.023	< 0.034	< 0.034	< 0.034	< 0.034	< 0.034	< 0.023
Physical																										
Texture					none			Texture		Fine	Fine	Fine	Fine	-	Fine	Fine	-	-	-	Fine	-	-	-	Fine	-	-
Ungrouped Analytes																										
Fraction Organic Carbon					g/g			FOC		0.0948	0.0926	0.0984	0.0692	0.0742	0.0769	0.0774	0.0748	0.0858	0.0727	0.0753	0.0922	0.0743	0.0932	0.0927	0.101	0.0784
Initial pH					pH units			pH_INITIAL		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MOISTURE AT LIQUID LIMIT					%			MOIST_LL		-	-	-	95	99	95	99	-	-	-	-	-	-	-	-	-	-
Moisture at Plastic Limit					%			MOIST_PL		-	-	-	70	78	72	80	-	-	-	-	-	-	-	-	-	-
Plasticity Index					%			PLAST_INDEX		-	-	-	25	21	24	19	-	-	-	-	-	-	-	-	-	-

Canadian Sediment Quality Guidelines for the Protection of Aquatic Life - Interim freshwater sediment quality guidelines
Canadian Sediment Quality Guidelines for the Protection of Aquatic Life - Probable effect levels - Freshwater
MOE 93 - Sediment - LEL
MOE 93 - Sediment - SEL
< Indicates parameter was below laboratory equipment detection limit.
> Indicates parameter detected above equipment analytical range.
- Chemical not analyzed or criteria not defined.
Output generated by GalReport.

Parameter	CCME Sediment ISQG Freshwater	CCME Sediment PEL Freshwater	MOE 93 - Sediment - LEL	MOE 93 - Sediment - SEL	Unit	MCS	MCS Name	CAS_RN															
Location																							
Sample Name									TCAB-SG-013	TCAB-SG-014	TCAB-SG-015	TCAB-SG-016	TCAB-SG-017	TCAB-SG-12	TCOM-SC-001A	TCOM-SC-001B	TCOM-SC-006A	TCOM-SC-006B	TCOM-SC-006B	TCOM-SC-006B	TCOM-SC-006B	TCOM-SC-006B	TCOM-SC-006B
Sample Date									2021-10-01	2021-10-01	2021-10-04	2021-10-01	2021-10-01	2021-10-04	2021-10-02	2021-10-02	2021-10-01	2021-10-02	2021-10-06	2021-10-06	2021-10-06	2021-10-06	2021-10-06	2021-10-06
FIELD_SDG									L2647638	L2647638	L2647880	L2647638	L2647638	L2647880	L2647897	L2647897	L2647638	L2647897	L2650174	L2650174	L2650174	L2650174	L2650174	L2650174
PARENT_SAMPLE_CODE																								
SAMPLE_TYPE_CODE									N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SYS_SAMPLE_CODE									L2647638-6	L2647638-5	L2647880-4	L2647638-2	L2647638-1	L2647880-6	L2647897-19	L2647897-20	L2647638-17	L2650174-21	L2647897-33	L2650174-22	L2650174-23	L2650174-24	L2650174-25	L2650174-26	L2650174-27
Field and Physical																								
Moisture, Percent					%			MOIST	70.5	84.2	83.6	83.3	82.6	81.8	66.8	85.6	73.8	82.7	68.8	78.6	74.5	71.9	71.3	71.3	66.0
Sieve - #200 (>0.075mm)					%			SIEVE>0.075MM	-	-	-	-	8.5	2.1	-	-	-	-	-	-	-	-	-	-	-
Index of Additive Cancer Risk (IACR)					none			PAH_IACR	18.3	14.2	11.0	20.4	29.3	12.3	10.2	0.87	13.5	10.3	19.9	11.2	14.0	24.3	17.5	19.0	6.56
Hydrocarbons																								
Acenaphthene	**0.00671**	**0.0889**			mg/kg	0.00671	CCME Sediment ISQG Freshwater	83-32-9	**0.122**	**0.081**	**0.066**	**0.193**	**0.208**	**0.081**	**0.054**	**< 0.038**	**0.070**	**0.069**	**0.091**	**0.074**	**0.081**	**0.099**	**0.086**	**0.081**	**0.028**
Acenaphthylene	**0.00587**	**0.128**			mg/kg	0.00587	CCME Sediment ISQG Freshwater	208-96-8	**0.117**	**0.253**	**0.180**	**0.411**	**0.492**	**0.165**	**0.374**	**0.041**	**0.521**	**0.227**	**0.775**	**0.303**	**0.505**	**0.894**	**0.678**	**0.655**	**0.173**
Acridine					mg/kg			260-94-6	< 0.12	< 0.050	< 0.050	0.085	0.081	< 0.050	0.026	< 0.075	< 0.030	< 0.050	0.075	< 0.060	0.043	0.072	0.062	0.085	0.036
Anthracene	**0.0469**	**0.245**	**0.220**	370.0	mg/kg	0.0469	CCME Sediment ISQG Freshwater	120-12-7	**0.344**	**0.242**	**0.210**	**0.354**	**0.470**	**0.211**	**0.131**	< 0.030	**0.180**	**0.135**	**0.319**	**0.150**	**0.218**	**0.313**	**0.269**	**0.306**	**0.111**
Benz(a)anthracene	**0.0317**	**0.385**	**0.320**	1480	mg/kg	0.0317	CCME Sediment ISQG Freshwater	56-55-3	**0.93**	**0.667**	**0.517**	**0.981**	**1.43**	**0.615**	**0.481**	**< 0.075**	**0.614**	**0.427**	**0.956**	**0.447**	**0.600**	**1.24**	**0.868**	**0.941**	**0.340**
Benzo(a)pyrene Total Potency Equivalence (TPE)					mg/kg			PAH_TPE	1.50	1.36	0.977	2.02	2.91	1.14	0.979	0.098	1.35	0.920	2.05	1.03	1.37	2.44	1.79	1.80	0.612
Benzo(g,h,i)perylene			**0.170**	320.0	mg/kg	0.170	MOE 93 - Sediment - LEL	191-24-2	**0.79**	**0.721**	**0.503**	**1.17**	**1.44**	**0.652**	**0.428**	< 0.075	**0.665**	**0.434**	**0.787**	**0.487**	**0.580**	**0.898**	**0.702**	**0.701**	**0.222**
Benzo(a)pyrene	**0.0319**	**0.782**	**0.370**	1440	mg/kg	0.0319	CCME Sediment ISQG Freshwater	50-32-8	**0.951**	**0.926**	**0.653**	**1.37**	**2.01**	**0.753**	**0.683**	**0.063**	**0.949**	**0.616**	**1.47**	**0.691**	**0.958**	**1.77**	**1.28**	**1.26**	**0.427**
Benzo(b,j) fluoranthene					mg/kg			Benz_Fluo_bj	1.29	0.942	0.843	1.34	1.92	0.888	0.720	< 0.075	1.01	0.675	1.32	0.832	0.997	1.66	1.04	1.32	0.404
Fluoranthene	**0.111**	**2.355**	**0.750**	1020	mg/kg	0.111	CCME Sediment ISQG Freshwater	206-44-0	**2.27**	**1.05**	**0.848**	**1.35**	**1.73**	**1.10**	**0.602**	0.094	**0.711**	**0.681**	**1.07**	**0.683**	**0.728**	**1.21**	**1.08**	**1.19**	**0.504**
Indeno(1,2,3-c,d)pyrene			**0.200**	320.0	mg/kg	0.200	MOE 93 - Sediment - LEL	193-39-5	**0.69**	**0.599**	**0.401**	**0.936**	**1.22**	**0.508**	**0.376**	< 0.075	**0.493**	**0.425**	**0.752**	**0.481**	**0.570**	**0.846**	**0.674**	**0.672**	**0.222**
Naphthalene	**0.0346**	**0.391**			mg/kg	0.0346	CCME Sediment ISQG Freshwater	91-20-3	**0.068**	**0.040**	**0.045**	**0.369**	**0.310**	**0.038**	**0.046**	**< 0.038**	0.033	< 0.025	**0.075**	**0.040**	**0.045**	**0.065**	**0.039**	**0.089**	**0.039**
Pyrene	**0.053**	**0.875**	**0.490**	850.0	mg/kg	0.053	CCME Sediment ISQG Freshwater	129-00-0	**2.03**	**1.31**	**0.965**	**1.72**	**2.17**	**1.20**	**0.944**	**0.160**	**1.13**	**0.809**	**1.85**	**0.875**	**1.08**	**2.00**	**1.70**	**1.85**	**0.693**
2-methylnaphthalene	**0.0202**	**0.201**			mg/kg	0.0202	CCME Sediment ISQG Freshwater	91-57-6	**0.067**	**0.039**	**0.051**	**0.356**	**0.222**	**0.040**	**0.039**	**< 0.038**	**0.035**	**< 0.025**	**0.070**	**0.038**	**0.052**	**0.073**	**0.042**	**0.071**	**0.035**
Dibenz(a,h)anthracene	**0.00622**	**0.135**	**0.0600**	130.0	mg/kg	0.00622	CCME Sediment ISQG Freshwater	53-70-3	**0.186**	**0.159**	**0.115**	**0.251**	**0.335**	**0.151**	**0.104**	**< 0.038**	**0.148**	**0.106**	**0.205**	**0.120**	**0.150**	**0.227**	**0.172**	**0.177**	**0.062**
Index of Additive Cancer Risk (IACR)					none			PAH_IACR	18.3	14.2	11.0	20.4	29.3	12.3	10.2	0.87	13.5	10.3	19.9	11.2	14.0	24.3	17.5	19.0	6.56
Quinoline					mg/kg			91-22-5	< 0.060	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.010	< 0.038	< 0.015	< 0.025	< 0.020	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.010
Fluorene	**0.0212**	**0.144**	**0.190**	160.0	mg/kg	0.0212	CCME Sediment ISQG Freshwater	86-73-7	**0.129**	**0.082**	**0.074**	**0.165**	**0.191**	**0.083**	**0.068**	**< 0.038**	**0.100**	**0.071**	**0.135**	**0.082**	**0.100**	**0.149**	**0.114**	**0.132**	**0.044**
Total Organic Carbon			**1.00**	**10.0**	%	1.00	MOE 93 - Sediment - LEL	TOC	**5.53**	**8.17**	**7.26**	**7.22**	**7.23**	**7.75**	**7.51**	**39.2**	**7.48**	-	**7.25**	-	-	-	-	-	-
1-Methylnaphthalene					mg/kg			90-12-0	< 0.060	0.035	0.040	0.231	0.157	0.033	0.028	< 0.038	0.030	< 0.025	0.050	0.027	0.034	0.050	0.038	0.045	0.030
Chrysene	**0.0571**	**0.862**	**0.340**	460.0	mg/kg	0.0571	CCME Sediment ISQG Freshwater	218-01-9	**1.20**	**0.800**	**0.677**	**1.13**	**1.58**	**0.810**	**0.511**	**< 0.075**	**0.687**	**0.579**	**1.10**	**0.593**	**0.718**	**1.28**	**0.992**	**1.05**	**0.392**
Phenanthrene	**0.0419**	**0.515**	**0.560**	950.0	mg/kg	0.0419	CCME Sediment ISQG Freshwater	85-01-8	**1.23**	**0.412**	**0.401**	**0.736**	**0.838**	**0.507**	**0.217**	< 0.038	**0.296**	**0.320**	**0.468**	**0.298**	**0.315**	**0.478**	**0.441**	**0.553**	**0.230**
Benzo(k)fluoranthene			**0.240**	1340	mg/kg	0.240	MOE 93 - Sediment - LEL	207-08-9	**0.50**	**0.386**	0.215	**0.511**	**0.737**	**0.250**	**0.246**	< 0.075	0.236	**0.352**	**0.480**	**0.280**	**0.330**	**0.539**	**0.532**	**0.452**	0.205
Metals																								
Aluminum					mg/kg			7429-90-5	8970	26400	28800	25500	25900	25600	19900	2870	24100	11100	22500	14900	20800	24100	19900	22000	23700
Antimony					mg/kg			7440-36-0	1.50	1.40	1.32	1.44	1.46	1.78	1.59	0.27	1.98	< 2.0	2.30	0.65	1.42	1.80	2.22	2.90	1.04
Arsenic	**5.9**	**17**	**6.00**	**33.0**	mg/kg	5.9	CCME Sediment ISQG Freshwater	7440-38-2	4.43	**8.48**	**7.93**	**10.6**	**10.2**	**7.05**	**13.3**	5.08	**18.0**	**8.0**	**20.7**	**11.0**	**15.8**	**19.6**	**23.0**	**42.9**	**16.1**
Barium					mg/kg			7440-39-3	112	333	328	322	314	295	281	72.2	347	228	301	250	293	333	286	289	296
Beryllium					mg/kg			7440-41-7	0.43	0.95	0.88	0.87	0.84	0.79	0.71	< 0.20	1.00	< 2.0	0.82	0.59	0.81	0.80	0.79	0.86	0.86
Bismuth					mg/kg			7440-69-9	0.43	0.59	0.52	0.58	1.04	0.50	0.49	< 0.40	0.65	< 4.0	0.76	0.36	0.49	0.54	0.66	0.71	0.40
Boron|H.W.E Boron					mg/kg			7440-42-8	9.8	15.7	15.9	16.0	12.7	0.63|5.1	9.4	17	12.6	< 100	10.8	9.1	11.3	10.6	11.4	10.7	10.4
Cadmium	**0.6**	3.5	**0.600**	10.0	mg/kg	0.6	CCME Sediment ISQG Freshwater	7440-43-9	0.406	**1.04**	**0.772**	**0.988**	**1.13**	**0.798**	**0.931**	0.201	**1.33**	**0.61**	**1.06**	**0.742**	**1.01**	**1.20**	**1.44**	**1.02**	0.436
Calcium					mg/kg			7440-70-2	118000	38600	53900	54300	51200	58900	59400	21900	55400	97800	31100	89100	61700	43300	35700	44800	47000
Chromium			**26.0**	**110.0**	mg/kg	26.0	MOE 93 - Sediment - LEL	7440-47-3	**62.1**	**212**	**165**	**149**	**184**	**167**	**1810**	**136**	**2350**	**709**	**2980**	**866**	**1540**	**2510**	**2650**	**2290**	**809**
Chromium Trivalent (Cr(III))					mg/kg			16065-83-1	-	-	-	-	-	166	-	-	-	-	-	-	-	-	-	-	-	-
Chromium Hexavalent (Cr(VI))					mg/kg			18540-29-9	-	-	-	-	-	0.60	-	-	-	-	-	-	-	-	-	-	-	-
Cobalt					mg/kg			7440-48-4	7.40	15.2	14.8	14.1	14.5	14.4	19.1	3.24	21.5	11.1	22.7	12.7	18.4	23.0	24.3	38.1	20.7
Copper	**35.7**	**197**	**16.0**	**110.0**	mg/kg	16.0	MOE 93 - Sediment - LEL	7440-50-8	**77.4**	**271**	**202**	**634**	**838**	**144**	**47.2**	9.0	**58.5**	**41**	**51.5**	**40.1**	**52.0**	**57.9**	**50.1**	**48.5**	**34.7**
Iron			**20000**	**40000**	mg/kg	20000	MOE 93 - Sediment - LEL	7439-89-6	17700	**37300**	**39200**	**41900**	**39900**	**35300**	**30200**	9130	**35600**	**21600**	**30600**	**23900**	**32200**	**31200**	**31100**	**33000**	**31300**
Lead	**35**	**91.3**	**31.0**	**250.0**	mg/kg	31.0	MOE 93 - Sediment - LEL	7439-92-1	**57.9**	**113**	**90.1**	**162**	**229**	**86.9**	**190**	12.8	**234**	**105**	**261**	**123**	**179**	**224**	**249**	**246**	**106**
Lithium					mg/kg			7439-93-2	11.2	24.4	19.0	21.8	20.7	17.4	15.0	< 4.0	22.7	< 40	17.6	13.7	19.3	19.5	17.8	19.8	21.0
Magnesium					mg/kg			7439-95-4	19500	17700	18900	16500	16000	20600	15400	2530	18400	11100	16200	12600	16800	18700	15000	15900	16000
Manganese			**460.0**	**1100.0**	mg/kg	460.0	MOE 93 - Sediment - LEL	7439-96-5	**547**	**1250**	**1380**	**1260**	**1110**	**1260**	**667**	**509**	**826**	**598**	**719**	**591**	**729**	**799**	**660**	**691**	**662**
Mercury	**0.17**	**0.486**	**0.200**	**2.00**	mg/kg	0.17	CCME Sediment ISQG Freshwater	7439-97-6	0.104	**0.244**	**0.186**	**0.222**	**0.261**	**0.208**	**0.459**	0.059	**0.593**	**0.312**	**0.845**	**0.348**	**0.497**	**0.617**	**0.820**	**1.63**	**0.480**
Molybdenum					mg/kg			7439-98-7	1.38	1.61	1.47	2.14	2.13	1.49	1.15	2.20	1.39	< 2.0	1.17	0.99	1.23	1.19	1.25	1.16	0.86
Nickel			**16.0**	**75.0**	mg/kg	16.0	MOE 93 - Sediment - LEL	7440-02-0	**18.0**	**36.4**	**35.8**	**36.0**	**35.4**	**34.5**	**31.4**	7.1	**38.8**	**21**	**35.2**	**24.2**	**34.4**	**39.7**	**35.8**	**42.3**	**33.1**
Phosphorus			**600.0**	**2000.0**	mg/kg	600.0	MOE 93 - Sediment - LEL	7723-14-0	**1090**	**1360**	**1510**	**1790**	**1540**	**1420**	**1270**	400	**1540**	**< 1000**	**1360**	**927**	**1370**	**1430**	**1260**	**1380**	**1120**
Potassium					mg/kg			7440-09-7	1790	5000	6090	4670	4770	5370	4560	560	5430	2400	4710	3510	4830	5690	4890	4750	5520
Selenium					mg/kg			7782-49-2	0.42	1.35	1.47	1.46	1.44	1.28	0.98	0.62	1.17	< 4.0	0.93	0.94	1.18	0.97	1.02	1.00	0.47
Silver					mg/kg			7440-22-4	0.26	0.57	0.39	0.41	0.58	0.40	0.60	< 0.20	0.86	< 2.0	0.83	0.47	0.72	0.72	0.82	0.84	0.34
Sodium					mg/kg			7440-23-5	307	720	808	941	1950	696	691	400	762	< 1000	650	617	740	836	689	697	731
Strontium					mg/kg			7440-24-6	188	138	174	168	179	161	385	244	330	744	179	582	410	286	232	273	239
Sulphur (S8)					mg/kg			7704-34-9	2900	5700	5600	6700	6500	5200	7000	14600	6900	< 20000	5600	6800	7000	6100	6300	7100	4400
Thallium					mg/kg			7440-28-0	0.182	0.385	0.394	0.388	0.391	0.361	0.367	< 0.10	0.396	< 1.0	0.380	0.241	0.327	0.354	0.386	0.389	0.327
Tin					mg/kg			7440-31-5	5.3	7.3	6.4	15.0	13.1	6.0	6.8	< 4.0	9.6	< 40	9.3	5.2	7.6	8.7	10.6	9.3	4.8
Titanium					mg/kg			7440-32-6	489	1410	1540	1220	1150	1430	1210	190	1610	657	1310	923	1330	1590	1350	1410	1530
Tungsten					mg/kg			7440-33-7	4.15	1.15	1.83	0.83	0.74	2.52	< 0.50	< 1.0	< 0.50	< 10	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Uranium					mg/kg			7440-61-1	0.559	1.07	0.898	1.02	0.865	0.867	0.811	1.22	0.917	< 1.0	0.776	0.630	0.801	0.774	0.771	0.800	0.715
Vanadium					mg/kg			7440-62-2	28.7	60.6	59.7	57.4	53.6	59.0	54.5	9.86	68.8	33.9	56.5	41.1	58.1	66.9	56.2	57.7	57.6
Zinc	**123**	**315**	**120.0**	820.0	mg/kg	120.0	MOE 93 - Sediment - LEL	7440-66-6	**256**	**311**	**320**	**400**	**457**	**336**	**201**	16.6	**246**	**160**	**236**	**164**	**220**	**257**	**235**	**223**	**135**
Zirconium					mg/kg			7440-67-7	1.8	5.1	3.6	3.9	4.3	3.6	6.6	< 2.0	9.0	< 20	7.7	2.7	6.5	7.6	8.0	7.9	8.2
pH					pH units			pH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PCBs																								
Total Polychlorinated Biphenyls (PCBs)	**0.0341**	**0.277**			mg/kg	0.0341	CCME Sediment ISQG Freshwater	1336-36-3	**0.0751**	**0.221**	**< 0.29**	**0.206**	**0.255**	**0.135**	**0.475**	0.021	**0.832**	**0.376**	**1.152**	**0.499**	**0.577**	**0.758**	**0.86**	**0.789**	**0.26**
Aroclor 1016			**0.00700**	53.0	mg/kg	0.00700	MOE 93 - Sediment - LEL	12674-11-2	**< 0.016**	**< 0.034**	**< 0.12**	**< 0.023**	**< 0.046**	**< 0.023**	**< 0.0090**	< 0.0060	**< 0.014**	**< 0.015**	< 0.0060	**< 0.0090**	**< 0.0090**	**< 0.0090**	**< 0.0090**	**< 0.0090**	< 0.0060
Aroclor 1221					mg/kg			11104-28-2	< 0.016	< 0.034	< 0.12	< 0.023	< 0.046	< 0.023	< 0.0090	< 0.0060	< 0.014	< 0.015	< 0.0060	< 0.0090	< 0.0090	< 0.0090	< 0.0090	< 0.0090	< 0.0060
Aroclor 1232					mg/kg			11141-16-5	< 0.016	< 0.034	< 0.12	< 0.023	< 0.046	< 0.023	< 0.0090	< 0.0060	< 0.014	< 0.015	< 0.0060	< 0.0090	< 0.0090	< 0.0090	< 0.0090	< 0.0090	< 0.0060
Aroclor 1242					mg/kg			53469-21-9	< 0.016	< 0.034	< 0.12	< 0.023	< 0.046	< 0.023	< 0.0090	< 0.0060	< 0.014	< 0.020	< 0.035	< 0.0093	< 0.015	< 0.022	< 0.025	< 0.025	< 0.011
Aroclor 1248			**0.0300**	150.0	mg/kg	0.0300	MOE 93 - Sediment - LEL	12672-29-6	< 0.016	**< 0.034**	**< 0.12**	< 0.023	**< 0.046**	< 0.023	< 0.0090	< 0.0060	< 0.014	< 0.015	< 0.0060	< 0.0090	< 0.0090	< 0.0090	< 0.0090	< 0.0090	< 0.0060
Aroclor 1254	**0.06**	**0.34**	**0.0600**	34.0	mg/kg	0.06	CCME Sediment ISQG Freshwater	11097-69-1	0.0504	**0.124**	**< 0.080**	**0.103**	**0.147**	**0.068**	**0.185**	0.0210	**0.302**	**0.136**	**0.409**	**0.179**	**0.203**	**0.265**	**0.295**	**0.285**	**0.0990**
Aroclor 1260			**0.00500**	24.0	mg/kg	0.00500	MOE 93 - Sediment - LEL	11096-82-5	**0.0247**	**0.097**	**< 0.053**	**0.103**	**0.108**	**0.066**	**0.290**	**< 0.0060**	**0.529**	**0.240**	**0.743**	**0.320**	**0.374**	**0.493**	**0.565**	**0.504**	**0.161**
Aroclor 1262					mg/kg			37324-23-5	< 0.0090	< 0.023	< 0.023	< 0.023	< 0.023	< 0.023	< 0.0090	< 0.0060	< 0.014	< 0.015	< 0.0060	< 0.0090	< 0.0090	< 0.0090	< 0.0090	< 0.0090	< 0.0060
Aroclor 1268					mg/kg			11100-14-4	< 0.0090	< 0.023	< 0.023	< 0.023	< 0.023	< 0.023	< 0.0090	< 0.0060	< 0.014	< 0.015	< 0.0060	< 0.0090	< 0.0090	< 0.0090	< 0.0090	< 0.0090	< 0.0060
Physical																								
Texture					none			Texture	-	-	-	-	Fine	Fine	-	-	-	-	-	-	-	-	-	-	-
Ungrouped Analytes																								
Fraction Organic Carbon					g/g			FOC	0.0553	0.0817	0.0726	0.0722	0.0723	0.0775	0.0751	0.392	0.0748	-	0.0725	-	-	-	-	-	-
Initial pH					pH units			pH_INITIAL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MOISTURE AT LIQUID LIMIT					%			MOIST_LL	-	-	102	-	-	100	85	-	81	-	-	-	-	-	-	-	-
Moisture at Plastic Limit					%			MOIST_PL	-	-	76	-	-	73	72	-	62	-	-	-	-	-	-	-	-
Plasticity Index					%			PLAST_INDEX	-	-	26	-	-	27	13	-	19	-	-	-	-	-	-	-	-

Canadian Sediment Quality Guidelines for the Protection of Aquatic Life - Interim freshwater sediment quality guidelines
Canadian Sediment Quality Guidelines for the Protection of Aquatic Life - Probable effect levels - Freshwater
MOE 93 - Sediment - LEL
MOE 93 - Sediment - SEL
< Indicates parameter was below laboratory equipment detection limit.
> Indicates parameter detected above equipment analytical range.
- Chemical not analyzed or criteria not defined.
Output generated by GalReport.

Parameter	CCME Sediment ISQG Freshwater	CCME Sediment PEL Freshwater	MOE 93 - Sediment - LEL	MOE 93 - Sediment - SEL	Unit	MCS	MCS Name	CAS_RN	TCOM-SC-007A	TCOM-SC-009A	TCOM-SG-001	TCOM-SG-006	TCOM-SG-007	TCOM-SG-009	TCRC-SC-004A	TCRC-SC-010A	TCRC-SC-010B	TCRC-SG-001	TCRC-SG-002	TCRC-SG-003	TCRC-SG-004	TCRC-SG-005	TCRC-SG-006	TCRC-SG-007	TCRC-SG-008
Location																									
Sample Name									TCOM-SC-007A	TCOM-SC-009A	TCOM-SG-001	TCOM-SG-006	TCOM-SG-007	TCOM-SG-009	TCRC-SC-004A	TCRC-SC-010A	TCRC-SC-010B	TCRC-SG-001	TCRC-SG-002	TCRC-SG-003	TCRC-SG-004	TCRC-SG-005	TCRC-SG-006	TCRC-SG-007	TCRC-SG-008
Sample Date									2021-10-01	2021-10-02	2021-10-02	2021-10-01	2021-10-01	2021-10-02	2021-09-30	2021-10-01	2021-10-01	2021-09-28	2021-09-28	2021-09-28	2021-09-30	2021-09-28	2021-09-28	2021-09-28	2021-09-28
FIELD_SDG									L2647638	L2647897	L2647897	L2647638	L2647638	L2647897	L2646743	L2647638	L2647638	L2646459	L2646459	L2646459	L2646743	L2646459	L2646459	L2646459	L2646459
PARENT_SAMPLE_CODE																									
SAMPLE_TYPE_CODE									N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SYS_SAMPLE_CODE									L2647638-19	L2647897-22	L2647897-21	L2647638-16	L2647638-18	L2647897-24	L2646743-14	L2647638-14	L2647638-15	L2646459-26	L2646459-27	L2646459-28	L2646743-15	L2646459-29	L2646459-30	L2646459-31	L2646459-32
Field and Physical																									
Moisture, Percent					%			MOIST	36.6	57.2	84.5	86.8	78.1	76.0	42.7	37.4	32.4	81.6	86.0	77.3	62.8	86.7	86.4	85.1	86.5
Sieve - #200 (>0.075mm)					%			SIEVE>0.075MM	-	-	-	-	-	8.2	-	18.4	-	8.4	-	-	-	-	-	2.8	-
Index of Additive Cancer Risk (IACR)					none			PAH_IACR	11.3	2.27	23.7	9.10	210	6.04	2.67	6.33	1.59	5.44	5.35	5.21	10.3	4.06	6.54	7.10	6.57
Hydrocarbons																									
Acenaphthene	**0.00671**	**0.0889**			mg/kg	0.00671	CCME Sediment ISQG Freshwater	83-32-9	**0.0517**	**0.0120**	**0.103**	**0.061**	**1.55**	**0.030**	**0.0230**	**0.0308**	< 0.0050	**0.047**	**< 0.038**	**0.033**	**0.035**	**< 0.038**	**< 0.038**	**< 0.038**	**0.071**
Acenaphthylene	**0.00587**	**0.128**			mg/kg	0.00587	CCME Sediment ISQG Freshwater	208-96-8	**0.0603**	**0.0531**	**0.708**	**0.214**	**2.05**	**0.169**	**0.0803**	**0.0507**	**0.0217**	**0.127**	**0.151**	**0.101**	**0.172**	**0.095**	**0.129**	**0.088**	**0.127**
Acridine					mg/kg			260-94-6	0.021	< 0.015	< 0.050	< 0.075	0.478	< 0.030	0.024	0.022	< 0.010	< 0.050	< 0.075	< 0.030	0.038	< 0.075	< 0.075	< 0.075	< 0.075
Anthracene	**0.0469**	**0.245**	**0.220**	370.0	mg/kg	0.0469	CCME Sediment ISQG Freshwater	120-12-7	**0.157**	0.0298	**0.301**	**0.096**	**5.44**	**0.073**	**0.0548**	**0.0907**	0.0198	**0.063**	**0.053**	**0.070**	**0.128**	0.036	**0.085**	**0.069**	**0.150**
Benz(a)anthracene	**0.0317**	**0.385**	**0.320**	1480	mg/kg	0.0317	CCME Sediment ISQG Freshwater	56-55-3	**0.691**	**0.094**	**1.24**	**0.356**	**13.7**	**0.244**	**0.127**	**0.381**	**0.056**	**0.268**	**0.248**	**0.283**	**0.532**	**0.196**	**0.287**	**0.350**	**0.345**
Benzo(a)pyrene Total Potency Equivalence (TPE)					mg/kg			PAH_TPE	0.956	0.205	2.58	0.811	18.3	0.568	0.246	0.539	0.115	0.510	0.519	0.488	0.927	0.390	0.586	0.610	0.576
Benzo(g,h,i)perylene			**0.170**	320.0	mg/kg	0.170	MOE 93 - Sediment - LEL	191-24-2	**0.317**	0.101	**1.02**	**0.481**	**7.22**	**0.301**	0.115	**0.210**	0.047	**0.272**	**0.279**	**0.236**	**0.401**	**0.212**	**0.307**	**0.321**	**0.305**
Benzo(a)pyrene	**0.0319**	**0.782**	**0.370**	1440	mg/kg	0.0319	CCME Sediment ISQG Freshwater	50-32-8	**0.641**	**0.137**	**1.89**	**0.534**	**12.1**	**0.385**	**0.167**	**0.356**	**0.0712**	**0.348**	**0.353**	**0.335**	**0.626**	**0.267**	**0.402**	**0.399**	**0.382**
Benzo(b,j) fluoranthene					mg/kg			Benz_Fluo_bj	0.742	0.164	1.50	0.669	13.5	0.424	0.181	0.425	0.124	0.374	0.370	0.344	0.696	0.283	0.440	0.503	0.456
Fluoranthene	**0.111**	**2.355**	**0.750**	1020	mg/kg	0.111	CCME Sediment ISQG Freshwater	206-44-0	**1.38**	**0.154**	**1.07**	**0.550**	**25.9**	**0.324**	**0.201**	**0.630**	**0.231**	**0.418**	**0.356**	**0.424**	**0.819**	**0.264**	**0.473**	**0.668**	**0.775**
Indeno(1,2,3-c,d)pyrene			**0.200**	320.0	mg/kg	0.200	MOE 93 - Sediment - LEL	193-39-5	**0.327**	0.085	**0.879**	**0.351**	**6.11**	**0.244**	0.099	0.200	0.047	**0.202**	**0.210**	0.184	**0.393**	0.163	**0.205**	**0.257**	**0.231**
Naphthalene	**0.0346**	**0.391**			mg/kg	0.0346	CCME Sediment ISQG Freshwater	91-20-3	0.0241	0.0094	**0.076**	**< 0.038**	**0.548**	0.021	0.0313	0.0103	< 0.0050	< 0.025	**< 0.038**	< 0.015	0.027	**< 0.038**	**< 0.038**	**< 0.038**	**0.040**
Pyrene	**0.053**	**0.875**	**0.490**	850.0	mg/kg	0.053	CCME Sediment ISQG Freshwater	129-00-0	**1.22**	**0.181**	**1.57**	**0.683**	**23.5**	**0.419**	**0.253**	**0.554**	**0.167**	**0.470**	**0.437**	**0.453**	**0.840**	**0.320**	**0.533**	**0.631**	**0.675**
2-methylnaphthalene	**0.0202**	**0.201**			mg/kg	0.0202	CCME Sediment ISQG Freshwater	91-57-6	0.0126	0.0097	**0.059**	**< 0.038**	**0.527**	**0.022**	0.0185	0.0065	< 0.0050	**< 0.025**	**< 0.038**	< 0.015	0.019	**< 0.038**	**< 0.038**	**< 0.038**	**< 0.038**
Dibenz(a,h)anthracene	**0.00622**	**0.135**	**0.0600**	130.0	mg/kg	0.00622	CCME Sediment ISQG Freshwater	53-70-3	**0.0977**	**0.0258**	**0.254**	**0.106**	**2.14**	**0.069**	**0.0287**	**0.0610**	**0.0145**	**0.058**	**0.064**	**0.054**	**0.101**	**0.045**	**0.064**	**0.073**	**0.067**
Index of Additive Cancer Risk (IACR)					none			PAH_IACR	11.3	2.27	23.7	9.10	210	6.04	2.67	6.33	1.59	5.44	5.35	5.21	10.3	4.06	6.54	7.10	6.57
Quinoline					mg/kg			91-22-5	< 0.0050	< 0.0075	< 0.025	< 0.038	0.022	< 0.015	< 0.0050	< 0.0050	< 0.0050	< 0.025	< 0.038	< 0.015	< 0.010	< 0.038	< 0.038	< 0.038	< 0.038
Fluorene	**0.0212**	**0.144**	**0.190**	160.0	mg/kg	0.0212	CCME Sediment ISQG Freshwater	86-73-7	**0.0530**	0.0155	**0.120**	**0.060**	**2.61**	**0.036**	**0.0284**	**0.0292**	0.0088	**0.048**	**< 0.038**	**0.041**	**0.051**	**< 0.038**	**0.046**	**< 0.038**	**0.128**
Total Organic Carbon			**1.00**	**10.0**	%	1.00	MOE 93 - Sediment - LEL	TOC	**1.48**	**2.82**	**9.57**	**7.51**	**4.03**	**5.05**	**2.09**	**1.70**	0.72	**5.23**	**7.31**	**6.06**	**3.22**	**6.31**	**6.70**	**6.88**	**6.90**
1-Methylnaphthalene					mg/kg			90-12-0	0.0139	< 0.0075	0.059	< 0.038	0.685	< 0.015	0.0146	0.0059	< 0.0050	< 0.025	< 0.038	< 0.015	0.013	< 0.038	< 0.038	< 0.038	< 0.038
Chrysene	**0.0571**	**0.862**	**0.340**	460.0	mg/kg	0.0571	CCME Sediment ISQG Freshwater	218-01-9	**0.682**	**0.116**	**1.13**	**0.465**	**13.8**	**0.297**	**0.143**	**0.365**	**0.120**	**0.318**	**0.305**	**0.304**	**0.573**	**0.228**	**0.379**	**0.445**	**0.368**
Phenanthrene	**0.0419**	**0.515**	**0.560**	950.0	mg/kg	0.0419	CCME Sediment ISQG Freshwater	85-01-8	**0.485**	**0.0758**	**0.394**	**0.234**	**19.6**	**0.144**	**0.116**	**0.260**	**0.124**	**0.242**	**0.153**	**0.215**	**0.358**	**0.105**	**0.247**	**0.306**	**0.643**
Benzo(k)fluoranthene			**0.240**	1340	mg/kg	0.240	MOE 93 - Sediment - LEL	207-08-9	**0.306**	0.061	**0.532**	**0.243**	**5.11**	0.165	0.072	0.163	0.050	0.133	0.127	0.130	**0.280**	0.092	0.201	0.184	0.167
Metals																									
Aluminum					mg/kg			7429-90-5	25000	25600	20500	14700	11000	16800	19500	20600	19800	18200	17200	18700	17200	15500	22000	18000	14100
Antimony					mg/kg			7440-36-0	0.34	0.70	0.50	1.30	2.28	0.67	1.38	1.91	0.24	1.41	0.89	0.95	2.82	0.63	0.80	2.96	0.86
Arsenic	**5.9**	**17**	**6.00**	**33.0**	mg/kg	5.9	CCME Sediment ISQG Freshwater	7440-38-2	4.30	**8.43**	4.73	**9.62**	**7.96**	**8.82**	**23.9**	**41.2**	**7.19**	**12.2**	**10.0**	**12.2**	**32.8**	**7.74**	**10.3**	**59.3**	**14.3**
Barium					mg/kg			7440-39-3	375	325	243	324	188	292	249	299	272	261	268	272	242	267	301	264	273
Beryllium					mg/kg			7440-41-7	0.84	0.77	0.64	0.65	0.53	0.67	0.72	0.76	0.91	0.74	0.66	0.72	0.70	0.58	0.78	0.70	0.59
Bismuth					mg/kg			7440-69-9	< 0.20	0.27	< 0.40	< 0.40	0.22	0.27	< 0.40	0.25	< 0.20	0.27	0.37	0.38	< 0.40	0.33	0.38	0.55	0.40
Boron|H.W.E Boron					mg/kg			7440-42-8	9.2	7.4	12	14	9.2	0.65|7.0	< 10	0.42|8.7	10.6	0.52|10.5	10.2	10.3	< 10	8.5	11.7	12.5	12.6
Cadmium	**0.6**	3.5	**0.600**	10.0	mg/kg	0.6	CCME Sediment ISQG Freshwater	7440-43-9	0.117	0.382	**0.623**	**0.794**	0.402	0.477	0.330	0.493	0.145	0.488	**0.683**	**0.668**	0.398	0.588	**0.692**	**0.637**	0.556
Calcium					mg/kg			7440-70-2	37600	49900	59100	146000	25700	86100	47200	44900	72000	89500	87200	79500	57400	107000	70100	82800	112000
Chromium			**26.0**	**110.0**	mg/kg	26.0	MOE 93 - Sediment - LEL	7440-47-3	**73.3**	**499**	**197**	**749**	**351**	**598**	**391**	**127**	**45.0**	**447**	**850**	**741**	**380**	**538**	**653**	**473**	**456**
Chromium Trivalent (Cr(III))					mg/kg			16065-83-1	-	-	-	-	-	594	-	127	-	444	-	-	-	-	-	-	-
Chromium Hexavalent (Cr(VI))					mg/kg			18540-29-9	-	-	-	-	-	4.26	-	0.36	-	3.5	-	-	-	-	-	-	-
Cobalt					mg/kg			7440-48-4	18.2	19.9	10.8	12.3	13.8	15.0	45.0	26.0	13.9	21.1	15.9	19.5	64.7	12.6	18.6	21.6	15.4
Copper	**35.7**	**197**	**16.0**	**110.0**	mg/kg	16.0	MOE 93 - Sediment - LEL	7440-50-8	**31.3**	**36.8**	**37.0**	**44.6**	**79.7**	**30.8**	**32.3**	**37.4**	**26.8**	**49.1**	**40.2**	**38.9**	**35.3**	**33.5**	**45.1**	**57.4**	**34.1**
Iron			**20000**	**40000**	mg/kg	20000	MOE 93 - Sediment - LEL	7439-89-6	**33100**	**36900**	**25200**	**25400**	**20600**	**26100**	**30900**	**35300**	**31500**	**29500**	**28900**	**30100**	**28500**	**24500**	**32600**	**27600**	**23700**
Lead	**35**	**91.3**	**31.0**	**250.0**	mg/kg	31.0	MOE 93 - Sediment - LEL	7439-92-1	**37.7**	**72.7**	**63.5**	**104**	**106**	**75.7**	**69.9**	**99.9**	16.4	**101**	**107**	**105**	**77.5**	**80.0**	**92.6**	**110**	**81.4**
Lithium					mg/kg			7439-93-2	21.0	17.9	14.5	15.5	10.0	11.3	16.5	18.2	21.5	17.1	15.5	16.5	16.5	13.5	18.9	17.5	14.2
Magnesium					mg/kg			7439-95-4	16800	17400	10400	13900	8020	13200	17000	18200	23900	17200	15500	16600	14400	13500	18300	17200	13100
Manganese			**460.0**	**1100.0**	mg/kg	460.0	MOE 93 - Sediment - LEL	7439-96-5	457	**934**	**846**	**854**	314	**789**	**709**	**745**	**869**	**772**	**992**	**917**	**649**	**931**	**1190**	**893**	**1100**
Mercury	**0.17**	**0.486**	**0.200**	**2.00**	mg/kg	0.17	CCME Sediment ISQG Freshwater	7439-97-6	0.0742	**0.188**	**0.270**	**0.271**	**0.227**	**0.240**	**0.861**	**0.697**	0.0530	**0.325**	**0.293**	**0.325**	**0.834**	**0.224**	**0.314**	**0.815**	**0.402**
Molybdenum					mg/kg			7439-98-7	1.11	0.71	0.99	1.25	0.82	0.66	0.58	0.96	1.04	0.74	0.90	0.91	0.52	0.89	0.84	0.92	0.95
Nickel			**16.0**	**75.0**	mg/kg	16.0	MOE 93 - Sediment - LEL	7440-02-0	**31.9**	**34.7**	**24.9**	**24.4**	**18.3**	**24.8**	**44.0**	**33.5**	**27.1**	**30.0**	**27.4**	**30.1**	**60.4**	**23.6**	**33.4**	**31.9**	**23.4**
Phosphorus			**600.0**	**2000.0**	mg/kg	600.0	MOE 93 - Sediment - LEL	7723-14-0	**1130**	**1150**	**870**	**1250**	**1380**	**1040**	**930**	**1110**	**1100**	**1220**	**1260**	**1260**	**1080**	**1110**	**1290**	**1140**	**1210**
Potassium					mg/kg			7440-09-7	5790	5930	3730	3420	2090	3850	5380	5190	5160	4580	4280	4590	4880	3730	5310	4350	3720
Selenium					mg/kg			7782-49-2	0.33	0.44	1.35	1.13	0.36	0.69	< 0.40	0.22	< 0.20	0.58	0.91	0.79	0.47	0.92	0.91	0.80	0.88
Silver					mg/kg			7440-22-4	< 0.10	0.27	0.32	0.42	0.12	0.30	0.54	0.69	< 0.10	0.37	0.53	0.53	0.83	0.45	0.53	0.64	0.50
Sodium					mg/kg			7440-23-5	895	806	580	680	480	588	760	743	909	825	715	767	710	650	843	741	683
Strontium					mg/kg			7440-24-6	331	335	271	938	215	567	199	227	229	552	517	464	319	651	366	499	673
Sulphur (S8)					mg/kg			7704-34-9	2200	3000	7900	8200	4700	4600	2100	3300	2100	4300	7700	6800	2700	7400	6600	4600	7800
Thallium					mg/kg			7440-28-0	0.256	0.377	0.29	0.24	0.199	0.274	0.30	0.269	0.286	0.280	0.280	0.320	0.30	0.248	0.291	0.273	0.283
Tin					mg/kg			7440-31-5	111	6.5	< 4.0	5.5	94.4	3.5	6.4	55.4	< 2.0	12.9	5.2	6.6	8.7	4.2	6.5	6.9	5.8
Titanium					mg/kg			7440-32-6	1750	1660	1180	947	828	1150	1670	1540	1570	1210	1040	1200	1450	914	1290	1270	931
Tungsten					mg/kg			7440-33-7	< 0.50	< 0.50	< 1.0	< 1.0	< 0.50	< 0.50	< 1.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0	< 0.50	< 0.50	0.82	< 0.50
Uranium					mg/kg			7440-61-1	1.37	0.772	0.85	0.74	0.754	0.588	0.68	0.788	1.76	0.608	0.739	0.757	0.59	0.733	0.731	0.650	0.737
Vanadium					mg/kg			7440-62-2	63.0	62.4	42.3	44.5	27.9	42.6	54.6	57.8	61.0	48.5	46.8	50.0	47.0	40.9	54.3	48.4	38.3
Zinc	**123**	**315**	**120.0**	820.0	mg/kg	120.0	MOE 93 - Sediment - LEL	7440-66-6	89.8	**138**	**124**	**172**	**147**	**137**	**130**	**220**	77.6	**167**	**169**	**165**	**150**	**129**	**172**	**191**	**142**
Zirconium					mg/kg			7440-67-7	8.4	7.2	3.2	3.9	3.2	3.8	8.1	7.5	12.3	5.9	4.5	5.2	5.6	3.8	5.6	3.5	3.1
pH					pH units			pH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PCBs																									
Total Polychlorinated Biphenyls (PCBs)	**0.0341**	**0.277**			mg/kg	0.0341	CCME Sediment ISQG Freshwater	1336-36-3	< 0.014	**0.095**	**0.324**	**0.328**	**0.192**	**0.254**	**0.1472**	**0.0559**	< 0.0090	**0.205**	**0.354**	**0.214**	**0.162**	**0.279**	**0.274**	**0.335**	**0.253**
Aroclor 1016			**0.00700**	53.0	mg/kg	0.00700	MOE 93 - Sediment - LEL	12674-11-2	< 0.0045	**< 0.011**	**< 0.023**	**< 0.034**	**< 0.014**	**< 0.014**	**< 0.015**	< 0.0030	< 0.0030	**< 0.015**	**< 0.023**	**< 0.0090**	**< 0.030**	**< 0.023**	**< 0.023**	**< 0.023**	**< 0.023**
Aroclor 1221					mg/kg			11104-28-2	< 0.0045	< 0.011	< 0.023	< 0.034	< 0.014	< 0.014	< 0.015	< 0.0030	< 0.0030	< 0.015	< 0.023	< 0.0090	< 0.030	< 0.023	< 0.023	< 0.023	< 0.023
Aroclor 1232					mg/kg			11141-16-5	< 0.0045	< 0.011	< 0.023	< 0.034	< 0.014	< 0.014	< 0.015	< 0.0030	< 0.0030	< 0.015	< 0.023	< 0.0090	< 0.030	< 0.023	< 0.023	< 0.023	< 0.023
Aroclor 1242					mg/kg			53469-21-9	< 0.0045	< 0.011	< 0.023	< 0.034	< 0.014	< 0.014	< 0.015	< 0.0080	< 0.0030	< 0.015	< 0.023	< 0.0090	< 0.030	< 0.023	< 0.023	< 0.023	< 0.023
Aroclor 1248			**0.0300**	150.0	mg/kg	0.0300	MOE 93 - Sediment - LEL	12672-29-6	< 0.0045	< 0.011	< 0.023	**< 0.034**	< 0.014	< 0.014	< 0.015	< 0.0030	< 0.0030	< 0.015	< 0.023	< 0.0090	< 0.030	< 0.023	< 0.023	< 0.023	< 0.023
Aroclor 1254	**0.06**	**0.34**	**0.0600**	34.0	mg/kg	0.06	CCME Sediment ISQG Freshwater	11097-69-1	< 0.0045	0.033	**0.167**	**0.149**	**0.097**	**0.096**	0.0484	0.0267	0.0038	**0.077**	**0.135**	**0.0825**	0.0577	**0.111**	**0.105**	**0.145**	**0.095**
Aroclor 1260			**0.00500**	24.0	mg/kg	0.00500	MOE 93 - Sediment - LEL	11096-82-5	< 0.0045	**0.062**	**0.156**	**0.179**	**0.095**	**0.158**	**0.0988**	**0.0292**	0.0038	**0.128**	**0.219**	**0.132**	**0.104**	**0.169**	**0.169**	**0.190**	**0.157**
Aroclor 1262					mg/kg			37324-23-5	< 0.0045	< 0.011	< 0.023	< 0.034	< 0.014	< 0.014	< 0.0030	< 0.0030	< 0.0030	< 0.015	< 0.023	< 0.0090	< 0.0060	< 0.023	< 0.023	< 0.023	< 0.023
Aroclor 1268					mg/kg			11100-14-4	< 0.0045	< 0.011	< 0.023	< 0.034	< 0.014	< 0.014	< 0.0030	< 0.0030	< 0.0030	< 0.015	< 0.023	< 0.0090	< 0.0060	< 0.023	< 0.023	< 0.023	< 0.023
Physical																									
Texture					none			Texture	-	-	-	-	-	Fine	-	Fine	-	Fine	-	-	-	-	-	Fine	-
Ungrouped Analytes																									
Fraction Organic Carbon					g/g			FOC	0.0148	0.0282	0.0957	0.0751	0.0403	0.0505	0.0209	0.0170	0.0072	0.0523	0.0731	0.0606	0.0322	0.0631	0.0670	0.0688	0.0690
Initial pH					pH units			pH_INITIAL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MOISTURE AT LIQUID LIMIT					%			MOIST_LL	50	64	97	190	N/A	81	48	49	-	-	-	-	60	-	-	-	-
Moisture at Plastic Limit					%			MOIST_PL	28	47	85	86	N/A	64	30	30	-	-	-	-	43	-	-	-	-
Plasticity Index					%			PLAST_INDEX	22	18	12	104	N/A	17	18	18	-	-	-	-	18	-	-	-	-

Canadian Sediment Quality Guidelines for the Protection of Aquatic Life - Interim freshwater sediment quality guidelines
Canadian Sediment Quality Guidelines for the Protection of Aquatic Life - Probable effect levels - Freshwater
MOE 93 - Sediment - LEL
MOE 93 - Sediment - SEL
< Indicates parameter was below laboratory equipment detection limit.
> Indicates parameter detected above equipment analytical range.
- Chemical not analyzed or criteria not defined.
Output generated by GalReport.

Parameter	CCME Sediment ISQG Freshwater	CCME Sediment PEL Freshwater	MOE 93 - Sediment - LEL	MOE 93 - Sediment - SEL	Unit	MCS	MCS Name	CAS_RN										
Location																		
Sample Name									TCRC-SG-009	TCRC-SG-010	WM-SC-003A	WM-SC-003B	WM-SG-001	WM-SG-002	WM-SG-003	WM-SG-004	WM-SG-005	WM-SG-006	WM-SG-007
Sample Date									2021-09-28	2021-10-01	2021-10-05	2021-10-05	2021-10-02	2021-09-30	2021-10-05	2021-10-02	2021-10-02	2021-10-02	2021-10-02
FIELD_SDG									L2646459	L2647638	L2650176	L2650176	L2647897	L2646743	L2650176	L2647897	L2647897	L2647897	L2647897
PARENT_SAMPLE_CODE																			
SAMPLE_TYPE_CODE									N	N	N	N	N	N	N	N	N	N	N
SYS_SAMPLE_CODE									L2646459-33	L2647638-13	L2650176-5	L2650176-6	L2647897-6	L2646743-16	L2650176-4	L2647897-5	L2647897-3	L2647897-4	L2647897-7
Field and Physical																			
Moisture, Percent					%			MOIST	87.7	70.9	75.1	76.9	82.7	84.2	80.8	85.4	84.9	85.4	86.4
Sieve - #200 (>0.075mm)					%			SIEVE>0.075MM	-	29.4	1.4	3.6	-	18.4	3.2	-	-	2.5	-
Index of Additive Cancer Risk (IACR)					none			PAH_IACR	8.41	236	23.5	42.5	47.6	8.60	12.9	9.92	38.9	10.2	8.49
Hydrocarbons																			
Acenaphthene	**0.00671**	**0.0889**			mg/kg	0.00671	CCME Sediment ISQG Freshwater	83-32-9	**0.041**	**0.198**	**0.143**	**0.213**	**0.273**	**0.054**	**0.059**	**0.043**	**0.217**	**0.047**	**0.038**
Acenaphthylene	**0.00587**	**0.128**			mg/kg	0.00587	CCME Sediment ISQG Freshwater	208-96-8	**0.231**	**1.48**	**0.557**	**0.734**	**0.240**	**0.144**	**0.263**	**0.232**	**0.342**	**0.199**	**0.195**
Acridine					mg/kg			260-94-6	< 0.075	0.394	0.521	1.08	0.161	< 0.050	0.058	< 0.075	0.099	< 0.075	< 0.075
Anthracene	**0.0469**	**0.245**	**0.220**	370.0	mg/kg	0.0469	CCME Sediment ISQG Freshwater	120-12-7	**0.082**	**2.68**	**0.344**	**0.613**	**0.702**	**0.113**	**0.170**	**0.102**	**0.476**	**0.107**	**0.091**
Benz(a)anthracene	**0.0317**	**0.385**	**0.320**	1480	mg/kg	0.0317	CCME Sediment ISQG Freshwater	56-55-3	**0.375**	**15.4**	**1.20**	**2.39**	**2.76**	**0.365**	**0.580**	**0.449**	**2.17**	**0.453**	**0.395**
Benzo(a)pyrene Total Potency Equivalence (TPE)					mg/kg			PAH_TPE	0.811	19.2	2.13	3.64	3.84	0.750	1.15	0.900	3.20	0.890	0.774
Benzo(g,h,i)perylene			**0.170**	320.0	mg/kg	0.170	MOE 93 - Sediment - LEL	191-24-2	**0.450**	**6.98**	**0.788**	**1.33**	**1.65**	**0.387**	**0.456**	**0.480**	**1.39**	**0.491**	**0.413**
Benzo(a)pyrene	**0.0319**	**0.782**	**0.370**	1440	mg/kg	0.0319	CCME Sediment ISQG Freshwater	50-32-8	**0.561**	**12.5**	**1.46**	**2.43**	**2.45**	**0.490**	**0.785**	**0.603**	**2.06**	**0.586**	**0.518**
Benzo(b,j) fluoranthene					mg/kg			Benz_Fluo_bj	0.581	16.9	1.61	2.93	3.42	0.612	0.949	0.756	2.86	0.781	0.648
Fluoranthene	**0.111**	**2.355**	**0.750**	1020	mg/kg	0.111	CCME Sediment ISQG Freshwater	206-44-0	**0.501**	**26.2**	**1.87**	**4.12**	**5.81**	**0.776**	**0.967**	**0.648**	**4.33**	**0.733**	**0.570**
Indeno(1,2,3-c,d)pyrene			**0.200**	320.0	mg/kg	0.200	MOE 93 - Sediment - LEL	193-39-5	**0.303**	**7.11**	**0.819**	**1.45**	**1.63**	**0.359**	**0.464**	**0.411**	**1.29**	**0.405**	**0.340**
Naphthalene	**0.0346**	**0.391**			mg/kg	0.0346	CCME Sediment ISQG Freshwater	91-20-3	**< 0.038**	**0.072**	**0.065**	**0.159**	**0.164**	**0.061**	< 0.025	**< 0.038**	**0.133**	**< 0.038**	**< 0.038**
Pyrene	**0.053**	**0.875**	**0.490**	850.0	mg/kg	0.053	CCME Sediment ISQG Freshwater	129-00-0	**0.598**	**21.2**	**2.62**	**5.25**	**4.99**	**0.720**	**1.08**	**0.742**	**3.82**	**0.751**	**0.644**
2-methylnaphthalene	**0.0202**	**0.201**			mg/kg	0.0202	CCME Sediment ISQG Freshwater	91-57-6	**< 0.038**	**0.044**	**0.063**	**0.136**	**0.098**	**0.035**	**0.026**	**< 0.038**	**0.084**	**< 0.038**	**< 0.038**
Dibenz(a,h)anthracene	**0.00622**	**0.135**	**0.0600**	130.0	mg/kg	0.00622	CCME Sediment ISQG Freshwater	53-70-3	**0.094**	**2.09**	**0.227**	**0.386**	**0.444**	**0.094**	**0.126**	**0.105**	**0.381**	**0.108**	**0.092**
Index of Additive Cancer Risk (IACR)					none			PAH_IACR	8.41	236	23.5	42.5	47.6	8.60	12.9	9.92	38.9	10.2	8.49
Quinoline					mg/kg			91-22-5	< 0.038	< 0.015	< 0.015	< 0.015	< 0.025	< 0.025	< 0.025	< 0.038	< 0.025	< 0.038	< 0.038
Fluorene	**0.0212**	**0.144**	**0.190**	160.0	mg/kg	0.0212	CCME Sediment ISQG Freshwater	86-73-7	**0.052**	**0.390**	**0.148**	**0.360**	**0.354**	**0.063**	**0.076**	**0.053**	**0.256**	**0.050**	**0.046**
Total Organic Carbon			**1.00**	**10.0**	%	1.00	MOE 93 - Sediment - LEL	TOC	**7.40**	**4.25**	**7.48**	**9.70**	**6.79**	**7.19**	**6.17**	**8.57**	**8.58**	**7.59**	**8.27**
1-Methylnaphthalene					mg/kg			90-12-0	< 0.038	0.044	0.047	0.093	0.087	0.028	0.025	< 0.038	0.076	< 0.038	< 0.038
Chrysene	**0.0571**	**0.862**	**0.340**	460.0	mg/kg	0.0571	CCME Sediment ISQG Freshwater	218-01-9	**0.430**	**15.3**	**1.47**	**3.02**	**2.80**	**0.467**	**0.684**	**0.475**	**2.25**	**0.505**	**0.409**
Phenanthrene	**0.0419**	**0.515**	**0.560**	950.0	mg/kg	0.0419	CCME Sediment ISQG Freshwater	85-01-8	**0.210**	**6.11**	**0.887**	**2.02**	**3.35**	**0.481**	**0.446**	**0.265**	**2.26**	**0.329**	**0.237**
Benzo(k)fluoranthene			**0.240**	1340	mg/kg	0.240	MOE 93 - Sediment - LEL	207-08-9	0.214	**4.83**	**0.593**	**1.05**	**1.15**	**0.245**	**0.315**	0.207	**0.868**	0.225	0.171
Metals																			
Aluminum					mg/kg			7429-90-5	17600	16300	20100	15300	15800	12900	15500	25100	19700	22300	21300
Antimony					mg/kg			7440-36-0	0.81	3.57	4.69	15.6	2.85	0.76	1.79	1.40	3.19	1.32	1.24
Arsenic	**5.9**	**17**	**6.00**	**33.0**	mg/kg	5.9	CCME Sediment ISQG Freshwater	7440-38-2	**8.60**	**67.6**	**61.7**	**349**	**45.4**	**10.3**	**25.6**	**18.6**	**54.9**	**17.4**	**12.8**
Barium					mg/kg			7440-39-3	263	269	298	293	254	197	240	354	289	340	329
Beryllium					mg/kg			7440-41-7	0.73	0.61	0.83	0.66	0.59	0.58	0.59	0.77	0.64	0.71	0.72
Bismuth					mg/kg			7440-69-9	0.42	0.49	1.78	4.95	0.97	< 0.40	0.64	0.76	0.58	0.73	0.73
Boron|H.W.E Boron					mg/kg			7440-42-8	11.4	0.43|7.9	0.94|11.3	9.4	13.0	11	0.81|8.8	12.7	11.4	11.3	11.0
Cadmium	**0.6**	3.5	**0.600**	10.0	mg/kg	0.6	CCME Sediment ISQG Freshwater	7440-43-9	**0.650**	**1.06**	**1.48**	**1.41**	**1.01**	**0.622**	**0.765**	**1.07**	**1.21**	**0.902**	**0.877**
Calcium					mg/kg			7440-70-2	74400	63000	52300	42500	97900	91800	105000	82300	58100	85100	75300
Chromium			**26.0**	**110.0**	mg/kg	26.0	MOE 93 - Sediment - LEL	7440-47-3	**653**	**259**	**1830**	**1140**	**305**	**488**	**744**	**1000**	**669**	**748**	**771**
Chromium Trivalent (Cr(III))					mg/kg			16065-83-1	-	258	1820	-	-	-	739	-	-	-	-
Chromium Hexavalent (Cr(VI))					mg/kg			18540-29-9	-	1.02	8.10	-	-	-	5.0	-	-	-	-
Cobalt					mg/kg			7440-48-4	12.6	38.1	38.8	153	27.4	13.7	19.6	19.1	32.0	17.4	15.5
Copper	**35.7**	**197**	**16.0**	**110.0**	mg/kg	16.0	MOE 93 - Sediment - LEL	7440-50-8	**39.4**	**58.2**	**68.9**	**81.1**	**91.5**	**37.6**	**45.5**	**60.5**	**93.1**	**58.0**	**51.5**
Iron			**20000**	**40000**	mg/kg	20000	MOE 93 - Sediment - LEL	7439-89-6	**26400**	**31200**	**30100**	**25100**	**25100**	**23300**	**23200**	**35200**	**29900**	**30900**	**30200**
Lead	**35**	**91.3**	**31.0**	**250.0**	mg/kg	31.0	MOE 93 - Sediment - LEL	7439-92-1	**98.7**	**222**	**321**	**457**	**166**	**94.9**	**136**	**152**	**210**	**133**	**132**
Lithium					mg/kg			7439-93-2	16.7	14.3	20.6	12.2	11.1	12.4	14.8	15.0	11.6	13.8	14.1
Magnesium					mg/kg			7439-95-4	15000	12800	15000	10700	18000	11700	12300	17200	15200	16300	15000
Manganese			**460.0**	**1100.0**	mg/kg	460.0	MOE 93 - Sediment - LEL	7439-96-5	**884**	**618**	**583**	**464**	**782**	**1010**	**573**	**1160**	**789**	**1070**	**1030**
Mercury	**0.17**	**0.486**	**0.200**	**2.00**	mg/kg	0.17	CCME Sediment ISQG Freshwater	7439-97-6	**0.348**	**1.22**	**2.30**	**12.1**	**1.30**	**0.688**	**1.36**	**0.683**	**1.48**	**0.689**	**0.577**
Molybdenum					mg/kg			7439-98-7	0.98	0.86	1.15	1.00	1.23	0.90	1.03	1.39	1.21	1.42	1.40
Nickel			**16.0**	**75.0**	mg/kg	16.0	MOE 93 - Sediment - LEL	7440-02-0	**25.8**	**37.1**	**45.0**	**99.9**	**32.1**	**22.3**	**28.1**	**34.8**	**40.4**	**32.0**	**30.5**
Phosphorus			**600.0**	**2000.0**	mg/kg	600.0	MOE 93 - Sediment - LEL	7723-14-0	**1090**	**1130**	**1260**	**1090**	**1190**	**1210**	**1030**	**1430**	**1340**	**1350**	**1270**
Potassium					mg/kg			7440-09-7	4430	3710	4320	3180	3800	3290	3240	5770	4350	5420	5010
Selenium					mg/kg			7782-49-2	0.89	0.55	1.21	1.55	0.93	1.20	0.88	1.62	1.20	1.50	1.48
Silver					mg/kg			7440-22-4	0.62	0.59	1.98	3.95	0.59	0.48	1.06	1.02	1.81	1.00	0.95
Sodium					mg/kg			7440-23-5	673	558	607	423	624	650	594	838	671	739	725
Strontium					mg/kg			7440-24-6	413	327	275	253	362	636	551	475	316	541	489
Sulphur (S8)					mg/kg			7704-34-9	7300	5300	7000	6200	6000	10700	7100	10800	7500	9400	9400
Thallium					mg/kg			7440-28-0	0.287	0.277	0.399	0.463	0.277	0.28	0.264	0.369	0.332	0.332	0.337
Tin					mg/kg			7440-31-5	4.9	55.9	26.6	27.3	18.6	8.0	8.7	8.0	17.1	7.9	7.3
Titanium					mg/kg			7440-32-6	1210	1070	1250	854	958	818	941	1500	1170	1320	1300
Tungsten					mg/kg			7440-33-7	< 0.50	< 0.50	< 0.50	< 0.50	2.21	< 1.0	< 0.50	0.69	1.06	0.67	0.56
Uranium					mg/kg			7440-61-1	0.800	0.634	0.853	0.735	0.689	0.78	0.710	1.07	0.812	0.981	1.04
Vanadium					mg/kg			7440-62-2	47.5	41.9	51.3	37.5	46.4	35.3	40.3	60.7	53.0	54.3	52.5
Zinc	**123**	**315**	**120.0**	820.0	mg/kg	120.0	MOE 93 - Sediment - LEL	7440-66-6	**147**	**421**	**287**	**413**	**361**	**140**	**169**	**241**	**359**	**234**	**204**
Zirconium					mg/kg			7440-67-7	4.1	4.1	5.1	4.7	2.7	2.7	3.8	4.1	3.9	3.7	4.3
pH					pH units			pH	-	-	-	-	-	-	-	-	-	-	-
PCBs																			
Total Polychlorinated Biphenyls (PCBs)	**0.0341**	**0.277**			mg/kg	0.0341	CCME Sediment ISQG Freshwater	1336-36-3	**0.486**	**0.166**	**1.632**	**1.272**	**< 0.23**	**0.264**	**0.537**	**0.517**	**0.426**	**0.380**	**0.203**
Aroclor 1016			**0.00700**	53.0	mg/kg	0.00700	MOE 93 - Sediment - LEL	12674-11-2	**< 0.023**	**< 0.014**	**< 0.0090**	**< 0.0090**	**< 0.045**	**< 0.023**	**< 0.015**	**< 0.023**	**< 0.023**	**< 0.023**	< 0.0060
Aroclor 1221					mg/kg			11104-28-2	< 0.023	< 0.014	< 0.0090	< 0.0090	< 0.045	< 0.023	< 0.015	< 0.023	< 0.023	< 0.023	< 0.0060
Aroclor 1232					mg/kg			11141-16-5	< 0.023	< 0.014	< 0.0090	< 0.0090	< 0.045	< 0.023	< 0.015	< 0.023	< 0.023	< 0.023	< 0.0060
Aroclor 1242					mg/kg			53469-21-9	< 0.023	< 0.023	< 0.055	< 0.038	< 0.045	< 0.023	< 0.015	< 0.023	< 0.023	< 0.023	< 0.0060
Aroclor 1248			**0.0300**	150.0	mg/kg	0.0300	MOE 93 - Sediment - LEL	12672-29-6	< 0.023	< 0.014	< 0.0090	< 0.0090	**< 0.045**	< 0.023	< 0.015	< 0.023	< 0.023	< 0.023	< 0.0060
Aroclor 1254	**0.06**	**0.34**	**0.0600**	34.0	mg/kg	0.06	CCME Sediment ISQG Freshwater	11097-69-1	**0.186**	**0.090**	**0.995**	**1.05**	**< 0.16**	**0.101**	**0.214**	**0.213**	**0.203**	**0.159**	**0.105**
Aroclor 1260			**0.00500**	24.0	mg/kg	0.00500	MOE 93 - Sediment - LEL	11096-82-5	**0.300**	**0.076**	**0.637**	**0.222**	**< 0.11**	**0.163**	**0.323**	**0.304**	**0.223**	**0.221**	**0.0979**
Aroclor 1262					mg/kg			37324-23-5	< 0.023	< 0.014	< 0.0090	< 0.0090	< 0.045	< 0.023	< 0.015	< 0.023	< 0.023	< 0.023	< 0.0060
Aroclor 1268					mg/kg			11100-14-4	< 0.023	< 0.014	< 0.0090	< 0.0090	< 0.045	< 0.023	< 0.015	< 0.023	< 0.023	< 0.023	< 0.0060
Physical																			
Texture					none			Texture	-	Fine	Fine	Fine	-	Fine	Fine	-	-	Fine	-
Ungrouped Analytes																			
Fraction Organic Carbon					g/g			FOC	0.0740	0.0425	0.0748	0.0970	0.0679	0.0719	0.0617	0.0857	0.0858	0.0759	0.0827
Initial pH					pH units			pH_INITIAL	-	-	-	-	-	-	-	-	-	-	-
MOISTURE AT LIQUID LIMIT					%			MOIST_LL	-	55	94	-	-	-	97	-	-	-	-
Moisture at Plastic Limit					%			MOIST_PL	-	51	66	-	-	-	63	-	-	-	-
Plasticity Index					%			PLAST_INDEX	-	4	27	-	-	-	34	-	-	-	-

Canadian Sediment Quality Guidelines for the Protection of Aquatic Life - Interim freshwater sediment quality guidelines
Canadian Sediment Quality Guidelines for the Protection of Aquatic Life - Probable effect levels - Freshwater
MOE 93 - Sediment - LEL
MOE 93 - Sediment - SEL
< Indicates parameter was below laboratory equipment detection limit.
> Indicates parameter detected above equipment analytical range.
- Chemical not analyzed or criteria not defined.
Output generated by GalReport.

Parameter	O.Reg 347/558	Unit	CAS_RN	Location	Sample Name	Sample Date	FIELD_SDG	PARENT_SAMPLE_CODE	SAMPLE_TYPE_CODE	SYS_SAMPLE_CODE	DUP-001	DUP-002	DUP-003	DUP-004	DUP-005	DUP-006	DUP-007	DUP-008	DUP-201	DUP-202	DUP-203	DUP-204	DUP-205	DUP-206	DUP-207	DUP-208	DUP-209	DUP-210	PCE-SG-001	PCE-SG-002
											2021-09-28	2021-09-29	2021-09-30	2021-10-03	2021-10-03	2021-10-03	2021-10-04	2021-10-04	2021-09-28	2021-09-29	2021-09-30	2021-10-05	2021-10-03	2021-10-05	2021-10-05	2021-10-05	2021-10-06	2021-10-06	2021-10-02	2021-10-02
											L2646459	L2646722	L2646743	L2648161	L2648161	L2648161	L2647880	L2647880	L2646459	L2646722	L2646743	L2650176	L2648161	L2650176	L2650176	L2650176	L2650174	L2650174	L2647897	L2647897
											L2646459-13	L2646722-6	L2646743-19	L2648161-15	L2648161-13	L2648161-11	L2647880-7	L2647880-16	L2646459-8	L2646722-8	L2646743-4	L2650176-8	L2648161-1	L2650176-5	L2650176-2	L2650176-17	L2650174-4	L2650174-7		
											FD	FD	FD	FD	FD	FD	FD	FD	FD	FD	FD	FD	FD	FD	FD	FD	FD	FD	N	N
											L2646459-14	L2646722-7	L2646743-22	L2648161-21	L2648161-20	L2648161-12	L2647880-19	L2647880-20	L2646459-9	L2646722-9	L2646743-13	L2650176-13	L2648161-4	L2650176-14	L2650176-15	L2650176-16	L2650174-8	L2650174-9	L2647897-12	L2647897-14
Field and Physical																														
Moisture, Percent		%	MOIST								86.1	84.2	73.6	82.5	66.1	75.4	72.2	81.7	86.2	83.7	86.0	74.7	64.6	76.8	70.6	70.3	86.3	79.7	83.0	82.6
Sieve - #200 (>0.075mm)		%	SIEVE>0.075MM								-	-	-	4.2	-	-	-	-	-	-	-	-	8.7	1.2	18.6	-	< 1.0	2.2	1.4	-
Index of Additive Cancer Risk (IACR)		none	PAH_IACR								11.6	12.7	48.2	13.6	33.7	12.4	28.1	23.7	11.2	20.7	12.3	54.0	15.4	28.4	63.7	54.3	17.0	17.3	9.35	11.3
Hydrocarbons																														
Acenaphthene		mg/L	83-32-9								-	-	-	< 0.0050	-	-	-	-	-	-	-	-	< 0.0050	< 0.0050	< 0.0050	-	-	-	-	-
Acenaphthylene		mg/L	208-96-8								-	-	-	< 0.0050	-	-	-	-	-	-	-	-	< 0.0050	< 0.0050	< 0.0050	-	-	-	-	-
Anthracene		mg/L	120-12-7								-	-	-	< 0.0050	-	-	-	-	-	-	-	-	< 0.0050	< 0.0050	< 0.0050	-	-	-	-	-
Benz(a)anthracene		mg/L	56-55-3								-	-	-	< 0.0050	-	-	-	-	-	-	-	-	< 0.0050	< 0.0050	< 0.0050	-	-	-	-	-
Benzo(g,h,i)perylene		mg/L	191-24-2								-	-	-	< 0.0050	-	-	-	-	-	-	-	-	< 0.0050	< 0.0050	< 0.0050	-	-	-	-	-
Benzo(a)pyrene		mg/L	50-32-8								-	-	-	< 0.0010	-	-	-	-	-	-	-	-	< 0.0010	< 0.0010	< 0.0010	-	-	-	-	-
Benzo(b,j) fluoranthene		mg/L	Benz_Fluo_bj								-	-	-	< 0.0050	-	-	-	-	-	-	-	-	< 0.0050	< 0.0050	< 0.0050	-	-	-	-	-
Fluoranthene		mg/L	206-44-0								-	-	-	< 0.0050	-	-	-	-	-	-	-	-	< 0.0050	< 0.0050	< 0.0050	-	-	-	-	-
Indeno(1,2,3-c,d)pyrene		mg/L	193-39-5								-	-	-	< 0.0050	-	-	-	-	-	-	-	-	< 0.0050	< 0.0050	< 0.0050	-	-	-	-	-
Naphthalene		mg/L	91-20-3								-	-	-	< 0.0050	-	-	-	-	-	-	-	-	< 0.0050	< 0.0050	< 0.0050	-	-	-	-	-
Pyrene		mg/L	129-00-0								-	-	-	< 0.0050	-	-	-	-	-	-	-	-	< 0.0050	< 0.0050	< 0.0050	-	-	-	-	-
Dibenz(a,h)anthracene		mg/L	53-70-3								-	-	-	< 0.0050	-	-	-	-	-	-	-	-	< 0.0050	< 0.0050	< 0.0050	-	-	-	-	-
Index of Additive Cancer Risk (IACR)		none	PAH_IACR								11.6	12.7	48.2	13.6	33.7	12.4	28.1	23.7	11.2	20.7	12.3	54.0	15.4	28.4	63.7	54.3	17.0	17.3	9.35	11.3
Quinoline		mg/L	91-22-5								-	-	-	< 0.0050	-	-	-	-	-	-	-	-	< 0.0050	< 0.0050	< 0.0050	-	-	-	-	-
Fluorene		mg/L	86-73-7								-	-	-	< 0.0050	-	-	-	-	-	-	-	-	< 0.0050	< 0.0050	< 0.0050	-	-	-	-	-
Total Organic Carbon		%	TOC								8.74	8.23	9.90	7.61	2.81	8.12	5.25	7.21	8.69	8.64	10.1	8.41	5.98	7.60	6.24	7.90	10.5	6.84	7.24	7.76
Chrysene		mg/L	218-01-9								-	-	-	< 0.0050	-	-	-	-	-	-	-	-	< 0.0050	< 0.0050	< 0.0050	-	-	-	-	-
Phenanthrene		mg/L	85-01-8								-	-	-	< 0.0050	-	-	-	-	-	-	-	-	< 0.0050	< 0.0050	< 0.0050	-	-	-	-	-
Benzo(k)fluoranthene		mg/L	207-08-9								-	-	-	< 0.0050	-	-	-	-	-	-	-	-	< 0.0050	< 0.0050	< 0.0050	-	-	-	-	-
Metals																														
Arsenic		mg/L	7440-38-2								-	-	-	< 0.050	-	-	-	-	-	-	-	-	< 0.050	0.177	< 0.050	-	-	-	-	-
Barium		mg/L	7440-39-3								-	-	-	0.88	-	-	-	-	-	-	-	-	1.05	1.03	0.88	-	-	-	-	-
Boron		mg/L	7440-42-8								-	-	-	< 2.5	-	-	-	-	-	-	-	-	< 2.5	< 2.5	< 2.5	-	-	-	-	-
Cadmium		mg/L	7440-43-9								-	-	-	< 0.0050	-	-	-	-	-	-	-	-	< 0.0050	< 0.0050	< 0.0050	-	-	-	-	-
Chromium		mg/L	7440-47-3								-	-	-	< 0.050	-	-	-	-	-	-	-	-	< 0.050	< 0.050	< 0.050	-	-	-	-	-
Lead		mg/L	7439-92-1								-	-	-	< 0.025	-	-	-	-	-	-	-	-	< 0.025	0.109	< 0.025	-	-	-	-	-
Mercury		mg/L	7439-97-6								-	-	-	< 0.00010	-	-	-	-	-	-	-	-	< 0.00010	< 0.00010	< 0.00010	-	-	-	-	-
Selenium		mg/L	7782-49-2								-	-	-	< 0.025	-	-	-	-	-	-	-	-	< 0.025	< 0.025	< 0.025	-	-	-	-	-
Silver		mg/L	7440-22-4								-	-	-	< 0.0050	-	-	-	-	-	-	-	-	< 0.0050	< 0.0050	< 0.0050	-	-	-	-	-
Uranium		mg/L	7440-61-1								-	-	-	< 0.25	-	-	-	-	-	-	-	-	< 0.25	< 0.25	< 0.25	-	-	-	-	-
pH		pH units	pH								-	-	-	5.88	-	-	-	-	-	-	-	-	5.74	5.49	5.86	-	-	-	-	-
Physical																														
Texture		none	Texture								-	-	-	Fine	-	-	-	-	-	-	-	-	Fine	Fine	Fine	-	Fine	Fine	Fine	-
Ungrouped Analytes																														
Initial pH		pH units	pH_INITIAL								-	-	-	5.06	-	-	-	-	-	-	-	-	5.00	7.82	7.76	-	-	-	-	-
MOISTURE AT LIQUID LIMIT		%	MOIST_LL								-	-	-	-	-	-	-	-	-	-	-	98	75	93	-	-	-	-	-	-
Moisture at Plastic Limit		%	MOIST_PL								-	-	-	-	-	-	-	-	-	-	-	88	58	61	-	-	-	-	-	-
Plasticity Index		%	PLAST_INDEX								-	-	-	-	-	-	-	-	-	-	-	10	17	32	-	-	-	-	-	-
Specific Gravity		kg/L	SG								-	-	-	-	-	-	-	-	-	-	-	1.20	1.21	1.18	-	-	-	-	-	-

O.Reg 347 Standards for leachate toxic soils

< Indicates parameter was below laboratory equipment detection limit.

> Indicates parameter detected above equipment analytical range.

- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Parameter	O.Reg 347/558	Unit	CAS_RN																			
Location																						
Sample Name				PCE-SG-003	PCE-SG-004	PCE-SG-005	PCE-SG-006	PCE-SG-007	PCE-SG-008	PCE-SG-009	PCE-SG-010	PCE-SG-011	PCE-SG-012	PCE-SG-013	PCE-SG-014	PCOM-SC-001A	PCOM-SC-001B	PCOM-SC-001C	PCOM-SC-001D	PCOM-SC-001E	PCOM-SC-001F	PCOM-SC-001G	PCOM-SG-001
Sample Date				2021-10-02	2021-10-03	2021-10-03	2021-10-03	2021-10-03	2021-10-03	2021-10-03	2021-10-03	2021-10-03	2021-10-04	2021-10-06	2021-10-06	2021-10-07	2021-10-07	2021-10-07	2021-10-07	2021-10-07	2021-10-07	2021-10-07	2021-10-05
FIELD_SDG				L2647897	L2648161	L2648161	L2648161	L2648161	L2648161	L2648161	L2648161	L2648161	L2647880	L2650174	L2650174	L2650175	L2650175	L2650175	L2650175	L2650175	L2650175	L2650175	L2650176
PARENT_SAMPLE_CODE																							
SAMPLE_TYPE_CODE				N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SYS_SAMPLE_CODE				L2647897-13	L2648161-19	L2648161-15	L2648161-18	L2648161-17	L2648161-16	L2648161-14	L2648161-13	L2648161-11	L2647880-15	L2650174-6	L2650174-7	L2650175-12	L2650175-14	L2650175-15	L2650175-16	L2650175-17	L2650175-18	L2650175-19	L2650176-17
Field and Physical																							
Moisture, Percent		%	MOIST	82.2	83.2	82.0	72.7	67.2	72.0	77.2	70.1	71.9	83.7	84.3	78.8	58.7	50.4	37.3	23.1	33.2	48.9	59.8	68.5
Sieve - #200 (>0.075mm)		%	SIEVE>0.075MM	-	-	4.1	-	-	-	-	-	-	-	1.4	2.1	-	-	-	-	-	-	-	-
Index of Additive Cancer Risk (IACR)		none	PAH_IACR	15.5	10.7	14.4	41.6	11.7	12.9	21.4	39.7	8.08	11.3	8.28	18.2	51.5	37.1	16.4	16.0	33.1	89.6	98.0	52.0
Hydrocarbons																							
Acenaphthene		mg/L	83-32-9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthylene		mg/L	208-96-8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Anthracene		mg/L	120-12-7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benz(a)anthracene		mg/L	56-55-3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(g,h,i)perylene		mg/L	191-24-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(a)pyrene		mg/L	50-32-8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(b,j) fluoranthene		mg/L	Benz_Fluo_bj	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fluoranthene		mg/L	206-44-0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Indeno(1,2,3-c,d)pyrene		mg/L	193-39-5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Naphthalene		mg/L	91-20-3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyrene		mg/L	129-00-0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenz(a,h)anthracene		mg/L	53-70-3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Index of Additive Cancer Risk (IACR)		none	PAH_IACR	15.5	10.7	14.4	41.6	11.7	12.9	21.4	39.7	8.08	11.3	8.28	18.2	51.5	37.1	16.4	16.0	33.1	89.6	98.0	52.0
Quinoline		mg/L	91-22-5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fluorene		mg/L	86-73-7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Organic Carbon		%	TOC	6.76	9.38	7.41	6.24	6.74	7.66	5.79	2.93	8.01	7.86	7.13	6.67	-	-	-	-	-	-	-	7.57
Chrysene		mg/L	218-01-9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phenanthrene		mg/L	85-01-8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(k)fluoranthene		mg/L	207-08-9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Metals																							
Arsenic		mg/L	7440-38-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Barium		mg/L	7440-39-3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Boron		mg/L	7440-42-8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cadmium		mg/L	7440-43-9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium		mg/L	7440-47-3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead		mg/L	7439-92-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mercury		mg/L	7439-97-6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium		mg/L	7782-49-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silver		mg/L	7440-22-4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Uranium		mg/L	7440-61-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
pH		pH units	pH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Physical																							
Texture		none	Texture	-	-	Fine	-	-	-	-	-	-	-	Fine	Fine	-	-	-	-	-	-	-	-
Ungrouped Analytes																							
Initial pH		pH units	pH_INITIAL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MOISTURE AT LIQUID LIMIT		%	MOIST_LL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Moisture at Plastic Limit		%	MOIST_PL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Plasticity Index		%	PLAST_INDEX	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Specific Gravity		kg/L	SG	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

O.Reg 347 Standards for leachate toxic soils
< Indicates parameter was below laboratory equipment detection limit.
> Indicates parameter detected above equipment analytical range.
- Chemical not analyzed or criteria not defined.
Output generated by GalReport.

Parameter	O.Reg 347/558	Unit	CAS_RN	Location	Sample Name	Sample Date	FIELD_SDG	PARENT_SAMPLE_CODE	SAMPLE_TYPE_CODE	SYS_SAMPLE_CODE
					PCOM-SG-001	2021-10-05	L2650176		N	L2650176-1
					PCOM-SG-001	2021-10-07	L2650175		N	L2650175-13
					PCOM-SG-002	2021-10-05	L2650176		N	L2650176-2
					PCOM-SG-003	2021-10-05	L2650176		N	L2650176-3
					PCW-SC-001	2021-10-03	L2648161		N	L2648161-3
					PCW-SC-001A	2021-10-03	L2648161		N	L2648161-1
					PCW-SC-001AX	2021-10-06	L2650174		N	L2650174-14
					PCW-SC-001B	2021-10-03	L2648161		N	L2648161-2
					PCW-SC-001BX	2021-10-06	L2650174		N	L2650174-15
					PCW-SC-001CX	2021-10-06	L2650174		N	L2650174-16
					PCW-SC-001DX	2021-10-06	L2650174		N	L2650174-17
					PCW-SC-001EX	2021-10-06	L2650174		N	L2650174-18
					PCW-SC-001FX	2021-10-06	L2650174		N	L2650174-19
					PCW-SC-001GX	2021-10-06	L2650174		N	L2650174-20
					PCW-SC-005A	2021-10-03	L2648161		N	L2648161-5
					PCW-SC-005B	2021-10-03	L2648161		N	L2648161-6
					PCW-SC-007A	2021-10-03	L2648161		N	L2648161-8
					PCW-SC-007B	2021-10-03	L2648161		N	L2648161-9
					PCW-SC-011A	2021-10-05	L2650176		N	L2650176-8
					PCW-SC-011B	2021-10-05	L2650176		N	L2650176-9
Field and Physical										
Moisture, Percent		%	MOIST		71.0	70.2	68.0	70.1	82.1	77.1	78.6	86.3	71.5	64.8	60.2	64.6	80.4	87.1	65.8	84.2	76.8	86.2	69.9	70.9
Sieve - #200 (>0.075mm)		%	SIEVE>0.075MM		-	25.9	18.8	-	3.8	8.2	-	13.9	-	-	-	-	-	-	19.7	-	13.0	1.9	-	-
Index of Additive Cancer Risk (IACR)		none	PAH_IACR		46.9	42.2	63.8	40.9	17.4	28.3	14.9	3.65	13.3	12.3	10.5	18.6	53.9	34.6	48.7	27.0	46.1	28.5	43.4	72.0
Hydrocarbons																								
Acenaphthene		mg/L	83-32-9		-	-	< 0.0050	-	< 0.0050	< 0.0050	-	-	-	-	-	-	-	-	-	-	< 0.0050	-	-	-
Acenaphthylene		mg/L	208-96-8		-	-	< 0.0050	-	< 0.0050	< 0.0050	-	-	-	-	-	-	-	-	-	-	< 0.0050	-	-	-
Anthracene		mg/L	120-12-7		-	-	< 0.0050	-	< 0.0050	< 0.0050	-	-	-	-	-	-	-	-	-	-	< 0.0050	-	-	-
Benz(a)anthracene		mg/L	56-55-3		-	-	< 0.0050	-	< 0.0050	< 0.0050	-	-	-	-	-	-	-	-	-	-	< 0.0050	-	-	-
Benzo(g,h,i)perylene		mg/L	191-24-2		-	-	< 0.0050	-	< 0.0050	< 0.0050	-	-	-	-	-	-	-	-	-	-	< 0.0050	-	-	-
Benzo(a)pyrene		mg/L	50-32-8		-	-	< 0.0010	-	< 0.0010	< 0.0010	-	-	-	-	-	-	-	-	-	-	< 0.0010	-	-	-
Benzo(b,j) fluoranthene		mg/L	Benz_Fluo_bj		-	-	< 0.0050	-	< 0.0050	< 0.0050	-	-	-	-	-	-	-	-	-	-	< 0.0050	-	-	-
Fluoranthene		mg/L	206-44-0		-	-	< 0.0050	-	< 0.0050	< 0.0050	-	-	-	-	-	-	-	-	-	-	< 0.0050	-	-	-
Indeno(1,2,3-c,d)pyrene		mg/L	193-39-5		-	-	< 0.0050	-	< 0.0050	< 0.0050	-	-	-	-	-	-	-	-	-	-	< 0.0050	-	-	-
Naphthalene		mg/L	91-20-3		-	-	< 0.0050	-	< 0.0050	< 0.0050	-	-	-	-	-	-	-	-	-	-	< 0.0050	-	-	-
Pyrene		mg/L	129-00-0		-	-	< 0.0050	-	< 0.0050	< 0.0050	-	-	-	-	-	-	-	-	-	-	< 0.0050	-	-	-
Dibenz(a,h)anthracene		mg/L	53-70-3		-	-	< 0.0050	-	< 0.0050	< 0.0050	-	-	-	-	-	-	-	-	-	-	< 0.0050	-	-	-
Index of Additive Cancer Risk (IACR)		none	PAH_IACR		46.9	42.2	63.8	40.9	17.4	28.3	14.9	3.65	13.3	12.3	10.5	18.6	53.9	34.6	48.7	27.0	46.1	28.5	43.4	72.0
Quinoline		mg/L	91-22-5		-	-	< 0.0050	-	< 0.0050	< 0.0050	-	-	-	-	-	-	-	-	-	-	< 0.0050	-	-	-
Fluorene		mg/L	86-73-7		-	-	< 0.0050	-	< 0.0050	< 0.0050	-	-	-	-	-	-	-	-	-	-	< 0.0050	-	-	-
Total Organic Carbon		%	TOC		6.15	5.15	6.09	6.72	6.63	6.88	-	36.5	-	-	-	-	-	-	6.29	28.9	12.6	30.4	8.49	10.1
Chrysene		mg/L	218-01-9		-	-	< 0.0050	-	< 0.0050	< 0.0050	-	-	-	-	-	-	-	-	-	-	< 0.0050	-	-	-
Phenanthrene		mg/L	85-01-8		-	-	< 0.0050	-	< 0.0050	< 0.0050	-	-	-	-	-	-	-	-	-	-	< 0.0050	-	-	-
Benzo(k)fluoranthene		mg/L	207-08-9		-	-	< 0.0050	-	< 0.0050	< 0.0050	-	-	-	-	-	-	-	-	-	-	< 0.0050	-	-	-
Metals																								
Arsenic		mg/L	7440-38-2		-	-	< 0.050	-	< 0.050	< 0.050	-	-	-	-	-	-	-	-	-	-	< 0.050	-	-	-
Barium		mg/L	7440-39-3		-	-	1.04	-	0.86	1.04	-	-	-	-	-	-	-	-	-	-	0.83	-	-	-
Boron		mg/L	7440-42-8		-	-	< 2.5	-	< 2.5	< 2.5	-	-	-	-	-	-	-	-	-	-	< 2.5	-	-	-
Cadmium		mg/L	7440-43-9		-	-	< 0.0050	-	< 0.0050	< 0.0050	-	-	-	-	-	-	-	-	-	-	< 0.0050	-	-	-
Chromium		mg/L	7440-47-3		-	-	< 0.050	-	< 0.050	< 0.050	-	-	-	-	-	-	-	-	-	-	< 0.050	-	-	-
Lead		mg/L	7439-92-1		-	-	< 0.025	-	< 0.025	< 0.025	-	-	-	-	-	-	-	-	-	-	0.030	-	-	-
Mercury		mg/L	7439-97-6		-	-	< 0.00010	-	< 0.00010	< 0.00010	-	-	-	-	-	-	-	-	-	-	< 0.00010	-	-	-
Selenium		mg/L	7782-49-2		-	-	< 0.025	-	< 0.025	< 0.025	-	-	-	-	-	-	-	-	-	-	< 0.025	-	-	-
Silver		mg/L	7440-22-4		-	-	< 0.0050	-	< 0.0050	< 0.0050	-	-	-	-	-	-	-	-	-	-	< 0.0050	-	-	-
Uranium		mg/L	7440-61-1		-	-	< 0.25	-	< 0.25	< 0.25	-	-	-	-	-	-	-	-	-	-	< 0.25	-	-	-
pH		pH units	pH		-	-	5.89	-	5.81	5.77	-	-	-	-	-	-	-	-	-	-	5.77	-	-	-
Physical																								
Texture		none	Texture		-	Fine	Fine	-	Fine	Fine	-	Fine	-	-	-	-	-	-	Fine	-	Fine	Fine	-	-
Ungrouped Analytes																								
Initial pH		pH units	pH_INITIAL		-	-	7.98	-	5.07	5.05	-	-	-	-	-	-	-	-	-	-	5.04	-	-	-
MOISTURE AT LIQUID LIMIT		%	MOIST_LL		-	-	-	-	86	78	-	-	-	-	-	-	-	-	76	-	116	-	97	-
Moisture at Plastic Limit		%	MOIST_PL		-	-	-	-	79	55	-	-	-	-	-	-	-	-	58	-	105	-	88	-
Plasticity Index		%	PLAST_INDEX		-	-	-	-	7	23	-	-	-	-	-	-	-	-	18	-	11	-	9	-
Specific Gravity		kg/L	SG		-	-	-	-	1.09	1.22	-	-	-	-	-	-	-	-	1.23	-	1.09	-	1.15	-

O.Reg 347 Standards for leachate toxic soils

< Indicates parameter was below laboratory equipment detection limit.

> Indicates parameter detected above equipment analytical range.

- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Parameter	O.Reg 347/558	Unit	CAS_RN																			
Location																						
Sample Name				PCW-SC-013A	PCW-SG-002	PCW-SG-003	PCW-SG-004	PCW-SG-005	PCW-SG-006	PCW-SG-007	PCW-SG-008	PCW-SG-009	PCW-SG-010	PCW-SG-011	PCW-SG-012	PCW-SG-013	PCW-SG-014	PCW-SG-015	PCW-SG-016	PPOM-SC-002A	PPOM-SC-002B	PPOM-SC-002C	PPOM-SC-004A
Sample Date				2021-10-05	2021-10-04	2021-10-04	2021-10-04	2021-10-03	2021-10-04	2021-10-03	2021-10-04	2021-10-04	2021-10-04	2021-10-05	2021-10-04	2021-10-05	2021-10-04	2021-10-04	2021-10-04	2021-10-02	2021-10-02	2021-10-02	2021-10-02
FIELD_SDG				L2650176	L2647880	L2647880	L2647880	L2648161	L2647880	L2648161	L2647880	L2647880	L2647880	L2650176	L2647880	L2650176	L2647880	L2647880	L2647880	L2647897	L2647897	L2647897	L2647897
PARENT_SAMPLE_CODE																							
SAMPLE_TYPE_CODE				N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SYS_SAMPLE_CODE				L2650176-11	L2647880-8	L2647880-10	L2647880-9	L2648161-7	L2647880-7	L2648161-10	L2647880-11	L2647880-14	L2647880-13	L2650176-7	L2647880-12	L2650176-10	L2647880-17	L2647880-16	L2647880-18	L2647897-25	L2647897-26	L2647897-28	L2647897-15
Field and Physical																							
Moisture, Percent		%	MOIST	76.9	77.4	81.0	86.3	86.2	69.0	85.5	82.3	83.3	82.2	74.1	82.8	81.4	73.4	80.4	82.4	70.6	73.3	79.2	72.8
Sieve - #200 (>0.075mm)		%	SIEVE>0.075MM	2.4	-	-	-	16.6	-	5.0	-	-	-	1.7	-	2.7	-	-	-	1.6	-	-	< 1.0
Index of Additive Cancer Risk (IACR)		none	PAH_IACR	49.8	11.6	24.0	47.5	62.8	22.7	36.6	38.0	18.7	32.0	32.8	39.0	38.0	40.4	20.7	10.9	26.0	48.2	17.9	23.0
Hydrocarbons																							
Acenaphthene		mg/L	83-32-9	< 0.0050	-	-	-	< 0.0050	-	< 0.0050	-	-	-	< 0.0050	-	< 0.0050	-	-	-	< 0.0050	-	-	< 0.0050
Acenaphthylene		mg/L	208-96-8	< 0.0050	-	-	-	< 0.0050	-	< 0.0050	-	-	-	< 0.0050	-	< 0.0050	-	-	-	< 0.0050	-	-	< 0.0050
Anthracene		mg/L	120-12-7	< 0.0050	-	-	-	< 0.0050	-	< 0.0050	-	-	-	< 0.0050	-	< 0.0050	-	-	-	< 0.0050	-	-	< 0.0050
Benz(a)anthracene		mg/L	56-55-3	< 0.0050	-	-	-	< 0.0050	-	< 0.0050	-	-	-	< 0.0050	-	< 0.0050	-	-	-	< 0.0050	-	-	< 0.0050
Benzo(g,h,i)perylene		mg/L	191-24-2	< 0.0050	-	-	-	< 0.0050	-	< 0.0050	-	-	-	< 0.0050	-	< 0.0050	-	-	-	< 0.0050	-	-	< 0.0050
Benzo(a)pyrene		mg/L	50-32-8	< 0.0010	-	-	-	< 0.0010	-	< 0.0010	-	-	-	< 0.0010	-	< 0.0010	-	-	-	< 0.0010	-	-	< 0.0010
Benzo(b,j) fluoranthene		mg/L	Benz_Fluo_bj	< 0.0050	-	-	-	< 0.0050	-	< 0.0050	-	-	-	< 0.0050	-	< 0.0050	-	-	-	< 0.0050	-	-	< 0.0050
Fluoranthene		mg/L	206-44-0	< 0.0050	-	-	-	< 0.0050	-	< 0.0050	-	-	-	< 0.0050	-	< 0.0050	-	-	-	< 0.0050	-	-	< 0.0050
Indeno(1,2,3-c,d)pyrene		mg/L	193-39-5	< 0.0050	-	-	-	< 0.0050	-	< 0.0050	-	-	-	< 0.0050	-	< 0.0050	-	-	-	< 0.0050	-	-	< 0.0050
Naphthalene		mg/L	91-20-3	< 0.0050	-	-	-	< 0.0050	-	< 0.0050	-	-	-	< 0.0050	-	< 0.0050	-	-	-	< 0.0050	-	-	< 0.0050
Pyrene		mg/L	129-00-0	< 0.0050	-	-	-	< 0.0050	-	< 0.0050	-	-	-	< 0.0050	-	< 0.0050	-	-	-	< 0.0050	-	-	< 0.0050
Dibenz(a,h)anthracene		mg/L	53-70-3	< 0.0050	-	-	-	< 0.0050	-	< 0.0050	-	-	-	< 0.0050	-	< 0.0050	-	-	-	< 0.0050	-	-	< 0.0050
Index of Additive Cancer Risk (IACR)		none	PAH_IACR	49.8	11.6	24.0	47.5	62.8	22.7	36.6	38.0	18.7	32.0	32.8	39.0	38.0	40.4	20.7	10.9	26.0	48.2	17.9	23.0
Quinoline		mg/L	91-22-5	< 0.0050	-	-	-	< 0.0050	-	< 0.0050	-	-	-	< 0.0050	-	< 0.0050	-	-	-	< 0.0050	-	-	< 0.0050
Fluorene		mg/L	86-73-7	< 0.0050	-	-	-	< 0.0050	-	< 0.0050	-	-	-	< 0.0050	-	< 0.0050	-	-	-	< 0.0050	-	-	< 0.0050
Total Organic Carbon		%	TOC	12.7	6.16	7.64	11.7	7.74	4.22	13.6	9.27	8.25	9.28	8.02	11.6	11.8	8.18	7.54	7.20	7.33	8.59	15.3	10.8
Chrysene		mg/L	218-01-9	< 0.0050	-	-	-	< 0.0050	-	< 0.0050	-	-	-	< 0.0050	-	< 0.0050	-	-	-	< 0.0050	-	-	< 0.0050
Phenanthrene		mg/L	85-01-8	< 0.0050	-	-	-	< 0.0050	-	< 0.0050	-	-	-	< 0.0050	-	< 0.0050	-	-	-	< 0.0050	-	-	< 0.0050
Benzo(k)fluoranthene		mg/L	207-08-9	< 0.0050	-	-	-	< 0.0050	-	< 0.0050	-	-	-	< 0.0050	-	< 0.0050	-	-	-	< 0.0050	-	-	< 0.0050
Metals																							
Arsenic		mg/L	7440-38-2	< 0.050	-	-	-	< 0.050	-	< 0.050	-	-	-	< 0.050	-	< 0.050	-	-	-	< 0.050	-	-	< 0.050
Barium		mg/L	7440-39-3	0.75	-	-	-	0.85	-	0.64	-	-	-	1.06	-	1.09	-	-	-	1.18	-	-	1.33
Boron		mg/L	7440-42-8	< 2.5	-	-	-	< 2.5	-	< 2.5	-	-	-	< 2.5	-	< 2.5	-	-	-	< 2.5	-	-	< 2.5
Cadmium		mg/L	7440-43-9	< 0.0050	-	-	-	< 0.0050	-	< 0.0050	-	-	-	< 0.0050	-	< 0.0050	-	-	-	< 0.0050	-	-	< 0.0050
Chromium		mg/L	7440-47-3	< 0.050	-	-	-	< 0.050	-	< 0.050	-	-	-	< 0.050	-	0.126	-	-	-	< 0.050	-	-	< 0.050
Lead		mg/L	7439-92-1	0.028	-	-	-	< 0.025	-	0.025	-	-	-	< 0.025	-	0.089	-	-	-	< 0.025	-	-	0.125
Mercury		mg/L	7439-97-6	< 0.00010	-	-	-	< 0.00010	-	< 0.00010	-	-	-	< 0.00010	-	< 0.00010	-	-	-	< 0.00010	-	-	< 0.00010
Selenium		mg/L	7782-49-2	< 0.025	-	-	-	< 0.025	-	< 0.025	-	-	-	< 0.025	-	< 0.025	-	-	-	< 0.025	-	-	< 0.025
Silver		mg/L	7440-22-4	< 0.0050	-	-	-	< 0.0050	-	< 0.0050	-	-	-	< 0.0050	-	< 0.0050	-	-	-	< 0.0050	-	-	< 0.0050
Uranium		mg/L	7440-61-1	< 0.25	-	-	-	< 0.25	-	< 0.25	-	-	-	< 0.25	-	< 0.25	-	-	-	< 0.25	-	-	< 0.25
pH		pH units	pH	5.70	-	-	-	5.84	-	5.45	-	-	-	5.65	-	4.69	-	-	-	5.87	-	-	4.91
Physical																							
Texture		none	Texture	Fine	-	-	-	Fine	-	Fine	-	-	-	Fine	-	Fine	-	-	-	Fine	-	-	Fine
Ungrouped Analytes																							
Initial pH		pH units	pH_INITIAL	8.13	-	-	-	5.00	-	5.01	-	-	-	7.77	-	7.78	-	-	-	5.08	-	-	5.05
MOISTURE AT LIQUID LIMIT		%	MOIST_LL	N/A	-	-	-	114	-	136	-	-	-	99	-	121	-	-	-	92	-	-	101
Moisture at Plastic Limit		%	MOIST_PL	N/A	-	-	-	93	-	127	-	-	-	80	-	105	-	-	-	71	-	-	89
Plasticity Index		%	PLAST_INDEX	N/A	-	-	-	21	-	10	-	-	-	19	-	16	-	-	-	21	-	-	11
Specific Gravity		kg/L	SG	1.11	-	-	-	1.07	-	1.05	-	-	-	1.15	-	1.08	-	-	-	1.16	-	-	1.11

O.Reg 347 Standards for leachate toxic soils

< Indicates parameter was below laboratory equipment detection limit.

> Indicates parameter detected above equipment analytical range.

- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Parameter	O.Reg 347/558	Unit	CAS_RN	Location	Sample Name	Sample Date	FIELD_SDG	PARENT_SAMPLE_CODE	SAMPLE_TYPE_CODE	SYS_SAMPLE_CODE
					PPOM-SC-004B	2021-10-02	L2647897		N	L2647897-16
					PPOM-SC-004C	2021-10-02	L2647897		N	L2647897-17
					PPOM-SG-001	2021-10-02	L2647897		N	L2647897-8
					PPOM-SG-002	2021-10-02	L2647897		N	L2647897-27
					PPOM-SG-003	2021-10-02	L2647897		N	L2647897-9
					PPOM-SG-004	2021-10-02	L2647897		N	L2647897-18
					PPOM-SG-005	2021-10-02	L2647897		N	L2647897-10
					PPOM-SG-006	2021-10-02	L2647897		N	L2647897-11
					TC0M-SG-002	2021-09-28	L2646459		N	L2646459-21
					TC0M-SG-003	2021-09-28	L2646459		N	L2646459-22
					TC0M-SG-004	2021-09-28	L2646459		N	L2646459-23
					TC0M-SG-005	2021-09-28	L2646459		N	L2646459-24
					TC0M-SG-008	2021-09-28	L2646459		N	L2646459-25
					TC1-SG-001	2021-09-28	L2646459		N	L2646459-1
					TC1-SG-002	2021-09-28	L2646459		N	L2646459-2
					TC1-SG-003	2021-09-28	L2646459		N	L2646459-3
					TC1-SG-004	2021-09-28	L2646459		N	L2646459-4
					TC1-SG-005	2021-09-28	L2646459		N	L2646459-5
					TC1-SG-006	2021-10-06	L2650174		N	L2650174-1
					TC1-SG-007	2021-10-06	L2650174		N	L2650174-2
Field and Physical										
Moisture, Percent		%	MOIST		85.7	84.4	79.8	79.8	83.1	82.3	87.3	83.2	86.6	85.1	87.6	80.5	86.9	85.5	88.3	85.8	87.6	83.8	84.5	85.7
Sieve - #200 (>0.075mm)		%	SIEVE>0.075MM		< 1.0	-	-	1.3	-	< 1.0	-	-	-	-	-	-	-	-	-	< 1.0	-	-	< 1.0	< 1.0
Index of Additive Cancer Risk (IACR)		none	PAH_IACR		0.82	< 0.50	24.3	27.6	24.7	19.3	11.9	15.3	8.62	11.2	9.27	17.9	11.9	7.70	6.74	6.52	6.44	4.83	7.35	11.5
Hydrocarbons																								
Acenaphthene		mg/L	83-32-9		-	-	-	< 0.0050	-	< 0.0050	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthylene		mg/L	208-96-8		-	-	-	< 0.0050	-	< 0.0050	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Anthracene		mg/L	120-12-7		-	-	-	< 0.0050	-	< 0.0050	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benz(a)anthracene		mg/L	56-55-3		-	-	-	< 0.0050	-	< 0.0050	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(g,h,i)perylene		mg/L	191-24-2		-	-	-	< 0.0050	-	< 0.0050	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(a)pyrene		mg/L	50-32-8		-	-	-	< 0.0010	-	< 0.0010	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(b,j) fluoranthene		mg/L	Benz_Fluo_bj		-	-	-	< 0.0050	-	< 0.0050	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fluoranthene		mg/L	206-44-0		-	-	-	< 0.0050	-	< 0.0050	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Indeno(1,2,3-c,d)pyrene		mg/L	193-39-5		-	-	-	< 0.0050	-	< 0.0050	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Naphthalene		mg/L	91-20-3		-	-	-	< 0.0050	-	< 0.0050	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyrene		mg/L	129-00-0		-	-	-	< 0.0050	-	< 0.0050	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenz(a,h)anthracene		mg/L	53-70-3		-	-	-	< 0.0050	-	< 0.0050	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Index of Additive Cancer Risk (IACR)		none	PAH_IACR		0.82	< 0.50	24.3	27.6	24.7	19.3	11.9	15.3	8.62	11.2	9.27	17.9	11.9	7.70	6.74	6.52	6.44	4.83	7.35	11.5
Quinoline		mg/L	91-22-5		-	-	-	< 0.0050	-	< 0.0050	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fluorene		mg/L	86-73-7		-	-	-	< 0.0050	-	< 0.0050	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Organic Carbon		%	TOC		22.7	37.2	11.0	7.36	8.31	9.73	8.86	11.3	7.59	9.76	7.81	8.89	7.64	7.85	8.07	7.42	7.73	5.92	7.50	8.31
Chrysene		mg/L	218-01-9		-	-	-	< 0.0050	-	< 0.0050	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phenanthrene		mg/L	85-01-8		-	-	-	< 0.0050	-	< 0.0050	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(k)fluoranthene		mg/L	207-08-9		-	-	-	< 0.0050	-	< 0.0050	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Metals																								
Arsenic		mg/L	7440-38-2		-	-	-	< 0.050	-	< 0.050	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Barium		mg/L	7440-39-3		-	-	-	1.09	-	1.17	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Boron		mg/L	7440-42-8		-	-	-	< 2.5	-	< 2.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cadmium		mg/L	7440-43-9		-	-	-	< 0.0050	-	< 0.0050	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium		mg/L	7440-47-3		-	-	-	< 0.050	-	< 0.050	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead		mg/L	7439-92-1		-	-	-	< 0.025	-	0.087	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mercury		mg/L	7439-97-6		-	-	-	< 0.00010	-	< 0.00010	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium		mg/L	7782-49-2		-	-	-	< 0.025	-	< 0.025	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silver		mg/L	7440-22-4		-	-	-	< 0.0050	-	< 0.0050	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Uranium		mg/L	7440-61-1		-	-	-	< 0.25	-	< 0.25	-	-	-	-	-	-	-	-	-	-	-	-	-	-
pH		pH units	pH		-	-	-	5.83	-	4.98	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Physical																								
Texture		none	Texture		Fine	-	-	Fine	-	Fine	-	-	-	-	-	-	-	-	-	-	Fine	-	-	Fine	Fine
Ungrouped Analytes																								
Initial pH		pH units	pH_INITIAL		-	-	-	5.04	-	5.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MOISTURE AT LIQUID LIMIT		%	MOIST_LL		-	-	-	96	-	110	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Moisture at Plastic Limit		%	MOIST_PL		-	-	-	77	-	95	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Plasticity Index		%	PLAST_INDEX		-	-	-	19	-	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Specific Gravity		kg/L	SG		-	-	-	1.14	-	1.08	-	-	-	-	-	-	-	-	-	-	-	-	-	-

O.Reg 347 Standards for leachate toxic soils

< Indicates parameter was below laboratory equipment detection limit.

> Indicates parameter detected above equipment analytical range.

- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Parameter	O.Reg 347/558	Unit	CAS_RN																				
Location																							
Sample Name				TC1-SG-008	TC1-SG-009	TC1-SG-010	TC1-SG-011	TC1-SG-012	TC1-SG-013	TC2A-SG-001	TC2A-SG-002	TC2A-SG-003	TC2A-SG-004	TC2A-SG-005	TC2A-SG-006	TC2A-SG-007	TC2A-SG-008	TC2A-SG-009	TC2A-SG-010	TC2A-SG-011	TC2A-SG-012	TC2A-SG-013	TC2B-SG-001
Sample Date				2021-10-06	2021-10-07	2021-10-07	2021-10-07	2021-10-07	2021-10-07	2021-09-28	2021-09-28	2021-09-28	2021-09-28	2021-09-28	2021-09-28	2021-09-28	2021-09-28	2021-09-28	2021-09-28	2021-09-28	2021-09-28	2021-09-28	2021-10-07
FIELD_SDG				L2650174	L2650175	L2650175	L2650175	L2650175	L2650175	L2646459	L2646459	L2646459	L2646459	L2646459	L2646459	L2646459	L2646459	L2646459	L2646459	L2646459	L2646459	L2646459	L2650175
PARENT_SAMPLE_CODE																							
SAMPLE_TYPE_CODE				N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SYS_SAMPLE_CODE				L2650174-5	L2650175-2	L2650175-1	L2650175-3	L2650175-5	L2650175-4	L2646459-6	L2646459-7	L2646459-8	L2646459-10	L2646459-11	L2646459-12	L2646459-13	L2646459-15	L2646459-16	L2646459-17	L2646459-18	L2646459-19	L2646459-20	L2650175-10
Field and Physical																							
Moisture, Percent		%	MOIST	85.3	86.4	86.5	88.3	85.8	88.3	83.0	85.1	86.0	85.7	87.5	79.0	87.0	87.2	86.9	88.8	88.8	86.8	50.2	86.4
Sieve - #200 (>0.075mm)		%	SIEVE>0.075MM	1.2	1.2	< 1.0	< 1.0	1.3	< 1.0	-	-	-	-	-	6.0	-	-	-	< 1.0	-	-	-	< 1.0
Index of Additive Cancer Risk (IACR)		none	PAH_IACR	7.27	8.68	8.73	5.00	10.2	6.87	35.2	18.1	10.6	15.2	9.91	14.4	12.0	9.07	21.7	11.1	11.6	31.5	9.95	10.2
Hydrocarbons																							
Acenaphthene		mg/L	83-32-9	-	-	-	-	-	-	-	-	-	-	-	< 0.0050	-	-	-	< 0.0050	-	-	-	-
Acenaphthylene		mg/L	208-96-8	-	-	-	-	-	-	-	-	-	-	-	< 0.0050	-	-	-	< 0.0050	-	-	-	-
Anthracene		mg/L	120-12-7	-	-	-	-	-	-	-	-	-	-	-	< 0.0050	-	-	-	< 0.0050	-	-	-	-
Benz(a)anthracene		mg/L	56-55-3	-	-	-	-	-	-	-	-	-	-	-	< 0.0050	-	-	-	< 0.0050	-	-	-	-
Benzo(g,h,i)perylene		mg/L	191-24-2	-	-	-	-	-	-	-	-	-	-	-	< 0.0050	-	-	-	< 0.0050	-	-	-	-
Benzo(a)pyrene		mg/L	50-32-8	-	-	-	-	-	-	-	-	-	-	-	< 0.0010	-	-	-	< 0.0010	-	-	-	-
Benzo(b,j) fluoranthene		mg/L	Benz_Fluo_bj	-	-	-	-	-	-	-	-	-	-	-	< 0.0050	-	-	-	< 0.0050	-	-	-	-
Fluoranthene		mg/L	206-44-0	-	-	-	-	-	-	-	-	-	-	-	< 0.0050	-	-	-	< 0.0050	-	-	-	-
Indeno(1,2,3-c,d)pyrene		mg/L	193-39-5	-	-	-	-	-	-	-	-	-	-	-	< 0.0050	-	-	-	< 0.0050	-	-	-	-
Naphthalene		mg/L	91-20-3	-	-	-	-	-	-	-	-	-	-	-	< 0.0050	-	-	-	< 0.0050	-	-	-	-
Pyrene		mg/L	129-00-0	-	-	-	-	-	-	-	-	-	-	-	< 0.0050	-	-	-	< 0.0050	-	-	-	-
Dibenz(a,h)anthracene		mg/L	53-70-3	-	-	-	-	-	-	-	-	-	-	-	< 0.0050	-	-	-	< 0.0050	-	-	-	-
Index of Additive Cancer Risk (IACR)		none	PAH_IACR	7.27	8.68	8.73	5.00	10.2	6.87	35.2	18.1	10.6	15.2	9.91	14.4	12.0	9.07	21.7	11.1	11.6	31.5	9.95	10.2
Quinoline		mg/L	91-22-5	-	-	-	-	-	-	-	-	-	-	-	< 0.0050	-	-	-	< 0.0050	-	-	-	-
Fluorene		mg/L	86-73-7	-	-	-	-	-	-	-	-	-	-	-	< 0.0050	-	-	-	< 0.0050	-	-	-	-
Total Organic Carbon		%	TOC	9.33	9.42	9.49	9.69	10.3	11.0	7.95	8.50	7.69	8.70	8.67	6.99	8.75	8.70	7.72	8.90	8.41	9.38	2.33	9.47
Chrysene		mg/L	218-01-9	-	-	-	-	-	-	-	-	-	-	-	< 0.0050	-	-	-	< 0.0050	-	-	-	-
Phenanthrene		mg/L	85-01-8	-	-	-	-	-	-	-	-	-	-	-	< 0.0050	-	-	-	< 0.0050	-	-	-	-
Benzo(k)fluoranthene		mg/L	207-08-9	-	-	-	-	-	-	-	-	-	-	-	< 0.0050	-	-	-	< 0.0050	-	-	-	-
Metals																							
Arsenic		mg/L	7440-38-2	-	-	-	-	-	-	-	-	-	-	-	< 0.050	-	-	-	< 0.050	-	-	-	-
Barium		mg/L	7440-39-3	-	-	-	-	-	-	-	-	-	-	-	1.12	-	-	-	0.87	-	-	-	-
Boron		mg/L	7440-42-8	-	-	-	-	-	-	-	-	-	-	-	< 2.5	-	-	-	< 2.5	-	-	-	-
Cadmium		mg/L	7440-43-9	-	-	-	-	-	-	-	-	-	-	-	< 0.0050	-	-	-	< 0.0050	-	-	-	-
Chromium		mg/L	7440-47-3	-	-	-	-	-	-	-	-	-	-	-	< 0.050	-	-	-	< 0.050	-	-	-	-
Lead		mg/L	7439-92-1	-	-	-	-	-	-	-	-	-	-	-	0.054	-	-	-	0.026	-	-	-	-
Mercury		mg/L	7439-97-6	-	-	-	-	-	-	-	-	-	-	-	< 0.00010	-	-	-	< 0.00010	-	-	-	-
Selenium		mg/L	7782-49-2	-	-	-	-	-	-	-	-	-	-	-	< 0.025	-	-	-	< 0.025	-	-	-	-
Silver		mg/L	7440-22-4	-	-	-	-	-	-	-	-	-	-	-	< 0.0050	-	-	-	< 0.0050	-	-	-	-
Uranium		mg/L	7440-61-1	-	-	-	-	-	-	-	-	-	-	-	< 0.25	-	-	-	< 0.25	-	-	-	-
pH		pH units	pH	-	-	-	-	-	-	-	-	-	-	-	5.10	-	-	-	5.59	-	-	-	-
Physical																							
Texture		none	Texture	Fine	Fine	Fine	Fine	Fine	Fine	-	-	-	-	-	Fine	-	-	-	Fine	-	-	-	Fine
Ungrouped Analytes																							
Initial pH		pH units	pH_INITIAL	-	-	-	-	-	-	-	-	-	-	-	8.10	-	-	-	8.04	-	-	-	-
MOISTURE AT LIQUID LIMIT		%	MOIST_LL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Moisture at Plastic Limit		%	MOIST_PL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Plasticity Index		%	PLAST_INDEX	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Specific Gravity		kg/L	SG	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

O.Reg 347 Standards for leachate toxic soils

< Indicates parameter was below laboratory equipment detection limit.

> Indicates parameter detected above equipment analytical range.

- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Location																					
Sample Name			TC2B-SG-002	TC2B-SG-003	TC3A-SG-001	TC3A-SG-002	TC3A-SG-003	TC3A-SG-004	TC3B-SG-001	TC4-SC-010A	TC4-SC-010AX	TC4-SC-010BX	TC4-SC-010CX	TC4-SC-010DX	TC4-SG-001	TC4SG-002	TC4-SG-003	TC4-SG-003A	TC4-SG-003B	TC4-SG-004	TC4-SG-005	TC4-SG-006
Sample Date			2021-10-07	2021-10-07	2021-09-29	2021-09-29	2021-09-29	2021-10-07	2021-10-07	2021-09-30	2021-10-06	2021-10-06	2021-10-06	2021-10-06	2021-09-29	2021-09-29	2021-09-30	2021-09-30	2021-09-30	2021-09-30	2021-09-30	2021-09-29
FIELD_SDG			L2650175	L2650175	L2646722	L2646722	L2646722	L2650175	L2650175	L2646743	L2650174	L2650174	L2650174	L2650174	L2646722	L2646722	L2646743	L2646743	L2646743	L2646743	L2646743	L2646722
PARENT_SAMPLE_CODE																						
SAMPLE_TYPE_CODE			N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SYS_SAMPLE_CODE			L2650175-8	L2650175-9	L2646722-1	L2646722-2	L2646722-3	L2650175-7	L2650175-11	L2646743-17	L2650174-10	L2650174-11	L2650174-12	L2650174-13	L2646722-4	L2646722-5	L2646743-21	L2646743-19	L2646743-20	L2646743-1	L2646743-2	L2646722-6
Parameter	**O.Reg 347/558**	**Unit**	**CAS_RN**																			
Field and Physical																						
Moisture, Percent		%	MOIST	87.2	86.8	85.2	80.8	84.6	86.4	84.8	71.6	86.3	84.3	80.0	72.3	38.3	85.8	83.0	70.8	74.6	86.9	85.0	85.1
Sieve - #200 (>0.075mm)		%	SIEVE>0.075MM	1.1	1.4	10.0	-	3.8	1.7	3.8	-	-	-	-	-	-	-	-	-	-	-	-	-
Index of Additive Cancer Risk (IACR)		none	PAH_IACR	5.67	9.84	9.14	16.6	11.2	13.2	7.34	43.6	18.6	19.7	25.3	24.9	220	20.5	24.5	39.8	45.5	14.6	16.5	13.9
Hydrocarbons																						
Acenaphthene		mg/L	83-32-9	-	-	-	-	< 0.0050	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthylene		mg/L	208-96-8	-	-	-	-	< 0.0050	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Anthracene		mg/L	120-12-7	-	-	-	-	< 0.0050	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benz(a)anthracene		mg/L	56-55-3	-	-	-	-	< 0.0050	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(g,h,i)perylene		mg/L	191-24-2	-	-	-	-	< 0.0050	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(a)pyrene		mg/L	50-32-8	-	-	-	-	< 0.0010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(b,j) fluoranthene		mg/L	Benz_Fluo_bj	-	-	-	-	< 0.0050	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fluoranthene		mg/L	206-44-0	-	-	-	-	< 0.0050	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Indeno(1,2,3-c,d)pyrene		mg/L	193-39-5	-	-	-	-	< 0.0050	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Naphthalene		mg/L	91-20-3	-	-	-	-	< 0.0050	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyrene		mg/L	129-00-0	-	-	-	-	< 0.0050	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenz(a,h)anthracene		mg/L	53-70-3	-	-	-	-	< 0.0050	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Index of Additive Cancer Risk (IACR)		none	PAH_IACR	5.67	9.84	9.14	16.6	11.2	13.2	7.34	43.6	18.6	19.7	25.3	24.9	220	20.5	24.5	39.8	45.5	14.6	16.5	13.9
Quinoline		mg/L	91-22-5	-	-	-	-	< 0.0050	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fluorene		mg/L	86-73-7	-	-	-	-	< 0.0050	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Organic Carbon		%	TOC	9.92	9.82	9.58	11.2	9.28	8.82	7.54	7.63	-	-	-	-	2.81	7.98	7.44	9.61	10.5	8.90	9.60	7.67
Chrysene		mg/L	218-01-9	-	-	-	-	< 0.0050	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phenanthrene		mg/L	85-01-8	-	-	-	-	< 0.0050	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(k)fluoranthene		mg/L	207-08-9	-	-	-	-	< 0.0050	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Metals																						
Arsenic		mg/L	7440-38-2	-	-	-	-	0.088	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Barium		mg/L	7440-39-3	-	-	-	-	1.22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Boron		mg/L	7440-42-8	-	-	-	-	< 2.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cadmium		mg/L	7440-43-9	-	-	-	-	< 0.0050	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium		mg/L	7440-47-3	-	-	-	-	< 0.050	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead		mg/L	7439-92-1	-	-	-	-	0.214	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mercury		mg/L	7439-97-6	-	-	-	-	< 0.00010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium		mg/L	7782-49-2	-	-	-	-	< 0.025	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silver		mg/L	7440-22-4	-	-	-	-	< 0.0050	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Uranium		mg/L	7440-61-1	-	-	-	-	< 0.25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
pH		pH units	pH	-	-	-	-	5.37	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Physical																						
Texture		none	Texture	Fine	Fine	Fine	-	Fine	Fine	Fine	-	-	-	-	-	-	-	-	-	-	-	-	-
Ungrouped Analytes																						
Initial pH		pH units	pH_INITIAL	-	-	-	-	7.46	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MOISTURE AT LIQUID LIMIT		%	MOIST_LL	-	-	-	-	-	-	-	85	-	-	-	-	-	-	-	-	-	-	-	-
Moisture at Plastic Limit		%	MOIST_PL	-	-	-	-	-	-	-	72	-	-	-	-	-	-	-	-	-	-	-	-
Plasticity Index		%	PLAST_INDEX	-	-	-	-	-	-	-	14	-	-	-	-	-	-	-	-	-	-	-	-
Specific Gravity		kg/L	SG	-	-	-	-	-	-	-	1.14	-	-	-	-	-	-	-	-	-	-	-	-

O.Reg 347 Standards for leachate toxic soils
< Indicates parameter was below laboratory equipment detection limit.
> Indicates parameter detected above equipment analytical range.
- Chemical not analyzed or criteria not defined.
Output generated by GalReport.

Parameter	O.Reg 347/558	Unit	CAS_RN																			
Location																						
Sample Name				TC4-SG-007	TC4-SG-008	TC4-SG-009	TC4-SG-009A	TC4-SG-010	TC4-SG-011	TC4-SG-012	TC4-SG-013	TC4-SG-013X	TC4-SG-014	TC5-SG-002	TC5-SG-003	TC5-SG-004	TC5-SG-005	TC5-SG-006	TC5-SG-007	TCAB-SC-001A	TCAB-SC12A	TCAB-SC-015A	TCAB-SC-001
Sample Date				2021-09-29	2021-09-30	2021-09-29	2021-09-29	2021-09-30	2021-09-30	2021-09-30	2021-09-30	2021-09-30	2021-09-30	2021-09-30	2021-09-30	2021-09-30	2021-10-07	2021-10-06	2021-10-06	2021-10-04	2021-10-04	2021-10-04	2021-10-04
FIELD_SDG				L2646722	L2646743	L2646722	L2646722	L2646743	L2646743	L2646743	L2646743	L2646743	L2646743	L2646743	L2646743	L2646743	L2650175	L2650174	L2650174	L2647880	L2647880	L2647880	L2647880
PARENT_SAMPLE_CODE																							
SAMPLE_TYPE_CODE				N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SYS_SAMPLE_CODE				L2646722-8	L2646743-3	L2646722-10	L2646722-11	L2646743-18	L2646743-5	L2646743-4	L2646743-6	L2646743-8	L2646743-7	L2646743-11	L2646743-10	L2646743-9	L2650175-6	L2650174-3	L2650174-4	L2647880-1	L2647880-5	L2647880-3	L2647880-2
Field and Physical																							
Moisture, Percent		%	MOIST	82.6	84.7	85.3	73.0	85.1	82.6	86.0	61.2	83.8	82.5	85.0	85.7	86.2	86.9	83.0	86.2	80.3	78.8	81.4	83.2
Sieve - #200 (>0.075mm)		%	SIEVE>0.075MM	-	-	10.2	4.0	5.6	-	-	45.9	-	-	13.0	-	-	5.5	4.9	< 1.0	4.2	< 1.0	-	4.2
Index of Additive Cancer Risk (IACR)		none	PAH_IACR	13.5	18.9	24.3	44.3	16.0	25.9	13.9	14.1	36.7	37.8	17.4	19.7	19.7	19.6	37.0	13.7	36.9	18.6	14.0	22.2
Hydrocarbons																							
Acenaphthene		mg/L	83-32-9	-	-	< 0.0050	< 0.0050	-	-	-	-	-	-	-	-	-	-	-	-	< 0.0050	< 0.0050	-	< 0.0050
Acenaphthylene		mg/L	208-96-8	-	-	< 0.0050	< 0.0050	-	-	-	-	-	-	-	-	-	-	-	-	< 0.0050	< 0.0050	-	< 0.0050
Anthracene		mg/L	120-12-7	-	-	< 0.0050	< 0.0050	-	-	-	-	-	-	-	-	-	-	-	-	< 0.0050	< 0.0050	-	< 0.0050
Benz(a)anthracene		mg/L	56-55-3	-	-	< 0.0050	< 0.0050	-	-	-	-	-	-	-	-	-	-	-	-	< 0.0050	< 0.0050	-	< 0.0050
Benzo(g,h,i)perylene		mg/L	191-24-2	-	-	< 0.0050	< 0.0050	-	-	-	-	-	-	-	-	-	-	-	-	< 0.0050	< 0.0050	-	< 0.0050
Benzo(a)pyrene		mg/L	50-32-8	-	-	< 0.0010	< 0.0010	-	-	-	-	-	-	-	-	-	-	-	-	< 0.0010	< 0.0010	-	< 0.0010
Benzo(b,j) fluoranthene		mg/L	Benz_Fluo_bj	-	-	< 0.0050	< 0.0050	-	-	-	-	-	-	-	-	-	-	-	-	< 0.0050	< 0.0050	-	< 0.0050
Fluoranthene		mg/L	206-44-0	-	-	< 0.0050	< 0.0050	-	-	-	-	-	-	-	-	-	-	-	-	< 0.0050	< 0.0050	-	< 0.0050
Indeno(1,2,3-c,d)pyrene		mg/L	193-39-5	-	-	< 0.0050	< 0.0050	-	-	-	-	-	-	-	-	-	-	-	-	< 0.0050	< 0.0050	-	< 0.0050
Naphthalene		mg/L	91-20-3	-	-	< 0.0050	< 0.0050	-	-	-	-	-	-	-	-	-	-	-	-	< 0.0050	< 0.0050	-	< 0.0050
Pyrene		mg/L	129-00-0	-	-	< 0.0050	< 0.0050	-	-	-	-	-	-	-	-	-	-	-	-	< 0.0050	< 0.0050	-	< 0.0050
Dibenz(a,h)anthracene		mg/L	53-70-3	-	-	< 0.0050	< 0.0050	-	-	-	-	-	-	-	-	-	-	-	-	< 0.0050	< 0.0050	-	< 0.0050
Index of Additive Cancer Risk (IACR)		none	PAH_IACR	13.5	18.9	24.3	44.3	16.0	25.9	13.9	14.1	36.7	37.8	17.4	19.7	19.7	19.6	37.0	13.7	36.9	18.6	14.0	22.2
Quinoline		mg/L	91-22-5	-	-	< 0.0050	< 0.0050	-	-	-	-	-	-	-	-	-	-	-	-	< 0.0050	< 0.0050	-	< 0.0050
Fluorene		mg/L	86-73-7	-	-	< 0.0050	< 0.0050	-	-	-	-	-	-	-	-	-	-	-	-	< 0.0050	< 0.0050	-	< 0.0050
Total Organic Carbon		%	TOC	8.05	8.47	9.17	8.94	8.97	7.36	9.44	2.68	8.83	7.95	9.20	10.2	9.35	9.48	9.26	9.84	6.92	7.69	7.42	7.74
Chrysene		mg/L	218-01-9	-	-	< 0.0050	< 0.0050	-	-	-	-	-	-	-	-	-	-	-	-	< 0.0050	< 0.0050	-	< 0.0050
Phenanthrene		mg/L	85-01-8	-	-	< 0.0050	< 0.0050	-	-	-	-	-	-	-	-	-	-	-	-	< 0.0050	< 0.0050	-	< 0.0050
Benzo(k)fluoranthene		mg/L	207-08-9	-	-	< 0.0050	< 0.0050	-	-	-	-	-	-	-	-	-	-	-	-	< 0.0050	< 0.0050	-	< 0.0050
Metals																							
Arsenic		mg/L	7440-38-2	-	-	< 0.050	< 0.050	-	-	-	-	-	-	-	-	-	-	-	-	< 0.050	< 0.050	-	< 0.050
Barium		mg/L	7440-39-3	-	-	0.84	0.91	-	-	-	-	-	-	-	-	-	-	-	-	0.85	0.86	-	0.81
Boron		mg/L	7440-42-8	-	-	< 2.5	< 2.5	-	-	-	-	-	-	-	-	-	-	-	-	< 2.5	< 2.5	-	< 2.5
Cadmium		mg/L	7440-43-9	-	-	< 0.0050	< 0.0050	-	-	-	-	-	-	-	-	-	-	-	-	< 0.0050	< 0.0050	-	< 0.0050
Chromium		mg/L	7440-47-3	-	-	< 0.050	< 0.050	-	-	-	-	-	-	-	-	-	-	-	-	< 0.050	< 0.050	-	< 0.050
Lead		mg/L	7439-92-1	-	-	< 0.025	0.051	-	-	-	-	-	-	-	-	-	-	-	-	0.070	0.026	-	0.036
Mercury		mg/L	7439-97-6	-	-	< 0.00010	< 0.00010	-	-	-	-	-	-	-	-	-	-	-	-	< 0.00010	< 0.00010	-	< 0.00010
Selenium		mg/L	7782-49-2	-	-	< 0.025	< 0.025	-	-	-	-	-	-	-	-	-	-	-	-	< 0.025	< 0.025	-	< 0.025
Silver		mg/L	7440-22-4	-	-	< 0.0050	< 0.0050	-	-	-	-	-	-	-	-	-	-	-	-	< 0.0050	< 0.0050	-	< 0.0050
Uranium		mg/L	7440-61-1	-	-	< 0.25	< 0.25	-	-	-	-	-	-	-	-	-	-	-	-	< 0.25	< 0.25	-	< 0.25
pH		pH units	pH	-	-	5.50	5.42	-	-	-	-	-	-	-	-	-	-	-	-	5.26	5.56	-	5.34
Physical																							
Texture		none	Texture	-	-	Fine	Fine	Fine	-	-	Fine	-	-	Fine	-	-	Fine	Fine	Fine	Fine	Fine	-	Fine
Ungrouped Analytes																							
Initial pH		pH units	pH_INITIAL	-	-	8.34	7.64	-	-	-	-	-	-	-	-	-	-	-	-	7.19	8.01	-	8.16
MOISTURE AT LIQUID LIMIT		%	MOIST_LL	-	-	157	86	97	-	-	-	-	-	-	-	-	-	-	-	95	95	99	99
Moisture at Plastic Limit		%	MOIST_PL	-	-	83	74	89	-	-	-	-	-	-	-	-	-	-	-	70	72	78	80
Plasticity Index		%	PLAST_INDEX	-	-	75	11	9	-	-	-	-	-	-	-	-	-	-	-	25	24	21	19
Specific Gravity		kg/L	SG	-	-	1.10	1.16	1.09	-	-	-	-	-	-	-	-	-	-	-	1.01	1.12	1.11	1.10

O.Reg 347 Standards for leachate toxic soils
< Indicates parameter was below laboratory equipment detection limit.
> Indicates parameter detected above equipment analytical range.
- Chemical not analyzed or criteria not defined.
Output generated by GalReport.

Parameter	O.Reg 347/558	Unit	CAS_RN																			
Location				TCAB-SG-002	TCAB-SG-003	TCAB-SG-004	TCAB-SG-005	TCAB-SG-006	TCAB-SG-007	TCAB-SG-008	TCAB-SG-009	TCAB-SG-010	TCAB-SG-011	TCAB-SG-012	TCAB-SG-013	TCAB-SG-014	TCAB-SG-015	TCAB-SG-016	TCAB-SG-017	TCOM-SC-001A	TCOM-SC-001B	TCOM-SC-006A	TCOM-SC-006AX
Sample Name				TCAB-SG-002	TCAB-SG-003	TCAB-SG-004	TCAB-SG-005	TCAB-SG-006	TCAB-SG-007	TCAB-SG-008	TCAB-SG-009	TCAB-SG-010	TCAB-SG-011	TCAB-SG-012	TCAB-SG-013	TCAB-SG-014	TCAB-SG-015	TCAB-SG-016	TCAB-SG-017	TCOM-SC-001A	TCOM-SC-001B	TCOM-SC-006A	TCOM-SC-006AX
Sample Date				2021-10-02	2021-10-01	2021-10-01	2021-10-02	2021-10-01	2021-10-01	2021-10-01	2021-10-01	2021-10-01	2021-10-01	2021-10-04	2021-10-01	2021-10-01	2021-10-04	2021-10-01	2021-10-01	2021-10-02	2021-10-02	2021-10-01	2021-10-06
FIELD_SDG				L2647897	L2647638	L2647638	L2647897	L2647638	L2647638	L2647638	L2647638	L2647638	L2647638	L2647880	L2647638	L2647638	L2647880	L2647638	L2647638	L2647897	L2647897	L2647638	L2650174
PARENT_SAMPLE_CODE																							
SAMPLE_TYPE_CODE				N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SYS_SAMPLE_CODE				L2647897-2	L2647638-11	L2647638-12	L2647897-1	L2647638-8	L2647638-9	L2647638-10	L2647638-3	L2647638-4	L2647638-7	L2647880-6	L2647638-6	L2647638-5	L2647880-4	L2647638-2	L2647638-1	L2647897-19	L2647897-20	L2647638-17	L2650174-21
Field and Physical																							
Moisture, Percent		%	MOIST	80.3	87.4	80.8	82.6	88.1	85.6	87.9	86.3	88.7	84.0	81.8	70.5	84.2	83.6	83.3	82.6	66.8	85.6	73.8	82.7
Sieve - #200 (>0.075mm)		%	SIEVE>0.075MM	-	-	-	12.4	-	-	-	1.5	-	-	2.1	-	-	-	-	8.5	-	-	-	-
Index of Additive Cancer Risk (IACR)		none	PAH_IACR	44.4	16.0	31.3	23.2	13.2	21.8	31.8	11.9	16.7	10.9	12.3	18.3	14.2	11.0	20.4	29.3	10.2	0.87	13.5	10.3
Hydrocarbons																							
Acenaphthene		mg/L	83-32-9	-	-	-	< 0.0050	-	-	-	< 0.0050	-	-	< 0.0050	-	-	-	-	-	-	-	-	-
Acenaphthylene		mg/L	208-96-8	-	-	-	< 0.0050	-	-	-	< 0.0050	-	-	< 0.0050	-	-	-	-	-	-	-	-	-
Anthracene		mg/L	120-12-7	-	-	-	< 0.0050	-	-	-	< 0.0050	-	-	< 0.0050	-	-	-	-	-	-	-	-	-
Benz(a)anthracene		mg/L	56-55-3	-	-	-	< 0.0050	-	-	-	< 0.0050	-	-	< 0.0050	-	-	-	-	-	-	-	-	-
Benzo(g,h,i)perylene		mg/L	191-24-2	-	-	-	< 0.0050	-	-	-	< 0.0050	-	-	< 0.0050	-	-	-	-	-	-	-	-	-
Benzo(a)pyrene		mg/L	50-32-8	-	-	-	< 0.0010	-	-	-	< 0.0010	-	-	< 0.0010	-	-	-	-	-	-	-	-	-
Benzo(b,j) fluoranthene		mg/L	Benz_Fluo_bj	-	-	-	< 0.0050	-	-	-	< 0.0050	-	-	< 0.0050	-	-	-	-	-	-	-	-	-
Fluoranthene		mg/L	206-44-0	-	-	-	< 0.0050	-	-	-	< 0.0050	-	-	< 0.0050	-	-	-	-	-	-	-	-	-
Indeno(1,2,3-c,d)pyrene		mg/L	193-39-5	-	-	-	< 0.0050	-	-	-	< 0.0050	-	-	< 0.0050	-	-	-	-	-	-	-	-	-
Naphthalene		mg/L	91-20-3	-	-	-	< 0.0050	-	-	-	< 0.0050	-	-	< 0.0050	-	-	-	-	-	-	-	-	-
Pyrene		mg/L	129-00-0	-	-	-	< 0.0050	-	-	-	< 0.0050	-	-	< 0.0050	-	-	-	-	-	-	-	-	-
Dibenz(a,h)anthracene		mg/L	53-70-3	-	-	-	< 0.0050	-	-	-	< 0.0050	-	-	< 0.0050	-	-	-	-	-	-	-	-	-
Index of Additive Cancer Risk (IACR)		none	PAH_IACR	44.4	16.0	31.3	23.2	13.2	21.8	31.8	11.9	16.7	10.9	12.3	18.3	14.2	11.0	20.4	29.3	10.2	0.87	13.5	10.3
Quinoline		mg/L	91-22-5	-	-	-	< 0.0050	-	-	-	< 0.0050	-	-	< 0.0050	-	-	-	-	-	-	-	-	-
Fluorene		mg/L	86-73-7	-	-	-	< 0.0050	-	-	-	< 0.0050	-	-	< 0.0050	-	-	-	-	-	-	-	-	-
Total Organic Carbon		%	TOC	7.48	8.58	7.27	7.53	9.22	7.43	9.32	9.27	10.1	7.84	7.75	5.53	8.17	7.26	7.22	7.23	7.51	39.2	7.48	-
Chrysene		mg/L	218-01-9	-	-	-	< 0.0050	-	-	-	< 0.0050	-	-	< 0.0050	-	-	-	-	-	-	-	-	-
Phenanthrene		mg/L	85-01-8	-	-	-	< 0.0050	-	-	-	< 0.0050	-	-	< 0.0050	-	-	-	-	-	-	-	-	-
Benzo(k)fluoranthene		mg/L	207-08-9	-	-	-	< 0.0050	-	-	-	< 0.0050	-	-	< 0.0050	-	-	-	-	-	-	-	-	-
Metals																							
Arsenic		mg/L	7440-38-2	-	-	-	< 0.050	-	-	-	< 0.050	-	-	< 0.050	-	-	-	-	-	-	-	-	-
Barium		mg/L	7440-39-3	-	-	-	0.84	-	-	-	0.56	-	-	0.82	-	-	-	-	-	-	-	-	-
Boron		mg/L	7440-42-8	-	-	-	< 2.5	-	-	-	< 2.5	-	-	< 2.5	-	-	-	-	-	-	-	-	-
Cadmium		mg/L	7440-43-9	-	-	-	< 0.0050	-	-	-	< 0.0050	-	-	< 0.0050	-	-	-	-	-	-	-	-	-
Chromium		mg/L	7440-47-3	-	-	-	< 0.050	-	-	-	< 0.050	-	-	< 0.050	-	-	-	-	-	-	-	-	-
Lead		mg/L	7439-92-1	-	-	-	< 0.025	-	-	-	0.037	-	-	< 0.025	-	-	-	-	-	-	-	-	-
Mercury		mg/L	7439-97-6	-	-	-	< 0.00010	-	-	-	< 0.00010	-	-	< 0.00010	-	-	-	-	-	-	-	-	-
Selenium		mg/L	7782-49-2	-	-	-	< 0.025	-	-	-	< 0.025	-	-	< 0.025	-	-	-	-	-	-	-	-	-
Silver		mg/L	7440-22-4	-	-	-	< 0.0050	-	-	-	< 0.0050	-	-	< 0.0050	-	-	-	-	-	-	-	-	-
Uranium		mg/L	7440-61-1	-	-	-	< 0.25	-	-	-	< 0.25	-	-	< 0.25	-	-	-	-	-	-	-	-	-
pH		pH units	pH	-	-	-	5.65	-	-	-	5.05	-	-	5.57	-	-	-	-	-	-	-	-	-
Physical																							
Texture		none	Texture	-	-	-	Fine	-	-	-	Fine	-	-	Fine	-	-	-	-	Fine	-	-	-	-
Ungrouped Analytes																							
Initial pH		pH units	pH_INITIAL	-	-	-	5.08	-	-	-	7.77	-	-	8.17	-	-	-	-	-	-	-	-	-
MOISTURE AT LIQUID LIMIT		%	MOIST_LL	-	-	-	-	-	-	-	-	-	-	100	-	-	102	-	-	85	-	81	-
Moisture at Plastic Limit		%	MOIST_PL	-	-	-	-	-	-	-	-	-	-	73	-	-	76	-	-	72	-	62	-
Plasticity Index		%	PLAST_INDEX	-	-	-	-	-	-	-	-	-	-	27	-	-	26	-	-	13	-	19	-
Specific Gravity		kg/L	SG	-	-	-	-	-	-	-	-	-	-	1.11	-	-	1.11	-	-	1.20	-	1.19	-

O.Reg 347 Standards for leachate toxic soils

< Indicates parameter was below laboratory equipment detection limit.

> Indicates parameter detected above equipment analytical range.

- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Parameter	O.Reg 347/558	Unit	CAS_RN	Location	TCOM-SC-006B	TCOM-SC-006BX	TCOM-SC-006CX	TCOM-SC-006DX	TCOM-SC-006EX	TCOM-SC-006FX	TCOM-SC-006GX	TCOM-SC-007A	TCOM-SC-009A	TCOM-SG-001	TCOM-SG-006	TCOM-SG-007	TCOM-SG-009	TCRC-SC-004A	TCRC-SC-010A	TCRC-SC-010B	TCRC-SG-001	TCRC-SG-002	TCRC-SG-003	TCRC-SG-004
				Sample Name	TCOM-SC-006B	TCOM-SC-006BX	TCOM-SC-006CX	TCOM-SC-006DX	TCOM-SC-006EX	TCOM-SC-006FX	TCOM-SC-006GX	TCOM-SC-007A	TCOM-SC-009A	TCOM-SG-001	TCOM-SG-006	TCOM-SG-007	TCOM-SG-009	TCRC-SC-004A	TCRC-SC-010A	TCRC-SC-010B	TCRC-SG-001	TCRC-SG-002	TCRC-SG-003	TCRC-SG-004
				Sample Date	2021-10-02	2021-10-06	2021-10-06	2021-10-06	2021-10-06	2021-10-06	2021-10-06	2021-10-01	2021-10-02	2021-10-02	2021-10-01	2021-10-01	2021-10-02	2021-09-30	2021-10-01	2021-10-01	2021-09-28	2021-09-28	2021-09-28	2021-09-30
				FIELD_SDG	L2647897	L2650174	L2650174	L2650174	L2650174	L2650174	L2650174	L2647638	L2647897	L2647897	L2647638	L2647638	L2647897	L2646743	L2647638	L2647638	L2646459	L2646459	L2646459	L2646743
				PARENT_SAMPLE_CODE																				
				SAMPLE_TYPE_CODE	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
				SYS_SAMPLE_CODE	L2647897-33	L2650174-22	L2650174-23	L2650174-24	L2650174-25	L2650174-26	L2650174-27	L2647638-19	L2647897-22	L2647897-21	L2647638-16	L2647638-18	L2647897-24	L2646743-14	L2647638-14	L2647638-15	L2646459-26	L2646459-27	L2646459-28	L2646743-15
Field and Physical																								
Moisture, Percent		%	MOIST		68.8	78.6	74.5	71.9	71.3	71.3	66.0	36.6	57.2	84.5	86.8	78.1	76.0	42.7	37.4	32.4	81.6	86.0	77.3	62.8
Sieve - #200 (>0.075mm)		%	SIEVE>0.075MM		-	-	-	-	-	-	-	-	-	-	-	-	8.2	-	18.4	-	8.4	-	-	-
Index of Additive Cancer Risk (IACR)		none	PAH_IACR		19.9	11.2	14.0	24.3	17.5	19.0	6.56	11.3	2.27	23.7	9.10	210	6.04	2.67	6.33	1.59	5.44	5.35	5.21	10.3
Hydrocarbons																								
Acenaphthene		mg/L	83-32-9		-	-	-	-	-	-	-	-	-	-	-	-	< 0.0050	-	-	-	< 0.0050	-	-	-
Acenaphthylene		mg/L	208-96-8		-	-	-	-	-	-	-	-	-	-	-	-	< 0.0050	-	-	-	< 0.0050	-	-	-
Anthracene		mg/L	120-12-7		-	-	-	-	-	-	-	-	-	-	-	-	< 0.0050	-	-	-	< 0.0050	-	-	-
Benz(a)anthracene		mg/L	56-55-3		-	-	-	-	-	-	-	-	-	-	-	-	< 0.0050	-	-	-	< 0.0050	-	-	-
Benzo(g,h,i)perylene		mg/L	191-24-2		-	-	-	-	-	-	-	-	-	-	-	-	< 0.0050	-	-	-	< 0.0050	-	-	-
Benzo(a)pyrene		mg/L	50-32-8		-	-	-	-	-	-	-	-	-	-	-	-	< 0.0010	-	-	-	< 0.0010	-	-	-
Benzo(b,j) fluoranthene		mg/L	Benz_Fluo_bj		-	-	-	-	-	-	-	-	-	-	-	-	< 0.0050	-	-	-	< 0.0050	-	-	-
Fluoranthene		mg/L	206-44-0		-	-	-	-	-	-	-	-	-	-	-	-	< 0.0050	-	-	-	< 0.0050	-	-	-
Indeno(1,2,3-c,d)pyrene		mg/L	193-39-5		-	-	-	-	-	-	-	-	-	-	-	-	< 0.0050	-	-	-	< 0.0050	-	-	-
Naphthalene		mg/L	91-20-3		-	-	-	-	-	-	-	-	-	-	-	-	< 0.0050	-	-	-	< 0.0050	-	-	-
Pyrene		mg/L	129-00-0		-	-	-	-	-	-	-	-	-	-	-	-	< 0.0050	-	-	-	< 0.0050	-	-	-
Dibenz(a,h)anthracene		mg/L	53-70-3		-	-	-	-	-	-	-	-	-	-	-	-	< 0.0050	-	-	-	< 0.0050	-	-	-
Index of Additive Cancer Risk (IACR)		none	PAH_IACR		19.9	11.2	14.0	24.3	17.5	19.0	6.56	11.3	2.27	23.7	9.10	210	6.04	2.67	6.33	1.59	5.44	5.35	5.21	10.3
Quinoline		mg/L	91-22-5		-	-	-	-	-	-	-	-	-	-	-	-	< 0.0050	-	-	-	< 0.0050	-	-	-
Fluorene		mg/L	86-73-7		-	-	-	-	-	-	-	-	-	-	-	-	< 0.0050	-	-	-	< 0.0050	-	-	-
Total Organic Carbon		%	TOC		7.25	-	-	-	-	-	-	1.48	2.82	9.57	7.51	4.03	5.05	2.09	1.70	0.72	5.23	7.31	6.06	3.22
Chrysene		mg/L	218-01-9		-	-	-	-	-	-	-	-	-	-	-	-	< 0.0050	-	-	-	< 0.0050	-	-	-
Phenanthrene		mg/L	85-01-8		-	-	-	-	-	-	-	-	-	-	-	-	< 0.0050	-	-	-	< 0.0050	-	-	-
Benzo(k)fluoranthene		mg/L	207-08-9		-	-	-	-	-	-	-	-	-	-	-	-	< 0.0050	-	-	-	< 0.0050	-	-	-
Metals																								
Arsenic		mg/L	7440-38-2		-	-	-	-	-	-	-	-	-	-	-	-	< 0.050	-	-	-	< 0.050	-	-	-
Barium		mg/L	7440-39-3		-	-	-	-	-	-	-	-	-	-	-	-	1.30	-	-	-	1.21	-	-	-
Boron		mg/L	7440-42-8		-	-	-	-	-	-	-	-	-	-	-	-	< 2.5	-	-	-	< 2.5	-	-	-
Cadmium		mg/L	7440-43-9		-	-	-	-	-	-	-	-	-	-	-	-	< 0.0050	-	-	-	< 0.0050	-	-	-
Chromium		mg/L	7440-47-3		-	-	-	-	-	-	-	-	-	-	-	-	< 0.050	-	-	-	0.068	-	-	-
Lead		mg/L	7439-92-1		-	-	-	-	-	-	-	-	-	-	-	-	0.087	-	-	-	0.151	-	-	-
Mercury		mg/L	7439-97-6		-	-	-	-	-	-	-	-	-	-	-	-	< 0.00010	-	-	-	< 0.00010	-	-	-
Selenium		mg/L	7782-49-2		-	-	-	-	-	-	-	-	-	-	-	-	< 0.025	-	-	-	< 0.025	-	-	-
Silver		mg/L	7440-22-4		-	-	-	-	-	-	-	-	-	-	-	-	< 0.0050	-	-	-	< 0.0050	-	-	-
Uranium		mg/L	7440-61-1		-	-	-	-	-	-	-	-	-	-	-	-	< 0.25	-	-	-	< 0.25	-	-	-
pH		pH units	pH		-	-	-	-	-	-	-	-	-	-	-	-	4.80	-	-	-	4.57	-	-	-
Physical																								
Texture		none	Texture		-	-	-	-	-	-	-	-	-	-	-	-	Fine	-	Fine	-	Fine	-	-	-
Ungrouped Analytes																								
Initial pH		pH units	pH_INITIAL		-	-	-	-	-	-	-	-	-	-	-	-	5.05	-	-	-	8.05	-	-	-
MOISTURE AT LIQUID LIMIT		%	MOIST_LL		-	-	-	-	-	-	-	50	64	97	190	N/A	81	48	49	-	-	-	-	60
Moisture at Plastic Limit		%	MOIST_PL		-	-	-	-	-	-	-	28	47	85	86	N/A	64	30	30	-	-	-	-	43
Plasticity Index		%	PLAST_INDEX		-	-	-	-	-	-	-	22	18	12	104	N/A	17	18	18	-	-	-	-	18
Specific Gravity		kg/L	SG		-	-	-	-	-	-	-	1.45	1.38	1.12	1.08	1.16	1.17	1.48	1.32	-	-	-	-	1.23

O.Reg 347 Standards for leachate toxic soils

< Indicates parameter was below laboratory equipment detection limit.

> Indicates parameter detected above equipment analytical range.

- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Parameter	O.Reg 347/558	Unit	CAS_RN																
Location																			
Sample Name				TCRC-SG-005	TCRC-SG-006	TCRC-SG-007	TCRC-SG-008	TCRC-SG-009	TCRC-SG-010	TCRC-SG-010A	WM-SC-003A	WM-SC-003B	WM-SG-001	WM-SG-002	WM-SG-003	WM-SG-003A	WM-SG-004	WM-SG-005	WM-SG-006	WM-SG-007
Sample Date				2021-09-28	2021-09-28	2021-09-28	2021-09-28	2021-09-28	2021-10-01	2021-10-01	2021-10-05	2021-10-05	2021-10-02	2021-09-30	2021-10-05	2021-10-05	2021-10-02	2021-10-02	2021-10-02	2021-10-02
FIELD_SDG				L2646459	L2646459	L2646459	L2646459	L2646459	L2647638	L2648304	L2650176	L2650176	L2647897	L2646743	L2650176	L2650177	L2647897	L2647897	L2647897	L2647897
PARENT_SAMPLE_CODE																				
SAMPLE_TYPE_CODE				N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SYS_SAMPLE_CODE				L2646459-29	L2646459-30	L2646459-31	L2646459-32	L2646459-33	L2647638-13	L2648304-3	L2650176-5	L2650176-6	L2647897-6	L2646743-16	L2650176-4	L2650177-3	L2647897-5	L2647897-3	L2647897-4	L2647897-7
Field and Physical																				
Moisture, Percent		%	MOIST	86.7	86.4	85.1	86.5	87.7	70.9	-	75.1	76.9	82.7	84.2	80.8	-	85.4	84.9	85.4	86.4
Sieve - #200 (>0.075mm)		%	SIEVE>0.075MM	-	-	2.8	-	-	29.4	-	1.4	3.6	-	18.4	3.2	-	-	-	2.5	-
Index of Additive Cancer Risk (IACR)		none	PAH_IACR	4.06	6.54	7.10	6.57	8.41	236	-	23.5	42.5	47.6	8.60	12.9	-	9.92	38.9	10.2	8.49
Hydrocarbons																				
Acenaphthene		mg/L	83-32-9	-	-	-	-	-	< 0.0050	< 0.0050	-	-	-	-	< 0.0050	< 0.0050	-	-	-	-
Acenaphthylene		mg/L	208-96-8	-	-	-	-	-	< 0.0050	< 0.0050	-	-	-	-	< 0.0050	< 0.0050	-	-	-	-
Anthracene		mg/L	120-12-7	-	-	-	-	-	< 0.0050	< 0.0050	-	-	-	-	< 0.0050	< 0.0050	-	-	-	-
Benz(a)anthracene		mg/L	56-55-3	-	-	-	-	-	< 0.0050	< 0.0050	-	-	-	-	< 0.0050	< 0.0050	-	-	-	-
Benzo(g,h,i)perylene		mg/L	191-24-2	-	-	-	-	-	< 0.0050	< 0.0050	-	-	-	-	< 0.0050	< 0.0050	-	-	-	-
Benzo(a)pyrene		mg/L	50-32-8	-	-	-	-	-	< 0.0010	< 0.0010	-	-	-	-	< 0.0010	< 0.0010	-	-	-	-
Benzo(b,j) fluoranthene		mg/L	Benz_Fluo_bj	-	-	-	-	-	< 0.0050	< 0.0050	-	-	-	-	< 0.0050	< 0.0050	-	-	-	-
Fluoranthene		mg/L	206-44-0	-	-	-	-	-	< 0.0050	< 0.0050	-	-	-	-	< 0.0050	< 0.0050	-	-	-	-
Indeno(1,2,3-c,d)pyrene		mg/L	193-39-5	-	-	-	-	-	< 0.0050	< 0.0050	-	-	-	-	< 0.0050	< 0.0050	-	-	-	-
Naphthalene		mg/L	91-20-3	-	-	-	-	-	< 0.0050	< 0.0050	-	-	-	-	< 0.0050	< 0.0050	-	-	-	-
Pyrene		mg/L	129-00-0	-	-	-	-	-	< 0.0050	< 0.0050	-	-	-	-	< 0.0050	< 0.0050	-	-	-	-
Dibenz(a,h)anthracene		mg/L	53-70-3	-	-	-	-	-	< 0.0050	< 0.0050	-	-	-	-	< 0.0050	< 0.0050	-	-	-	-
Index of Additive Cancer Risk (IACR)		none	PAH_IACR	4.06	6.54	7.10	6.57	8.41	236	-	23.5	42.5	47.6	8.60	12.9	-	9.92	38.9	10.2	8.49
Quinoline		mg/L	91-22-5	-	-	-	-	-	< 0.0050	< 0.0050	-	-	-	-	< 0.0050	< 0.0050	-	-	-	-
Fluorene		mg/L	86-73-7	-	-	-	-	-	< 0.0050	< 0.0050	-	-	-	-	< 0.0050	< 0.0050	-	-	-	-
Total Organic Carbon		%	TOC	6.31	6.70	6.88	6.90	7.40	4.25	-	7.48	9.70	6.79	7.19	6.17	-	8.57	8.58	7.59	8.27
Chrysene		mg/L	218-01-9	-	-	-	-	-	< 0.0050	< 0.0050	-	-	-	-	< 0.0050	< 0.0050	-	-	-	-
Phenanthrene		mg/L	85-01-8	-	-	-	-	-	< 0.0050	< 0.0050	-	-	-	-	< 0.0050	< 0.0050	-	-	-	-
Benzo(k)fluoranthene		mg/L	207-08-9	-	-	-	-	-	< 0.0050	< 0.0050	-	-	-	-	< 0.0050	< 0.0050	-	-	-	-
Metals																				
Arsenic		mg/L	7440-38-2	-	-	-	-	-	< 0.050	< 0.050	-	-	-	-	< 0.050	0.179	-	-	-	-
Barium		mg/L	7440-39-3	-	-	-	-	-	1.30	1.66	-	-	-	-	0.90	0.96	-	-	-	-
Boron		mg/L	7440-42-8	-	-	-	-	-	< 2.5	< 2.5	-	-	-	-	< 2.5	< 2.5	-	-	-	-
Cadmium		mg/L	7440-43-9	-	-	-	-	-	< 0.0050	< 0.0050	-	-	-	-	< 0.0050	< 0.0050	-	-	-	-
Chromium		mg/L	7440-47-3	-	-	-	-	-	< 0.050	< 0.050	-	-	-	-	< 0.050	< 0.050	-	-	-	-
Lead		mg/L	7439-92-1	-	-	-	-	-	0.161	0.046	-	-	-	-	0.040	0.104	-	-	-	-
Mercury		mg/L	7439-97-6	-	-	-	-	-	< 0.00010	< 0.00010	-	-	-	-	< 0.00010	< 0.00010	-	-	-	-
Selenium		mg/L	7782-49-2	-	-	-	-	-	< 0.025	< 0.025	-	-	-	-	< 0.025	< 0.025	-	-	-	-
Silver		mg/L	7440-22-4	-	-	-	-	-	< 0.0050	< 0.0050	-	-	-	-	< 0.0050	< 0.0050	-	-	-	-
Uranium		mg/L	7440-61-1	-	-	-	-	-	< 0.25	< 0.25	-	-	-	-	< 0.25	< 0.25	-	-	-	-
pH		pH units	pH	-	-	-	-	-	4.89	5.12	-	-	-	-	5.84	5.47	-	-	-	-
Physical																				
Texture		none	Texture	-	-	Fine	-	-	Fine	-	Fine	Fine	-	Fine	Fine	-	-	-	Fine	-
Ungrouped Analytes																				
Initial pH		pH units	pH_INITIAL	-	-	-	-	-	8.28	8.61	-	-	-	-	8.23	7.82	-	-	-	-
MOISTURE AT LIQUID LIMIT		%	MOIST_LL	-	-	-	-	-	55	-	94	-	-	-	97	-	-	-	-	-
Moisture at Plastic Limit		%	MOIST_PL	-	-	-	-	-	51	-	66	-	-	-	63	-	-	-	-	-
Plasticity Index		%	PLAST_INDEX	-	-	-	-	-	4	-	27	-	-	-	34	-	-	-	-	-
Specific Gravity		kg/L	SG	-	-	-	-	-	1.19	-	1.16	-	-	-	1.12	-	-	-	-	-

O.Reg 347 Standards for leachate toxic soils
< Indicates parameter was below laboratory equipment detection limit.
> Indicates parameter detected above equipment analytical range.
- Chemical not analyzed or criteria not defined.
Output generated by GalReport.

APPENDIX F

Laboratory Certificates of Analysis

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GOLDER ASSOCIATES LTD (Whitby)
ATTN: Jill LaPorte
100 Scotia Court
Whitby ON L1N 8Y6

Date Received: 01-OCT-21
Report Date: 26-OCT-21 12:36 (MT)
Version: FINAL

Client Phone: 905-723-2727

Certificate of Analysis

Lab Work Order #: L2646459

Project P.O. #: NOT SUBMITTED
Job Reference: 1783886-8000
C of C Numbers:
Legal Site Desc:

Amanda Overholster
Account Manager

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646459-1 TC1-SG-001 Sampled By: JW/ JF on 28-SEP-21 @ 13:37 Matrix: SED							
Physical Tests							
% Moisture	85.5		0.25	%	04-OCT-21	05-OCT-21	R5607044
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0785		0.0010	g/g	07-OCT-21	07-OCT-21	R5614731
Total Organic Carbon	7.85		0.10	%	07-OCT-21	07-OCT-21	R5614731
Metals							
Aluminum (Al)	16100		50	ug/g	06-OCT-21	07-OCT-21	R5613960
Antimony (Sb)	0.94		0.10	ug/g	06-OCT-21	07-OCT-21	R5613960
Arsenic (As)	7.63		0.10	ug/g	06-OCT-21	07-OCT-21	R5613960
Barium (Ba)	264		0.50	ug/g	06-OCT-21	07-OCT-21	R5613960
Beryllium (Be)	0.61		0.10	ug/g	06-OCT-21	07-OCT-21	R5613960
Bismuth (Bi)	0.35		0.20	ug/g	06-OCT-21	07-OCT-21	R5613960
Boron (B)	12.6		5.0	ug/g	06-OCT-21	07-OCT-21	R5613960
Cadmium (Cd)	0.688		0.020	ug/g	06-OCT-21	07-OCT-21	R5613960
Calcium (Ca)	103000		50	ug/g	06-OCT-21	07-OCT-21	R5613960
Chromium (Cr)	693		0.50	ug/g	06-OCT-21	07-OCT-21	R5613960
Cobalt (Co)	11.3		0.10	ug/g	06-OCT-21	07-OCT-21	R5613960
Copper (Cu)	40.9		0.50	ug/g	06-OCT-21	07-OCT-21	R5613960
Iron (Fe)	24900		50	ug/g	06-OCT-21	07-OCT-21	R5613960
Lead (Pb)	101		0.50	ug/g	06-OCT-21	07-OCT-21	R5613960
Lithium (Li)	14.9		2.0	ug/g	06-OCT-21	07-OCT-21	R5613960
Magnesium (Mg)	13000		20	ug/g	06-OCT-21	07-OCT-21	R5613960
Manganese (Mn)	731		1.0	ug/g	06-OCT-21	07-OCT-21	R5613960
Mercury (Hg)	0.226		0.0050	ug/g	16-OCT-21	18-OCT-21	R5623137
Molybdenum (Mo)	1.53		0.10	ug/g	06-OCT-21	07-OCT-21	R5613960
Nickel (Ni)	23.9		0.50	ug/g	06-OCT-21	07-OCT-21	R5613960
Phosphorus (P)	1260		50	ug/g	06-OCT-21	07-OCT-21	R5613960
Potassium (K)	3740		100	ug/g	06-OCT-21	07-OCT-21	R5613960
Selenium (Se)	1.16		0.20	ug/g	06-OCT-21	07-OCT-21	R5613960
Silver (Ag)	0.39		0.10	ug/g	06-OCT-21	07-OCT-21	R5613960
Sodium (Na)	743		50	ug/g	06-OCT-21	07-OCT-21	R5613960
Strontium (Sr)	652		0.50	ug/g	06-OCT-21	07-OCT-21	R5613960
Sulfur (S)	9300		1000	ug/g	06-OCT-21	07-OCT-21	R5613960
Thallium (Tl)	0.241		0.050	ug/g	06-OCT-21	07-OCT-21	R5613960
Tin (Sn)	4.1		2.0	ug/g	06-OCT-21	07-OCT-21	R5613960
Titanium (Ti)	895		1.0	ug/g	06-OCT-21	07-OCT-21	R5613960
Tungsten (W)	0.93		0.50	ug/g	06-OCT-21	07-OCT-21	R5613960
Uranium (U)	0.819		0.050	ug/g	06-OCT-21	07-OCT-21	R5613960
Vanadium (V)	46.4		0.20	ug/g	06-OCT-21	07-OCT-21	R5613960
Zinc (Zn)	168		2.0	ug/g	06-OCT-21	07-OCT-21	R5613960
Zirconium (Zr)	3.0		1.0	ug/g	06-OCT-21	07-OCT-21	R5613960
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	<0.038	DLHM	0.038	ug/g	04-OCT-21	05-OCT-21	R5608197

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646459-1 TC1-SG-001 Sampled By: JW/ JF on 28-SEP-21 @ 13:37 Matrix: SED							
Polycyclic Aromatic Hydrocarbons							
Acenaphthylene	0.140	DLHM	0.038	ug/g	04-OCT-21	05-OCT-21	R5608197
Acridine	<0.075	DLHM	0.075	ug/g	04-OCT-21	05-OCT-21	R5608197
Anthracene	0.069	DLHM	0.030	ug/g	04-OCT-21	05-OCT-21	R5608197
Benzo(a)anthracene	0.304	R	0.075	ug/g	04-OCT-21	05-OCT-21	R5608197
Benzo(a)pyrene	0.444	DLHM	0.038	ug/g	04-OCT-21	05-OCT-21	R5608197
Benzo(b&j)fluoranthene	0.593	DLHM	0.075	ug/g	04-OCT-21	05-OCT-21	R5608197
Benzo(g,h,i)perylene	0.383	DLHM	0.075	ug/g	04-OCT-21	05-OCT-21	R5608197
Benzo(k)fluoranthene	0.184	DLHM	0.075	ug/g	04-OCT-21	05-OCT-21	R5608197
Chrysene	0.407	DLHM	0.075	ug/g	04-OCT-21	05-OCT-21	R5608197
Dibenz(a,h)anthracene	0.084	DLHM	0.038	ug/g	04-OCT-21	05-OCT-21	R5608197
Fluoroanthene	0.465	DLHM	0.038	ug/g	04-OCT-21	05-OCT-21	R5608197
Fluorene	0.039	DLHM	0.038	ug/g	04-OCT-21	05-OCT-21	R5608197
Indeno(1,2,3-cd)pyrene	0.297	DLHM	0.075	ug/g	04-OCT-21	05-OCT-21	R5608197
1-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	04-OCT-21	05-OCT-21	R5608197
2-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	04-OCT-21	05-OCT-21	R5608197
Naphthalene	<0.038	DLHM	0.038	ug/g	04-OCT-21	05-OCT-21	R5608197
Phenanthrene	0.188	DLHM	0.038	ug/g	04-OCT-21	05-OCT-21	R5608197
Pyrene	0.566	DLHM	0.038	ug/g	04-OCT-21	05-OCT-21	R5608197
Quinoline	<0.038	DLHM	0.038	ug/g	04-OCT-21	05-OCT-21	R5608197
Surrogate: 2-Fluorobiphenyl	86.6		60-140	%	04-OCT-21	05-OCT-21	R5608197
Surrogate: d14-Terphenyl	85.4		60-140	%	04-OCT-21	05-OCT-21	R5608197
B(a)P Total Potency Equivalent	0.673		0.053	ug/g	04-OCT-21	05-OCT-21	R5608197
IACR (CCME)	7.70		0.75		04-OCT-21	05-OCT-21	R5608197
Polychlorinated Biphenyls							
Aroclor 1016	<0.023	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1221	<0.023	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1232	<0.023	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1242	<0.023	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1248	<0.023	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1254	0.092	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1260	0.149	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1262	<0.023	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1268	<0.023	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Total Polychlorinated Biphenyls	0.240		0.068	mg/kg	06-OCT-21	06-OCT-21	R5611197
Surrogate: d14-Terphenyl	89.3		50-140	%	06-OCT-21	06-OCT-21	R5611197
L2646459-2 TC1-SG-002 Sampled By: JW/ JF on 28-SEP-21 @ 13:18 Matrix: SED							
Physical Tests							
% Moisture	88.3		0.25	%	04-OCT-21	05-OCT-21	R5607044
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0807		0.0010	g/g	07-OCT-21	07-OCT-21	R5614731

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646459-2 TC1-SG-002 Sampled By: JW/ JF on 28-SEP-21 @ 13:18 Matrix: SED							
Organic / Inorganic Carbon							
Total Organic Carbon	8.07		0.10	%	07-OCT-21	07-OCT-21	R5614731
Metals							
Aluminum (Al)	16600		50	ug/g	06-OCT-21	07-OCT-21	R5613960
Antimony (Sb)	0.89		0.10	ug/g	06-OCT-21	07-OCT-21	R5613960
Arsenic (As)	7.14		0.10	ug/g	06-OCT-21	07-OCT-21	R5613960
Barium (Ba)	279		0.50	ug/g	06-OCT-21	07-OCT-21	R5613960
Beryllium (Be)	0.64		0.10	ug/g	06-OCT-21	07-OCT-21	R5613960
Bismuth (Bi)	0.36		0.20	ug/g	06-OCT-21	07-OCT-21	R5613960
Boron (B)	15.2		5.0	ug/g	06-OCT-21	07-OCT-21	R5613960
Cadmium (Cd)	0.666		0.020	ug/g	06-OCT-21	07-OCT-21	R5613960
Calcium (Ca)	102000		50	ug/g	06-OCT-21	07-OCT-21	R5613960
Chromium (Cr)	661		0.50	ug/g	06-OCT-21	07-OCT-21	R5613960
Cobalt (Co)	11.8		0.10	ug/g	06-OCT-21	07-OCT-21	R5613960
Copper (Cu)	41.4		0.50	ug/g	06-OCT-21	07-OCT-21	R5613960
Iron (Fe)	26100		50	ug/g	06-OCT-21	07-OCT-21	R5613960
Lead (Pb)	98.1		0.50	ug/g	06-OCT-21	07-OCT-21	R5613960
Lithium (Li)	15.5		2.0	ug/g	06-OCT-21	07-OCT-21	R5613960
Magnesium (Mg)	13000		20	ug/g	06-OCT-21	07-OCT-21	R5613960
Manganese (Mn)	885		1.0	ug/g	06-OCT-21	07-OCT-21	R5613960
Mercury (Hg)	0.215		0.0050	ug/g	16-OCT-21	18-OCT-21	R5623137
Molybdenum (Mo)	1.36		0.10	ug/g	06-OCT-21	07-OCT-21	R5613960
Nickel (Ni)	24.8		0.50	ug/g	06-OCT-21	07-OCT-21	R5613960
Phosphorus (P)	1260		50	ug/g	06-OCT-21	07-OCT-21	R5613960
Potassium (K)	3910		100	ug/g	06-OCT-21	07-OCT-21	R5613960
Selenium (Se)	1.26		0.20	ug/g	06-OCT-21	07-OCT-21	R5613960
Silver (Ag)	0.40		0.10	ug/g	06-OCT-21	07-OCT-21	R5613960
Sodium (Na)	733		50	ug/g	06-OCT-21	07-OCT-21	R5613960
Strontium (Sr)	668		0.50	ug/g	06-OCT-21	07-OCT-21	R5613960
Sulfur (S)	9700		1000	ug/g	06-OCT-21	07-OCT-21	R5613960
Thallium (Tl)	0.250		0.050	ug/g	06-OCT-21	07-OCT-21	R5613960
Tin (Sn)	4.4		2.0	ug/g	06-OCT-21	07-OCT-21	R5613960
Titanium (Ti)	908		1.0	ug/g	06-OCT-21	07-OCT-21	R5613960
Tungsten (W)	0.81		0.50	ug/g	06-OCT-21	07-OCT-21	R5613960
Uranium (U)	0.802		0.050	ug/g	06-OCT-21	07-OCT-21	R5613960
Vanadium (V)	45.9		0.20	ug/g	06-OCT-21	07-OCT-21	R5613960
Zinc (Zn)	165		2.0	ug/g	06-OCT-21	07-OCT-21	R5613960
Zirconium (Zr)	3.2		1.0	ug/g	06-OCT-21	07-OCT-21	R5613960
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	<0.038	DLHM	0.038	ug/g	04-OCT-21	05-OCT-21	R5608197
Acenaphthylene	0.141	DLHM	0.038	ug/g	04-OCT-21	05-OCT-21	R5608197
Acridine	<0.075	DLHM	0.075	ug/g	04-OCT-21	05-OCT-21	R5608197

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646459-2 TC1-SG-002 Sampled By: JW/ JF on 28-SEP-21 @ 13:18 Matrix: SED							
Polycyclic Aromatic Hydrocarbons							
Anthracene	0.069	DLHM	0.030	ug/g	04-OCT-21	05-OCT-21	R5608197
Benzo(a)anthracene	0.270	R	0.075	ug/g	04-OCT-21	05-OCT-21	R5608197
Benzo(a)pyrene	0.396	DLHM	0.038	ug/g	04-OCT-21	05-OCT-21	R5608197
Benzo(b&j)fluoranthene	0.509	DLHM	0.075	ug/g	04-OCT-21	05-OCT-21	R5608197
Benzo(g,h,i)perylene	0.337	DLHM	0.075	ug/g	04-OCT-21	05-OCT-21	R5608197
Benzo(k)fluoranthene	0.164	DLHM	0.075	ug/g	04-OCT-21	05-OCT-21	R5608197
Chrysene	0.351	DLHM	0.075	ug/g	04-OCT-21	05-OCT-21	R5608197
Dibenz(a,h)anthracene	0.074	DLHM	0.038	ug/g	04-OCT-21	05-OCT-21	R5608197
Fluoroanthene	0.398	DLHM	0.038	ug/g	04-OCT-21	05-OCT-21	R5608197
Fluorene	0.039	DLHM	0.038	ug/g	04-OCT-21	05-OCT-21	R5608197
Indeno(1,2,3-cd)pyrene	0.289	DLHM	0.075	ug/g	04-OCT-21	05-OCT-21	R5608197
1-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	04-OCT-21	05-OCT-21	R5608197
2-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	04-OCT-21	05-OCT-21	R5608197
Naphthalene	<0.038	DLHM	0.038	ug/g	04-OCT-21	05-OCT-21	R5608197
Phenanthrene	0.166	DLHM	0.038	ug/g	04-OCT-21	05-OCT-21	R5608197
Pyrene	0.467	DLHM	0.038	ug/g	04-OCT-21	05-OCT-21	R5608197
Quinoline	<0.038	DLHM	0.038	ug/g	04-OCT-21	05-OCT-21	R5608197
Surrogate: 2-Fluorobiphenyl	89.9		60-140	%	04-OCT-21	05-OCT-21	R5608197
Surrogate: d14-Terphenyl	88.6		60-140	%	04-OCT-21	05-OCT-21	R5608197
B(a)P Total Potency Equivalent	0.599		0.053	ug/g	04-OCT-21	05-OCT-21	R5608197
IACR (CCME)	6.74		0.75		04-OCT-21	05-OCT-21	R5608197
Polychlorinated Biphenyls							
Aroclor 1016	<0.023	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1221	<0.023	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1232	<0.023	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1242	<0.023	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1248	<0.023	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1254	0.087	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1260	0.172	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1262	<0.023	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1268	<0.023	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Total Polychlorinated Biphenyls	0.259		0.068	mg/kg	06-OCT-21	06-OCT-21	R5611197
Surrogate: d14-Terphenyl	86.2		50-140	%	06-OCT-21	06-OCT-21	R5611197
L2646459-3 TC1-SG-003 Sampled By: JW/ JF on 28-SEP-21 @ 13:00 Matrix: SED							
Physical Tests							
% Moisture	85.8		0.25	%	04-OCT-21	05-OCT-21	R5607044
Particle Size							
General Texture Class	Fine				08-OCT-21	08-OCT-21	R5614882
MUST PSA % > 75um	<1.0	PSAL	1.0	%	08-OCT-21	08-OCT-21	R5614882
Organic / Inorganic Carbon							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646459-3 TC1-SG-003 Sampled By: JW/ JF on 28-SEP-21 @ 13:00 Matrix: SED							
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0742		0.0010	g/g	07-OCT-21	07-OCT-21	R5614731
Total Organic Carbon	7.42		0.10	%	07-OCT-21	07-OCT-21	R5614731
Metals							
Aluminum (Al)	16400		50	ug/g	06-OCT-21	07-OCT-21	R5613960
Antimony (Sb)	0.82		0.10	ug/g	06-OCT-21	07-OCT-21	R5613960
Arsenic (As)	7.81		0.10	ug/g	06-OCT-21	07-OCT-21	R5613960
Barium (Ba)	286		0.50	ug/g	06-OCT-21	07-OCT-21	R5613960
Beryllium (Be)	0.63		0.10	ug/g	06-OCT-21	07-OCT-21	R5613960
Bismuth (Bi)	0.37		0.20	ug/g	06-OCT-21	07-OCT-21	R5613960
Boron (B)	11.6		5.0	ug/g	06-OCT-21	07-OCT-21	R5613960
Cadmium (Cd)	0.665		0.020	ug/g	06-OCT-21	07-OCT-21	R5613960
Calcium (Ca)	107000		50	ug/g	06-OCT-21	07-OCT-21	R5613960
Chromium (Cr)	717		0.50	ug/g	06-OCT-21	07-OCT-21	R5613960
Cobalt (Co)	11.6		0.10	ug/g	06-OCT-21	07-OCT-21	R5613960
Copper (Cu)	39.3		0.50	ug/g	06-OCT-21	07-OCT-21	R5613960
Iron (Fe)	26100		50	ug/g	06-OCT-21	07-OCT-21	R5613960
Lead (Pb)	101		0.50	ug/g	06-OCT-21	07-OCT-21	R5613960
Lithium (Li)	15.1		2.0	ug/g	06-OCT-21	07-OCT-21	R5613960
Magnesium (Mg)	12800		20	ug/g	06-OCT-21	07-OCT-21	R5613960
Manganese (Mn)	840		1.0	ug/g	06-OCT-21	07-OCT-21	R5613960
Mercury (Hg)	0.261		0.0050	ug/g	16-OCT-21	18-OCT-21	R5623137
Molybdenum (Mo)	1.39		0.10	ug/g	06-OCT-21	07-OCT-21	R5613960
Nickel (Ni)	24.3		0.50	ug/g	06-OCT-21	07-OCT-21	R5613960
Phosphorus (P)	1160		50	ug/g	06-OCT-21	07-OCT-21	R5613960
Potassium (K)	3800		100	ug/g	06-OCT-21	07-OCT-21	R5613960
Selenium (Se)	1.21		0.20	ug/g	06-OCT-21	07-OCT-21	R5613960
Silver (Ag)	0.47		0.10	ug/g	06-OCT-21	07-OCT-21	R5613960
Sodium (Na)	674		50	ug/g	06-OCT-21	07-OCT-21	R5613960
Strontium (Sr)	693		0.50	ug/g	06-OCT-21	07-OCT-21	R5613960
Sulfur (S)	9900		1000	ug/g	06-OCT-21	07-OCT-21	R5613960
Thallium (Tl)	0.250		0.050	ug/g	06-OCT-21	07-OCT-21	R5613960
Tin (Sn)	4.9		2.0	ug/g	06-OCT-21	07-OCT-21	R5613960
Titanium (Ti)	984		1.0	ug/g	06-OCT-21	07-OCT-21	R5613960
Tungsten (W)	0.56		0.50	ug/g	06-OCT-21	07-OCT-21	R5613960
Uranium (U)	0.860		0.050	ug/g	06-OCT-21	07-OCT-21	R5613960
Vanadium (V)	46.3		0.20	ug/g	06-OCT-21	07-OCT-21	R5613960
Zinc (Zn)	159		2.0	ug/g	06-OCT-21	07-OCT-21	R5613960
Zirconium (Zr)	3.2		1.0	ug/g	06-OCT-21	07-OCT-21	R5613960
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	<0.038	DLHM	0.038	ug/g	04-OCT-21	05-OCT-21	R5608197
Acenaphthylene	0.137	DLHM	0.038	ug/g	04-OCT-21	05-OCT-21	R5608197

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646459-3 TC1-SG-003 Sampled By: JW/ JF on 28-SEP-21 @ 13:00 Matrix: SED							
Polycyclic Aromatic Hydrocarbons							
Acridine	<0.075	DLHM	0.075	ug/g	04-OCT-21	05-OCT-21	R5608197
Anthracene	0.065	DLHM	0.030	ug/g	04-OCT-21	05-OCT-21	R5608197
Benzo(a)anthracene	0.288	R	0.075	ug/g	04-OCT-21	05-OCT-21	R5608197
Benzo(a)pyrene	0.393	DLHM	0.038	ug/g	04-OCT-21	05-OCT-21	R5608197
Benzo(b&j)fluoranthene	0.477	DLHM	0.075	ug/g	04-OCT-21	05-OCT-21	R5608197
Benzo(g,h,i)perylene	0.315	DLHM	0.075	ug/g	04-OCT-21	05-OCT-21	R5608197
Benzo(k)fluoranthene	0.157	DLHM	0.075	ug/g	04-OCT-21	05-OCT-21	R5608197
Chrysene	0.331	DLHM	0.075	ug/g	04-OCT-21	05-OCT-21	R5608197
Dibenz(a,h)anthracene	0.072	DLHM	0.038	ug/g	04-OCT-21	05-OCT-21	R5608197
Fluoroanthene	0.379	DLHM	0.038	ug/g	04-OCT-21	05-OCT-21	R5608197
Fluorene	<0.038	DLHM	0.038	ug/g	04-OCT-21	05-OCT-21	R5608197
Indeno(1,2,3-cd)pyrene	0.275	DLHM	0.075	ug/g	04-OCT-21	05-OCT-21	R5608197
1-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	04-OCT-21	05-OCT-21	R5608197
2-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	04-OCT-21	05-OCT-21	R5608197
Naphthalene	<0.038	DLHM	0.038	ug/g	04-OCT-21	05-OCT-21	R5608197
Phenanthrene	0.155	DLHM	0.038	ug/g	04-OCT-21	05-OCT-21	R5608197
Pyrene	0.461	DLHM	0.038	ug/g	04-OCT-21	05-OCT-21	R5608197
Quinoline	<0.038	DLHM	0.038	ug/g	04-OCT-21	05-OCT-21	R5608197
Surrogate: 2-Fluorobiphenyl	83.7		60-140	%	04-OCT-21	05-OCT-21	R5608197
Surrogate: d14-Terphenyl	82.2		60-140	%	04-OCT-21	05-OCT-21	R5608197
B(a)P Total Potency Equivalent	0.591		0.053	ug/g	04-OCT-21	05-OCT-21	R5608197
IACR (CCME)	6.52		0.75		04-OCT-21	05-OCT-21	R5608197
Polychlorinated Biphenyls							
Aroclor 1016	<0.023	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1221	<0.023	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1232	<0.023	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1242	<0.023	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1248	<0.023	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1254	0.110	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1260	0.189	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1262	<0.023	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1268	<0.023	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Total Polychlorinated Biphenyls	0.299		0.068	mg/kg	06-OCT-21	06-OCT-21	R5611197
Surrogate: d14-Terphenyl	89.4		50-140	%	06-OCT-21	06-OCT-21	R5611197
L2646459-4 TC1-SG-004 Sampled By: JW/ JF on 28-SEP-21 @ 12:40 Matrix: SED							
Physical Tests							
% Moisture	87.6		0.25	%	04-OCT-21	05-OCT-21	R5607044
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0773		0.0010	g/g	07-OCT-21	07-OCT-21	R5614731
Total Organic Carbon	7.73		0.10	%	07-OCT-21	07-OCT-21	R5614731

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646459-4 TC1-SG-004 Sampled By: JW/ JF on 28-SEP-21 @ 12:40 Matrix: SED							
Organic / Inorganic Carbon							
Metals							
Aluminum (Al)	15600		50	ug/g	06-OCT-21	07-OCT-21	R5613960
Antimony (Sb)	0.82		0.10	ug/g	06-OCT-21	07-OCT-21	R5613960
Arsenic (As)	7.19		0.10	ug/g	06-OCT-21	07-OCT-21	R5613960
Barium (Ba)	273		0.50	ug/g	06-OCT-21	07-OCT-21	R5613960
Beryllium (Be)	0.61		0.10	ug/g	06-OCT-21	07-OCT-21	R5613960
Bismuth (Bi)	0.42		0.20	ug/g	06-OCT-21	07-OCT-21	R5613960
Boron (B)	11.2		5.0	ug/g	06-OCT-21	07-OCT-21	R5613960
Cadmium (Cd)	0.632		0.020	ug/g	06-OCT-21	07-OCT-21	R5613960
Calcium (Ca)	88000		50	ug/g	06-OCT-21	07-OCT-21	R5613960
Chromium (Cr)	618		0.50	ug/g	06-OCT-21	07-OCT-21	R5613960
Cobalt (Co)	12.4		0.10	ug/g	06-OCT-21	07-OCT-21	R5613960
Copper (Cu)	37.3		0.50	ug/g	06-OCT-21	07-OCT-21	R5613960
Iron (Fe)	26200		50	ug/g	06-OCT-21	07-OCT-21	R5613960
Lead (Pb)	96.6		0.50	ug/g	06-OCT-21	07-OCT-21	R5613960
Lithium (Li)	14.3		2.0	ug/g	06-OCT-21	07-OCT-21	R5613960
Magnesium (Mg)	12100		20	ug/g	06-OCT-21	07-OCT-21	R5613960
Manganese (Mn)	993		1.0	ug/g	06-OCT-21	07-OCT-21	R5613960
Mercury (Hg)	0.254		0.0050	ug/g	16-OCT-21	18-OCT-21	R5623137
Molybdenum (Mo)	1.31		0.10	ug/g	06-OCT-21	07-OCT-21	R5613960
Nickel (Ni)	24.4		0.50	ug/g	06-OCT-21	07-OCT-21	R5613960
Phosphorus (P)	1160		50	ug/g	06-OCT-21	07-OCT-21	R5613960
Potassium (K)	3820		100	ug/g	06-OCT-21	07-OCT-21	R5613960
Selenium (Se)	1.14		0.20	ug/g	06-OCT-21	07-OCT-21	R5613960
Silver (Ag)	0.48		0.10	ug/g	06-OCT-21	07-OCT-21	R5613960
Sodium (Na)	650		50	ug/g	06-OCT-21	07-OCT-21	R5613960
Strontium (Sr)	572		0.50	ug/g	06-OCT-21	07-OCT-21	R5613960
Sulfur (S)	10300		1000	ug/g	06-OCT-21	07-OCT-21	R5613960
Thallium (Tl)	0.263		0.050	ug/g	06-OCT-21	07-OCT-21	R5613960
Tin (Sn)	4.2		2.0	ug/g	06-OCT-21	07-OCT-21	R5613960
Titanium (Ti)	904		1.0	ug/g	06-OCT-21	07-OCT-21	R5613960
Tungsten (W)	<0.50		0.50	ug/g	06-OCT-21	07-OCT-21	R5613960
Uranium (U)	0.830		0.050	ug/g	06-OCT-21	07-OCT-21	R5613960
Vanadium (V)	43.1		0.20	ug/g	06-OCT-21	07-OCT-21	R5613960
Zinc (Zn)	153		2.0	ug/g	06-OCT-21	07-OCT-21	R5613960
Zirconium (Zr)	3.5		1.0	ug/g	06-OCT-21	07-OCT-21	R5613960
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.041	DLHM	0.038	ug/g	04-OCT-21	05-OCT-21	R5608197
Acenaphthylene	0.130	DLHM	0.038	ug/g	04-OCT-21	05-OCT-21	R5608197
Acridine	<0.075	DLHM	0.075	ug/g	04-OCT-21	05-OCT-21	R5608197
Anthracene	0.079	DLHM	0.030	ug/g	04-OCT-21	05-OCT-21	R5608197

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646459-4 TC1-SG-004 Sampled By: JW/ JF on 28-SEP-21 @ 12:40 Matrix: SED							
Polycyclic Aromatic Hydrocarbons							
Benzo(a)anthracene	0.303	R	0.075	ug/g	04-OCT-21	05-OCT-21	R5608197
Benzo(a)pyrene	0.386	DLHM	0.038	ug/g	04-OCT-21	05-OCT-21	R5608197
Benzo(b&j)fluoranthene	0.475	DLHM	0.075	ug/g	04-OCT-21	05-OCT-21	R5608197
Benzo(g,h,i)perylene	0.300	DLHM	0.075	ug/g	04-OCT-21	05-OCT-21	R5608197
Benzo(k)fluoranthene	0.145	DLHM	0.075	ug/g	04-OCT-21	05-OCT-21	R5608197
Chrysene	0.340	DLHM	0.075	ug/g	04-OCT-21	05-OCT-21	R5608197
Dibenz(a,h)anthracene	0.072	DLHM	0.038	ug/g	04-OCT-21	05-OCT-21	R5608197
Fluoroanthene	0.449	DLHM	0.038	ug/g	04-OCT-21	05-OCT-21	R5608197
Fluorene	0.047	DLHM	0.038	ug/g	04-OCT-21	05-OCT-21	R5608197
Indeno(1,2,3-cd)pyrene	0.248	DLHM	0.075	ug/g	04-OCT-21	05-OCT-21	R5608197
1-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	04-OCT-21	05-OCT-21	R5608197
2-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	04-OCT-21	05-OCT-21	R5608197
Naphthalene	<0.038	DLHM	0.038	ug/g	04-OCT-21	05-OCT-21	R5608197
Phenanthrene	0.216	DLHM	0.038	ug/g	04-OCT-21	05-OCT-21	R5608197
Pyrene	0.484	DLHM	0.038	ug/g	04-OCT-21	05-OCT-21	R5608197
Quinoline	<0.038	DLHM	0.038	ug/g	04-OCT-21	05-OCT-21	R5608197
Surrogate: 2-Fluorobiphenyl	87.7		60-140	%	04-OCT-21	05-OCT-21	R5608197
Surrogate: d14-Terphenyl	86.8		60-140	%	04-OCT-21	05-OCT-21	R5608197
B(a)P Total Potency Equivalent	0.581		0.053	ug/g	04-OCT-21	05-OCT-21	R5608197
IACR (CCME)	6.44		0.75		04-OCT-21	05-OCT-21	R5608197
Polychlorinated Biphenyls							
Aroclor 1016	<0.023	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1221	<0.023	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1232	<0.023	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1242	<0.023	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1248	<0.023	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1254	0.091	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1260	0.185	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1262	<0.023	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1268	<0.023	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Total Polychlorinated Biphenyls	0.276		0.068	mg/kg	06-OCT-21	06-OCT-21	R5611197
Surrogate: d14-Terphenyl	97.7		50-140	%	06-OCT-21	06-OCT-21	R5611197
L2646459-5 TC1-SG-005 Sampled By: JW/ JF on 28-SEP-21 @ 11:15 Matrix: SED							
Physical Tests							
% Moisture	83.8		0.25	%	04-OCT-21	05-OCT-21	R5607044
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0592		0.0010	g/g	07-OCT-21	07-OCT-21	R5614731
Total Organic Carbon	5.92		0.10	%	07-OCT-21	07-OCT-21	R5614731
Metals							
Aluminum (Al)	18800		50	ug/g	06-OCT-21	07-OCT-21	R5613960

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646459-5 TC1-SG-005 Sampled By: JW/ JF on 28-SEP-21 @ 11:15 Matrix: SED							
Metals							
Antimony (Sb)	0.63		0.10	ug/g	06-OCT-21	07-OCT-21	R5613960
Arsenic (As)	7.58		0.10	ug/g	06-OCT-21	07-OCT-21	R5613960
Barium (Ba)	285		0.50	ug/g	06-OCT-21	07-OCT-21	R5613960
Beryllium (Be)	0.69		0.10	ug/g	06-OCT-21	07-OCT-21	R5613960
Bismuth (Bi)	0.31		0.20	ug/g	06-OCT-21	07-OCT-21	R5613960
Boron (B)	10.7		5.0	ug/g	06-OCT-21	07-OCT-21	R5613960
Cadmium (Cd)	0.557		0.020	ug/g	06-OCT-21	07-OCT-21	R5613960
Calcium (Ca)	80300		50	ug/g	06-OCT-21	07-OCT-21	R5613960
Chromium (Cr)	475		0.50	ug/g	06-OCT-21	07-OCT-21	R5613960
Cobalt (Co)	13.5		0.10	ug/g	06-OCT-21	07-OCT-21	R5613960
Copper (Cu)	33.7		0.50	ug/g	06-OCT-21	07-OCT-21	R5613960
Iron (Fe)	28700		50	ug/g	06-OCT-21	07-OCT-21	R5613960
Lead (Pb)	78.6		0.50	ug/g	06-OCT-21	07-OCT-21	R5613960
Lithium (Li)	16.0		2.0	ug/g	06-OCT-21	07-OCT-21	R5613960
Magnesium (Mg)	13400		20	ug/g	06-OCT-21	07-OCT-21	R5613960
Manganese (Mn)	945		1.0	ug/g	06-OCT-21	07-OCT-21	R5613960
Mercury (Hg)	0.269		0.0050	ug/g	16-OCT-21	18-OCT-21	R5623137
Molybdenum (Mo)	0.89		0.10	ug/g	06-OCT-21	07-OCT-21	R5613960
Nickel (Ni)	26.1		0.50	ug/g	06-OCT-21	07-OCT-21	R5613960
Phosphorus (P)	1260		50	ug/g	06-OCT-21	07-OCT-21	R5613960
Potassium (K)	4390		100	ug/g	06-OCT-21	07-OCT-21	R5613960
Selenium (Se)	0.88		0.20	ug/g	06-OCT-21	07-OCT-21	R5613960
Silver (Ag)	0.38		0.10	ug/g	06-OCT-21	07-OCT-21	R5613960
Sodium (Na)	720		50	ug/g	06-OCT-21	07-OCT-21	R5613960
Strontium (Sr)	477		0.50	ug/g	06-OCT-21	07-OCT-21	R5613960
Sulfur (S)	7200		1000	ug/g	06-OCT-21	07-OCT-21	R5613960
Thallium (Tl)	0.290		0.050	ug/g	06-OCT-21	07-OCT-21	R5613960
Tin (Sn)	5.6		2.0	ug/g	06-OCT-21	07-OCT-21	R5613960
Titanium (Ti)	1230		1.0	ug/g	06-OCT-21	07-OCT-21	R5613960
Tungsten (W)	<0.50		0.50	ug/g	06-OCT-21	07-OCT-21	R5613960
Uranium (U)	0.731		0.050	ug/g	06-OCT-21	07-OCT-21	R5613960
Vanadium (V)	48.2		0.20	ug/g	06-OCT-21	07-OCT-21	R5613960
Zinc (Zn)	400		2.0	ug/g	06-OCT-21	07-OCT-21	R5613960
Zirconium (Zr)	4.3		1.0	ug/g	06-OCT-21	07-OCT-21	R5613960
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	<0.025	DLHM	0.025	ug/g	04-OCT-21	05-OCT-21	R5608197
Acenaphthylene	0.101	DLHM	0.025	ug/g	04-OCT-21	05-OCT-21	R5608197
Acridine	<0.050	DLHM	0.050	ug/g	04-OCT-21	05-OCT-21	R5608197
Anthracene	0.054	DLHM	0.020	ug/g	04-OCT-21	05-OCT-21	R5608197
Benzo(a)anthracene	0.233	R	0.050	ug/g	04-OCT-21	05-OCT-21	R5608197
Benzo(a)pyrene	0.294	DLHM	0.025	ug/g	04-OCT-21	05-OCT-21	R5608197

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646459-5 TC1-SG-005 Sampled By: JW/ JF on 28-SEP-21 @ 11:15 Matrix: SED							
Polycyclic Aromatic Hydrocarbons							
Benzo(b&j)fluoranthene	0.354	DLHM	0.050	ug/g	04-OCT-21	05-OCT-21	R5608197
Benzo(g,h,i)perylene	0.223	DLHM	0.050	ug/g	04-OCT-21	05-OCT-21	R5608197
Benzo(k)fluoranthene	0.109	DLHM	0.050	ug/g	04-OCT-21	05-OCT-21	R5608197
Chrysene	0.247	DLHM	0.050	ug/g	04-OCT-21	05-OCT-21	R5608197
Dibenz(a,h)anthracene	0.052	DLHM	0.025	ug/g	04-OCT-21	05-OCT-21	R5608197
Fluoroanthene	0.323	DLHM	0.025	ug/g	04-OCT-21	05-OCT-21	R5608197
Fluorene	0.030	DLHM	0.025	ug/g	04-OCT-21	05-OCT-21	R5608197
Indeno(1,2,3-cd)pyrene	0.182	DLHM	0.050	ug/g	04-OCT-21	05-OCT-21	R5608197
1-Methylnaphthalene	<0.025	DLHM	0.025	ug/g	04-OCT-21	05-OCT-21	R5608197
2-Methylnaphthalene	<0.025	DLHM	0.025	ug/g	04-OCT-21	05-OCT-21	R5608197
Naphthalene	<0.025	DLHM	0.025	ug/g	04-OCT-21	05-OCT-21	R5608197
Phenanthrene	0.141	DLHM	0.025	ug/g	04-OCT-21	05-OCT-21	R5608197
Pyrene	0.373	DLHM	0.025	ug/g	04-OCT-21	05-OCT-21	R5608197
Quinoline	<0.025	DLHM	0.025	ug/g	04-OCT-21	05-OCT-21	R5608197
Surrogate: 2-Fluorobiphenyl	87.1		60-140	%	04-OCT-21	05-OCT-21	R5608197
Surrogate: d14-Terphenyl	87.8		60-140	%	04-OCT-21	05-OCT-21	R5608197
B(a)P Total Potency Equivalent	0.438		0.036	ug/g	04-OCT-21	05-OCT-21	R5608197
IACR (CCME)	4.83		0.50		04-OCT-21	05-OCT-21	R5608197
Polychlorinated Biphenyls							
Aroclor 1016	<0.015	DLHM	0.015	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1221	<0.015	DLHM	0.015	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1232	<0.015	DLHM	0.015	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1242	<0.015	DLHM	0.015	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1248	<0.015	DLHM	0.015	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1254	0.149	DLHM	0.015	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1260	0.129	DLHM	0.015	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1262	<0.015	DLHM	0.015	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1268	<0.015	DLHM	0.015	mg/kg	06-OCT-21	06-OCT-21	R5611197
Total Polychlorinated Biphenyls	0.278		0.045	mg/kg	06-OCT-21	06-OCT-21	R5611197
Surrogate: d14-Terphenyl	87.8		50-140	%	06-OCT-21	06-OCT-21	R5611197
L2646459-6 TC2A-SG-001 Sampled By: JW/ JF on 28-SEP-21 @ 16:55 Matrix: SED							
Physical Tests							
% Moisture	83.0		0.25	%	04-OCT-21	05-OCT-21	R5607044
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0795		0.0010	g/g	07-OCT-21	07-OCT-21	R5614731
Total Organic Carbon	7.95		0.10	%	07-OCT-21	07-OCT-21	R5614731
Metals							
Aluminum (Al)	12900		50	ug/g	06-OCT-21	07-OCT-21	R5613960
Antimony (Sb)	1.19		0.10	ug/g	06-OCT-21	07-OCT-21	R5613960
Arsenic (As)	12.4		0.10	ug/g	06-OCT-21	07-OCT-21	R5613960

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646459-6 TC2A-SG-001 Sampled By: JW/ JF on 28-SEP-21 @ 16:55 Matrix: SED							
Metals							
Barium (Ba)	205		0.50	ug/g	06-OCT-21	07-OCT-21	R5613960
Beryllium (Be)	0.58		0.10	ug/g	06-OCT-21	07-OCT-21	R5613960
Bismuth (Bi)	0.69		0.20	ug/g	06-OCT-21	07-OCT-21	R5613960
Boron (B)	13.2		5.0	ug/g	06-OCT-21	07-OCT-21	R5613960
Cadmium (Cd)	1.49		0.020	ug/g	06-OCT-21	07-OCT-21	R5613960
Calcium (Ca)	75100		50	ug/g	06-OCT-21	07-OCT-21	R5613960
Chromium (Cr)	146		0.50	ug/g	06-OCT-21	07-OCT-21	R5613960
Cobalt (Co)	14.5		0.10	ug/g	06-OCT-21	07-OCT-21	R5613960
Copper (Cu)	77.7		0.50	ug/g	06-OCT-21	07-OCT-21	R5613960
Iron (Fe)	22800		50	ug/g	06-OCT-21	07-OCT-21	R5613960
Lead (Pb)	192		0.50	ug/g	06-OCT-21	07-OCT-21	R5613960
Lithium (Li)	12.8		2.0	ug/g	06-OCT-21	07-OCT-21	R5613960
Magnesium (Mg)	15300		20	ug/g	06-OCT-21	07-OCT-21	R5613960
Manganese (Mn)	475		1.0	ug/g	06-OCT-21	07-OCT-21	R5613960
Mercury (Hg)	1.21	DLHC	0.050	ug/g	16-OCT-21	18-OCT-21	R5623137
Molybdenum (Mo)	1.02		0.10	ug/g	06-OCT-21	07-OCT-21	R5613960
Nickel (Ni)	24.9		0.50	ug/g	06-OCT-21	07-OCT-21	R5613960
Phosphorus (P)	1100		50	ug/g	06-OCT-21	07-OCT-21	R5613960
Potassium (K)	3180		100	ug/g	06-OCT-21	07-OCT-21	R5613960
Selenium (Se)	1.25		0.20	ug/g	06-OCT-21	07-OCT-21	R5613960
Silver (Ag)	1.22		0.10	ug/g	06-OCT-21	07-OCT-21	R5613960
Sodium (Na)	1150		50	ug/g	06-OCT-21	07-OCT-21	R5613960
Strontium (Sr)	269		0.50	ug/g	06-OCT-21	07-OCT-21	R5613960
Sulfur (S)	6800		1000	ug/g	06-OCT-21	07-OCT-21	R5613960
Thallium (Tl)	0.398		0.050	ug/g	06-OCT-21	07-OCT-21	R5613960
Tin (Sn)	24.8		2.0	ug/g	06-OCT-21	07-OCT-21	R5613960
Titanium (Ti)	806		1.0	ug/g	06-OCT-21	07-OCT-21	R5613960
Tungsten (W)	0.96		0.50	ug/g	06-OCT-21	07-OCT-21	R5613960
Uranium (U)	0.783		0.050	ug/g	06-OCT-21	07-OCT-21	R5613960
Vanadium (V)	39.8		0.20	ug/g	06-OCT-21	07-OCT-21	R5613960
Zinc (Zn)	358		2.0	ug/g	06-OCT-21	07-OCT-21	R5613960
Zirconium (Zr)	4.4		1.0	ug/g	06-OCT-21	07-OCT-21	R5613960
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.132	DLHM	0.025	ug/g	04-OCT-21	05-OCT-21	R5608197
Acenaphthylene	0.228	DLHM	0.025	ug/g	04-OCT-21	05-OCT-21	R5608197
Acridine	0.120	DLHM	0.050	ug/g	04-OCT-21	05-OCT-21	R5608197
Anthracene	0.460	DLHM	0.020	ug/g	04-OCT-21	05-OCT-21	R5608197
Benzo(a)anthracene	2.03	DLHM	0.050	ug/g	04-OCT-21	05-OCT-21	R5608197
Benzo(a)pyrene	1.80	DLHM	0.025	ug/g	04-OCT-21	05-OCT-21	R5608197
Benzo(b&j)fluoranthene	2.56	DLHM	0.050	ug/g	04-OCT-21	05-OCT-21	R5608197
Benzo(g,h,i)perylene	1.15	DLHM	0.050	ug/g	04-OCT-21	05-OCT-21	R5608197

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646459-6 TC2A-SG-001 Sampled By: JW/ JF on 28-SEP-21 @ 16:55 Matrix: SED							
Polycyclic Aromatic Hydrocarbons							
Benzo(k)fluoranthene	0.820	DLHM	0.050	ug/g	04-OCT-21	05-OCT-21	R5608197
Chrysene	2.05	DLHM	0.050	ug/g	04-OCT-21	05-OCT-21	R5608197
Dibenz(a,h)anthracene	0.340	DLHM	0.025	ug/g	04-OCT-21	05-OCT-21	R5608197
Fluoroanthene	3.71	DLHM	0.025	ug/g	04-OCT-21	05-OCT-21	R5608197
Fluorene	0.226	DLHM	0.025	ug/g	04-OCT-21	05-OCT-21	R5608197
Indeno(1,2,3-cd)pyrene	1.24	DLHM	0.050	ug/g	04-OCT-21	05-OCT-21	R5608197
1-Methylnaphthalene	0.054	DLHM	0.025	ug/g	04-OCT-21	05-OCT-21	R5608197
2-Methylnaphthalene	0.065	DLHM	0.025	ug/g	04-OCT-21	05-OCT-21	R5608197
Naphthalene	0.080	DLHM	0.025	ug/g	04-OCT-21	05-OCT-21	R5608197
Phenanthrene	1.89	DLHM	0.025	ug/g	04-OCT-21	05-OCT-21	R5608197
Pyrene	3.15	DLHM	0.025	ug/g	04-OCT-21	05-OCT-21	R5608197
Quinoline	<0.025	DLHM	0.025	ug/g	04-OCT-21	05-OCT-21	R5608197
Surrogate: 2-Fluorobiphenyl	88.7		60-140	%	04-OCT-21	05-OCT-21	R5608197
Surrogate: d14-Terphenyl	87.6		60-140	%	04-OCT-21	05-OCT-21	R5608197
B(a)P Total Potency Equivalent	2.84		0.036	ug/g	04-OCT-21	05-OCT-21	R5608197
IACR (CCME)	35.2		0.50		04-OCT-21	05-OCT-21	R5608197
Polychlorinated Biphenyls							
Aroclor 1016	<0.015	DLHM	0.015	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1221	<0.015	DLHM	0.015	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1232	<0.015	DLHM	0.015	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1242	<0.0170	DLM	0.017	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1248	<0.015	DLHM	0.015	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1254	0.165	DLHM	0.015	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1260	0.111	DLHM	0.015	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1262	<0.015	DLHM	0.015	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1268	<0.015	DLHM	0.015	mg/kg	06-OCT-21	06-OCT-21	R5611197
Total Polychlorinated Biphenyls	0.276		0.045	mg/kg	06-OCT-21	06-OCT-21	R5611197
Surrogate: d14-Terphenyl	89.0		50-140	%	06-OCT-21	06-OCT-21	R5611197
L2646459-7 TC2A-SG-002 Sampled By: JW/ JF on 28-SEP-21 @ 16:35 Matrix: SED							
Physical Tests							
% Moisture	85.1		0.25	%	04-OCT-21	05-OCT-21	R5607044
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0850		0.0010	g/g	07-OCT-21	07-OCT-21	R5614731
Total Organic Carbon	8.50		0.10	%	07-OCT-21	07-OCT-21	R5614731
Metals							
Aluminum (Al)	14600		50	ug/g	06-OCT-21	07-OCT-21	R5613960
Antimony (Sb)	1.20		0.10	ug/g	06-OCT-21	07-OCT-21	R5613960
Arsenic (As)	17.0		0.10	ug/g	06-OCT-21	07-OCT-21	R5613960
Barium (Ba)	241		0.50	ug/g	06-OCT-21	07-OCT-21	R5613960
Beryllium (Be)	0.59		0.10	ug/g	06-OCT-21	07-OCT-21	R5613960

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646459-7 TC2A-SG-002 Sampled By: JW/ JF on 28-SEP-21 @ 16:35 Matrix: SED							
Metals							
Bismuth (Bi)	0.88		0.20	ug/g	06-OCT-21	07-OCT-21	R5613960
Boron (B)	12.1		5.0	ug/g	06-OCT-21	07-OCT-21	R5613960
Cadmium (Cd)	1.07		0.020	ug/g	06-OCT-21	07-OCT-21	R5613960
Calcium (Ca)	71000		50	ug/g	06-OCT-21	07-OCT-21	R5613960
Chromium (Cr)	247		0.50	ug/g	06-OCT-21	07-OCT-21	R5613960
Cobalt (Co)	13.0		0.10	ug/g	06-OCT-21	07-OCT-21	R5613960
Copper (Cu)	74.1		0.50	ug/g	06-OCT-21	07-OCT-21	R5613960
Iron (Fe)	23100		50	ug/g	06-OCT-21	07-OCT-21	R5613960
Lead (Pb)	155		0.50	ug/g	06-OCT-21	07-OCT-21	R5613960
Lithium (Li)	13.2		2.0	ug/g	06-OCT-21	07-OCT-21	R5613960
Magnesium (Mg)	13100		20	ug/g	06-OCT-21	07-OCT-21	R5613960
Manganese (Mn)	600		1.0	ug/g	06-OCT-21	07-OCT-21	R5613960
Mercury (Hg)	1.33	DLHC	0.050	ug/g	16-OCT-21	18-OCT-21	R5623137
Molybdenum (Mo)	1.37		0.10	ug/g	06-OCT-21	07-OCT-21	R5613960
Nickel (Ni)	25.6		0.50	ug/g	06-OCT-21	07-OCT-21	R5613960
Phosphorus (P)	1160		50	ug/g	06-OCT-21	07-OCT-21	R5613960
Potassium (K)	3300		100	ug/g	06-OCT-21	07-OCT-21	R5613960
Selenium (Se)	1.44		0.20	ug/g	06-OCT-21	07-OCT-21	R5613960
Silver (Ag)	2.03		0.10	ug/g	06-OCT-21	07-OCT-21	R5613960
Sodium (Na)	563		50	ug/g	06-OCT-21	07-OCT-21	R5613960
Strontium (Sr)	345		0.50	ug/g	06-OCT-21	07-OCT-21	R5613960
Sulfur (S)	8000		1000	ug/g	06-OCT-21	07-OCT-21	R5613960
Thallium (Tl)	0.321		0.050	ug/g	06-OCT-21	07-OCT-21	R5613960
Tin (Sn)	10.7		2.0	ug/g	06-OCT-21	07-OCT-21	R5613960
Titanium (Ti)	790		1.0	ug/g	06-OCT-21	07-OCT-21	R5613960
Tungsten (W)	0.80		0.50	ug/g	06-OCT-21	07-OCT-21	R5613960
Uranium (U)	0.891		0.050	ug/g	06-OCT-21	07-OCT-21	R5613960
Vanadium (V)	42.3		0.20	ug/g	06-OCT-21	07-OCT-21	R5613960
Zinc (Zn)	293		2.0	ug/g	06-OCT-21	07-OCT-21	R5613960
Zirconium (Zr)	3.8		1.0	ug/g	06-OCT-21	07-OCT-21	R5613960
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.064	DLHM	0.038	ug/g	04-OCT-21	05-OCT-21	R5608197
Acenaphthylene	0.173	DLHM	0.038	ug/g	04-OCT-21	05-OCT-21	R5608197
Acridine	<0.075	DLHM	0.075	ug/g	04-OCT-21	05-OCT-21	R5608197
Anthracene	0.189	DLHM	0.030	ug/g	04-OCT-21	05-OCT-21	R5608197
Benzo(a)anthracene	0.946	DLHM	0.075	ug/g	04-OCT-21	05-OCT-21	R5608197
Benzo(a)pyrene	0.957	DLHM	0.038	ug/g	04-OCT-21	05-OCT-21	R5608197
Benzo(b&j)fluoranthene	1.34	DLHM	0.075	ug/g	04-OCT-21	05-OCT-21	R5608197
Benzo(g,h,i)perylene	0.683	DLHM	0.075	ug/g	04-OCT-21	05-OCT-21	R5608197
Benzo(k)fluoranthene	0.427	DLHM	0.075	ug/g	04-OCT-21	05-OCT-21	R5608197
Chrysene	1.06	DLHM	0.075	ug/g	04-OCT-21	05-OCT-21	R5608197

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646459-7 TC2A-SG-002 Sampled By: JW/ JF on 28-SEP-21 @ 16:35 Matrix: SED							
Polycyclic Aromatic Hydrocarbons							
Dibenz(a,h)anthracene	0.186	DLHM	0.038	ug/g	04-OCT-21	05-OCT-21	R5608197
Fluoroanthene	1.66	DLHM	0.038	ug/g	04-OCT-21	05-OCT-21	R5608197
Fluorene	0.078	DLHM	0.038	ug/g	04-OCT-21	05-OCT-21	R5608197
Indeno(1,2,3-cd)pyrene	0.646	DLHM	0.075	ug/g	04-OCT-21	05-OCT-21	R5608197
1-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	04-OCT-21	05-OCT-21	R5608197
2-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	04-OCT-21	05-OCT-21	R5608197
Naphthalene	0.039	DLHM	0.038	ug/g	04-OCT-21	05-OCT-21	R5608197
Phenanthrene	0.686	DLHM	0.038	ug/g	04-OCT-21	05-OCT-21	R5608197
Pyrene	1.54	DLHM	0.038	ug/g	04-OCT-21	05-OCT-21	R5608197
Quinoline	<0.038	DLHM	0.038	ug/g	04-OCT-21	05-OCT-21	R5608197
Surrogate: 2-Fluorobiphenyl	89.6		60-140	%	04-OCT-21	05-OCT-21	R5608197
Surrogate: d14-Terphenyl	87.6		60-140	%	04-OCT-21	05-OCT-21	R5608197
B(a)P Total Potency Equivalent	1.50		0.053	ug/g	04-OCT-21	05-OCT-21	R5608197
IACR (CCME)	18.1		0.75		04-OCT-21	05-OCT-21	R5608197
Polychlorinated Biphenyls							
Aroclor 1016	<0.023	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1221	<0.023	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1232	<0.023	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1242	<0.023	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1248	<0.023	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1254	0.193	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1260	0.154	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1262	<0.023	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1268	<0.023	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Total Polychlorinated Biphenyls	0.347		0.068	mg/kg	06-OCT-21	06-OCT-21	R5611197
Surrogate: d14-Terphenyl	87.6		50-140	%	06-OCT-21	06-OCT-21	R5611197
L2646459-8 TC2A-SG-003 Sampled By: JW/ JF on 28-SEP-21 @ 16:05 Matrix: SED							
Physical Tests							
% Moisture	86.0		0.25	%	04-OCT-21	05-OCT-21	R5607044
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0769		0.0010	g/g	07-OCT-21	07-OCT-21	R5614731
Total Organic Carbon	7.69		0.10	%	07-OCT-21	07-OCT-21	R5614731
Metals							
Aluminum (Al)	18000		50	ug/g	06-OCT-21	07-OCT-21	R5613960
Antimony (Sb)	1.21		0.10	ug/g	06-OCT-21	07-OCT-21	R5613960
Arsenic (As)	14.5		0.10	ug/g	06-OCT-21	07-OCT-21	R5613960
Barium (Ba)	280		0.50	ug/g	06-OCT-21	07-OCT-21	R5613960
Beryllium (Be)	0.69		0.10	ug/g	06-OCT-21	07-OCT-21	R5613960
Bismuth (Bi)	0.71		0.20	ug/g	06-OCT-21	07-OCT-21	R5613960
Boron (B)	11.5		5.0	ug/g	06-OCT-21	07-OCT-21	R5613960

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646459-8 TC2A-SG-003 Sampled By: JW/ JF on 28-SEP-21 @ 16:05 Matrix: SED							
Metals							
Cadmium (Cd)	0.888		0.020	ug/g	06-OCT-21	07-OCT-21	R5613960
Calcium (Ca)	76200		50	ug/g	06-OCT-21	07-OCT-21	R5613960
Chromium (Cr)	642		0.50	ug/g	06-OCT-21	07-OCT-21	R5613960
Cobalt (Co)	15.9		0.10	ug/g	06-OCT-21	07-OCT-21	R5613960
Copper (Cu)	53.4		0.50	ug/g	06-OCT-21	07-OCT-21	R5613960
Iron (Fe)	27000		50	ug/g	06-OCT-21	07-OCT-21	R5613960
Lead (Pb)	131		0.50	ug/g	06-OCT-21	07-OCT-21	R5613960
Lithium (Li)	16.6		2.0	ug/g	06-OCT-21	07-OCT-21	R5613960
Magnesium (Mg)	13500		20	ug/g	06-OCT-21	07-OCT-21	R5613960
Manganese (Mn)	880		1.0	ug/g	06-OCT-21	07-OCT-21	R5613960
Mercury (Hg)	0.725		0.0050	ug/g	16-OCT-21	18-OCT-21	R5623137
Molybdenum (Mo)	1.26		0.10	ug/g	06-OCT-21	07-OCT-21	R5613960
Nickel (Ni)	28.9		0.50	ug/g	06-OCT-21	07-OCT-21	R5613960
Phosphorus (P)	1160		50	ug/g	06-OCT-21	07-OCT-21	R5613960
Potassium (K)	4160		100	ug/g	06-OCT-21	07-OCT-21	R5613960
Selenium (Se)	1.24		0.20	ug/g	06-OCT-21	07-OCT-21	R5613960
Silver (Ag)	1.04		0.10	ug/g	06-OCT-21	07-OCT-21	R5613960
Sodium (Na)	637		50	ug/g	06-OCT-21	07-OCT-21	R5613960
Strontium (Sr)	415		0.50	ug/g	06-OCT-21	07-OCT-21	R5613960
Sulfur (S)	8700		1000	ug/g	06-OCT-21	07-OCT-21	R5613960
Thallium (Tl)	0.305		0.050	ug/g	06-OCT-21	07-OCT-21	R5613960
Tin (Sn)	9.4		2.0	ug/g	06-OCT-21	07-OCT-21	R5613960
Titanium (Ti)	1060		1.0	ug/g	06-OCT-21	07-OCT-21	R5613960
Tungsten (W)	0.53		0.50	ug/g	06-OCT-21	07-OCT-21	R5613960
Uranium (U)	0.894		0.050	ug/g	06-OCT-21	07-OCT-21	R5613960
Vanadium (V)	48.2		0.20	ug/g	06-OCT-21	07-OCT-21	R5613960
Zinc (Zn)	208		2.0	ug/g	06-OCT-21	07-OCT-21	R5613960
Zirconium (Zr)	4.3		1.0	ug/g	06-OCT-21	07-OCT-21	R5613960
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.044	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Acenaphthylene	0.153	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Acridine	<0.075	DLHM	0.075	ug/g	04-OCT-21	06-OCT-21	R5608197
Anthracene	0.117	DLHM	0.030	ug/g	04-OCT-21	06-OCT-21	R5608197
Benzo(a)anthracene	0.481	R	0.075	ug/g	04-OCT-21	06-OCT-21	R5608197
Benzo(a)pyrene	0.615	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Benzo(b&j)fluoranthene	0.777	DLHM	0.075	ug/g	04-OCT-21	06-OCT-21	R5608197
Benzo(g,h,i)perylene	0.523	DLHM	0.075	ug/g	04-OCT-21	06-OCT-21	R5608197
Benzo(k)fluoranthene	0.252	DLHM	0.075	ug/g	04-OCT-21	06-OCT-21	R5608197
Chrysene	0.591	DLHM	0.075	ug/g	04-OCT-21	06-OCT-21	R5608197
Dibenz(a,h)anthracene	0.123	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Fluoroanthene	0.786	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646459-8 TC2A-SG-003 Sampled By: JW/ JF on 28-SEP-21 @ 16:05 Matrix: SED							
Polycyclic Aromatic Hydrocarbons							
Fluorene	0.057	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Indeno(1,2,3-cd)pyrene	0.442	DLHM	0.075	ug/g	04-OCT-21	06-OCT-21	R5608197
1-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
2-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Naphthalene	<0.038	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Phenanthrene	0.367	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Pyrene	0.817	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Quinoline	<0.038	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Surrogate: 2-Fluorobiphenyl	90.2		60-140	%	04-OCT-21	06-OCT-21	R5608197
Surrogate: d14-Terphenyl	88.1		60-140	%	04-OCT-21	06-OCT-21	R5608197
B(a)P Total Potency Equivalent	0.945		0.053	ug/g	04-OCT-21	06-OCT-21	R5608197
IACR (CCME)	10.6		0.75		04-OCT-21	06-OCT-21	R5608197
Polychlorinated Biphenyls							
Aroclor 1016	<0.023	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1221	<0.023	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1232	<0.023	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1242	<0.023	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1248	<0.023	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1254	0.257	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1260	0.224	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1262	<0.023	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1268	<0.023	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Total Polychlorinated Biphenyls	0.480		0.068	mg/kg	06-OCT-21	06-OCT-21	R5611197
Surrogate: d14-Terphenyl	90.1		50-140	%	06-OCT-21	06-OCT-21	R5611197
L2646459-9 DUP-201 Sampled By: JW/ JF on 28-SEP-21 Matrix: SED							
Physical Tests							
% Moisture	86.2		0.25	%	04-OCT-21	05-OCT-21	R5607044
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0869		0.0010	g/g	08-OCT-21	08-OCT-21	R5614716
Total Organic Carbon	8.69		0.10	%	08-OCT-21	08-OCT-21	R5614716
Metals							
Aluminum (Al)	18800		50	ug/g	06-OCT-21	07-OCT-21	R5613960
Antimony (Sb)	1.22		0.10	ug/g	06-OCT-21	07-OCT-21	R5613960
Arsenic (As)	15.1		0.10	ug/g	06-OCT-21	07-OCT-21	R5613960
Barium (Ba)	285		0.50	ug/g	06-OCT-21	07-OCT-21	R5613960
Beryllium (Be)	0.70		0.10	ug/g	06-OCT-21	07-OCT-21	R5613960
Bismuth (Bi)	0.74		0.20	ug/g	06-OCT-21	07-OCT-21	R5613960
Boron (B)	11.6		5.0	ug/g	06-OCT-21	07-OCT-21	R5613960
Cadmium (Cd)	0.903		0.020	ug/g	06-OCT-21	07-OCT-21	R5613960
Calcium (Ca)	80300		50	ug/g	06-OCT-21	07-OCT-21	R5613960

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646459-9 DUP-201 Sampled By: JW/ JF on 28-SEP-21 Matrix: SED							
Metals							
Chromium (Cr)	683		0.50	ug/g	06-OCT-21	07-OCT-21	R5613960
Cobalt (Co)	16.3		0.10	ug/g	06-OCT-21	07-OCT-21	R5613960
Copper (Cu)	54.8		0.50	ug/g	06-OCT-21	07-OCT-21	R5613960
Iron (Fe)	28300		50	ug/g	06-OCT-21	07-OCT-21	R5613960
Lead (Pb)	143		0.50	ug/g	06-OCT-21	07-OCT-21	R5613960
Lithium (Li)	16.4		2.0	ug/g	06-OCT-21	07-OCT-21	R5613960
Magnesium (Mg)	14700		20	ug/g	06-OCT-21	07-OCT-21	R5613960
Manganese (Mn)	953		1.0	ug/g	06-OCT-21	07-OCT-21	R5613960
Mercury (Hg)	0.754		0.0050	ug/g	16-OCT-21	18-OCT-21	R5623137
Molybdenum (Mo)	1.24		0.10	ug/g	06-OCT-21	07-OCT-21	R5613960
Nickel (Ni)	29.1		0.50	ug/g	06-OCT-21	07-OCT-21	R5613960
Phosphorus (P)	1280		50	ug/g	06-OCT-21	07-OCT-21	R5613960
Potassium (K)	4350		100	ug/g	06-OCT-21	07-OCT-21	R5613960
Selenium (Se)	1.37		0.20	ug/g	06-OCT-21	07-OCT-21	R5613960
Silver (Ag)	1.06		0.10	ug/g	06-OCT-21	07-OCT-21	R5613960
Sodium (Na)	672		50	ug/g	06-OCT-21	07-OCT-21	R5613960
Strontium (Sr)	455		0.50	ug/g	06-OCT-21	07-OCT-21	R5613960
Sulfur (S)	8700		1000	ug/g	06-OCT-21	07-OCT-21	R5613960
Thallium (Tl)	0.326		0.050	ug/g	06-OCT-21	07-OCT-21	R5613960
Tin (Sn)	7.8		2.0	ug/g	06-OCT-21	07-OCT-21	R5613960
Titanium (Ti)	1110		1.0	ug/g	06-OCT-21	07-OCT-21	R5613960
Tungsten (W)	0.53		0.50	ug/g	06-OCT-21	07-OCT-21	R5613960
Uranium (U)	0.977		0.050	ug/g	06-OCT-21	07-OCT-21	R5613960
Vanadium (V)	50.1		0.20	ug/g	06-OCT-21	07-OCT-21	R5613960
Zinc (Zn)	210		2.0	ug/g	06-OCT-21	07-OCT-21	R5613960
Zirconium (Zr)	4.5		1.0	ug/g	06-OCT-21	07-OCT-21	R5613960
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.062	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Acenaphthylene	0.175	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Acridine	<0.075	DLHM	0.075	ug/g	04-OCT-21	06-OCT-21	R5608197
Anthracene	0.136	DLHM	0.030	ug/g	04-OCT-21	06-OCT-21	R5608197
Benzo(a)anthracene	0.537	R	0.075	ug/g	04-OCT-21	06-OCT-21	R5608197
Benzo(a)pyrene	0.646	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Benzo(b&j)fluoranthene	0.809	DLHM	0.075	ug/g	04-OCT-21	06-OCT-21	R5608197
Benzo(g,h,i)perylene	0.531	DLHM	0.075	ug/g	04-OCT-21	06-OCT-21	R5608197
Benzo(k)fluoranthene	0.279	DLHM	0.075	ug/g	04-OCT-21	06-OCT-21	R5608197
Chrysene	0.605	DLHM	0.075	ug/g	04-OCT-21	06-OCT-21	R5608197
Dibenz(a,h)anthracene	0.123	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Fluoroanthene	0.892	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Fluorene	0.067	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Indeno(1,2,3-cd)pyrene	0.460	DLHM	0.075	ug/g	04-OCT-21	06-OCT-21	R5608197

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646459-9 DUP-201 Sampled By: JW/ JF on 28-SEP-21 Matrix: SED							
Polycyclic Aromatic Hydrocarbons							
1-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
2-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Naphthalene	<0.038	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Phenanthrene	0.469	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Pyrene	0.896	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Quinoline	<0.038	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Surrogate: 2-Fluorobiphenyl	88.9		60-140	%	04-OCT-21	06-OCT-21	R5608197
Surrogate: d14-Terphenyl	85.9		60-140	%	04-OCT-21	06-OCT-21	R5608197
B(a)P Total Potency Equivalent	0.988		0.053	ug/g	04-OCT-21	06-OCT-21	R5608197
IACR (CCME)	11.2		0.75		04-OCT-21	06-OCT-21	R5608197
Polychlorinated Biphenyls							
Aroclor 1016	<0.023	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1221	<0.023	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1232	<0.023	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1242	<0.023	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1248	<0.023	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1254	0.166	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1260	0.190	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1262	<0.023	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1268	<0.023	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Total Polychlorinated Biphenyls	0.355		0.068	mg/kg	06-OCT-21	06-OCT-21	R5611197
Surrogate: d14-Terphenyl	88.2		50-140	%	06-OCT-21	06-OCT-21	R5611197
L2646459-10 TC2A-SG-004 Sampled By: JW/ JF on 28-SEP-21 @ 16:50 Matrix: SED							
Physical Tests							
% Moisture	85.7		0.25	%	04-OCT-21	05-OCT-21	R5607044
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0870		0.0010	g/g	08-OCT-21	08-OCT-21	R5614716
Total Organic Carbon	8.70		0.10	%	08-OCT-21	08-OCT-21	R5614716
Metals							
Aluminum (Al)	11300		50	ug/g	06-OCT-21	07-OCT-21	R5613960
Antimony (Sb)	1.01		0.10	ug/g	06-OCT-21	07-OCT-21	R5613960
Arsenic (As)	10.4		0.10	ug/g	06-OCT-21	07-OCT-21	R5613960
Barium (Ba)	211		0.50	ug/g	06-OCT-21	07-OCT-21	R5613960
Beryllium (Be)	0.51		0.10	ug/g	06-OCT-21	07-OCT-21	R5613960
Bismuth (Bi)	0.94		0.20	ug/g	06-OCT-21	07-OCT-21	R5613960
Boron (B)	12.9		5.0	ug/g	06-OCT-21	07-OCT-21	R5613960
Cadmium (Cd)	0.801		0.020	ug/g	06-OCT-21	07-OCT-21	R5613960
Calcium (Ca)	93100		50	ug/g	06-OCT-21	07-OCT-21	R5613960
Chromium (Cr)	185		0.50	ug/g	06-OCT-21	07-OCT-21	R5613960
Cobalt (Co)	10.7		0.10	ug/g	06-OCT-21	07-OCT-21	R5613960

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646459-10 TC2A-SG-004 Sampled By: JW/ JF on 28-SEP-21 @ 16:50 Matrix: SED							
Metals							
Copper (Cu)	64.9		0.50	ug/g	06-OCT-21	07-OCT-21	R5613960
Iron (Fe)	18400		50	ug/g	06-OCT-21	07-OCT-21	R5613960
Lead (Pb)	128		0.50	ug/g	06-OCT-21	07-OCT-21	R5613960
Lithium (Li)	12.2		2.0	ug/g	06-OCT-21	07-OCT-21	R5613960
Magnesium (Mg)	12700		20	ug/g	06-OCT-21	07-OCT-21	R5613960
Manganese (Mn)	480		1.0	ug/g	06-OCT-21	07-OCT-21	R5613960
Mercury (Hg)	1.41	DLHC	0.050	ug/g	16-OCT-21	18-OCT-21	R5623137
Molybdenum (Mo)	1.26		0.10	ug/g	06-OCT-21	07-OCT-21	R5613960
Nickel (Ni)	20.5		0.50	ug/g	06-OCT-21	07-OCT-21	R5613960
Phosphorus (P)	1040		50	ug/g	06-OCT-21	07-OCT-21	R5613960
Potassium (K)	2760		100	ug/g	06-OCT-21	07-OCT-21	R5613960
Selenium (Se)	1.41		0.20	ug/g	06-OCT-21	07-OCT-21	R5613960
Silver (Ag)	1.97		0.10	ug/g	06-OCT-21	07-OCT-21	R5613960
Sodium (Na)	540		50	ug/g	06-OCT-21	07-OCT-21	R5613960
Strontium (Sr)	379		0.50	ug/g	06-OCT-21	07-OCT-21	R5613960
Sulfur (S)	7200		1000	ug/g	06-OCT-21	07-OCT-21	R5613960
Thallium (Tl)	0.315		0.050	ug/g	06-OCT-21	07-OCT-21	R5613960
Tin (Sn)	8.7		2.0	ug/g	06-OCT-21	07-OCT-21	R5613960
Titanium (Ti)	629		1.0	ug/g	06-OCT-21	07-OCT-21	R5613960
Tungsten (W)	1.74		0.50	ug/g	06-OCT-21	07-OCT-21	R5613960
Uranium (U)	0.774		0.050	ug/g	06-OCT-21	07-OCT-21	R5613960
Vanadium (V)	33.1		0.20	ug/g	06-OCT-21	07-OCT-21	R5613960
Zinc (Zn)	262		2.0	ug/g	06-OCT-21	07-OCT-21	R5613960
Zirconium (Zr)	2.5		1.0	ug/g	06-OCT-21	07-OCT-21	R5613960
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.046	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Acenaphthylene	0.097	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Acridine	<0.075	DLHM	0.075	ug/g	04-OCT-21	06-OCT-21	R5608197
Anthracene	0.135	DLHM	0.030	ug/g	04-OCT-21	06-OCT-21	R5608197
Benzo(a)anthracene	0.656	DLHM	0.075	ug/g	04-OCT-21	06-OCT-21	R5608197
Benzo(a)pyrene	0.753	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Benzo(b&j)fluoranthene	1.15	DLHM	0.075	ug/g	04-OCT-21	06-OCT-21	R5608197
Benzo(g,h,i)perylene	0.718	DLHM	0.075	ug/g	04-OCT-21	06-OCT-21	R5608197
Benzo(k)fluoranthene	0.397	DLHM	0.075	ug/g	04-OCT-21	06-OCT-21	R5608197
Chrysene	0.962	DLHM	0.075	ug/g	04-OCT-21	06-OCT-21	R5608197
Dibenz(a,h)anthracene	0.164	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Fluoroanthene	1.36	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Fluorene	0.065	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Indeno(1,2,3-cd)pyrene	0.629	DLHM	0.075	ug/g	04-OCT-21	06-OCT-21	R5608197
1-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
2-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646459-10 TC2A-SG-004 Sampled By: JW/ JF on 28-SEP-21 @ 16:50 Matrix: SED							
Polycyclic Aromatic Hydrocarbons							
Naphthalene	<0.038	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Phenanthrene	0.586	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Pyrene	1.21	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Quinoline	<0.038	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Surrogate: 2-Fluorobiphenyl	90.3		60-140	%	04-OCT-21	06-OCT-21	R5608197
Surrogate: d14-Terphenyl	87.7		60-140	%	04-OCT-21	06-OCT-21	R5608197
B(a)P Total Potency Equivalent	1.22		0.053	ug/g	04-OCT-21	06-OCT-21	R5608197
IACR (CCME)	15.2		0.75		04-OCT-21	06-OCT-21	R5608197
Polychlorinated Biphenyls							
Aroclor 1016	<0.023	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1221	<0.023	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1232	<0.023	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1242	<0.023	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1248	<0.023	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1254	0.146	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1260	0.097	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1262	<0.023	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1268	<0.023	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Total Polychlorinated Biphenyls	0.243		0.068	mg/kg	06-OCT-21	06-OCT-21	R5611197
Surrogate: d14-Terphenyl	89.7		50-140	%	06-OCT-21	06-OCT-21	R5611197
L2646459-11 TC2A-SG-005 Sampled By: JW/ JF on 28-SEP-21 @ 17:10 Matrix: SED							
Physical Tests							
% Moisture	87.5		0.25	%	04-OCT-21	05-OCT-21	R5607676
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0867		0.0010	g/g	08-OCT-21	08-OCT-21	R5614716
Total Organic Carbon	8.67		0.10	%	08-OCT-21	08-OCT-21	R5614716
Metals							
Aluminum (Al)	14800	DLM	100	ug/g	06-OCT-21	07-OCT-21	R5613997
Antimony (Sb)	1.29	DLM	0.20	ug/g	06-OCT-21	07-OCT-21	R5613997
Arsenic (As)	15.6	DLM	0.20	ug/g	06-OCT-21	07-OCT-21	R5613997
Barium (Ba)	250	DLM	1.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Beryllium (Be)	0.57	DLM	0.20	ug/g	06-OCT-21	07-OCT-21	R5613997
Bismuth (Bi)	0.67	DLM	0.40	ug/g	06-OCT-21	07-OCT-21	R5613997
Boron (B)	13	DLM	10	ug/g	06-OCT-21	07-OCT-21	R5613997
Cadmium (Cd)	0.777	DLM	0.040	ug/g	06-OCT-21	07-OCT-21	R5613997
Calcium (Ca)	109000	DLM	100	ug/g	06-OCT-21	07-OCT-21	R5613997
Chromium (Cr)	374	DLM	1.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Cobalt (Co)	13.6	DLM	0.20	ug/g	06-OCT-21	07-OCT-21	R5613997
Copper (Cu)	59.5	DLM	1.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Iron (Fe)	24400	DLM	100	ug/g	06-OCT-21	07-OCT-21	R5613997

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646459-11 TC2A-SG-005 Sampled By: JW/ JF on 28-SEP-21 @ 17:10 Matrix: SED							
Metals							
Lead (Pb)	113	DLM	1.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Lithium (Li)	14.7	DLM	4.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Magnesium (Mg)	13700	DLM	40	ug/g	06-OCT-21	07-OCT-21	R5613997
Manganese (Mn)	662	DLM	2.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Mercury (Hg)	0.658		0.0050	ug/g	06-OCT-21	07-OCT-21	R5613508
Molybdenum (Mo)	1.60	DLM	0.20	ug/g	06-OCT-21	07-OCT-21	R5613997
Nickel (Ni)	25.4	DLM	1.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Phosphorus (P)	1150	DLM	100	ug/g	06-OCT-21	07-OCT-21	R5613997
Potassium (K)	3290	DLM	200	ug/g	06-OCT-21	07-OCT-21	R5613997
Selenium (Se)	1.72	DLM	0.40	ug/g	06-OCT-21	07-OCT-21	R5613997
Silver (Ag)	1.16	DLM	0.20	ug/g	06-OCT-21	07-OCT-21	R5613997
Sodium (Na)	620	DLM	100	ug/g	06-OCT-21	07-OCT-21	R5613997
Strontium (Sr)	541	DLM	1.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Sulfur (S)	10200	DLM	2000	ug/g	06-OCT-21	07-OCT-21	R5613997
Thallium (Tl)	0.26	DLM	0.10	ug/g	06-OCT-21	07-OCT-21	R5613997
Tin (Sn)	6.4	DLM	4.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Titanium (Ti)	828	DLM	2.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Tungsten (W)	1.3	DLM	1.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Uranium (U)	1.00	DLM	0.10	ug/g	06-OCT-21	07-OCT-21	R5613997
Vanadium (V)	43.6	DLM	0.40	ug/g	06-OCT-21	07-OCT-21	R5613997
Zinc (Zn)	232	DLM	4.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Zirconium (Zr)	2.9	DLM	2.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	<0.038	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Acenaphthylene	0.089	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Acridine	<0.075	DLHM	0.075	ug/g	04-OCT-21	06-OCT-21	R5608197
Anthracene	0.089	DLHM	0.030	ug/g	04-OCT-21	06-OCT-21	R5608197
Benzo(a)anthracene	0.413	DLHM	0.075	ug/g	04-OCT-21	06-OCT-21	R5608197
Benzo(a)pyrene	0.508	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Benzo(b&j)fluoranthene	0.757	DLHM	0.075	ug/g	04-OCT-21	06-OCT-21	R5608197
Benzo(g,h,i)perylene	0.508	DLHM	0.075	ug/g	04-OCT-21	06-OCT-21	R5608197
Benzo(k)fluoranthene	0.246	DLHM	0.075	ug/g	04-OCT-21	06-OCT-21	R5608197
Chrysene	0.596	DLHM	0.075	ug/g	04-OCT-21	06-OCT-21	R5608197
Dibenz(a,h)anthracene	0.112	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Fluoroanthene	0.803	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Fluorene	0.043	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Indeno(1,2,3-cd)pyrene	0.448	DLHM	0.075	ug/g	04-OCT-21	06-OCT-21	R5608197
1-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
2-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Naphthalene	<0.038	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Phenanthrene	0.342	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646459-11 TC2A-SG-005 Sampled By: JW/ JF on 28-SEP-21 @ 17:10 Matrix: SED							
Polycyclic Aromatic Hydrocarbons							
Pyrene	0.748	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Quinoline	<0.038	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Surrogate: 2-Fluorobiphenyl	82.5		60-140	%	04-OCT-21	06-OCT-21	R5608197
Surrogate: d14-Terphenyl	82.0		60-140	%	04-OCT-21	06-OCT-21	R5608197
B(a)P Total Potency Equivalent	0.818		0.053	ug/g	04-OCT-21	06-OCT-21	R5608197
IACR (CCME)	9.91		0.75		04-OCT-21	06-OCT-21	R5608197
Polychlorinated Biphenyls							
Aroclor 1016	<0.023	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1221	<0.023	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1232	<0.023	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1242	<0.023	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1248	<0.023	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1254	0.133	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1260	0.166	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1262	<0.023	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1268	<0.023	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Total Polychlorinated Biphenyls	0.299		0.068	mg/kg	06-OCT-21	06-OCT-21	R5611197
Surrogate: d14-Terphenyl	91.3		50-140	%	06-OCT-21	06-OCT-21	R5611197
L2646459-12 TC2A-SG-006 Sampled By: JW/ JF on 28-SEP-21 @ 15:25 Matrix: SED							
Physical Tests							
% Moisture	79.0		0.25	%	04-OCT-21	05-OCT-21	R5607676
Particle Size							
General Texture Class	Fine				08-OCT-21	08-OCT-21	R5614882
MUST PSA % > 75um	6.0	PSAL	1.0	%	08-OCT-21	08-OCT-21	R5614882
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0699		0.0010	g/g	08-OCT-21	08-OCT-21	R5614716
Total Organic Carbon	6.99		0.10	%	08-OCT-21	08-OCT-21	R5614716
Metals							
Aluminum (Al)	11900		50	ug/g	07-OCT-21	07-OCT-21	R5614325
Antimony (Sb)	1.15		0.10	ug/g	07-OCT-21	07-OCT-21	R5614325
Arsenic (As)	6.19		0.10	ug/g	07-OCT-21	07-OCT-21	R5614325
Barium (Ba)	173		0.50	ug/g	07-OCT-21	07-OCT-21	R5614325
Beryllium (Be)	0.46		0.10	ug/g	07-OCT-21	07-OCT-21	R5614325
Bismuth (Bi)	0.59		0.20	ug/g	07-OCT-21	07-OCT-21	R5614325
Boron (B)	14.2		5.0	ug/g	07-OCT-21	07-OCT-21	R5614325
Boron (B), Hot Water Ext.	0.77		0.10	ug/g	07-OCT-21	07-OCT-21	R5613991
Cadmium (Cd)	0.486		0.020	ug/g	07-OCT-21	07-OCT-21	R5614325
Calcium (Ca)	145000		50	ug/g	07-OCT-21	07-OCT-21	R5614325
Chromium (Cr)	81.3		0.50	ug/g	07-OCT-21	07-OCT-21	R5614325
Cobalt (Co)	10.4		0.10	ug/g	07-OCT-21	07-OCT-21	R5614325

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646459-12 TC2A-SG-006 Sampled By: JW/ JF on 28-SEP-21 @ 15:25 Matrix: SED							
Metals							
Copper (Cu)	64.5		0.50	ug/g	07-OCT-21	07-OCT-21	R5614325
Iron (Fe)	18800		50	ug/g	07-OCT-21	07-OCT-21	R5614325
Lead (Pb)	73.7		0.50	ug/g	07-OCT-21	07-OCT-21	R5614325
Lithium (Li)	12.9		2.0	ug/g	07-OCT-21	07-OCT-21	R5614325
Magnesium (Mg)	18200		20	ug/g	07-OCT-21	07-OCT-21	R5614325
Manganese (Mn)	438		1.0	ug/g	07-OCT-21	07-OCT-21	R5614325
Mercury (Hg)	0.869		0.0050	ug/g	07-OCT-21	08-OCT-21	R5614414
Molybdenum (Mo)	1.34		0.10	ug/g	07-OCT-21	07-OCT-21	R5614325
Nickel (Ni)	19.6		0.50	ug/g	07-OCT-21	07-OCT-21	R5614325
Phosphorus (P)	1090		50	ug/g	07-OCT-21	07-OCT-21	R5614325
Potassium (K)	2610		100	ug/g	07-OCT-21	07-OCT-21	R5614325
Selenium (Se)	1.07		0.20	ug/g	07-OCT-21	07-OCT-21	R5614325
Silver (Ag)	1.07		0.10	ug/g	07-OCT-21	07-OCT-21	R5614325
Sodium (Na)	561		50	ug/g	07-OCT-21	07-OCT-21	R5614325
Strontium (Sr)	406		0.50	ug/g	07-OCT-21	07-OCT-21	R5614325
Sulfur (S)	5900		1000	ug/g	07-OCT-21	07-OCT-21	R5614325
Thallium (Tl)	0.279		0.050	ug/g	07-OCT-21	07-OCT-21	R5614325
Tin (Sn)	5.1		2.0	ug/g	07-OCT-21	07-OCT-21	R5614325
Titanium (Ti)	568		1.0	ug/g	07-OCT-21	07-OCT-21	R5614325
Tungsten (W)	3.75		0.50	ug/g	07-OCT-21	07-OCT-21	R5614325
Uranium (U)	0.679		0.050	ug/g	07-OCT-21	07-OCT-21	R5614325
Vanadium (V)	37.2		0.20	ug/g	07-OCT-21	07-OCT-21	R5614325
Zinc (Zn)	258		2.0	ug/g	07-OCT-21	07-OCT-21	R5614325
Zirconium (Zr)	2.0		1.0	ug/g	07-OCT-21	07-OCT-21	R5614325
Speciated Metals							
Chromium, Trivalent	81		10	ug/g		08-OCT-21	
Chromium, Hexavalent	0.54	DLHM	0.40	ug/g	06-OCT-21	07-OCT-21	R5614562
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.040	DLHM	0.015	ug/g	04-OCT-21	06-OCT-21	R5608197
Acenaphthylene	0.042	DLHM	0.015	ug/g	04-OCT-21	06-OCT-21	R5608197
Acridine	0.064	R	0.030	ug/g	04-OCT-21	06-OCT-21	R5608197
Anthracene	0.108	DLHM	0.012	ug/g	04-OCT-21	06-OCT-21	R5608197
Benzo(a)anthracene	0.629	DLHM	0.030	ug/g	04-OCT-21	06-OCT-21	R5608197
Benzo(a)pyrene	0.679	DLHM	0.015	ug/g	04-OCT-21	06-OCT-21	R5608197
Benzo(b&j)fluoranthene	1.13	DLHM	0.030	ug/g	04-OCT-21	06-OCT-21	R5608197
Benzo(g,h,i)perylene	0.582	DLHM	0.030	ug/g	04-OCT-21	06-OCT-21	R5608197
Benzo(k)fluoranthene	0.361	DLHM	0.030	ug/g	04-OCT-21	06-OCT-21	R5608197
Chrysene	0.993	DLHM	0.030	ug/g	04-OCT-21	06-OCT-21	R5608197
Dibenz(a,h)anthracene	0.140	DLHM	0.015	ug/g	04-OCT-21	06-OCT-21	R5608197
Fluoroanthene	1.61	DLHM	0.015	ug/g	04-OCT-21	06-OCT-21	R5608197
Fluorene	0.065	DLHM	0.015	ug/g	04-OCT-21	06-OCT-21	R5608197

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646459-12 TC2A-SG-006 Sampled By: JW/ JF on 28-SEP-21 @ 15:25 Matrix: SED							
Polycyclic Aromatic Hydrocarbons							
Indeno(1,2,3-cd)pyrene	0.543	DLHM	0.030	ug/g	04-OCT-21	06-OCT-21	R5608197
1-Methylnaphthalene	0.018	R	0.015	ug/g	04-OCT-21	06-OCT-21	R5608197
2-Methylnaphthalene	0.018	R	0.015	ug/g	04-OCT-21	06-OCT-21	R5608197
Naphthalene	0.025	DLHM	0.015	ug/g	04-OCT-21	06-OCT-21	R5608197
Phenanthrene	0.697	DLHM	0.015	ug/g	04-OCT-21	06-OCT-21	R5608197
Pyrene	1.30	DLHM	0.015	ug/g	04-OCT-21	06-OCT-21	R5608197
Quinoline	<0.015	DLHM	0.015	ug/g	04-OCT-21	06-OCT-21	R5608197
Surrogate: 2-Fluorobiphenyl	91.3		60-140	%	04-OCT-21	06-OCT-21	R5608197
Surrogate: d14-Terphenyl	87.6		60-140	%	04-OCT-21	06-OCT-21	R5608197
B(a)P Total Potency Equivalent	1.10		0.021	ug/g	04-OCT-21	06-OCT-21	R5608197
IACR (CCME)	14.4		0.30		04-OCT-21	06-OCT-21	R5608197
Polychlorinated Biphenyls							
Aroclor 1016	<0.0090	DLHM	0.0090	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1221	<0.0090	DLHM	0.0090	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1232	<0.0090	DLHM	0.0090	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1242	<0.0150	DLM	0.015	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1248	<0.0090	DLHM	0.0090	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1254	0.0475	DLHM	0.0090	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1260	0.0510	DLHM	0.0090	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1262	<0.0090	DLHM	0.0090	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1268	<0.0090	DLHM	0.0090	mg/kg	06-OCT-21	06-OCT-21	R5611197
Total Polychlorinated Biphenyls	0.0985		0.027	mg/kg	06-OCT-21	06-OCT-21	R5611197
Surrogate: d14-Terphenyl	87.1		50-140	%	06-OCT-21	06-OCT-21	R5611197
L2646459-13 TC2A-SG-007 Sampled By: JW/ JF on 28-SEP-21 @ 14:15 Matrix: SED							
Physical Tests							
% Moisture	87.0		0.25	%	04-OCT-21	05-OCT-21	R5607676
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0875		0.0010	g/g	08-OCT-21	08-OCT-21	R5614716
Total Organic Carbon	8.75		0.10	%	08-OCT-21	08-OCT-21	R5614716
Metals							
Aluminum (Al)	14500	DLM	100	ug/g	06-OCT-21	07-OCT-21	R5613997
Antimony (Sb)	1.38	DLM	0.20	ug/g	06-OCT-21	07-OCT-21	R5613997
Arsenic (As)	12.3	DLM	0.20	ug/g	06-OCT-21	07-OCT-21	R5613997
Barium (Ba)	225	DLM	1.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Beryllium (Be)	0.56	DLM	0.20	ug/g	06-OCT-21	07-OCT-21	R5613997
Bismuth (Bi)	0.78	DLM	0.40	ug/g	06-OCT-21	07-OCT-21	R5613997
Boron (B)	13	DLM	10	ug/g	06-OCT-21	07-OCT-21	R5613997
Cadmium (Cd)	0.791	DLM	0.040	ug/g	06-OCT-21	07-OCT-21	R5613997
Calcium (Ca)	103000	DLM	100	ug/g	06-OCT-21	07-OCT-21	R5613997
Chromium (Cr)	328	DLM	1.0	ug/g	06-OCT-21	07-OCT-21	R5613997

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646459-13 TC2A-SG-007 Sampled By: JW/ JF on 28-SEP-21 @ 14:15 Matrix: SED							
Metals							
Cobalt (Co)	13.0	DLM	0.20	ug/g	06-OCT-21	07-OCT-21	R5613997
Copper (Cu)	65.1	DLM	1.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Iron (Fe)	23800	DLM	100	ug/g	06-OCT-21	07-OCT-21	R5613997
Lead (Pb)	108	DLM	1.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Lithium (Li)	14.2	DLM	4.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Magnesium (Mg)	15200	DLM	40	ug/g	06-OCT-21	07-OCT-21	R5613997
Manganese (Mn)	728	DLM	2.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Mercury (Hg)	0.699		0.0050	ug/g	06-OCT-21	07-OCT-21	R5613508
Molybdenum (Mo)	1.66	DLM	0.20	ug/g	06-OCT-21	07-OCT-21	R5613997
Nickel (Ni)	24.9	DLM	1.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Phosphorus (P)	1170	DLM	100	ug/g	06-OCT-21	07-OCT-21	R5613997
Potassium (K)	3260	DLM	200	ug/g	06-OCT-21	07-OCT-21	R5613997
Selenium (Se)	1.57	DLM	0.40	ug/g	06-OCT-21	07-OCT-21	R5613997
Silver (Ag)	1.28	DLM	0.20	ug/g	06-OCT-21	07-OCT-21	R5613997
Sodium (Na)	640	DLM	100	ug/g	06-OCT-21	07-OCT-21	R5613997
Strontium (Sr)	436	DLM	1.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Sulfur (S)	9700	DLM	2000	ug/g	06-OCT-21	07-OCT-21	R5613997
Thallium (Tl)	0.27	DLM	0.10	ug/g	06-OCT-21	07-OCT-21	R5613997
Tin (Sn)	6.3	DLM	4.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Titanium (Ti)	826	DLM	2.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Tungsten (W)	1.9	DLM	1.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Uranium (U)	0.96	DLM	0.10	ug/g	06-OCT-21	07-OCT-21	R5613997
Vanadium (V)	43.2	DLM	0.40	ug/g	06-OCT-21	07-OCT-21	R5613997
Zinc (Zn)	247	DLM	4.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Zirconium (Zr)	2.6	DLM	2.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	<0.038	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Acenaphthylene	0.076	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Acridine	<0.075	DLHM	0.075	ug/g	04-OCT-21	06-OCT-21	R5608197
Anthracene	0.089	DLHM	0.030	ug/g	04-OCT-21	06-OCT-21	R5608197
Benzo(a)anthracene	0.490	DLHM	0.075	ug/g	04-OCT-21	06-OCT-21	R5608197
Benzo(a)pyrene	0.601	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Benzo(b&j)fluoranthene	0.934	DLHM	0.075	ug/g	04-OCT-21	06-OCT-21	R5608197
Benzo(g,h,i)perylene	0.469	DLHM	0.075	ug/g	04-OCT-21	06-OCT-21	R5608197
Benzo(k)fluoranthene	0.315	DLHM	0.075	ug/g	04-OCT-21	06-OCT-21	R5608197
Chrysene	0.738	DLHM	0.075	ug/g	04-OCT-21	06-OCT-21	R5608197
Dibenz(a,h)anthracene	0.113	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Fluoroanthene	1.08	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Fluorene	0.048	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Indeno(1,2,3-cd)pyrene	0.449	DLHM	0.075	ug/g	04-OCT-21	06-OCT-21	R5608197
1-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646459-13 TC2A-SG-007 Sampled By: JW/ JF on 28-SEP-21 @ 14:15 Matrix: SED							
Polycyclic Aromatic Hydrocarbons							
2-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Naphthalene	<0.038	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Phenanthrene	0.419	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Pyrene	0.969	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Quinoline	<0.038	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Surrogate: 2-Fluorobiphenyl	87.1		60-140	%	04-OCT-21	06-OCT-21	R5608197
Surrogate: d14-Terphenyl	79.4		60-140	%	04-OCT-21	06-OCT-21	R5608197
B(a)P Total Potency Equivalent	0.945		0.053	ug/g	04-OCT-21	06-OCT-21	R5608197
IACR (CCME)	12.0		0.75		04-OCT-21	06-OCT-21	R5608197
Polychlorinated Biphenyls							
Aroclor 1016	<0.023	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1221	<0.023	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1232	<0.023	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1242	<0.023	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1248	<0.023	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1254	0.077	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1260	0.064	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1262	<0.023	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1268	<0.023	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Total Polychlorinated Biphenyls	0.141		0.068	mg/kg	06-OCT-21	06-OCT-21	R5611197
Surrogate: d14-Terphenyl	66.2		50-140	%	06-OCT-21	06-OCT-21	R5611197
L2646459-14 DUP-001 Sampled By: JW/ JF on 28-SEP-21 Matrix: SED							
Physical Tests							
% Moisture	86.1		0.25	%	04-OCT-21	05-OCT-21	R5607676
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0874		0.0010	g/g	08-OCT-21	08-OCT-21	R5614716
Total Organic Carbon	8.74		0.10	%	08-OCT-21	08-OCT-21	R5614716
Metals							
Aluminum (Al)	14200	DLM	100	ug/g	06-OCT-21	07-OCT-21	R5613997
Antimony (Sb)	1.37	DLM	0.20	ug/g	06-OCT-21	07-OCT-21	R5613997
Arsenic (As)	12.0	DLM	0.20	ug/g	06-OCT-21	07-OCT-21	R5613997
Barium (Ba)	206	DLM	1.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Beryllium (Be)	0.58	DLM	0.20	ug/g	06-OCT-21	07-OCT-21	R5613997
Bismuth (Bi)	0.74	DLM	0.40	ug/g	06-OCT-21	07-OCT-21	R5613997
Boron (B)	14	DLM	10	ug/g	06-OCT-21	07-OCT-21	R5613997
Cadmium (Cd)	0.786	DLM	0.040	ug/g	06-OCT-21	07-OCT-21	R5613997
Calcium (Ca)	99700	DLM	100	ug/g	06-OCT-21	07-OCT-21	R5613997
Chromium (Cr)	321	DLM	1.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Cobalt (Co)	12.8	DLM	0.20	ug/g	06-OCT-21	07-OCT-21	R5613997
Copper (Cu)	64.6	DLM	1.0	ug/g	06-OCT-21	07-OCT-21	R5613997

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646459-14 DUP-001 Sampled By: JW/ JF on 28-SEP-21 Matrix: SED							
Metals							
Iron (Fe)	23200	DLM	100	ug/g	06-OCT-21	07-OCT-21	R5613997
Lead (Pb)	115	DLM	1.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Lithium (Li)	14.7	DLM	4.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Magnesium (Mg)	14500	DLM	40	ug/g	06-OCT-21	07-OCT-21	R5613997
Manganese (Mn)	715	DLM	2.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Mercury (Hg)	0.619		0.0050	ug/g	06-OCT-21	07-OCT-21	R5613508
Molybdenum (Mo)	1.68	DLM	0.20	ug/g	06-OCT-21	07-OCT-21	R5613997
Nickel (Ni)	24.8	DLM	1.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Phosphorus (P)	1100	DLM	100	ug/g	06-OCT-21	07-OCT-21	R5613997
Potassium (K)	3190	DLM	200	ug/g	06-OCT-21	07-OCT-21	R5613997
Selenium (Se)	1.66	DLM	0.40	ug/g	06-OCT-21	07-OCT-21	R5613997
Silver (Ag)	1.31	DLM	0.20	ug/g	06-OCT-21	07-OCT-21	R5613997
Sodium (Na)	650	DLM	100	ug/g	06-OCT-21	07-OCT-21	R5613997
Strontium (Sr)	401	DLM	1.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Sulfur (S)	9700	DLM	2000	ug/g	06-OCT-21	07-OCT-21	R5613997
Thallium (Tl)	0.28	DLM	0.10	ug/g	06-OCT-21	07-OCT-21	R5613997
Tin (Sn)	6.2	DLM	4.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Titanium (Ti)	796	DLM	2.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Tungsten (W)	2.0	DLM	1.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Uranium (U)	0.99	DLM	0.10	ug/g	06-OCT-21	07-OCT-21	R5613997
Vanadium (V)	42.3	DLM	0.40	ug/g	06-OCT-21	07-OCT-21	R5613997
Zinc (Zn)	250	DLM	4.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Zirconium (Zr)	2.6	DLM	2.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	<0.038	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Acenaphthylene	0.082	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Acridine	<0.075	DLHM	0.075	ug/g	04-OCT-21	06-OCT-21	R5608197
Anthracene	0.094	DLHM	0.030	ug/g	04-OCT-21	06-OCT-21	R5608197
Benzo(a)anthracene	0.478	DLHM	0.075	ug/g	04-OCT-21	06-OCT-21	R5608197
Benzo(a)pyrene	0.589	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Benzo(b&j)fluoranthene	0.899	DLHM	0.075	ug/g	04-OCT-21	06-OCT-21	R5608197
Benzo(g,h,i)perylene	0.494	DLHM	0.075	ug/g	04-OCT-21	06-OCT-21	R5608197
Benzo(k)fluoranthene	0.302	DLHM	0.075	ug/g	04-OCT-21	06-OCT-21	R5608197
Chrysene	0.720	DLHM	0.075	ug/g	04-OCT-21	06-OCT-21	R5608197
Dibenz(a,h)anthracene	0.118	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Fluoroanthene	1.03	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Fluorene	0.050	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Indeno(1,2,3-cd)pyrene	0.459	DLHM	0.075	ug/g	04-OCT-21	06-OCT-21	R5608197
1-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
2-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Naphthalene	<0.038	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646459-14 DUP-001 Sampled By: JW/ JF on 28-SEP-21 Matrix: SED							
Polycyclic Aromatic Hydrocarbons							
Phenanthrene	0.403	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Pyrene	0.916	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Quinoline	<0.038	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Surrogate: 2-Fluorobiphenyl	87.4		60-140	%	04-OCT-21	06-OCT-21	R5608197
Surrogate: d14-Terphenyl	84.7		60-140	%	04-OCT-21	06-OCT-21	R5608197
B(a)P Total Potency Equivalent	0.933		0.053	ug/g	04-OCT-21	06-OCT-21	R5608197
IACR (CCME)	11.6		0.75		04-OCT-21	06-OCT-21	R5608197
Polychlorinated Biphenyls							
Aroclor 1016	<0.023	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1221	<0.023	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1232	<0.023	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1242	<0.023	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1248	<0.023	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1254	0.083	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1260	0.067	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1262	<0.023	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1268	<0.023	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Total Polychlorinated Biphenyls	0.150		0.068	mg/kg	06-OCT-21	06-OCT-21	R5611197
Surrogate: d14-Terphenyl	73.8		50-140	%	06-OCT-21	06-OCT-21	R5611197
L2646459-15 TC2A-SG-008 Sampled By: JW/ JF on 28-SEP-21 @ 14:25 Matrix: SED							
Physical Tests							
% Moisture	87.2		0.25	%	04-OCT-21	05-OCT-21	R5607676
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0870		0.0010	g/g	08-OCT-21	08-OCT-21	R5614716
Total Organic Carbon	8.70		0.10	%	08-OCT-21	08-OCT-21	R5614716
Metals							
Aluminum (Al)	19500	DLM	100	ug/g	06-OCT-21	07-OCT-21	R5613997
Antimony (Sb)	1.21	DLM	0.20	ug/g	06-OCT-21	07-OCT-21	R5613997
Arsenic (As)	12.2	DLM	0.20	ug/g	06-OCT-21	07-OCT-21	R5613997
Barium (Ba)	268	DLM	1.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Beryllium (Be)	0.72	DLM	0.20	ug/g	06-OCT-21	07-OCT-21	R5613997
Bismuth (Bi)	0.64	DLM	0.40	ug/g	06-OCT-21	07-OCT-21	R5613997
Boron (B)	13	DLM	10	ug/g	06-OCT-21	07-OCT-21	R5613997
Cadmium (Cd)	0.908	DLM	0.040	ug/g	06-OCT-21	07-OCT-21	R5613997
Calcium (Ca)	84600	DLM	100	ug/g	06-OCT-21	07-OCT-21	R5613997
Chromium (Cr)	695	DLM	1.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Cobalt (Co)	15.6	DLM	0.20	ug/g	06-OCT-21	07-OCT-21	R5613997
Copper (Cu)	55.9	DLM	1.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Iron (Fe)	28300	DLM	100	ug/g	06-OCT-21	07-OCT-21	R5613997
Lead (Pb)	129	DLM	1.0	ug/g	06-OCT-21	07-OCT-21	R5613997

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646459-15 TC2A-SG-008 Sampled By: JW/ JF on 28-SEP-21 @ 14:25 Matrix: SED							
Metals							
Lithium (Li)	17.9	DLM	4.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Magnesium (Mg)	14500	DLM	40	ug/g	06-OCT-21	07-OCT-21	R5613997
Manganese (Mn)	930	DLM	2.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Mercury (Hg)	0.628		0.0050	ug/g	06-OCT-21	07-OCT-21	R5613508
Molybdenum (Mo)	1.35	DLM	0.20	ug/g	06-OCT-21	07-OCT-21	R5613997
Nickel (Ni)	29.5	DLM	1.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Phosphorus (P)	1210	DLM	100	ug/g	06-OCT-21	07-OCT-21	R5613997
Potassium (K)	4050	DLM	200	ug/g	06-OCT-21	07-OCT-21	R5613997
Selenium (Se)	1.53	DLM	0.40	ug/g	06-OCT-21	07-OCT-21	R5613997
Silver (Ag)	0.93	DLM	0.20	ug/g	06-OCT-21	07-OCT-21	R5613997
Sodium (Na)	660	DLM	100	ug/g	06-OCT-21	07-OCT-21	R5613997
Strontium (Sr)	431	DLM	1.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Sulfur (S)	9600	DLM	2000	ug/g	06-OCT-21	07-OCT-21	R5613997
Thallium (Tl)	0.30	DLM	0.10	ug/g	06-OCT-21	07-OCT-21	R5613997
Tin (Sn)	7.2	DLM	4.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Titanium (Ti)	1120	DLM	2.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Tungsten (W)	<1.0	DLM	1.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Uranium (U)	1.01	DLM	0.10	ug/g	06-OCT-21	07-OCT-21	R5613997
Vanadium (V)	47.9	DLM	0.40	ug/g	06-OCT-21	07-OCT-21	R5613997
Zinc (Zn)	214	DLM	4.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Zirconium (Zr)	3.7	DLM	2.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.038	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Acenaphthylene	0.148	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Acridine	<0.075	DLHM	0.075	ug/g	04-OCT-21	06-OCT-21	R5608197
Anthracene	0.092	DLHM	0.030	ug/g	04-OCT-21	06-OCT-21	R5608197
Benzo(a)anthracene	0.399	R	0.075	ug/g	04-OCT-21	06-OCT-21	R5608197
Benzo(a)pyrene	0.513	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Benzo(b&j)fluoranthene	0.658	DLHM	0.075	ug/g	04-OCT-21	06-OCT-21	R5608197
Benzo(g,h,i)perylene	0.379	DLHM	0.075	ug/g	04-OCT-21	06-OCT-21	R5608197
Benzo(k)fluoranthene	0.227	DLHM	0.075	ug/g	04-OCT-21	06-OCT-21	R5608197
Chrysene	0.472	DLHM	0.075	ug/g	04-OCT-21	06-OCT-21	R5608197
Dibenz(a,h)anthracene	0.124	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Fluoroanthene	0.603	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Fluorene	0.049	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Indeno(1,2,3-cd)pyrene	0.349	DLHM	0.075	ug/g	04-OCT-21	06-OCT-21	R5608197
1-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
2-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Naphthalene	<0.038	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Phenanthrene	0.263	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Pyrene	0.658	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646459-15 TC2A-SG-008 Sampled By: JW/ JF on 28-SEP-21 @ 14:25 Matrix: SED							
Polycyclic Aromatic Hydrocarbons							
Quinoline	<0.038	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Surrogate: 2-Fluorobiphenyl	87.9		60-140	%	04-OCT-21	06-OCT-21	R5608197
Surrogate: d14-Terphenyl	86.7		60-140	%	04-OCT-21	06-OCT-21	R5608197
B(a)P Total Potency Equivalent	0.809		0.053	ug/g	04-OCT-21	06-OCT-21	R5608197
IACR (CCME)	9.07		0.75		04-OCT-21	06-OCT-21	R5608197
Polychlorinated Biphenyls							
Aroclor 1016	<0.023	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1221	<0.023	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1232	<0.023	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1242	<0.023	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1248	<0.023	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1254	0.090	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1260	0.085	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1262	<0.023	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Aroclor 1268	<0.023	DLHM	0.023	mg/kg	06-OCT-21	06-OCT-21	R5611197
Total Polychlorinated Biphenyls	0.174		0.068	mg/kg	06-OCT-21	06-OCT-21	R5611197
Surrogate: d14-Terphenyl	73.2		50-140	%	06-OCT-21	06-OCT-21	R5611197
L2646459-16 TC2A-SG-009 Sampled By: JW/ JF on 28-SEP-21 @ 14:00 Matrix: SED							
Physical Tests							
% Moisture	86.9		0.25	%	04-OCT-21	05-OCT-21	R5607676
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0772		0.0010	g/g	08-OCT-21	08-OCT-21	R5614716
Total Organic Carbon	7.72		0.10	%	08-OCT-21	08-OCT-21	R5614716
Metals							
Aluminum (Al)	11700	DLM	100	ug/g	06-OCT-21	07-OCT-21	R5613997
Antimony (Sb)	1.42	DLM	0.20	ug/g	06-OCT-21	07-OCT-21	R5613997
Arsenic (As)	8.08	DLM	0.20	ug/g	06-OCT-21	07-OCT-21	R5613997
Barium (Ba)	185	DLM	1.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Beryllium (Be)	0.50	DLM	0.20	ug/g	06-OCT-21	07-OCT-21	R5613997
Bismuth (Bi)	0.66	DLM	0.40	ug/g	06-OCT-21	07-OCT-21	R5613997
Boron (B)	15	DLM	10	ug/g	06-OCT-21	07-OCT-21	R5613997
Cadmium (Cd)	0.548	DLM	0.040	ug/g	06-OCT-21	07-OCT-21	R5613997
Calcium (Ca)	138000	DLM	100	ug/g	06-OCT-21	07-OCT-21	R5613997
Chromium (Cr)	117	DLM	1.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Cobalt (Co)	10.8	DLM	0.20	ug/g	06-OCT-21	07-OCT-21	R5613997
Copper (Cu)	63.5	DLM	1.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Iron (Fe)	21000	DLM	100	ug/g	06-OCT-21	07-OCT-21	R5613997
Lead (Pb)	106	DLM	1.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Lithium (Li)	13.1	DLM	4.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Magnesium (Mg)	15900	DLM	40	ug/g	06-OCT-21	07-OCT-21	R5613997

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646459-16 TC2A-SG-009 Sampled By: JW/ JF on 28-SEP-21 @ 14:00 Matrix: SED							
Metals							
Manganese (Mn)	504	DLM	2.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Mercury (Hg)	0.618		0.0050	ug/g	06-OCT-21	07-OCT-21	R5613508
Molybdenum (Mo)	1.54	DLM	0.20	ug/g	06-OCT-21	07-OCT-21	R5613997
Nickel (Ni)	21.6	DLM	1.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Phosphorus (P)	1180	DLM	100	ug/g	06-OCT-21	07-OCT-21	R5613997
Potassium (K)	2620	DLM	200	ug/g	06-OCT-21	07-OCT-21	R5613997
Selenium (Se)	1.73	DLM	0.40	ug/g	06-OCT-21	07-OCT-21	R5613997
Silver (Ag)	0.94	DLM	0.20	ug/g	06-OCT-21	07-OCT-21	R5613997
Sodium (Na)	550	DLM	100	ug/g	06-OCT-21	07-OCT-21	R5613997
Strontium (Sr)	460	DLM	1.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Sulfur (S)	8000	DLM	2000	ug/g	06-OCT-21	07-OCT-21	R5613997
Thallium (Tl)	0.27	DLM	0.10	ug/g	06-OCT-21	07-OCT-21	R5613997
Tin (Sn)	5.3	DLM	4.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Titanium (Ti)	609	DLM	2.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Tungsten (W)	3.4	DLM	1.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Uranium (U)	0.82	DLM	0.10	ug/g	06-OCT-21	07-OCT-21	R5613997
Vanadium (V)	38.4	DLM	0.40	ug/g	06-OCT-21	07-OCT-21	R5613997
Zinc (Zn)	266	DLM	4.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Zirconium (Zr)	2.1	DLM	2.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.098	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Acenaphthylene	0.051	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Acridine	0.132	DLHM	0.075	ug/g	04-OCT-21	06-OCT-21	R5608197
Anthracene	0.302	DLHM	0.030	ug/g	04-OCT-21	06-OCT-21	R5608197
Benzo(a)anthracene	1.14	DLHM	0.075	ug/g	04-OCT-21	06-OCT-21	R5608197
Benzo(a)pyrene	1.11	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Benzo(b&j)fluoranthene	1.62	DLHM	0.075	ug/g	04-OCT-21	06-OCT-21	R5608197
Benzo(g,h,i)perylene	0.740	DLHM	0.075	ug/g	04-OCT-21	06-OCT-21	R5608197
Benzo(k)fluoranthene	0.511	DLHM	0.075	ug/g	04-OCT-21	06-OCT-21	R5608197
Chrysene	1.43	DLHM	0.075	ug/g	04-OCT-21	06-OCT-21	R5608197
Dibenz(a,h)anthracene	0.206	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Fluoroanthene	2.18	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Fluorene	0.135	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Indeno(1,2,3-cd)pyrene	0.685	DLHM	0.075	ug/g	04-OCT-21	06-OCT-21	R5608197
1-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
2-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Naphthalene	<0.038	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Phenanthrene	1.11	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Pyrene	1.86	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Quinoline	<0.038	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Surrogate: 2-Fluorobiphenyl	87.5		60-140	%	04-OCT-21	06-OCT-21	R5608197

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646459-16 TC2A-SG-009 Sampled By: JW/ JF on 28-SEP-21 @ 14:00 Matrix: SED							
Polycyclic Aromatic Hydrocarbons							
Surrogate: d14-Terphenyl	83.6		60-140	%	04-OCT-21	06-OCT-21	R5608197
B(a)P Total Potency Equivalent	1.73		0.053	ug/g	04-OCT-21	06-OCT-21	R5608197
IACR (CCME)	21.7		0.75		04-OCT-21	06-OCT-21	R5608197
Polychlorinated Biphenyls							
Aroclor 1016	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1221	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1232	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1242	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1248	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1254	0.096	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1260	0.068	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1262	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1268	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Total Polychlorinated Biphenyls	0.164		0.068	mg/kg	07-OCT-21	07-OCT-21	R5613829
Surrogate: d14-Terphenyl	92.8		50-140	%	07-OCT-21	07-OCT-21	R5613829
L2646459-17 TC2A-SG-010 Sampled By: JW/ JF on 28-SEP-21 @ 13:35 Matrix: SED							
Physical Tests							
% Moisture	88.8		0.25	%	04-OCT-21	05-OCT-21	R5607676
Particle Size							
General Texture Class	Fine				08-OCT-21	08-OCT-21	R5614882
MUST PSA % > 75um	<1.0	PSAL	1.0	%	08-OCT-21	08-OCT-21	R5614882
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0890		0.0010	g/g	08-OCT-21	08-OCT-21	R5614716
Total Organic Carbon	8.90		0.10	%	08-OCT-21	08-OCT-21	R5614716
Metals							
Aluminum (Al)	21600		50	ug/g	07-OCT-21	07-OCT-21	R5614325
Antimony (Sb)	1.05		0.10	ug/g	07-OCT-21	07-OCT-21	R5614325
Arsenic (As)	11.1		0.10	ug/g	07-OCT-21	07-OCT-21	R5614325
Barium (Ba)	299		0.50	ug/g	07-OCT-21	07-OCT-21	R5614325
Beryllium (Be)	0.73		0.10	ug/g	07-OCT-21	07-OCT-21	R5614325
Bismuth (Bi)	0.71		0.20	ug/g	07-OCT-21	07-OCT-21	R5614325
Boron (B)	12.5		5.0	ug/g	07-OCT-21	07-OCT-21	R5614325
Boron (B), Hot Water Ext.	0.73		0.10	ug/g	07-OCT-21	07-OCT-21	R5613991
Cadmium (Cd)	1.05		0.020	ug/g	07-OCT-21	07-OCT-21	R5614325
Calcium (Ca)	76900		50	ug/g	07-OCT-21	07-OCT-21	R5614325
Chromium (Cr)	712		0.50	ug/g	07-OCT-21	07-OCT-21	R5614325
Cobalt (Co)	16.7		0.10	ug/g	07-OCT-21	07-OCT-21	R5614325
Copper (Cu)	62.8		0.50	ug/g	07-OCT-21	07-OCT-21	R5614325
Iron (Fe)	30400		50	ug/g	07-OCT-21	07-OCT-21	R5614325
Lead (Pb)	127		0.50	ug/g	07-OCT-21	07-OCT-21	R5614325

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646459-17 TC2A-SG-010 Sampled By: JW/ JF on 28-SEP-21 @ 13:35 Matrix: SED							
Metals							
Lithium (Li)	17.9		2.0	ug/g	07-OCT-21	07-OCT-21	R5614325
Magnesium (Mg)	15500		20	ug/g	07-OCT-21	07-OCT-21	R5614325
Manganese (Mn)	960		1.0	ug/g	07-OCT-21	07-OCT-21	R5614325
Mercury (Hg)	0.661		0.0050	ug/g	07-OCT-21	08-OCT-21	R5614414
Molybdenum (Mo)	1.35		0.10	ug/g	07-OCT-21	07-OCT-21	R5614325
Nickel (Ni)	33.0		0.50	ug/g	07-OCT-21	07-OCT-21	R5614325
Phosphorus (P)	1330		50	ug/g	07-OCT-21	07-OCT-21	R5614325
Potassium (K)	4710		100	ug/g	07-OCT-21	07-OCT-21	R5614325
Selenium (Se)	1.78		0.20	ug/g	07-OCT-21	07-OCT-21	R5614325
Silver (Ag)	1.11		0.10	ug/g	07-OCT-21	07-OCT-21	R5614325
Sodium (Na)	737		50	ug/g	07-OCT-21	07-OCT-21	R5614325
Strontium (Sr)	392		0.50	ug/g	07-OCT-21	07-OCT-21	R5614325
Sulfur (S)	11500		1000	ug/g	07-OCT-21	07-OCT-21	R5614325
Thallium (Tl)	0.317		0.050	ug/g	07-OCT-21	07-OCT-21	R5614325
Tin (Sn)	7.2		2.0	ug/g	07-OCT-21	07-OCT-21	R5614325
Titanium (Ti)	1080		1.0	ug/g	07-OCT-21	07-OCT-21	R5614325
Tungsten (W)	0.63		0.50	ug/g	07-OCT-21	07-OCT-21	R5614325
Uranium (U)	1.03		0.050	ug/g	07-OCT-21	07-OCT-21	R5614325
Vanadium (V)	50.2		0.20	ug/g	07-OCT-21	07-OCT-21	R5614325
Zinc (Zn)	239		2.0	ug/g	07-OCT-21	07-OCT-21	R5614325
Zirconium (Zr)	4.6		1.0	ug/g	07-OCT-21	07-OCT-21	R5614325
Speciated Metals							
Chromium, Trivalent	708		10	ug/g		08-OCT-21	
Chromium, Hexavalent	4.5	DLHM	1.0	ug/g	06-OCT-21	07-OCT-21	R5614562
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.048	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Acenaphthylene	0.184	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Acridine	<0.075	DLHM	0.075	ug/g	04-OCT-21	06-OCT-21	R5608197
Anthracene	0.143	DLHM	0.030	ug/g	04-OCT-21	06-OCT-21	R5608197
Benzo(a)anthracene	0.492	R	0.075	ug/g	04-OCT-21	06-OCT-21	R5608197
Benzo(a)pyrene	0.634	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Benzo(b&j)fluoranthene	0.811	DLHM	0.075	ug/g	04-OCT-21	06-OCT-21	R5608197
Benzo(g,h,i)perylene	0.430	DLHM	0.075	ug/g	04-OCT-21	06-OCT-21	R5608197
Benzo(k)fluoranthene	0.278	DLHM	0.075	ug/g	04-OCT-21	06-OCT-21	R5608197
Chrysene	0.573	DLHM	0.075	ug/g	04-OCT-21	06-OCT-21	R5608197
Dibenz(a,h)anthracene	0.142	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Fluoroanthene	0.744	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Fluorene	0.069	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Indeno(1,2,3-cd)pyrene	0.401	DLHM	0.075	ug/g	04-OCT-21	06-OCT-21	R5608197
1-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
2-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646459-17 TC2A-SG-010 Sampled By: JW/ JF on 28-SEP-21 @ 13:35 Matrix: SED							
Polycyclic Aromatic Hydrocarbons							
Naphthalene	<0.038	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Phenanthrene	0.362	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Pyrene	0.790	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Quinoline	<0.038	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Surrogate: 2-Fluorobiphenyl	90.7		60-140	%	04-OCT-21	06-OCT-21	R5608197
Surrogate: d14-Terphenyl	89.6		60-140	%	04-OCT-21	06-OCT-21	R5608197
B(a)P Total Potency Equivalent	0.984		0.053	ug/g	04-OCT-21	06-OCT-21	R5608197
IACR (CCME)	11.1		0.75		04-OCT-21	06-OCT-21	R5608197
Polychlorinated Biphenyls							
Aroclor 1016	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1221	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1232	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1242	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1248	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1254	0.178	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1260	0.217	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1262	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1268	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Total Polychlorinated Biphenyls	0.395		0.068	mg/kg	07-OCT-21	07-OCT-21	R5613829
Surrogate: d14-Terphenyl	89.9		50-140	%	07-OCT-21	07-OCT-21	R5613829
L2646459-18 TC2A-SG-011 Sampled By: JW/ JF on 28-SEP-21 @ 13:00 Matrix: SED							
Physical Tests							
% Moisture	88.8		0.25	%	04-OCT-21	05-OCT-21	R5607676
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0841		0.0010	g/g	08-OCT-21	08-OCT-21	R5614716
Total Organic Carbon	8.41		0.10	%	08-OCT-21	08-OCT-21	R5614716
Metals							
Aluminum (Al)	13300	DLM	100	ug/g	07-OCT-21	07-OCT-21	R5613846
Antimony (Sb)	1.03	DLM	0.20	ug/g	07-OCT-21	07-OCT-21	R5613846
Arsenic (As)	11.5	DLM	0.20	ug/g	07-OCT-21	07-OCT-21	R5613846
Barium (Ba)	235	DLM	1.0	ug/g	07-OCT-21	07-OCT-21	R5613846
Beryllium (Be)	0.59	DLM	0.20	ug/g	07-OCT-21	07-OCT-21	R5613846
Bismuth (Bi)	0.87	DLM	0.40	ug/g	07-OCT-21	07-OCT-21	R5613846
Boron (B)	14	DLM	10	ug/g	07-OCT-21	07-OCT-21	R5613846
Cadmium (Cd)	0.855	DLM	0.040	ug/g	07-OCT-21	07-OCT-21	R5613846
Calcium (Ca)	146000	DLM	100	ug/g	07-OCT-21	07-OCT-21	R5613846
Chromium (Cr)	275	DLM	1.0	ug/g	07-OCT-21	07-OCT-21	R5613846
Cobalt (Co)	12.5	DLM	0.20	ug/g	07-OCT-21	07-OCT-21	R5613846
Copper (Cu)	65.2	DLM	1.0	ug/g	07-OCT-21	07-OCT-21	R5613846
Iron (Fe)	23200	DLM	100	ug/g	07-OCT-21	07-OCT-21	R5613846

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646459-18 TC2A-SG-011 Sampled By: JW/ JF on 28-SEP-21 @ 13:00 Matrix: SED							
Metals							
Lead (Pb)	115	DLM	1.0	ug/g	07-OCT-21	07-OCT-21	R5613846
Lithium (Li)	14.6	DLM	4.0	ug/g	07-OCT-21	07-OCT-21	R5613846
Magnesium (Mg)	13600	DLM	40	ug/g	07-OCT-21	07-OCT-21	R5613846
Manganese (Mn)	580	DLM	2.0	ug/g	07-OCT-21	07-OCT-21	R5613846
Mercury (Hg)	0.677	DLM	0.010	ug/g	07-OCT-21	08-OCT-21	R5614407
Molybdenum (Mo)	1.46	DLM	0.20	ug/g	07-OCT-21	07-OCT-21	R5613846
Nickel (Ni)	24.4	DLM	1.0	ug/g	07-OCT-21	07-OCT-21	R5613846
Phosphorus (P)	1220	DLM	100	ug/g	07-OCT-21	07-OCT-21	R5613846
Potassium (K)	3030	DLM	200	ug/g	07-OCT-21	07-OCT-21	R5613846
Selenium (Se)	2.02	DLM	0.40	ug/g	07-OCT-21	07-OCT-21	R5613846
Silver (Ag)	1.31	DLM	0.20	ug/g	07-OCT-21	07-OCT-21	R5613846
Sodium (Na)	730	DLM	100	ug/g	07-OCT-21	07-OCT-21	R5613846
Strontium (Sr)	647	DLM	1.0	ug/g	07-OCT-21	07-OCT-21	R5613846
Sulfur (S)	11000	DLM	2000	ug/g	07-OCT-21	07-OCT-21	R5613846
Thallium (Tl)	0.28	DLM	0.10	ug/g	07-OCT-21	07-OCT-21	R5613846
Tin (Sn)	6.5	DLM	4.0	ug/g	07-OCT-21	07-OCT-21	R5613846
Titanium (Ti)	675	DLM	2.0	ug/g	07-OCT-21	07-OCT-21	R5613846
Uranium (U)	0.98	DLM	0.10	ug/g	07-OCT-21	07-OCT-21	R5613846
Vanadium (V)	37.0	DLM	0.40	ug/g	07-OCT-21	07-OCT-21	R5613846
Zinc (Zn)	262	DLM	4.0	ug/g	07-OCT-21	07-OCT-21	R5613846
Zirconium (Zr)	2.8	DLM	2.0	ug/g	07-OCT-21	07-OCT-21	R5613846
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.043	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Acenaphthylene	0.087	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Acridine	<0.075	DLHM	0.075	ug/g	04-OCT-21	06-OCT-21	R5608197
Anthracene	0.111	DLHM	0.030	ug/g	04-OCT-21	06-OCT-21	R5608197
Benzo(a)anthracene	0.460	DLHM	0.075	ug/g	04-OCT-21	06-OCT-21	R5608197
Benzo(a)pyrene	0.562	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Benzo(b&j)fluoranthene	0.900	DLHM	0.075	ug/g	04-OCT-21	06-OCT-21	R5608197
Benzo(g,h,i)perylene	0.445	DLHM	0.075	ug/g	04-OCT-21	06-OCT-21	R5608197
Benzo(k)fluoranthene	0.325	DLHM	0.075	ug/g	04-OCT-21	06-OCT-21	R5608197
Chrysene	0.699	DLHM	0.075	ug/g	04-OCT-21	06-OCT-21	R5608197
Dibenz(a,h)anthracene	0.110	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Fluoroanthene	0.953	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Fluorene	0.061	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Indeno(1,2,3-cd)pyrene	0.400	DLHM	0.075	ug/g	04-OCT-21	06-OCT-21	R5608197
1-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
2-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Naphthalene	<0.038	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Phenanthrene	0.440	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Pyrene	0.869	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646459-18 TC2A-SG-011 Sampled By: JW/ JF on 28-SEP-21 @ 13:00 Matrix: SED							
Polycyclic Aromatic Hydrocarbons							
Quinoline	<0.038	DLHM	0.038	ug/g	04-OCT-21	06-OCT-21	R5608197
Surrogate: 2-Fluorobiphenyl	90.9		60-140	%	04-OCT-21	06-OCT-21	R5608197
Surrogate: d14-Terphenyl	89.7		60-140	%	04-OCT-21	06-OCT-21	R5608197
B(a)P Total Potency Equivalent	0.892		0.053	ug/g	04-OCT-21	06-OCT-21	R5608197
IACR (CCME)	11.6		0.75		04-OCT-21	06-OCT-21	R5608197
Polychlorinated Biphenyls							
Aroclor 1016	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1221	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1232	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1242	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1248	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1254	0.174	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1260	0.154	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1262	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1268	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Total Polychlorinated Biphenyls	0.328		0.068	mg/kg	07-OCT-21	07-OCT-21	R5613829
Surrogate: d14-Terphenyl	91.3		50-140	%	07-OCT-21	07-OCT-21	R5613829
L2646459-19 TC2A-SG-012 Sampled By: JW/ JF on 28-SEP-21 @ 14:30 Matrix: SED							
Physical Tests							
% Moisture	86.8		0.25	%	04-OCT-21	05-OCT-21	R5607676
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0938		0.0010	g/g	08-OCT-21	08-OCT-21	R5614716
Total Organic Carbon	9.38		0.10	%	08-OCT-21	08-OCT-21	R5614716
Metals							
Aluminum (Al)	15000		50	ug/g	07-OCT-21	07-OCT-21	R5614325
Antimony (Sb)	1.44		0.10	ug/g	07-OCT-21	07-OCT-21	R5614325
Arsenic (As)	11.3		0.10	ug/g	07-OCT-21	07-OCT-21	R5614325
Barium (Ba)	215		0.50	ug/g	07-OCT-21	07-OCT-21	R5614325
Beryllium (Be)	0.68		0.10	ug/g	07-OCT-21	07-OCT-21	R5614325
Bismuth (Bi)	1.45		0.20	ug/g	07-OCT-21	07-OCT-21	R5614325
Boron (B)	13.0		5.0	ug/g	07-OCT-21	07-OCT-21	R5614325
Cadmium (Cd)	1.32		0.020	ug/g	07-OCT-21	07-OCT-21	R5614325
Calcium (Ca)	106000		50	ug/g	07-OCT-21	07-OCT-21	R5614325
Chromium (Cr)	187		0.50	ug/g	07-OCT-21	07-OCT-21	R5614325
Cobalt (Co)	14.8		0.10	ug/g	07-OCT-21	07-OCT-21	R5614325
Copper (Cu)	117		0.50	ug/g	07-OCT-21	07-OCT-21	R5614325
Iron (Fe)	25900		50	ug/g	07-OCT-21	07-OCT-21	R5614325
Lead (Pb)	171		0.50	ug/g	07-OCT-21	07-OCT-21	R5614325
Lithium (Li)	15.6		2.0	ug/g	07-OCT-21	07-OCT-21	R5614325
Magnesium (Mg)	17500		20	ug/g	07-OCT-21	07-OCT-21	R5614325

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646459-19 TC2A-SG-012 Sampled By: JW/ JF on 28-SEP-21 @ 14:30 Matrix: SED							
Metals							
Manganese (Mn)	427		1.0	ug/g	07-OCT-21	07-OCT-21	R5614325
Mercury (Hg)	1.76	DLHC	0.050	ug/g	07-OCT-21	08-OCT-21	R5614414
Molybdenum (Mo)	1.51		0.10	ug/g	07-OCT-21	07-OCT-21	R5614325
Nickel (Ni)	30.9		0.50	ug/g	07-OCT-21	07-OCT-21	R5614325
Phosphorus (P)	1300		50	ug/g	07-OCT-21	07-OCT-21	R5614325
Potassium (K)	3330		100	ug/g	07-OCT-21	07-OCT-21	R5614325
Selenium (Se)	2.10		0.20	ug/g	07-OCT-21	07-OCT-21	R5614325
Silver (Ag)	2.39		0.10	ug/g	07-OCT-21	07-OCT-21	R5614325
Sodium (Na)	568		50	ug/g	07-OCT-21	07-OCT-21	R5614325
Strontium (Sr)	351		0.50	ug/g	07-OCT-21	07-OCT-21	R5614325
Sulfur (S)	9600		1000	ug/g	07-OCT-21	07-OCT-21	R5614325
Thallium (Tl)	0.520		0.050	ug/g	07-OCT-21	07-OCT-21	R5614325
Tin (Sn)	18.4		2.0	ug/g	07-OCT-21	07-OCT-21	R5614325
Titanium (Ti)	734		1.0	ug/g	07-OCT-21	07-OCT-21	R5614325
Tungsten (W)	2.32		0.50	ug/g	07-OCT-21	07-OCT-21	R5614325
Uranium (U)	0.840		0.050	ug/g	07-OCT-21	07-OCT-21	R5614325
Vanadium (V)	44.0		0.20	ug/g	07-OCT-21	07-OCT-21	R5614325
Zinc (Zn)	432		2.0	ug/g	07-OCT-21	07-OCT-21	R5614325
Zirconium (Zr)	4.3		1.0	ug/g	07-OCT-21	07-OCT-21	R5614325
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.142		0.038	ug/g	05-OCT-21	06-OCT-21	R5611880
Acenaphthylene	0.234		0.038	ug/g	05-OCT-21	06-OCT-21	R5611880
Acridine	0.145		0.075	ug/g	05-OCT-21	06-OCT-21	R5611880
Anthracene	0.325		0.030	ug/g	05-OCT-21	06-OCT-21	R5611880
Benzo(a)anthracene	1.33		0.075	ug/g	05-OCT-21	06-OCT-21	R5611880
Benzo(a)pyrene	1.54		0.038	ug/g	05-OCT-21	06-OCT-21	R5611880
Benzo(b&j)fluoranthene	2.42		0.075	ug/g	05-OCT-21	06-OCT-21	R5611880
Benzo(g,h,i)perylene	1.13		0.075	ug/g	05-OCT-21	06-OCT-21	R5611880
Benzo(k)fluoranthene	0.883		0.075	ug/g	05-OCT-21	06-OCT-21	R5611880
Chrysene	1.88		0.075	ug/g	05-OCT-21	06-OCT-21	R5611880
Dibenz(a,h)anthracene	0.287		0.038	ug/g	05-OCT-21	06-OCT-21	R5611880
Fluoroanthene	2.66		0.038	ug/g	05-OCT-21	06-OCT-21	R5611880
Fluorene	0.213		0.038	ug/g	05-OCT-21	06-OCT-21	R5611880
Indeno(1,2,3-cd)pyrene	1.10		0.075	ug/g	05-OCT-21	06-OCT-21	R5611880
1-Methylnaphthalene	0.062		0.038	ug/g	05-OCT-21	06-OCT-21	R5611880
2-Methylnaphthalene	0.076		0.038	ug/g	05-OCT-21	06-OCT-21	R5611880
Naphthalene	0.079		0.038	ug/g	05-OCT-21	06-OCT-21	R5611880
Phenanthrene	1.06		0.038	ug/g	05-OCT-21	06-OCT-21	R5611880
Pyrene	2.37		0.038	ug/g	05-OCT-21	06-OCT-21	R5611880
Quinoline	<0.038	DLHM	0.038	ug/g	05-OCT-21	06-OCT-21	R5611880
Surrogate: 2-Fluorobiphenyl	90.5		60-140	%	05-OCT-21	06-OCT-21	R5611880

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646459-19 TC2A-SG-012 Sampled By: JW/ JF on 28-SEP-21 @ 14:30 Matrix: SED							
Polycyclic Aromatic Hydrocarbons							
Surrogate: d14-Terphenyl	84.4		60-140	%	05-OCT-21	06-OCT-21	R5611880
B(a)P Total Potency Equivalent	2.43		0.053	ug/g	05-OCT-21	06-OCT-21	R5611880
IACR (CCME)	31.5		0.75		05-OCT-21	06-OCT-21	R5611880
Polychlorinated Biphenyls							
Aroclor 1016	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1221	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1232	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1242	<0.0550	DLM	0.055	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1248	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1254	0.231	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1260	0.146	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1262	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1268	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Total Polychlorinated Biphenyls	0.377		0.068	mg/kg	07-OCT-21	07-OCT-21	R5613829
Surrogate: d14-Terphenyl	93.4		50-140	%	07-OCT-21	07-OCT-21	R5613829
L2646459-20 TC2A-SG-013 Sampled By: JW/ JF on 28-SEP-21 @ 15:05 Matrix: SED							
Physical Tests							
% Moisture	50.2		0.25	%	04-OCT-21	05-OCT-21	R5607676
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0233		0.0010	g/g	08-OCT-21	08-OCT-21	R5614716
Total Organic Carbon	2.33		0.10	%	08-OCT-21	08-OCT-21	R5614716
Metals							
Aluminum (Al)	3930	DLM	100	ug/g	06-OCT-21	07-OCT-21	R5613997
Antimony (Sb)	0.29	DLM	0.20	ug/g	06-OCT-21	07-OCT-21	R5613997
Arsenic (As)	1.43	DLM	0.20	ug/g	06-OCT-21	07-OCT-21	R5613997
Barium (Ba)	51.7	DLM	1.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Beryllium (Be)	<0.20	DLM	0.20	ug/g	06-OCT-21	07-OCT-21	R5613997
Bismuth (Bi)	<0.40	DLM	0.40	ug/g	06-OCT-21	07-OCT-21	R5613997
Boron (B)	<10	DLM	10	ug/g	06-OCT-21	07-OCT-21	R5613997
Cadmium (Cd)	0.089	DLM	0.040	ug/g	06-OCT-21	07-OCT-21	R5613997
Calcium (Ca)	101000	DLM	100	ug/g	06-OCT-21	07-OCT-21	R5613997
Chromium (Cr)	20.4	DLM	1.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Cobalt (Co)	4.87	DLM	0.20	ug/g	06-OCT-21	07-OCT-21	R5613997
Copper (Cu)	22.8	DLM	1.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Iron (Fe)	11400	DLM	100	ug/g	06-OCT-21	07-OCT-21	R5613997
Lead (Pb)	20.1	DLM	1.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Lithium (Li)	5.7	DLM	4.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Magnesium (Mg)	12500	DLM	40	ug/g	06-OCT-21	07-OCT-21	R5613997
Manganese (Mn)	171	DLM	2.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Mercury (Hg)	0.0415		0.0050	ug/g	06-OCT-21	07-OCT-21	R5613508

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646459-20 TC2A-SG-013 Sampled By: JW/ JF on 28-SEP-21 @ 15:05 Matrix: SED							
Metals							
Molybdenum (Mo)	0.48	DLM	0.20	ug/g	06-OCT-21	07-OCT-21	R5613997
Nickel (Ni)	8.8	DLM	1.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Phosphorus (P)	660	DLM	100	ug/g	06-OCT-21	07-OCT-21	R5613997
Potassium (K)	960	DLM	200	ug/g	06-OCT-21	07-OCT-21	R5613997
Selenium (Se)	<0.40	DLM	0.40	ug/g	06-OCT-21	07-OCT-21	R5613997
Silver (Ag)	<0.20	DLM	0.20	ug/g	06-OCT-21	07-OCT-21	R5613997
Sodium (Na)	220	DLM	100	ug/g	06-OCT-21	07-OCT-21	R5613997
Strontium (Sr)	216	DLM	1.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Sulfur (S)	<2000	DLM	2000	ug/g	06-OCT-21	07-OCT-21	R5613997
Thallium (Tl)	0.11	DLM	0.10	ug/g	06-OCT-21	07-OCT-21	R5613997
Tin (Sn)	<4.0	DLM	4.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Titanium (Ti)	339	DLM	2.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Tungsten (W)	<1.0	DLM	1.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Uranium (U)	0.36	DLM	0.10	ug/g	06-OCT-21	07-OCT-21	R5613997
Vanadium (V)	23.6	DLM	0.40	ug/g	06-OCT-21	07-OCT-21	R5613997
Zinc (Zn)	70.1	DLM	4.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Zirconium (Zr)	<2.0	DLM	2.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.0544		0.0075	ug/g	05-OCT-21	06-OCT-21	R5611880
Acenaphthylene	0.0260		0.0075	ug/g	05-OCT-21	06-OCT-21	R5611880
Acridine	0.067		0.015	ug/g	05-OCT-21	06-OCT-21	R5611880
Anthracene	0.105		0.0060	ug/g	05-OCT-21	06-OCT-21	R5611880
Benzo(a)anthracene	0.449		0.015	ug/g	05-OCT-21	06-OCT-21	R5611880
Benzo(a)pyrene	0.483		0.0075	ug/g	05-OCT-21	06-OCT-21	R5611880
Benzo(b&j)fluoranthene	0.761		0.015	ug/g	05-OCT-21	06-OCT-21	R5611880
Benzo(g,h,i)perylene	0.337		0.015	ug/g	05-OCT-21	06-OCT-21	R5611880
Benzo(k)fluoranthene	0.271		0.015	ug/g	05-OCT-21	06-OCT-21	R5611880
Chrysene	0.616		0.015	ug/g	05-OCT-21	06-OCT-21	R5611880
Dibenz(a,h)anthracene	0.0855		0.0075	ug/g	05-OCT-21	06-OCT-21	R5611880
Fluoroanthene	1.28		0.0075	ug/g	05-OCT-21	06-OCT-21	R5611880
Fluorene	0.0649		0.0075	ug/g	05-OCT-21	06-OCT-21	R5611880
Indeno(1,2,3-cd)pyrene	0.330		0.015	ug/g	05-OCT-21	06-OCT-21	R5611880
1-Methylnaphthalene	0.0156		0.0075	ug/g	05-OCT-21	06-OCT-21	R5611880
2-Methylnaphthalene	0.0195		0.0075	ug/g	05-OCT-21	06-OCT-21	R5611880
Naphthalene	0.0262		0.0075	ug/g	05-OCT-21	06-OCT-21	R5611880
Phenanthrene	0.725		0.0075	ug/g	05-OCT-21	06-OCT-21	R5611880
Pyrene	0.985		0.0075	ug/g	05-OCT-21	06-OCT-21	R5611880
Quinoline	<0.0075	DLHM	0.0075	ug/g	05-OCT-21	06-OCT-21	R5611880
Surrogate: 2-Fluorobiphenyl	90.0		60-140	%	05-OCT-21	06-OCT-21	R5611880
Surrogate: d14-Terphenyl	85.8		60-140	%	05-OCT-21	06-OCT-21	R5611880
B(a)P Total Potency Equivalent	0.759		0.020	ug/g	05-OCT-21	06-OCT-21	R5611880

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646459-20 TC2A-SG-013 Sampled By: JW/ JF on 28-SEP-21 @ 15:05 Matrix: SED							
Polycyclic Aromatic Hydrocarbons							
IACR (CCME)	9.95		0.15		05-OCT-21	06-OCT-21	R5611880
Polychlorinated Biphenyls							
Aroclor 1016	<0.0045	DLHM	0.0045	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1221	<0.0045	DLHM	0.0045	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1232	<0.0045	DLHM	0.0045	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1242	<0.0045	DLHM	0.0045	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1248	<0.0045	DLHM	0.0045	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1254	<0.0067	DLM	0.0067	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1260	<0.0045	DLHM	0.0045	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1262	<0.0045	DLHM	0.0045	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1268	<0.0045	DLHM	0.0045	mg/kg	07-OCT-21	07-OCT-21	R5613829
Total Polychlorinated Biphenyls	<0.015		0.015	mg/kg	07-OCT-21	07-OCT-21	R5613829
Surrogate: d14-Terphenyl	84.9		50-140	%	07-OCT-21	07-OCT-21	R5613829
L2646459-21 TC0M-SG-002 Sampled By: JW/ JF on 28-SEP-21 @ 13:55 Matrix: SED							
Physical Tests							
% Moisture	86.6		0.25	%	04-OCT-21	05-OCT-21	R5607676
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0759		0.0010	g/g	08-OCT-21	08-OCT-21	R5614716
Total Organic Carbon	7.59		0.10	%	08-OCT-21	08-OCT-21	R5614716
Metals							
Aluminum (Al)	10200	DLM	100	ug/g	06-OCT-21	07-OCT-21	R5613997
Antimony (Sb)	0.97	DLM	0.20	ug/g	06-OCT-21	07-OCT-21	R5613997
Arsenic (As)	5.21	DLM	0.20	ug/g	06-OCT-21	07-OCT-21	R5613997
Barium (Ba)	204	DLM	1.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Beryllium (Be)	0.42	DLM	0.20	ug/g	06-OCT-21	07-OCT-21	R5613997
Bismuth (Bi)	<0.40	DLM	0.40	ug/g	06-OCT-21	07-OCT-21	R5613997
Boron (B)	<10	DLM	10	ug/g	06-OCT-21	07-OCT-21	R5613997
Cadmium (Cd)	0.480	DLM	0.040	ug/g	06-OCT-21	07-OCT-21	R5613997
Calcium (Ca)	123000	DLM	100	ug/g	06-OCT-21	07-OCT-21	R5613997
Chromium (Cr)	525	DLM	1.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Cobalt (Co)	8.24	DLM	0.20	ug/g	06-OCT-21	07-OCT-21	R5613997
Copper (Cu)	31.2	DLM	1.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Iron (Fe)	18300	DLM	100	ug/g	06-OCT-21	07-OCT-21	R5613997
Lead (Pb)	67.3	DLM	1.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Lithium (Li)	10.7	DLM	4.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Magnesium (Mg)	10600	DLM	40	ug/g	06-OCT-21	07-OCT-21	R5613997
Manganese (Mn)	565	DLM	2.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Mercury (Hg)	0.145		0.0050	ug/g	06-OCT-21	07-OCT-21	R5613508
Molybdenum (Mo)	0.98	DLM	0.20	ug/g	06-OCT-21	07-OCT-21	R5613997
Nickel (Ni)	16.6	DLM	1.0	ug/g	06-OCT-21	07-OCT-21	R5613997

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646459-21 TC0M-SG-002 Sampled By: JW/ JF on 28-SEP-21 @ 13:55 Matrix: SED							
Metals							
Phosphorus (P)	840	DLM	100	ug/g	06-OCT-21	07-OCT-21	R5613997
Potassium (K)	2550	DLM	200	ug/g	06-OCT-21	07-OCT-21	R5613997
Selenium (Se)	0.84	DLM	0.40	ug/g	06-OCT-21	07-OCT-21	R5613997
Silver (Ag)	0.22	DLM	0.20	ug/g	06-OCT-21	07-OCT-21	R5613997
Sodium (Na)	510	DLM	100	ug/g	06-OCT-21	07-OCT-21	R5613997
Strontium (Sr)	811	DLM	1.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Sulfur (S)	6000	DLM	2000	ug/g	06-OCT-21	07-OCT-21	R5613997
Thallium (Tl)	0.16	DLM	0.10	ug/g	06-OCT-21	07-OCT-21	R5613997
Tin (Sn)	<4.0	DLM	4.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Titanium (Ti)	603	DLM	2.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Tungsten (W)	1.3	DLM	1.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Uranium (U)	0.50	DLM	0.10	ug/g	06-OCT-21	07-OCT-21	R5613997
Vanadium (V)	32.1	DLM	0.40	ug/g	06-OCT-21	07-OCT-21	R5613997
Zinc (Zn)	130	DLM	4.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Zirconium (Zr)	<2.0	DLM	2.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.042		0.038	ug/g	05-OCT-21	06-OCT-21	R5611880
Acenaphthylene	0.137		0.038	ug/g	05-OCT-21	06-OCT-21	R5611880
Acridine	<0.075	DLHM	0.075	ug/g	05-OCT-21	06-OCT-21	R5611880
Anthracene	0.080		0.030	ug/g	05-OCT-21	06-OCT-21	R5611880
Benzo(a)anthracene	0.360	R	0.075	ug/g	05-OCT-21	06-OCT-21	R5611880
Benzo(a)pyrene	0.484		0.038	ug/g	05-OCT-21	06-OCT-21	R5611880
Benzo(b&j)fluoranthene	0.596		0.075	ug/g	05-OCT-21	06-OCT-21	R5611880
Benzo(g,h,i)perylene	0.355		0.075	ug/g	05-OCT-21	06-OCT-21	R5611880
Benzo(k)fluoranthene	0.277		0.075	ug/g	05-OCT-21	06-OCT-21	R5611880
Chrysene	0.494		0.075	ug/g	05-OCT-21	06-OCT-21	R5611880
Dibenz(a,h)anthracene	0.082		0.038	ug/g	05-OCT-21	06-OCT-21	R5611880
Fluoroanthene	0.512		0.038	ug/g	05-OCT-21	06-OCT-21	R5611880
Fluorene	0.051		0.038	ug/g	05-OCT-21	06-OCT-21	R5611880
Indeno(1,2,3-cd)pyrene	0.323		0.075	ug/g	05-OCT-21	06-OCT-21	R5611880
1-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	05-OCT-21	06-OCT-21	R5611880
2-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	05-OCT-21	06-OCT-21	R5611880
Naphthalene	<0.038	DLHM	0.038	ug/g	05-OCT-21	06-OCT-21	R5611880
Phenanthrene	0.206		0.038	ug/g	05-OCT-21	06-OCT-21	R5611880
Pyrene	0.621		0.038	ug/g	05-OCT-21	06-OCT-21	R5611880
Quinoline	<0.038	DLHM	0.038	ug/g	05-OCT-21	06-OCT-21	R5611880
Surrogate: 2-Fluorobiphenyl	91.0		60-140	%	05-OCT-21	06-OCT-21	R5611880
Surrogate: d14-Terphenyl	85.5		60-140	%	05-OCT-21	06-OCT-21	R5611880
B(a)P Total Potency Equivalent	0.730		0.053	ug/g	05-OCT-21	06-OCT-21	R5611880
IACR (CCME)	8.62		0.75		05-OCT-21	06-OCT-21	R5611880
Polychlorinated Biphenyls							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646459-21 TC0M-SG-002 Sampled By: JW/ JF on 28-SEP-21 @ 13:55 Matrix: SED							
Polychlorinated Biphenyls							
Aroclor 1016	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1221	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1232	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1242	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1248	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1254	0.106	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1260	0.158	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1262	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1268	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Total Polychlorinated Biphenyls	0.263		0.068	mg/kg	07-OCT-21	07-OCT-21	R5613829
Surrogate: d14-Terphenyl	85.4		50-140	%	07-OCT-21	07-OCT-21	R5613829
L2646459-22 TC0M-SG-003 Sampled By: JW/ JF on 28-SEP-21 @ 14:50 Matrix: SED							
Physical Tests							
% Moisture	85.1		0.25	%	04-OCT-21	05-OCT-21	R5607676
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0976		0.0010	g/g	08-OCT-21	08-OCT-21	R5614716
Total Organic Carbon	9.76		0.10	%	08-OCT-21	08-OCT-21	R5614716
Metals							
Aluminum (Al)	14300		50	ug/g	07-OCT-21	07-OCT-21	R5614325
Antimony (Sb)	1.21		0.10	ug/g	07-OCT-21	07-OCT-21	R5614325
Arsenic (As)	10.2		0.10	ug/g	07-OCT-21	07-OCT-21	R5614325
Barium (Ba)	247		0.50	ug/g	07-OCT-21	07-OCT-21	R5614325
Beryllium (Be)	0.57		0.10	ug/g	07-OCT-21	07-OCT-21	R5614325
Bismuth (Bi)	0.34		0.20	ug/g	07-OCT-21	07-OCT-21	R5614325
Boron (B)	12.3		5.0	ug/g	07-OCT-21	07-OCT-21	R5614325
Cadmium (Cd)	0.812		0.020	ug/g	07-OCT-21	07-OCT-21	R5614325
Calcium (Ca)	103000		50	ug/g	07-OCT-21	07-OCT-21	R5614325
Chromium (Cr)	1100		0.50	ug/g	07-OCT-21	07-OCT-21	R5614325
Cobalt (Co)	15.6		0.10	ug/g	07-OCT-21	07-OCT-21	R5614325
Copper (Cu)	49.0		0.50	ug/g	07-OCT-21	07-OCT-21	R5614325
Iron (Fe)	25500		50	ug/g	07-OCT-21	07-OCT-21	R5614325
Lead (Pb)	134		0.50	ug/g	07-OCT-21	07-OCT-21	R5614325
Lithium (Li)	12.8		2.0	ug/g	07-OCT-21	07-OCT-21	R5614325
Magnesium (Mg)	13000		20	ug/g	07-OCT-21	07-OCT-21	R5614325
Manganese (Mn)	711		1.0	ug/g	07-OCT-21	07-OCT-21	R5614325
Mercury (Hg)	0.339		0.0050	ug/g	07-OCT-21	08-OCT-21	R5614414
Molybdenum (Mo)	1.09		0.10	ug/g	07-OCT-21	07-OCT-21	R5614325
Nickel (Ni)	24.9		0.50	ug/g	07-OCT-21	07-OCT-21	R5614325
Phosphorus (P)	1150		50	ug/g	07-OCT-21	07-OCT-21	R5614325
Potassium (K)	3250		100	ug/g	07-OCT-21	07-OCT-21	R5614325

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646459-22 TC0M-SG-003 Sampled By: JW/ JF on 28-SEP-21 @ 14:50 Matrix: SED							
Metals							
Selenium (Se)	1.10		0.20	ug/g	07-OCT-21	07-OCT-21	R5614325
Silver (Ag)	0.36		0.10	ug/g	07-OCT-21	07-OCT-21	R5614325
Sodium (Na)	634		50	ug/g	07-OCT-21	07-OCT-21	R5614325
Strontium (Sr)	690		0.50	ug/g	07-OCT-21	07-OCT-21	R5614325
Sulfur (S)	10000		1000	ug/g	07-OCT-21	07-OCT-21	R5614325
Thallium (Tl)	0.270		0.050	ug/g	07-OCT-21	07-OCT-21	R5614325
Tin (Sn)	6.0		2.0	ug/g	07-OCT-21	07-OCT-21	R5614325
Titanium (Ti)	791		1.0	ug/g	07-OCT-21	07-OCT-21	R5614325
Tungsten (W)	0.70		0.50	ug/g	07-OCT-21	07-OCT-21	R5614325
Uranium (U)	0.692		0.050	ug/g	07-OCT-21	07-OCT-21	R5614325
Vanadium (V)	39.7		0.20	ug/g	07-OCT-21	07-OCT-21	R5614325
Zinc (Zn)	196		2.0	ug/g	07-OCT-21	07-OCT-21	R5614325
Zirconium (Zr)	4.1		1.0	ug/g	07-OCT-21	07-OCT-21	R5614325
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.096		0.038	ug/g	05-OCT-21	06-OCT-21	R5611880
Acenaphthylene	0.336		0.038	ug/g	05-OCT-21	06-OCT-21	R5611880
Acridine	<0.075	DLHM	0.075	ug/g	05-OCT-21	06-OCT-21	R5611880
Anthracene	0.129		0.030	ug/g	05-OCT-21	06-OCT-21	R5611880
Benzo(a)anthracene	0.477	R	0.075	ug/g	05-OCT-21	06-OCT-21	R5611880
Benzo(a)pyrene	0.676		0.038	ug/g	05-OCT-21	06-OCT-21	R5611880
Benzo(b&j)fluoranthene	0.754		0.075	ug/g	05-OCT-21	06-OCT-21	R5611880
Benzo(g,h,i)perylene	0.407		0.075	ug/g	05-OCT-21	06-OCT-21	R5611880
Benzo(k)fluoranthene	0.360		0.075	ug/g	05-OCT-21	06-OCT-21	R5611880
Chrysene	0.648		0.075	ug/g	05-OCT-21	06-OCT-21	R5611880
Dibenz(a,h)anthracene	0.104		0.038	ug/g	05-OCT-21	06-OCT-21	R5611880
Fluoroanthene	0.794		0.038	ug/g	05-OCT-21	06-OCT-21	R5611880
Fluorene	0.085	R	0.038	ug/g	05-OCT-21	06-OCT-21	R5611880
Indeno(1,2,3-cd)pyrene	0.400		0.075	ug/g	05-OCT-21	06-OCT-21	R5611880
1-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	05-OCT-21	06-OCT-21	R5611880
2-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	05-OCT-21	06-OCT-21	R5611880
Naphthalene	<0.038		0.038	ug/g	05-OCT-21	06-OCT-21	R5611880
Phenanthrene	0.356		0.038	ug/g	05-OCT-21	06-OCT-21	R5611880
Pyrene	0.984		0.038	ug/g	05-OCT-21	06-OCT-21	R5611880
Quinoline	<0.038	DLHM	0.038	ug/g	05-OCT-21	06-OCT-21	R5611880
Surrogate: 2-Fluorobiphenyl	87.9		60-140	%	05-OCT-21	06-OCT-21	R5611880
Surrogate: d14-Terphenyl	77.2		60-140	%	05-OCT-21	06-OCT-21	R5611880
B(a)P Total Potency Equivalent	0.989		0.053	ug/g	05-OCT-21	06-OCT-21	R5611880
IACR (CCME)	11.2		0.75		05-OCT-21	06-OCT-21	R5611880
Polychlorinated Biphenyls							
Aroclor 1016	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1221	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646459-22 TC0M-SG-003 Sampled By: JW/ JF on 28-SEP-21 @ 14:50 Matrix: SED							
Polychlorinated Biphenyls							
Aroclor 1232	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1242	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1248	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1254	0.163	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1260	0.280	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1262	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1268	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Total Polychlorinated Biphenyls	0.442		0.068	mg/kg	07-OCT-21	07-OCT-21	R5613829
Surrogate: d14-Terphenyl	96.9		50-140	%	07-OCT-21	07-OCT-21	R5613829
L2646459-23 TC0M-SG-004 Sampled By: JW/ JF on 28-SEP-21 @ 14:20 Matrix: SED							
Physical Tests							
% Moisture	87.6		0.25	%	04-OCT-21	05-OCT-21	R5607676
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0781		0.0010	g/g	08-OCT-21	08-OCT-21	R5614716
Total Organic Carbon	7.81		0.10	%	08-OCT-21	08-OCT-21	R5614716
Metals							
Aluminum (Al)	15400		50	ug/g	07-OCT-21	07-OCT-21	R5614325
Antimony (Sb)	1.07		0.10	ug/g	07-OCT-21	07-OCT-21	R5614325
Arsenic (As)	8.85		0.10	ug/g	07-OCT-21	07-OCT-21	R5614325
Barium (Ba)	276		0.50	ug/g	07-OCT-21	07-OCT-21	R5614325
Beryllium (Be)	0.58		0.10	ug/g	07-OCT-21	07-OCT-21	R5614325
Bismuth (Bi)	0.32		0.20	ug/g	07-OCT-21	07-OCT-21	R5614325
Boron (B)	10.7		5.0	ug/g	07-OCT-21	07-OCT-21	R5614325
Cadmium (Cd)	0.741		0.020	ug/g	07-OCT-21	07-OCT-21	R5614325
Calcium (Ca)	137000		50	ug/g	07-OCT-21	07-OCT-21	R5614325
Chromium (Cr)	824		0.50	ug/g	07-OCT-21	07-OCT-21	R5614325
Cobalt (Co)	12.4		0.10	ug/g	07-OCT-21	07-OCT-21	R5614325
Copper (Cu)	44.6		0.50	ug/g	07-OCT-21	07-OCT-21	R5614325
Iron (Fe)	25800		50	ug/g	07-OCT-21	07-OCT-21	R5614325
Lead (Pb)	107		0.50	ug/g	07-OCT-21	07-OCT-21	R5614325
Lithium (Li)	14.3		2.0	ug/g	07-OCT-21	07-OCT-21	R5614325
Magnesium (Mg)	13800		20	ug/g	07-OCT-21	07-OCT-21	R5614325
Manganese (Mn)	744		1.0	ug/g	07-OCT-21	07-OCT-21	R5614325
Mercury (Hg)	0.261		0.0050	ug/g	07-OCT-21	08-OCT-21	R5614414
Molybdenum (Mo)	1.22		0.10	ug/g	07-OCT-21	07-OCT-21	R5614325
Nickel (Ni)	24.2		0.50	ug/g	07-OCT-21	07-OCT-21	R5614325
Phosphorus (P)	1050		50	ug/g	07-OCT-21	07-OCT-21	R5614325
Potassium (K)	3850		100	ug/g	07-OCT-21	07-OCT-21	R5614325
Selenium (Se)	1.16		0.20	ug/g	07-OCT-21	07-OCT-21	R5614325
Silver (Ag)	0.37		0.10	ug/g	07-OCT-21	07-OCT-21	R5614325

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646459-23 TC0M-SG-004 Sampled By: JW/ JF on 28-SEP-21 @ 14:20 Matrix: SED							
Metals							
Sodium (Na)	657		50	ug/g	07-OCT-21	07-OCT-21	R5614325
Strontium (Sr)	884		0.50	ug/g	07-OCT-21	07-OCT-21	R5614325
Sulfur (S)	9300		1000	ug/g	07-OCT-21	07-OCT-21	R5614325
Thallium (Tl)	0.222		0.050	ug/g	07-OCT-21	07-OCT-21	R5614325
Tin (Sn)	4.7		2.0	ug/g	07-OCT-21	07-OCT-21	R5614325
Titanium (Ti)	871		1.0	ug/g	07-OCT-21	07-OCT-21	R5614325
Tungsten (W)	0.75		0.50	ug/g	07-OCT-21	07-OCT-21	R5614325
Uranium (U)	0.675		0.050	ug/g	07-OCT-21	07-OCT-21	R5614325
Vanadium (V)	45.1		0.20	ug/g	07-OCT-21	07-OCT-21	R5614325
Zinc (Zn)	176		2.0	ug/g	07-OCT-21	07-OCT-21	R5614325
Zirconium (Zr)	3.0		1.0	ug/g	07-OCT-21	07-OCT-21	R5614325
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.057		0.038	ug/g	05-OCT-21	06-OCT-21	R5611880
Acenaphthylene	0.215		0.038	ug/g	05-OCT-21	06-OCT-21	R5611880
Acridine	<0.075	DLHM	0.075	ug/g	05-OCT-21	06-OCT-21	R5611880
Anthracene	0.089		0.030	ug/g	05-OCT-21	06-OCT-21	R5611880
Benzo(a)anthracene	0.366	R	0.075	ug/g	05-OCT-21	06-OCT-21	R5611880
Benzo(a)pyrene	0.550		0.038	ug/g	05-OCT-21	06-OCT-21	R5611880
Benzo(b&j)fluoranthene	0.633		0.075	ug/g	05-OCT-21	06-OCT-21	R5611880
Benzo(g,h,i)perylene	0.376		0.075	ug/g	05-OCT-21	06-OCT-21	R5611880
Benzo(k)fluoranthene	0.307		0.075	ug/g	05-OCT-21	06-OCT-21	R5611880
Chrysene	0.511		0.075	ug/g	05-OCT-21	06-OCT-21	R5611880
Dibenz(a,h)anthracene	0.088		0.038	ug/g	05-OCT-21	06-OCT-21	R5611880
Fluoroanthene	0.544		0.038	ug/g	05-OCT-21	06-OCT-21	R5611880
Fluorene	0.062		0.038	ug/g	05-OCT-21	06-OCT-21	R5611880
Indeno(1,2,3-cd)pyrene	0.331		0.075	ug/g	05-OCT-21	06-OCT-21	R5611880
1-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	05-OCT-21	06-OCT-21	R5611880
2-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	05-OCT-21	06-OCT-21	R5611880
Naphthalene	<0.038	DLHM	0.038	ug/g	05-OCT-21	06-OCT-21	R5611880
Phenanthrene	0.219		0.038	ug/g	05-OCT-21	06-OCT-21	R5611880
Pyrene	0.685		0.038	ug/g	05-OCT-21	06-OCT-21	R5611880
Quinoline	<0.038	DLHM	0.038	ug/g	05-OCT-21	06-OCT-21	R5611880
Surrogate: 2-Fluorobiphenyl	87.7		60-140	%	05-OCT-21	06-OCT-21	R5611880
Surrogate: d14-Terphenyl	78.1		60-140	%	05-OCT-21	06-OCT-21	R5611880
B(a)P Total Potency Equivalent	0.811		0.053	ug/g	05-OCT-21	06-OCT-21	R5611880
IACR (CCME)	9.27		0.75		05-OCT-21	06-OCT-21	R5611880
Polychlorinated Biphenyls							
Aroclor 1016	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1221	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1232	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1242	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646459-23 TC0M-SG-004 Sampled By: JW/ JF on 28-SEP-21 @ 14:20 Matrix: SED							
Polychlorinated Biphenyls							
Aroclor 1248	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1254	0.183	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1260	0.260	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1262	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1268	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Total Polychlorinated Biphenyls	0.443		0.068	mg/kg	07-OCT-21	07-OCT-21	R5613829
Surrogate: d14-Terphenyl	91.3		50-140	%	07-OCT-21	07-OCT-21	R5613829
L2646459-24 TC0M-SG-005 Sampled By: JW/ JF on 28-SEP-21 @ 15:07 Matrix: SED							
Physical Tests							
% Moisture	80.5		0.25	%	04-OCT-21	05-OCT-21	R5607676
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0889		0.0010	g/g	08-OCT-21	08-OCT-21	R5614716
Total Organic Carbon	8.89		0.10	%	08-OCT-21	08-OCT-21	R5614716
Metals							
Aluminum (Al)	20200		50	ug/g	07-OCT-21	07-OCT-21	R5614325
Antimony (Sb)	1.28		0.10	ug/g	07-OCT-21	07-OCT-21	R5614325
Arsenic (As)	12.7		0.10	ug/g	07-OCT-21	07-OCT-21	R5614325
Barium (Ba)	286		0.50	ug/g	07-OCT-21	07-OCT-21	R5614325
Beryllium (Be)	0.80		0.10	ug/g	07-OCT-21	07-OCT-21	R5614325
Bismuth (Bi)	0.48		0.20	ug/g	07-OCT-21	07-OCT-21	R5614325
Boron (B)	12.3		5.0	ug/g	07-OCT-21	07-OCT-21	R5614325
Cadmium (Cd)	0.917		0.020	ug/g	07-OCT-21	07-OCT-21	R5614325
Calcium (Ca)	74100		50	ug/g	07-OCT-21	07-OCT-21	R5614325
Chromium (Cr)	1720		0.50	ug/g	07-OCT-21	07-OCT-21	R5614325
Cobalt (Co)	26.8		0.10	ug/g	07-OCT-21	07-OCT-21	R5614325
Copper (Cu)	57.3		0.50	ug/g	07-OCT-21	07-OCT-21	R5614325
Iron (Fe)	34100		50	ug/g	07-OCT-21	07-OCT-21	R5614325
Lead (Pb)	185		0.50	ug/g	07-OCT-21	07-OCT-21	R5614325
Lithium (Li)	18.0		2.0	ug/g	07-OCT-21	07-OCT-21	R5614325
Magnesium (Mg)	14700		20	ug/g	07-OCT-21	07-OCT-21	R5614325
Manganese (Mn)	588		1.0	ug/g	07-OCT-21	07-OCT-21	R5614325
Mercury (Hg)	0.486		0.0050	ug/g	07-OCT-21	08-OCT-21	R5614414
Molybdenum (Mo)	0.98		0.10	ug/g	07-OCT-21	07-OCT-21	R5614325
Nickel (Ni)	33.9		0.50	ug/g	07-OCT-21	07-OCT-21	R5614325
Phosphorus (P)	1330		50	ug/g	07-OCT-21	07-OCT-21	R5614325
Potassium (K)	4240		100	ug/g	07-OCT-21	07-OCT-21	R5614325
Selenium (Se)	1.05		0.20	ug/g	07-OCT-21	07-OCT-21	R5614325
Silver (Ag)	0.40		0.10	ug/g	07-OCT-21	07-OCT-21	R5614325
Sodium (Na)	1030		50	ug/g	07-OCT-21	07-OCT-21	R5614325
Strontium (Sr)	651		0.50	ug/g	07-OCT-21	07-OCT-21	R5614325

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646459-24 TC0M-SG-005 Sampled By: JW/ JF on 28-SEP-21 @ 15:07 Matrix: SED							
Metals							
Sulfur (S)	12900		1000	ug/g	07-OCT-21	07-OCT-21	R5614325
Thallium (Tl)	0.372		0.050	ug/g	07-OCT-21	07-OCT-21	R5614325
Tin (Sn)	11.5		2.0	ug/g	07-OCT-21	07-OCT-21	R5614325
Titanium (Ti)	1170		1.0	ug/g	07-OCT-21	07-OCT-21	R5614325
Tungsten (W)	0.55		0.50	ug/g	07-OCT-21	07-OCT-21	R5614325
Uranium (U)	0.646		0.050	ug/g	07-OCT-21	07-OCT-21	R5614325
Vanadium (V)	45.7		0.20	ug/g	07-OCT-21	07-OCT-21	R5614325
Zinc (Zn)	247		2.0	ug/g	07-OCT-21	07-OCT-21	R5614325
Zirconium (Zr)	6.2		1.0	ug/g	07-OCT-21	07-OCT-21	R5614325
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.263		0.025	ug/g	05-OCT-21	06-OCT-21	R5611880
Acenaphthylene	0.700		0.025	ug/g	05-OCT-21	06-OCT-21	R5611880
Acridine	0.056		0.050	ug/g	05-OCT-21	06-OCT-21	R5611880
Anthracene	0.267		0.020	ug/g	05-OCT-21	06-OCT-21	R5611880
Benzo(a)anthracene	0.904	R	0.050	ug/g	05-OCT-21	06-OCT-21	R5611880
Benzo(a)pyrene	1.16		0.025	ug/g	05-OCT-21	06-OCT-21	R5611880
Benzo(b&j)fluoranthene	1.11		0.050	ug/g	05-OCT-21	06-OCT-21	R5611880
Benzo(g,h,i)perylene	0.627		0.050	ug/g	05-OCT-21	06-OCT-21	R5611880
Benzo(k)fluoranthene	0.558		0.050	ug/g	05-OCT-21	06-OCT-21	R5611880
Chrysene	1.03		0.050	ug/g	05-OCT-21	06-OCT-21	R5611880
Dibenz(a,h)anthracene	0.171		0.025	ug/g	05-OCT-21	06-OCT-21	R5611880
Fluoroanthene	1.40		0.025	ug/g	05-OCT-21	06-OCT-21	R5611880
Fluorene	0.164	R	0.025	ug/g	05-OCT-21	06-OCT-21	R5611880
Indeno(1,2,3-cd)pyrene	0.607		0.050	ug/g	05-OCT-21	06-OCT-21	R5611880
1-Methylnaphthalene	0.038		0.025	ug/g	05-OCT-21	06-OCT-21	R5611880
2-Methylnaphthalene	0.028	R	0.025	ug/g	05-OCT-21	06-OCT-21	R5611880
Naphthalene	0.039		0.025	ug/g	05-OCT-21	06-OCT-21	R5611880
Phenanthrene	0.635		0.025	ug/g	05-OCT-21	06-OCT-21	R5611880
Pyrene	1.63		0.025	ug/g	05-OCT-21	06-OCT-21	R5611880
Quinoline	<0.025	DLHM	0.025	ug/g	05-OCT-21	06-OCT-21	R5611880
Surrogate: 2-Fluorobiphenyl	87.1		60-140	%	05-OCT-21	06-OCT-21	R5611880
Surrogate: d14-Terphenyl	74.4		60-140	%	05-OCT-21	06-OCT-21	R5611880
B(a)P Total Potency Equivalent	1.66		0.036	ug/g	05-OCT-21	06-OCT-21	R5611880
IACR (CCME)	17.9		0.50		05-OCT-21	06-OCT-21	R5611880
Polychlorinated Biphenyls							
Aroclor 1016	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1221	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1232	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1242	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1248	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1254	0.110	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646459-24 TC0M-SG-005 Sampled By: JW/ JF on 28-SEP-21 @ 15:07 Matrix: SED							
Polychlorinated Biphenyls							
Aroclor 1260	0.204	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1262	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1268	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Total Polychlorinated Biphenyls	0.314		0.068	mg/kg	07-OCT-21	07-OCT-21	R5613829
Surrogate: d14-Terphenyl	90.3		50-140	%	07-OCT-21	07-OCT-21	R5613829
L2646459-25 TC0M-SG-008 Sampled By: JW/ JF on 28-SEP-21 @ 15:35 Matrix: SED							
Physical Tests							
% Moisture	86.9		0.25	%	04-OCT-21	05-OCT-21	R5607676
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0764		0.0010	g/g	08-OCT-21	08-OCT-21	R5614716
Total Organic Carbon	7.64		0.10	%	08-OCT-21	08-OCT-21	R5614716
Metals							
Aluminum (Al)	13400	DLM	100	ug/g	06-OCT-21	07-OCT-21	R5613997
Antimony (Sb)	1.44	DLM	0.20	ug/g	06-OCT-21	07-OCT-21	R5613997
Arsenic (As)	9.27	DLM	0.20	ug/g	06-OCT-21	07-OCT-21	R5613997
Barium (Ba)	222	DLM	1.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Beryllium (Be)	0.56	DLM	0.20	ug/g	06-OCT-21	07-OCT-21	R5613997
Bismuth (Bi)	<0.40	DLM	0.40	ug/g	06-OCT-21	07-OCT-21	R5613997
Boron (B)	<10	DLM	10	ug/g	06-OCT-21	07-OCT-21	R5613997
Cadmium (Cd)	0.656	DLM	0.040	ug/g	06-OCT-21	07-OCT-21	R5613997
Calcium (Ca)	99000	DLM	100	ug/g	06-OCT-21	07-OCT-21	R5613997
Chromium (Cr)	857	DLM	1.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Cobalt (Co)	12.2	DLM	0.20	ug/g	06-OCT-21	07-OCT-21	R5613997
Copper (Cu)	38.1	DLM	1.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Iron (Fe)	22500	DLM	100	ug/g	06-OCT-21	07-OCT-21	R5613997
Lead (Pb)	103	DLM	1.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Lithium (Li)	13.4	DLM	4.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Magnesium (Mg)	12600	DLM	40	ug/g	06-OCT-21	07-OCT-21	R5613997
Manganese (Mn)	676	DLM	2.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Mercury (Hg)	0.330		0.0050	ug/g	06-OCT-21	07-OCT-21	R5613508
Molybdenum (Mo)	0.98	DLM	0.20	ug/g	06-OCT-21	07-OCT-21	R5613997
Nickel (Ni)	21.7	DLM	1.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Phosphorus (P)	950	DLM	100	ug/g	06-OCT-21	07-OCT-21	R5613997
Potassium (K)	3120	DLM	200	ug/g	06-OCT-21	07-OCT-21	R5613997
Selenium (Se)	0.82	DLM	0.40	ug/g	06-OCT-21	07-OCT-21	R5613997
Silver (Ag)	0.39	DLM	0.20	ug/g	06-OCT-21	07-OCT-21	R5613997
Sodium (Na)	550	DLM	100	ug/g	06-OCT-21	07-OCT-21	R5613997
Strontium (Sr)	630	DLM	1.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Sulfur (S)	6400	DLM	2000	ug/g	06-OCT-21	07-OCT-21	R5613997
Thallium (Tl)	0.23	DLM	0.10	ug/g	06-OCT-21	07-OCT-21	R5613997

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646459-25 TC0M-SG-008 Sampled By: JW/ JF on 28-SEP-21 @ 15:35 Matrix: SED							
Metals							
Tin (Sn)	4.7	DLM	4.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Titanium (Ti)	907	DLM	2.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Tungsten (W)	<1.0	DLM	1.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Uranium (U)	0.60	DLM	0.10	ug/g	06-OCT-21	07-OCT-21	R5613997
Vanadium (V)	39.4	DLM	0.40	ug/g	06-OCT-21	07-OCT-21	R5613997
Zinc (Zn)	152	DLM	4.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Zirconium (Zr)	2.6	DLM	2.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.072	DLHM	0.038	ug/g	05-OCT-21	07-OCT-21	R5611880
Acenaphthylene	0.278	DLHM	0.038	ug/g	05-OCT-21	07-OCT-21	R5611880
Acridine	<0.075	DLHM	0.075	ug/g	05-OCT-21	07-OCT-21	R5611880
Anthracene	0.099	DLHM	0.030	ug/g	05-OCT-21	07-OCT-21	R5611880
Benzo(a)anthracene	0.530	R	0.075	ug/g	05-OCT-21	07-OCT-21	R5611880
Benzo(a)pyrene	0.761	DLHM	0.038	ug/g	05-OCT-21	07-OCT-21	R5611880
Benzo(b&j)fluoranthene	0.806	DLHM	0.075	ug/g	05-OCT-21	07-OCT-21	R5611880
Benzo(g,h,i)perylene	0.623	DLHM	0.075	ug/g	05-OCT-21	07-OCT-21	R5611880
Benzo(k)fluoranthene	0.328	DLHM	0.075	ug/g	05-OCT-21	07-OCT-21	R5611880
Chrysene	0.680	DLHM	0.075	ug/g	05-OCT-21	07-OCT-21	R5611880
Dibenz(a,h)anthracene	0.126	DLHM	0.038	ug/g	05-OCT-21	07-OCT-21	R5611880
Fluoroanthene	0.798	DLHM	0.038	ug/g	05-OCT-21	07-OCT-21	R5611880
Fluorene	0.066	DLHM	0.038	ug/g	05-OCT-21	07-OCT-21	R5611880
Indeno(1,2,3-cd)pyrene	0.455	DLHM	0.075	ug/g	05-OCT-21	07-OCT-21	R5611880
1-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	05-OCT-21	07-OCT-21	R5611880
2-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	05-OCT-21	07-OCT-21	R5611880
Naphthalene	<0.038	DLHM	0.038	ug/g	05-OCT-21	07-OCT-21	R5611880
Phenanthrene	0.305	DLHM	0.038	ug/g	05-OCT-21	07-OCT-21	R5611880
Pyrene	0.994	DLHM	0.038	ug/g	05-OCT-21	07-OCT-21	R5611880
Quinoline	<0.038	DLHM	0.038	ug/g	05-OCT-21	07-OCT-21	R5611880
Surrogate: 2-Fluorobiphenyl	86.9		60-140	%	05-OCT-21	07-OCT-21	R5611880
Surrogate: d14-Terphenyl	81.9		60-140	%	05-OCT-21	07-OCT-21	R5611880
B(a)P Total Potency Equivalent	1.11		0.053	ug/g	05-OCT-21	07-OCT-21	R5611880
IACR (CCME)	11.9		0.75		05-OCT-21	07-OCT-21	R5611880
Polychlorinated Biphenyls							
Aroclor 1016	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1221	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1232	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1242	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1248	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1254	0.181	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1260	0.324	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1262	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646459-25 TC0M-SG-008 Sampled By: JW/ JF on 28-SEP-21 @ 15:35 Matrix: SED							
Polychlorinated Biphenyls							
Aroclor 1268	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Total Polychlorinated Biphenyls	0.504		0.068	mg/kg	07-OCT-21	07-OCT-21	R5613829
Surrogate: d14-Terphenyl	92.7		50-140	%	07-OCT-21	07-OCT-21	R5613829
L2646459-26 TCRC-SG-001 Sampled By: JW/ JF on 28-SEP-21 @ 11:00 Matrix: SED							
Physical Tests							
% Moisture	81.6		0.25	%	04-OCT-21	05-OCT-21	R5608747
Particle Size							
General Texture Class	Fine				08-OCT-21	08-OCT-21	R5614882
MUST PSA % > 75um	8.4	PSAL	1.0	%	08-OCT-21	08-OCT-21	R5614882
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0523		0.0010	g/g	08-OCT-21	08-OCT-21	R5614716
Total Organic Carbon	5.23		0.10	%	08-OCT-21	08-OCT-21	R5614716
Metals							
Aluminum (Al)	18200		50	ug/g	07-OCT-21	07-OCT-21	R5614325
Antimony (Sb)	1.41		0.10	ug/g	07-OCT-21	07-OCT-21	R5614325
Arsenic (As)	12.2		0.10	ug/g	07-OCT-21	07-OCT-21	R5614325
Barium (Ba)	261		0.50	ug/g	07-OCT-21	07-OCT-21	R5614325
Beryllium (Be)	0.74		0.10	ug/g	07-OCT-21	07-OCT-21	R5614325
Bismuth (Bi)	0.27		0.20	ug/g	07-OCT-21	07-OCT-21	R5614325
Boron (B)	10.5		5.0	ug/g	07-OCT-21	07-OCT-21	R5614325
Boron (B), Hot Water Ext.	0.52		0.10	ug/g	07-OCT-21	07-OCT-21	R5613991
Cadmium (Cd)	0.488		0.020	ug/g	07-OCT-21	07-OCT-21	R5614325
Calcium (Ca)	89500		50	ug/g	07-OCT-21	07-OCT-21	R5614325
Chromium (Cr)	447		0.50	ug/g	07-OCT-21	07-OCT-21	R5614325
Cobalt (Co)	21.1		0.10	ug/g	07-OCT-21	07-OCT-21	R5614325
Copper (Cu)	49.1		0.50	ug/g	07-OCT-21	07-OCT-21	R5614325
Iron (Fe)	29500		50	ug/g	07-OCT-21	07-OCT-21	R5614325
Lead (Pb)	101		0.50	ug/g	07-OCT-21	07-OCT-21	R5614325
Lithium (Li)	17.1		2.0	ug/g	07-OCT-21	07-OCT-21	R5614325
Magnesium (Mg)	17200		20	ug/g	07-OCT-21	07-OCT-21	R5614325
Manganese (Mn)	772		1.0	ug/g	07-OCT-21	07-OCT-21	R5614325
Mercury (Hg)	0.325		0.0050	ug/g	07-OCT-21	08-OCT-21	R5614414
Molybdenum (Mo)	0.74		0.10	ug/g	07-OCT-21	07-OCT-21	R5614325
Nickel (Ni)	30.0		0.50	ug/g	07-OCT-21	07-OCT-21	R5614325
Phosphorus (P)	1220		50	ug/g	07-OCT-21	07-OCT-21	R5614325
Potassium (K)	4580		100	ug/g	07-OCT-21	07-OCT-21	R5614325
Selenium (Se)	0.58		0.20	ug/g	07-OCT-21	07-OCT-21	R5614325
Silver (Ag)	0.37		0.10	ug/g	07-OCT-21	07-OCT-21	R5614325
Sodium (Na)	825		50	ug/g	07-OCT-21	07-OCT-21	R5614325
Strontium (Sr)	552		0.50	ug/g	07-OCT-21	07-OCT-21	R5614325

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646459-26 TCRC-SG-001 Sampled By: JW/ JF on 28-SEP-21 @ 11:00 Matrix: SED							
Metals							
Sulfur (S)	4300		1000	ug/g	07-OCT-21	07-OCT-21	R5614325
Thallium (Tl)	0.280		0.050	ug/g	07-OCT-21	07-OCT-21	R5614325
Tin (Sn)	12.9		2.0	ug/g	07-OCT-21	07-OCT-21	R5614325
Titanium (Ti)	1210		1.0	ug/g	07-OCT-21	07-OCT-21	R5614325
Tungsten (W)	<0.50		0.50	ug/g	07-OCT-21	07-OCT-21	R5614325
Uranium (U)	0.608		0.050	ug/g	07-OCT-21	07-OCT-21	R5614325
Vanadium (V)	48.5		0.20	ug/g	07-OCT-21	07-OCT-21	R5614325
Zinc (Zn)	167		2.0	ug/g	07-OCT-21	07-OCT-21	R5614325
Zirconium (Zr)	5.9		1.0	ug/g	07-OCT-21	07-OCT-21	R5614325
Speciated Metals							
Chromium, Trivalent	444		10	ug/g		08-OCT-21	
Chromium, Hexavalent	3.5	DLHM	1.0	ug/g	06-OCT-21	07-OCT-21	R5614562
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.047	DLHM	0.025	ug/g	05-OCT-21	07-OCT-21	R5611880
Acenaphthylene	0.127	DLHM	0.025	ug/g	05-OCT-21	07-OCT-21	R5611880
Acridine	<0.050	DLHM	0.050	ug/g	05-OCT-21	07-OCT-21	R5611880
Anthracene	0.063	DLHM	0.020	ug/g	05-OCT-21	07-OCT-21	R5611880
Benzo(a)anthracene	0.268	R	0.050	ug/g	05-OCT-21	07-OCT-21	R5611880
Benzo(a)pyrene	0.348	DLHM	0.025	ug/g	05-OCT-21	07-OCT-21	R5611880
Benzo(b&j)fluoranthene	0.374	DLHM	0.050	ug/g	05-OCT-21	07-OCT-21	R5611880
Benzo(g,h,i)perylene	0.272	DLHM	0.050	ug/g	05-OCT-21	07-OCT-21	R5611880
Benzo(k)fluoranthene	0.133	DLHM	0.050	ug/g	05-OCT-21	07-OCT-21	R5611880
Chrysene	0.318	DLHM	0.050	ug/g	05-OCT-21	07-OCT-21	R5611880
Dibenz(a,h)anthracene	0.058	DLHM	0.025	ug/g	05-OCT-21	07-OCT-21	R5611880
Fluoroanthene	0.418	DLHM	0.025	ug/g	05-OCT-21	07-OCT-21	R5611880
Fluorene	0.048	DLHM	0.025	ug/g	05-OCT-21	07-OCT-21	R5611880
Indeno(1,2,3-cd)pyrene	0.202	DLHM	0.050	ug/g	05-OCT-21	07-OCT-21	R5611880
1-Methylnaphthalene	<0.025	DLHM	0.025	ug/g	05-OCT-21	07-OCT-21	R5611880
2-Methylnaphthalene	<0.025	DLHM	0.025	ug/g	05-OCT-21	07-OCT-21	R5611880
Naphthalene	<0.025	DLHM	0.025	ug/g	05-OCT-21	07-OCT-21	R5611880
Phenanthrene	0.242	DLHM	0.025	ug/g	05-OCT-21	07-OCT-21	R5611880
Pyrene	0.470	DLHM	0.025	ug/g	05-OCT-21	07-OCT-21	R5611880
Quinoline	<0.025	DLHM	0.025	ug/g	05-OCT-21	07-OCT-21	R5611880
Surrogate: 2-Fluorobiphenyl	85.9		60-140	%	05-OCT-21	07-OCT-21	R5611880
Surrogate: d14-Terphenyl	79.0		60-140	%	05-OCT-21	07-OCT-21	R5611880
B(a)P Total Potency Equivalent	0.510		0.036	ug/g	05-OCT-21	07-OCT-21	R5611880
IACR (CCME)	5.44		0.50		05-OCT-21	07-OCT-21	R5611880
Polychlorinated Biphenyls							
Aroclor 1016	<0.015	DLHM	0.015	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1221	<0.015	DLHM	0.015	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1232	<0.015	DLHM	0.015	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1242	<0.015	DLHM	0.015	mg/kg	07-OCT-21	07-OCT-21	R5613829

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646459-26 TCRC-SG-001 Sampled By: JW/ JF on 28-SEP-21 @ 11:00 Matrix: SED							
Polychlorinated Biphenyls							
Aroclor 1248	<0.015	DLHM	0.015	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1254	0.077	DLHM	0.015	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1260	0.128	DLHM	0.015	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1262	<0.015	DLHM	0.015	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1268	<0.015	DLHM	0.015	mg/kg	07-OCT-21	07-OCT-21	R5613829
Total Polychlorinated Biphenyls	0.205		0.045	mg/kg	07-OCT-21	07-OCT-21	R5613829
Surrogate: d14-Terphenyl	97.1		50-140	%	07-OCT-21	07-OCT-21	R5613829
L2646459-27 TCRC-SG-002 Sampled By: JW/ JF on 28-SEP-21 @ 11:00 Matrix: SED							
Physical Tests							
% Moisture	86.0		0.25	%	04-OCT-21	05-OCT-21	R5608747
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0731		0.0010	g/g	08-OCT-21	08-OCT-21	R5614716
Total Organic Carbon	7.31		0.10	%	08-OCT-21	08-OCT-21	R5614716
Metals							
Aluminum (Al)	17200		50	ug/g	07-OCT-21	07-OCT-21	R5614325
Antimony (Sb)	0.89		0.10	ug/g	07-OCT-21	07-OCT-21	R5614325
Arsenic (As)	10.0		0.10	ug/g	07-OCT-21	07-OCT-21	R5614325
Barium (Ba)	268		0.50	ug/g	07-OCT-21	07-OCT-21	R5614325
Beryllium (Be)	0.66		0.10	ug/g	07-OCT-21	07-OCT-21	R5614325
Bismuth (Bi)	0.37		0.20	ug/g	07-OCT-21	07-OCT-21	R5614325
Boron (B)	10.2		5.0	ug/g	07-OCT-21	07-OCT-21	R5614325
Cadmium (Cd)	0.683		0.020	ug/g	07-OCT-21	07-OCT-21	R5614325
Calcium (Ca)	87200		50	ug/g	07-OCT-21	07-OCT-21	R5614325
Chromium (Cr)	850		0.50	ug/g	07-OCT-21	07-OCT-21	R5614325
Cobalt (Co)	15.9		0.10	ug/g	07-OCT-21	07-OCT-21	R5614325
Copper (Cu)	40.2		0.50	ug/g	07-OCT-21	07-OCT-21	R5614325
Iron (Fe)	28900		50	ug/g	07-OCT-21	07-OCT-21	R5614325
Lead (Pb)	107		0.50	ug/g	07-OCT-21	07-OCT-21	R5614325
Lithium (Li)	15.5		2.0	ug/g	07-OCT-21	07-OCT-21	R5614325
Magnesium (Mg)	15500		20	ug/g	07-OCT-21	07-OCT-21	R5614325
Manganese (Mn)	992		1.0	ug/g	07-OCT-21	07-OCT-21	R5614325
Mercury (Hg)	0.293		0.0050	ug/g	07-OCT-21	08-OCT-21	R5614414
Molybdenum (Mo)	0.90		0.10	ug/g	07-OCT-21	07-OCT-21	R5614325
Nickel (Ni)	27.4		0.50	ug/g	07-OCT-21	07-OCT-21	R5614325
Phosphorus (P)	1260		50	ug/g	07-OCT-21	07-OCT-21	R5614325
Potassium (K)	4280		100	ug/g	07-OCT-21	07-OCT-21	R5614325
Selenium (Se)	0.91		0.20	ug/g	07-OCT-21	07-OCT-21	R5614325
Silver (Ag)	0.53		0.10	ug/g	07-OCT-21	07-OCT-21	R5614325
Sodium (Na)	715		50	ug/g	07-OCT-21	07-OCT-21	R5614325
Strontium (Sr)	517		0.50	ug/g	07-OCT-21	07-OCT-21	R5614325

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646459-27 TCRC-SG-002 Sampled By: JW/ JF on 28-SEP-21 @ 11:00 Matrix: SED							
Metals							
Sulfur (S)	7700		1000	ug/g	07-OCT-21	07-OCT-21	R5614325
Thallium (Tl)	0.280		0.050	ug/g	07-OCT-21	07-OCT-21	R5614325
Tin (Sn)	5.2		2.0	ug/g	07-OCT-21	07-OCT-21	R5614325
Titanium (Ti)	1040		1.0	ug/g	07-OCT-21	07-OCT-21	R5614325
Tungsten (W)	<0.50		0.50	ug/g	07-OCT-21	07-OCT-21	R5614325
Uranium (U)	0.739		0.050	ug/g	07-OCT-21	07-OCT-21	R5614325
Vanadium (V)	46.8		0.20	ug/g	07-OCT-21	07-OCT-21	R5614325
Zinc (Zn)	169		2.0	ug/g	07-OCT-21	07-OCT-21	R5614325
Zirconium (Zr)	4.5		1.0	ug/g	07-OCT-21	07-OCT-21	R5614325
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	<0.038	DLHM	0.038	ug/g	05-OCT-21	07-OCT-21	R5611880
Acenaphthylene	0.151	DLHM	0.038	ug/g	05-OCT-21	07-OCT-21	R5611880
Acridine	<0.075	DLHM	0.075	ug/g	05-OCT-21	07-OCT-21	R5611880
Anthracene	0.053	DLHM	0.030	ug/g	05-OCT-21	07-OCT-21	R5611880
Benzo(a)anthracene	0.248	R	0.075	ug/g	05-OCT-21	07-OCT-21	R5611880
Benzo(a)pyrene	0.353	DLHM	0.038	ug/g	05-OCT-21	07-OCT-21	R5611880
Benzo(b&j)fluoranthene	0.370	DLHM	0.075	ug/g	05-OCT-21	07-OCT-21	R5611880
Benzo(g,h,i)perylene	0.279	DLHM	0.075	ug/g	05-OCT-21	07-OCT-21	R5611880
Benzo(k)fluoranthene	0.127	DLHM	0.075	ug/g	05-OCT-21	07-OCT-21	R5611880
Chrysene	0.305	DLHM	0.075	ug/g	05-OCT-21	07-OCT-21	R5611880
Dibenz(a,h)anthracene	0.064	DLHM	0.038	ug/g	05-OCT-21	07-OCT-21	R5611880
Fluoroanthene	0.356	DLHM	0.038	ug/g	05-OCT-21	07-OCT-21	R5611880
Fluorene	<0.038	DLHM	0.038	ug/g	05-OCT-21	07-OCT-21	R5611880
Indeno(1,2,3-cd)pyrene	0.210	DLHM	0.075	ug/g	05-OCT-21	07-OCT-21	R5611880
1-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	05-OCT-21	07-OCT-21	R5611880
2-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	05-OCT-21	07-OCT-21	R5611880
Naphthalene	<0.038	DLHM	0.038	ug/g	05-OCT-21	07-OCT-21	R5611880
Phenanthrene	0.153	DLHM	0.038	ug/g	05-OCT-21	07-OCT-21	R5611880
Pyrene	0.437	DLHM	0.038	ug/g	05-OCT-21	07-OCT-21	R5611880
Quinoline	<0.038	DLHM	0.038	ug/g	05-OCT-21	07-OCT-21	R5611880
Surrogate: 2-Fluorobiphenyl	85.6		60-140	%	05-OCT-21	07-OCT-21	R5611880
Surrogate: d14-Terphenyl	74.6		60-140	%	05-OCT-21	07-OCT-21	R5611880
B(a)P Total Potency Equivalent	0.519		0.053	ug/g	05-OCT-21	07-OCT-21	R5611880
IACR (CCME)	5.35		0.75		05-OCT-21	07-OCT-21	R5611880
Polychlorinated Biphenyls							
Aroclor 1016	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1221	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1232	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1242	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1248	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1254	0.135	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646459-27 TCRC-SG-002 Sampled By: JW/ JF on 28-SEP-21 @ 11:00 Matrix: SED							
Polychlorinated Biphenyls							
Aroclor 1260	0.219	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1262	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1268	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Total Polychlorinated Biphenyls	0.354		0.068	mg/kg	07-OCT-21	07-OCT-21	R5613829
Surrogate: d14-Terphenyl	92.0		50-140	%	07-OCT-21	07-OCT-21	R5613829
L2646459-28 TCRC-SG-003 Sampled By: JW/ JF on 28-SEP-21 @ 10:40 Matrix: SED							
Physical Tests							
% Moisture	77.3		0.25	%	04-OCT-21	05-OCT-21	R5608747
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0606		0.0010	g/g	08-OCT-21	08-OCT-21	R5614716
Total Organic Carbon	6.06		0.10	%	08-OCT-21	08-OCT-21	R5614716
Metals							
Aluminum (Al)	18700		50	ug/g	07-OCT-21	07-OCT-21	R5614325
Antimony (Sb)	0.95		0.10	ug/g	07-OCT-21	07-OCT-21	R5614325
Arsenic (As)	12.2		0.10	ug/g	07-OCT-21	07-OCT-21	R5614325
Barium (Ba)	272		0.50	ug/g	07-OCT-21	07-OCT-21	R5614325
Beryllium (Be)	0.72		0.10	ug/g	07-OCT-21	07-OCT-21	R5614325
Bismuth (Bi)	0.38		0.20	ug/g	07-OCT-21	07-OCT-21	R5614325
Boron (B)	10.3		5.0	ug/g	07-OCT-21	07-OCT-21	R5614325
Cadmium (Cd)	0.668		0.020	ug/g	07-OCT-21	07-OCT-21	R5614325
Calcium (Ca)	79500		50	ug/g	07-OCT-21	07-OCT-21	R5614325
Chromium (Cr)	741		0.50	ug/g	07-OCT-21	07-OCT-21	R5614325
Cobalt (Co)	19.5		0.10	ug/g	07-OCT-21	07-OCT-21	R5614325
Copper (Cu)	38.9		0.50	ug/g	07-OCT-21	07-OCT-21	R5614325
Iron (Fe)	30100		50	ug/g	07-OCT-21	07-OCT-21	R5614325
Lead (Pb)	105		0.50	ug/g	07-OCT-21	07-OCT-21	R5614325
Lithium (Li)	16.5		2.0	ug/g	07-OCT-21	07-OCT-21	R5614325
Magnesium (Mg)	16600		20	ug/g	07-OCT-21	07-OCT-21	R5614325
Manganese (Mn)	917		1.0	ug/g	07-OCT-21	07-OCT-21	R5614325
Mercury (Hg)	0.325		0.0050	ug/g	07-OCT-21	08-OCT-21	R5614414
Molybdenum (Mo)	0.91		0.10	ug/g	07-OCT-21	07-OCT-21	R5614325
Nickel (Ni)	30.1		0.50	ug/g	07-OCT-21	07-OCT-21	R5614325
Phosphorus (P)	1260		50	ug/g	07-OCT-21	07-OCT-21	R5614325
Potassium (K)	4590		100	ug/g	07-OCT-21	07-OCT-21	R5614325
Selenium (Se)	0.79		0.20	ug/g	07-OCT-21	07-OCT-21	R5614325
Silver (Ag)	0.53		0.10	ug/g	07-OCT-21	07-OCT-21	R5614325
Sodium (Na)	767		50	ug/g	07-OCT-21	07-OCT-21	R5614325
Strontium (Sr)	464		0.50	ug/g	07-OCT-21	07-OCT-21	R5614325
Sulfur (S)	6800		1000	ug/g	07-OCT-21	07-OCT-21	R5614325
Thallium (Tl)	0.320		0.050	ug/g	07-OCT-21	07-OCT-21	R5614325

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646459-28 TCRC-SG-003 Sampled By: JW/ JF on 28-SEP-21 @ 10:40 Matrix: SED							
Metals							
Tin (Sn)	6.6		2.0	ug/g	07-OCT-21	07-OCT-21	R5614325
Titanium (Ti)	1200		1.0	ug/g	07-OCT-21	07-OCT-21	R5614325
Tungsten (W)	<0.50		0.50	ug/g	07-OCT-21	07-OCT-21	R5614325
Uranium (U)	0.757		0.050	ug/g	07-OCT-21	07-OCT-21	R5614325
Vanadium (V)	50.0		0.20	ug/g	07-OCT-21	07-OCT-21	R5614325
Zinc (Zn)	165		2.0	ug/g	07-OCT-21	07-OCT-21	R5614325
Zirconium (Zr)	5.2		1.0	ug/g	07-OCT-21	07-OCT-21	R5614325
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.033	DLHM	0.015	ug/g	05-OCT-21	07-OCT-21	R5611880
Acenaphthylene	0.101	DLHM	0.015	ug/g	05-OCT-21	07-OCT-21	R5611880
Acridine	<0.030	DLHM	0.030	ug/g	05-OCT-21	07-OCT-21	R5611880
Anthracene	0.070	DLHM	0.012	ug/g	05-OCT-21	07-OCT-21	R5611880
Benzo(a)anthracene	0.283	R	0.030	ug/g	05-OCT-21	07-OCT-21	R5611880
Benzo(a)pyrene	0.335	DLHM	0.015	ug/g	05-OCT-21	07-OCT-21	R5611880
Benzo(b&j)fluoranthene	0.344	DLHM	0.030	ug/g	05-OCT-21	07-OCT-21	R5611880
Benzo(g,h,i)perylene	0.236	DLHM	0.030	ug/g	05-OCT-21	07-OCT-21	R5611880
Benzo(k)fluoranthene	0.130	DLHM	0.030	ug/g	05-OCT-21	07-OCT-21	R5611880
Chrysene	0.304	DLHM	0.030	ug/g	05-OCT-21	07-OCT-21	R5611880
Dibenz(a,h)anthracene	0.054	DLHM	0.015	ug/g	05-OCT-21	07-OCT-21	R5611880
Fluoroanthene	0.424	DLHM	0.015	ug/g	05-OCT-21	07-OCT-21	R5611880
Fluorene	0.041	DLHM	0.015	ug/g	05-OCT-21	07-OCT-21	R5611880
Indeno(1,2,3-cd)pyrene	0.184	DLHM	0.030	ug/g	05-OCT-21	07-OCT-21	R5611880
1-Methylnaphthalene	<0.015	DLHM	0.015	ug/g	05-OCT-21	07-OCT-21	R5611880
2-Methylnaphthalene	<0.015	DLHM	0.015	ug/g	05-OCT-21	07-OCT-21	R5611880
Naphthalene	<0.015	DLHM	0.015	ug/g	05-OCT-21	07-OCT-21	R5611880
Phenanthrene	0.215	DLHM	0.015	ug/g	05-OCT-21	07-OCT-21	R5611880
Pyrene	0.453	DLHM	0.015	ug/g	05-OCT-21	07-OCT-21	R5611880
Quinoline	<0.015	DLHM	0.015	ug/g	05-OCT-21	07-OCT-21	R5611880
Surrogate: 2-Fluorobiphenyl	86.0		60-140	%	05-OCT-21	07-OCT-21	R5611880
Surrogate: d14-Terphenyl	66.6		60-140	%	05-OCT-21	07-OCT-21	R5611880
B(a)P Total Potency Equivalent	0.488		0.021	ug/g	05-OCT-21	07-OCT-21	R5611880
IACR (CCME)	5.21		0.30		05-OCT-21	07-OCT-21	R5611880
Polychlorinated Biphenyls							
Aroclor 1016	<0.0090	DLHM	0.0090	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1221	<0.0090	DLHM	0.0090	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1232	<0.0090	DLHM	0.0090	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1242	<0.0090	DLHM	0.0090	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1248	<0.0090	DLHM	0.0090	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1254	0.0825	DLHM	0.0090	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1260	0.132	DLHM	0.0090	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1262	<0.0090	DLHM	0.0090	mg/kg	07-OCT-21	07-OCT-21	R5613829

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646459-28 TCRC-SG-003 Sampled By: JW/ JF on 28-SEP-21 @ 10:40 Matrix: SED							
Polychlorinated Biphenyls							
Aroclor 1268	<0.0090	DLHM	0.0090	mg/kg	07-OCT-21	07-OCT-21	R5613829
Total Polychlorinated Biphenyls	0.214		0.027	mg/kg	07-OCT-21	07-OCT-21	R5613829
Surrogate: d14-Terphenyl	90.1		50-140	%	07-OCT-21	07-OCT-21	R5613829
L2646459-29 TCRC-SG-005 Sampled By: JW/ JF on 28-SEP-21 @ 10:00 Matrix: SED							
Physical Tests							
% Moisture	86.7		0.25	%	04-OCT-21	05-OCT-21	R5608747
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0631		0.0010	g/g	08-OCT-21	08-OCT-21	R5614708
Total Organic Carbon	6.31		0.10	%	08-OCT-21	08-OCT-21	R5614708
Metals							
Aluminum (Al)	15500		50	ug/g	07-OCT-21	07-OCT-21	R5614325
Antimony (Sb)	0.63		0.10	ug/g	07-OCT-21	07-OCT-21	R5614325
Arsenic (As)	7.74		0.10	ug/g	07-OCT-21	07-OCT-21	R5614325
Barium (Ba)	267		0.50	ug/g	07-OCT-21	07-OCT-21	R5614325
Beryllium (Be)	0.58		0.10	ug/g	07-OCT-21	07-OCT-21	R5614325
Bismuth (Bi)	0.33		0.20	ug/g	07-OCT-21	07-OCT-21	R5614325
Boron (B)	8.5		5.0	ug/g	07-OCT-21	07-OCT-21	R5614325
Cadmium (Cd)	0.588		0.020	ug/g	07-OCT-21	07-OCT-21	R5614325
Calcium (Ca)	107000		50	ug/g	07-OCT-21	07-OCT-21	R5614325
Chromium (Cr)	538		0.50	ug/g	07-OCT-21	07-OCT-21	R5614325
Cobalt (Co)	12.6		0.10	ug/g	07-OCT-21	07-OCT-21	R5614325
Copper (Cu)	33.5		0.50	ug/g	07-OCT-21	07-OCT-21	R5614325
Iron (Fe)	24500		50	ug/g	07-OCT-21	07-OCT-21	R5614325
Lead (Pb)	80.0		0.50	ug/g	07-OCT-21	07-OCT-21	R5614325
Lithium (Li)	13.5		2.0	ug/g	07-OCT-21	07-OCT-21	R5614325
Magnesium (Mg)	13500		20	ug/g	07-OCT-21	07-OCT-21	R5614325
Manganese (Mn)	931		1.0	ug/g	07-OCT-21	07-OCT-21	R5614325
Mercury (Hg)	0.224		0.0050	ug/g	07-OCT-21	08-OCT-21	R5614414
Molybdenum (Mo)	0.89		0.10	ug/g	07-OCT-21	07-OCT-21	R5614325
Nickel (Ni)	23.6		0.50	ug/g	07-OCT-21	07-OCT-21	R5614325
Phosphorus (P)	1110		50	ug/g	07-OCT-21	07-OCT-21	R5614325
Potassium (K)	3730		100	ug/g	07-OCT-21	07-OCT-21	R5614325
Selenium (Se)	0.92		0.20	ug/g	07-OCT-21	07-OCT-21	R5614325
Silver (Ag)	0.45		0.10	ug/g	07-OCT-21	07-OCT-21	R5614325
Sodium (Na)	650		50	ug/g	07-OCT-21	07-OCT-21	R5614325
Strontium (Sr)	651		0.50	ug/g	07-OCT-21	07-OCT-21	R5614325
Sulfur (S)	7400		1000	ug/g	07-OCT-21	07-OCT-21	R5614325
Thallium (Tl)	0.248		0.050	ug/g	07-OCT-21	07-OCT-21	R5614325
Tin (Sn)	4.2		2.0	ug/g	07-OCT-21	07-OCT-21	R5614325
Titanium (Ti)	914		1.0	ug/g	07-OCT-21	07-OCT-21	R5614325

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646459-29 TCRC-SG-005 Sampled By: JW/ JF on 28-SEP-21 @ 10:00 Matrix: SED							
Metals							
Tungsten (W)	<0.50		0.50	ug/g	07-OCT-21	07-OCT-21	R5614325
Uranium (U)	0.733		0.050	ug/g	07-OCT-21	07-OCT-21	R5614325
Vanadium (V)	40.9		0.20	ug/g	07-OCT-21	07-OCT-21	R5614325
Zinc (Zn)	129		2.0	ug/g	07-OCT-21	07-OCT-21	R5614325
Zirconium (Zr)	3.8		1.0	ug/g	07-OCT-21	07-OCT-21	R5614325
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	<0.038	DLHM	0.038	ug/g	05-OCT-21	07-OCT-21	R5611880
Acenaphthylene	0.095	DLHM	0.038	ug/g	05-OCT-21	07-OCT-21	R5611880
Acridine	<0.075	DLHM	0.075	ug/g	05-OCT-21	07-OCT-21	R5611880
Anthracene	0.036	DLHM	0.030	ug/g	05-OCT-21	07-OCT-21	R5611880
Benzo(a)anthracene	0.196	R	0.075	ug/g	05-OCT-21	07-OCT-21	R5611880
Benzo(a)pyrene	0.267	DLHM	0.038	ug/g	05-OCT-21	07-OCT-21	R5611880
Benzo(b&j)fluoranthene	0.283	DLHM	0.075	ug/g	05-OCT-21	07-OCT-21	R5611880
Benzo(g,h,i)perylene	0.212	DLHM	0.075	ug/g	05-OCT-21	07-OCT-21	R5611880
Benzo(k)fluoranthene	0.092	DLHM	0.075	ug/g	05-OCT-21	07-OCT-21	R5611880
Chrysene	0.228	DLHM	0.075	ug/g	05-OCT-21	07-OCT-21	R5611880
Dibenz(a,h)anthracene	0.045	DLHM	0.038	ug/g	05-OCT-21	07-OCT-21	R5611880
Fluoroanthene	0.264	DLHM	0.038	ug/g	05-OCT-21	07-OCT-21	R5611880
Fluorene	<0.038	DLHM	0.038	ug/g	05-OCT-21	07-OCT-21	R5611880
Indeno(1,2,3-cd)pyrene	0.163	DLHM	0.075	ug/g	05-OCT-21	07-OCT-21	R5611880
1-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	05-OCT-21	07-OCT-21	R5611880
2-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	05-OCT-21	07-OCT-21	R5611880
Naphthalene	<0.038	DLHM	0.038	ug/g	05-OCT-21	07-OCT-21	R5611880
Phenanthrene	0.105	DLHM	0.038	ug/g	05-OCT-21	07-OCT-21	R5611880
Pyrene	0.320	DLHM	0.038	ug/g	05-OCT-21	07-OCT-21	R5611880
Quinoline	<0.038	DLHM	0.038	ug/g	05-OCT-21	07-OCT-21	R5611880
Surrogate: 2-Fluorobiphenyl	86.3		60-140	%	05-OCT-21	07-OCT-21	R5611880
Surrogate: d14-Terphenyl	68.9		60-140	%	05-OCT-21	07-OCT-21	R5611880
B(a)P Total Potency Equivalent	0.390		0.053	ug/g	05-OCT-21	07-OCT-21	R5611880
IACR (CCME)	4.06		0.75		05-OCT-21	07-OCT-21	R5611880
Polychlorinated Biphenyls							
Aroclor 1016	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1221	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1232	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1242	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1248	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1254	0.111	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1260	0.169	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1262	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1268	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Total Polychlorinated Biphenyls	0.279		0.068	mg/kg	07-OCT-21	07-OCT-21	R5613829

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646459-29 TCRC-SG-005 Sampled By: JW/ JF on 28-SEP-21 @ 10:00 Matrix: SED							
Polychlorinated Biphenyls							
Surrogate: d14-Terphenyl	90.0		50-140	%	07-OCT-21	07-OCT-21	R5613829
L2646459-30 TCRC-SG-006 Sampled By: JW/ JF on 28-SEP-21 @ 11:30 Matrix: SED							
Physical Tests							
% Moisture	86.4		0.25	%	04-OCT-21	05-OCT-21	R5608747
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0670		0.0010	g/g	08-OCT-21	08-OCT-21	R5614708
Total Organic Carbon	6.70		0.10	%	08-OCT-21	08-OCT-21	R5614708
Metals							
Aluminum (Al)	22000		50	ug/g	07-OCT-21	07-OCT-21	R5614325
Antimony (Sb)	0.80		0.10	ug/g	07-OCT-21	07-OCT-21	R5614325
Arsenic (As)	10.3		0.10	ug/g	07-OCT-21	07-OCT-21	R5614325
Barium (Ba)	301		0.50	ug/g	07-OCT-21	07-OCT-21	R5614325
Beryllium (Be)	0.78		0.10	ug/g	07-OCT-21	07-OCT-21	R5614325
Bismuth (Bi)	0.38		0.20	ug/g	07-OCT-21	07-OCT-21	R5614325
Boron (B)	11.7		5.0	ug/g	07-OCT-21	07-OCT-21	R5614325
Cadmium (Cd)	0.692		0.020	ug/g	07-OCT-21	07-OCT-21	R5614325
Calcium (Ca)	70100		50	ug/g	07-OCT-21	07-OCT-21	R5614325
Chromium (Cr)	653		0.50	ug/g	07-OCT-21	07-OCT-21	R5614325
Cobalt (Co)	18.6		0.10	ug/g	07-OCT-21	07-OCT-21	R5614325
Copper (Cu)	45.1		0.50	ug/g	07-OCT-21	07-OCT-21	R5614325
Iron (Fe)	32600		50	ug/g	07-OCT-21	07-OCT-21	R5614325
Lead (Pb)	92.6		0.50	ug/g	07-OCT-21	07-OCT-21	R5614325
Lithium (Li)	18.9		2.0	ug/g	07-OCT-21	07-OCT-21	R5614325
Magnesium (Mg)	18300		20	ug/g	07-OCT-21	07-OCT-21	R5614325
Manganese (Mn)	1190		1.0	ug/g	07-OCT-21	07-OCT-21	R5614325
Mercury (Hg)	0.314		0.0050	ug/g	07-OCT-21	08-OCT-21	R5614414
Molybdenum (Mo)	0.84		0.10	ug/g	07-OCT-21	07-OCT-21	R5614325
Nickel (Ni)	33.4		0.50	ug/g	07-OCT-21	07-OCT-21	R5614325
Phosphorus (P)	1290		50	ug/g	07-OCT-21	07-OCT-21	R5614325
Potassium (K)	5310		100	ug/g	07-OCT-21	07-OCT-21	R5614325
Selenium (Se)	0.91		0.20	ug/g	07-OCT-21	07-OCT-21	R5614325
Silver (Ag)	0.53		0.10	ug/g	07-OCT-21	07-OCT-21	R5614325
Sodium (Na)	843		50	ug/g	07-OCT-21	07-OCT-21	R5614325
Strontium (Sr)	366		0.50	ug/g	07-OCT-21	07-OCT-21	R5614325
Sulfur (S)	6600		1000	ug/g	07-OCT-21	07-OCT-21	R5614325
Thallium (Tl)	0.291		0.050	ug/g	07-OCT-21	07-OCT-21	R5614325
Tin (Sn)	6.5		2.0	ug/g	07-OCT-21	07-OCT-21	R5614325
Titanium (Ti)	1290		1.0	ug/g	07-OCT-21	07-OCT-21	R5614325
Tungsten (W)	<0.50		0.50	ug/g	07-OCT-21	07-OCT-21	R5614325
Uranium (U)	0.731		0.050	ug/g	07-OCT-21	07-OCT-21	R5614325

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646459-30 TCRC-SG-006 Sampled By: JW/ JF on 28-SEP-21 @ 11:30 Matrix: SED							
Metals							
Vanadium (V)	54.3		0.20	ug/g	07-OCT-21	07-OCT-21	R5614325
Zinc (Zn)	172		2.0	ug/g	07-OCT-21	07-OCT-21	R5614325
Zirconium (Zr)	5.6		1.0	ug/g	07-OCT-21	07-OCT-21	R5614325
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	<0.038	DLHM	0.038	ug/g	07-OCT-21	08-OCT-21	R5614231
Acenaphthylene	0.129	DLHM	0.038	ug/g	07-OCT-21	08-OCT-21	R5614231
Acridine	<0.075	DLHM	0.075	ug/g	07-OCT-21	08-OCT-21	R5614231
Anthracene	0.085	DLHM	0.030	ug/g	07-OCT-21	08-OCT-21	R5614231
Benzo(a)anthracene	0.287	R	0.075	ug/g	07-OCT-21	08-OCT-21	R5614231
Benzo(a)pyrene	0.402	DLHM	0.038	ug/g	07-OCT-21	08-OCT-21	R5614231
Benzo(b&j)fluoranthene	0.440	DLHM	0.075	ug/g	07-OCT-21	08-OCT-21	R5614231
Benzo(g,h,i)perylene	0.307	DLHM	0.075	ug/g	07-OCT-21	08-OCT-21	R5614231
Benzo(k)fluoranthene	0.201	DLHM	0.075	ug/g	07-OCT-21	08-OCT-21	R5614231
Chrysene	0.379	DLHM	0.075	ug/g	07-OCT-21	08-OCT-21	R5614231
Dibenz(a,h)anthracene	0.064	DLHM	0.038	ug/g	07-OCT-21	08-OCT-21	R5614231
Fluoroanthene	0.473	DLHM	0.038	ug/g	07-OCT-21	08-OCT-21	R5614231
Fluorene	0.046	DLHM	0.038	ug/g	07-OCT-21	08-OCT-21	R5614231
Indeno(1,2,3-cd)pyrene	0.205	DLHM	0.075	ug/g	07-OCT-21	08-OCT-21	R5614231
1-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	07-OCT-21	08-OCT-21	R5614231
2-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	07-OCT-21	08-OCT-21	R5614231
Naphthalene	<0.038	DLHM	0.038	ug/g	07-OCT-21	08-OCT-21	R5614231
Phenanthrene	0.247	DLHM	0.038	ug/g	07-OCT-21	08-OCT-21	R5614231
Pyrene	0.533	DLHM	0.038	ug/g	07-OCT-21	08-OCT-21	R5614231
Quinoline	<0.038	DLHM	0.038	ug/g	07-OCT-21	08-OCT-21	R5614231
Surrogate: 2-Fluorobiphenyl	93.1		60-140	%	07-OCT-21	08-OCT-21	R5614231
Surrogate: d14-Terphenyl	82.0		60-140	%	07-OCT-21	08-OCT-21	R5614231
B(a)P Total Potency Equivalent	0.586		0.053	ug/g	07-OCT-21	08-OCT-21	R5614231
IACR (CCME)	6.54		0.75		07-OCT-21	08-OCT-21	R5614231
Polychlorinated Biphenyls							
Aroclor 1016	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1221	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1232	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1242	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1248	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1254	0.105	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1260	0.169	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1262	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1268	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Total Polychlorinated Biphenyls	0.274		0.068	mg/kg	07-OCT-21	07-OCT-21	R5613829
Surrogate: d14-Terphenyl	90.1		50-140	%	07-OCT-21	07-OCT-21	R5613829
L2646459-31 TCRC-SG-007 JW/ JF on 28-SEP-21 @ 10:10							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646459-31 TCRC-SG-007 Sampled By: JW/ JF on 28-SEP-21 @ 10:10 Matrix: SED							
Physical Tests							
% Moisture	85.1		0.25	%	04-OCT-21	05-OCT-21	R5608747
Particle Size							
General Texture Class	Fine				22-OCT-21	22-OCT-21	R5627100
MUST PSA % > 75um	2.8	PSAL	1.0	%	22-OCT-21	22-OCT-21	R5627100
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0688		0.0010	g/g	08-OCT-21	08-OCT-21	R5614708
Total Organic Carbon	6.88		0.10	%	08-OCT-21	08-OCT-21	R5614708
Metals							
Aluminum (Al)	18000		50	ug/g	06-OCT-21	07-OCT-21	R5613858
Antimony (Sb)	2.96		0.10	ug/g	06-OCT-21	07-OCT-21	R5613858
Arsenic (As)	59.3		0.10	ug/g	06-OCT-21	07-OCT-21	R5613858
Barium (Ba)	264		0.50	ug/g	06-OCT-21	07-OCT-21	R5613858
Beryllium (Be)	0.70		0.10	ug/g	06-OCT-21	07-OCT-21	R5613858
Bismuth (Bi)	0.53		0.20	ug/g	06-OCT-21	07-OCT-21	R5613858
Boron (B)	12.5		5.0	ug/g	06-OCT-21	07-OCT-21	R5613858
Cadmium (Cd)	0.637		0.020	ug/g	06-OCT-21	07-OCT-21	R5613858
Calcium (Ca)	82800		50	ug/g	06-OCT-21	07-OCT-21	R5613858
Chromium (Cr)	473		0.50	ug/g	06-OCT-21	07-OCT-21	R5613858
Cobalt (Co)	21.6		0.10	ug/g	06-OCT-21	07-OCT-21	R5613858
Copper (Cu)	57.4		0.50	ug/g	06-OCT-21	07-OCT-21	R5613858
Iron (Fe)	27600		50	ug/g	06-OCT-21	07-OCT-21	R5613858
Lead (Pb)	110		0.50	ug/g	06-OCT-21	07-OCT-21	R5613858
Lithium (Li)	17.5		2.0	ug/g	06-OCT-21	07-OCT-21	R5613858
Magnesium (Mg)	17200		20	ug/g	06-OCT-21	07-OCT-21	R5613858
Manganese (Mn)	893		1.0	ug/g	06-OCT-21	07-OCT-21	R5613858
Mercury (Hg)	0.815	DLM	0.010	ug/g	06-OCT-21	07-OCT-21	R5613510
Molybdenum (Mo)	0.92		0.10	ug/g	06-OCT-21	07-OCT-21	R5613858
Nickel (Ni)	31.9		0.50	ug/g	06-OCT-21	07-OCT-21	R5613858
Phosphorus (P)	1140		50	ug/g	06-OCT-21	07-OCT-21	R5613858
Potassium (K)	4350		100	ug/g	06-OCT-21	07-OCT-21	R5613858
Selenium (Se)	0.80		0.20	ug/g	06-OCT-21	07-OCT-21	R5613858
Silver (Ag)	0.64		0.10	ug/g	06-OCT-21	07-OCT-21	R5613858
Sodium (Na)	741		50	ug/g	06-OCT-21	07-OCT-21	R5613858
Strontium (Sr)	499		0.50	ug/g	06-OCT-21	07-OCT-21	R5613858
Sulfur (S)	4600		1000	ug/g	06-OCT-21	07-OCT-21	R5613858
Thallium (Tl)	0.273		0.050	ug/g	06-OCT-21	07-OCT-21	R5613858
Tin (Sn)	6.9		2.0	ug/g	06-OCT-21	07-OCT-21	R5613858
Titanium (Ti)	1270		1.0	ug/g	06-OCT-21	07-OCT-21	R5613858
Tungsten (W)	0.82		0.50	ug/g	06-OCT-21	07-OCT-21	R5613858
Uranium (U)	0.650		0.050	ug/g	06-OCT-21	07-OCT-21	R5613858
Vanadium (V)	48.4		0.20	ug/g	06-OCT-21	07-OCT-21	R5613858
Zinc (Zn)	191		2.0	ug/g	06-OCT-21	07-OCT-21	R5613858

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646459-31 TCRC-SG-007 Sampled By: JW/ JF on 28-SEP-21 @ 10:10 Matrix: SED							
Metals							
Zirconium (Zr)	3.5		1.0	ug/g	06-OCT-21	07-OCT-21	R5613858
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	<0.038	DLHM	0.038	ug/g	05-OCT-21	07-OCT-21	R5611880
Acenaphthylene	0.088	DLHM	0.038	ug/g	05-OCT-21	07-OCT-21	R5611880
Acridine	<0.075	DLHM	0.075	ug/g	05-OCT-21	07-OCT-21	R5611880
Anthracene	0.069	DLHM	0.030	ug/g	05-OCT-21	07-OCT-21	R5611880
Benzo(a)anthracene	0.350	DLHM	0.075	ug/g	05-OCT-21	07-OCT-21	R5611880
Benzo(a)pyrene	0.399	DLHM	0.038	ug/g	05-OCT-21	07-OCT-21	R5611880
Benzo(b&j)fluoranthene	0.503	DLHM	0.075	ug/g	05-OCT-21	07-OCT-21	R5611880
Benzo(g,h,i)perylene	0.321	DLHM	0.075	ug/g	05-OCT-21	07-OCT-21	R5611880
Benzo(k)fluoranthene	0.184	DLHM	0.075	ug/g	05-OCT-21	07-OCT-21	R5611880
Chrysene	0.445	DLHM	0.075	ug/g	05-OCT-21	07-OCT-21	R5611880
Dibenz(a,h)anthracene	0.073	DLHM	0.038	ug/g	05-OCT-21	07-OCT-21	R5611880
Fluoroanthene	0.668	DLHM	0.038	ug/g	05-OCT-21	07-OCT-21	R5611880
Fluorene	<0.038	DLHM	0.038	ug/g	05-OCT-21	07-OCT-21	R5611880
Indeno(1,2,3-cd)pyrene	0.257	DLHM	0.075	ug/g	05-OCT-21	07-OCT-21	R5611880
1-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	05-OCT-21	07-OCT-21	R5611880
2-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	05-OCT-21	07-OCT-21	R5611880
Naphthalene	<0.038	DLHM	0.038	ug/g	05-OCT-21	07-OCT-21	R5611880
Phenanthrene	0.306	DLHM	0.038	ug/g	05-OCT-21	07-OCT-21	R5611880
Pyrene	0.631	DLHM	0.038	ug/g	05-OCT-21	07-OCT-21	R5611880
Quinoline	<0.038	DLHM	0.038	ug/g	05-OCT-21	07-OCT-21	R5611880
Surrogate: 2-Fluorobiphenyl	86.8		60-140	%	05-OCT-21	07-OCT-21	R5611880
Surrogate: d14-Terphenyl	77.9		60-140	%	05-OCT-21	07-OCT-21	R5611880
B(a)P Total Potency Equivalent	0.610		0.053	ug/g	05-OCT-21	07-OCT-21	R5611880
IACR (CCME)	7.10		0.75		05-OCT-21	07-OCT-21	R5611880
Polychlorinated Biphenyls							
Aroclor 1016	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1221	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1232	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1242	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1248	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1254	0.145	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1260	0.190	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1262	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1268	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Total Polychlorinated Biphenyls	0.335		0.068	mg/kg	07-OCT-21	07-OCT-21	R5613829
Surrogate: d14-Terphenyl	106.2		50-140	%	07-OCT-21	07-OCT-21	R5613829
L2646459-32 TCRC-SG-008 Sampled By: JW/ JF on 28-SEP-21 @ 09:15 Matrix: SED							
Physical Tests							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646459-32 TCRC-SG-008 Sampled By: JW/ JF on 28-SEP-21 @ 09:15 Matrix: SED							
Physical Tests							
% Moisture	86.5		0.25	%	04-OCT-21	05-OCT-21	R5608747
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0690		0.0010	g/g	08-OCT-21	08-OCT-21	R5614708
Total Organic Carbon	6.90		0.10	%	08-OCT-21	08-OCT-21	R5614708
Metals							
Aluminum (Al)	14100		50	ug/g	06-OCT-21	07-OCT-21	R5613858
Antimony (Sb)	0.86		0.10	ug/g	06-OCT-21	07-OCT-21	R5613858
Arsenic (As)	14.3		0.10	ug/g	06-OCT-21	07-OCT-21	R5613858
Barium (Ba)	273		0.50	ug/g	06-OCT-21	07-OCT-21	R5613858
Beryllium (Be)	0.59		0.10	ug/g	06-OCT-21	07-OCT-21	R5613858
Bismuth (Bi)	0.40		0.20	ug/g	06-OCT-21	07-OCT-21	R5613858
Boron (B)	12.6		5.0	ug/g	06-OCT-21	07-OCT-21	R5613858
Cadmium (Cd)	0.556		0.020	ug/g	06-OCT-21	07-OCT-21	R5613858
Calcium (Ca)	112000		50	ug/g	06-OCT-21	07-OCT-21	R5613858
Chromium (Cr)	456		0.50	ug/g	06-OCT-21	07-OCT-21	R5613858
Cobalt (Co)	15.4		0.10	ug/g	06-OCT-21	07-OCT-21	R5613858
Copper (Cu)	34.1		0.50	ug/g	06-OCT-21	07-OCT-21	R5613858
Iron (Fe)	23700		50	ug/g	06-OCT-21	07-OCT-21	R5613858
Lead (Pb)	81.4		0.50	ug/g	06-OCT-21	07-OCT-21	R5613858
Lithium (Li)	14.2		2.0	ug/g	06-OCT-21	07-OCT-21	R5613858
Magnesium (Mg)	13100		20	ug/g	06-OCT-21	07-OCT-21	R5613858
Manganese (Mn)	1100		1.0	ug/g	06-OCT-21	07-OCT-21	R5613858
Mercury (Hg)	0.402	DLM	0.010	ug/g	06-OCT-21	07-OCT-21	R5613510
Molybdenum (Mo)	0.95		0.10	ug/g	06-OCT-21	07-OCT-21	R5613858
Nickel (Ni)	23.4		0.50	ug/g	06-OCT-21	07-OCT-21	R5613858
Phosphorus (P)	1210		50	ug/g	06-OCT-21	07-OCT-21	R5613858
Potassium (K)	3720		100	ug/g	06-OCT-21	07-OCT-21	R5613858
Selenium (Se)	0.88		0.20	ug/g	06-OCT-21	07-OCT-21	R5613858
Silver (Ag)	0.50		0.10	ug/g	06-OCT-21	07-OCT-21	R5613858
Sodium (Na)	683		50	ug/g	06-OCT-21	07-OCT-21	R5613858
Strontium (Sr)	673		0.50	ug/g	06-OCT-21	07-OCT-21	R5613858
Sulfur (S)	7800		1000	ug/g	06-OCT-21	07-OCT-21	R5613858
Thallium (Tl)	0.283		0.050	ug/g	06-OCT-21	07-OCT-21	R5613858
Tin (Sn)	5.8		2.0	ug/g	06-OCT-21	07-OCT-21	R5613858
Titanium (Ti)	931		1.0	ug/g	06-OCT-21	07-OCT-21	R5613858
Tungsten (W)	<0.50		0.50	ug/g	06-OCT-21	07-OCT-21	R5613858
Uranium (U)	0.737		0.050	ug/g	06-OCT-21	07-OCT-21	R5613858
Vanadium (V)	38.3		0.20	ug/g	06-OCT-21	07-OCT-21	R5613858
Zinc (Zn)	142		2.0	ug/g	06-OCT-21	07-OCT-21	R5613858
Zirconium (Zr)	3.1		1.0	ug/g	06-OCT-21	07-OCT-21	R5613858
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.071	DLHM	0.038	ug/g	05-OCT-21	07-OCT-21	R5611880

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646459-32 TCRC-SG-008 Sampled By: JW/ JF on 28-SEP-21 @ 09:15 Matrix: SED							
Polycyclic Aromatic Hydrocarbons							
Acenaphthylene	0.127	DLHM	0.038	ug/g	05-OCT-21	07-OCT-21	R5611880
Acridine	<0.075	DLHM	0.075	ug/g	05-OCT-21	07-OCT-21	R5611880
Anthracene	0.150	DLHM	0.030	ug/g	05-OCT-21	07-OCT-21	R5611880
Benzo(a)anthracene	0.345	R	0.075	ug/g	05-OCT-21	07-OCT-21	R5611880
Benzo(a)pyrene	0.382	DLHM	0.038	ug/g	05-OCT-21	07-OCT-21	R5611880
Benzo(b&j)fluoranthene	0.456	DLHM	0.075	ug/g	05-OCT-21	07-OCT-21	R5611880
Benzo(g,h,i)perylene	0.305	DLHM	0.075	ug/g	05-OCT-21	07-OCT-21	R5611880
Benzo(k)fluoranthene	0.167	DLHM	0.075	ug/g	05-OCT-21	07-OCT-21	R5611880
Chrysene	0.368	DLHM	0.075	ug/g	05-OCT-21	07-OCT-21	R5611880
Dibenz(a,h)anthracene	0.067	DLHM	0.038	ug/g	05-OCT-21	07-OCT-21	R5611880
Fluoroanthene	0.775	DLHM	0.038	ug/g	05-OCT-21	07-OCT-21	R5611880
Fluorene	0.128	DLHM	0.038	ug/g	05-OCT-21	07-OCT-21	R5611880
Indeno(1,2,3-cd)pyrene	0.231	DLHM	0.075	ug/g	05-OCT-21	07-OCT-21	R5611880
1-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	05-OCT-21	07-OCT-21	R5611880
2-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	05-OCT-21	07-OCT-21	R5611880
Naphthalene	0.040	R	0.038	ug/g	05-OCT-21	07-OCT-21	R5611880
Phenanthrene	0.643	DLHM	0.038	ug/g	05-OCT-21	07-OCT-21	R5611880
Pyrene	0.675	DLHM	0.038	ug/g	05-OCT-21	07-OCT-21	R5611880
Quinoline	<0.038	DLHM	0.038	ug/g	05-OCT-21	07-OCT-21	R5611880
Surrogate: 2-Fluorobiphenyl	85.9		60-140	%	05-OCT-21	07-OCT-21	R5611880
Surrogate: d14-Terphenyl	85.3		60-140	%	05-OCT-21	07-OCT-21	R5611880
B(a)P Total Potency Equivalent	0.576		0.053	ug/g	05-OCT-21	07-OCT-21	R5611880
IACR (CCME)	6.57		0.75		05-OCT-21	07-OCT-21	R5611880
Polychlorinated Biphenyls							
Aroclor 1016	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1221	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1232	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1242	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1248	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1254	0.095	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1260	0.157	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1262	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1268	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Total Polychlorinated Biphenyls	0.253		0.068	mg/kg	07-OCT-21	07-OCT-21	R5613829
Surrogate: d14-Terphenyl	86.2		50-140	%	07-OCT-21	07-OCT-21	R5613829
L2646459-33 TCRC-SG-009 Sampled By: JW/ JF on 28-SEP-21 @ 08:53 Matrix: SED							
Physical Tests							
% Moisture	87.7		0.25	%	04-OCT-21	05-OCT-21	R5608747
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0740		0.0010	g/g	08-OCT-21	08-OCT-21	R5614708

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646459-33 TCRC-SG-009 Sampled By: JW/ JF on 28-SEP-21 @ 08:53 Matrix: SED							
Organic / Inorganic Carbon							
Total Organic Carbon	7.40		0.10	%	08-OCT-21	08-OCT-21	R5614708
Metals							
Aluminum (Al)	17600		50	ug/g	06-OCT-21	07-OCT-21	R5613858
Antimony (Sb)	0.81		0.10	ug/g	06-OCT-21	07-OCT-21	R5613858
Arsenic (As)	8.60		0.10	ug/g	06-OCT-21	07-OCT-21	R5613858
Barium (Ba)	263		0.50	ug/g	06-OCT-21	07-OCT-21	R5613858
Beryllium (Be)	0.73		0.10	ug/g	06-OCT-21	07-OCT-21	R5613858
Bismuth (Bi)	0.42		0.20	ug/g	06-OCT-21	07-OCT-21	R5613858
Boron (B)	11.4		5.0	ug/g	06-OCT-21	07-OCT-21	R5613858
Cadmium (Cd)	0.650		0.020	ug/g	06-OCT-21	07-OCT-21	R5613858
Calcium (Ca)	74400		50	ug/g	06-OCT-21	07-OCT-21	R5613858
Chromium (Cr)	653		0.50	ug/g	06-OCT-21	07-OCT-21	R5613858
Cobalt (Co)	12.6		0.10	ug/g	06-OCT-21	07-OCT-21	R5613858
Copper (Cu)	39.4		0.50	ug/g	06-OCT-21	07-OCT-21	R5613858
Iron (Fe)	26400		50	ug/g	06-OCT-21	07-OCT-21	R5613858
Lead (Pb)	98.7		0.50	ug/g	06-OCT-21	07-OCT-21	R5613858
Lithium (Li)	16.7		2.0	ug/g	06-OCT-21	07-OCT-21	R5613858
Magnesium (Mg)	15000		20	ug/g	06-OCT-21	07-OCT-21	R5613858
Manganese (Mn)	884		1.0	ug/g	06-OCT-21	07-OCT-21	R5613858
Mercury (Hg)	0.348	DLM	0.010	ug/g	06-OCT-21	07-OCT-21	R5613510
Molybdenum (Mo)	0.98		0.10	ug/g	06-OCT-21	07-OCT-21	R5613858
Nickel (Ni)	25.8		0.50	ug/g	06-OCT-21	07-OCT-21	R5613858
Phosphorus (P)	1090		50	ug/g	06-OCT-21	07-OCT-21	R5613858
Potassium (K)	4430		100	ug/g	06-OCT-21	07-OCT-21	R5613858
Selenium (Se)	0.89		0.20	ug/g	06-OCT-21	07-OCT-21	R5613858
Silver (Ag)	0.62		0.10	ug/g	06-OCT-21	07-OCT-21	R5613858
Sodium (Na)	673		50	ug/g	06-OCT-21	07-OCT-21	R5613858
Strontium (Sr)	413		0.50	ug/g	06-OCT-21	07-OCT-21	R5613858
Sulfur (S)	7300		1000	ug/g	06-OCT-21	07-OCT-21	R5613858
Thallium (Tl)	0.287		0.050	ug/g	06-OCT-21	07-OCT-21	R5613858
Tin (Sn)	4.9		2.0	ug/g	06-OCT-21	07-OCT-21	R5613858
Titanium (Ti)	1210		1.0	ug/g	06-OCT-21	07-OCT-21	R5613858
Tungsten (W)	<0.50		0.50	ug/g	06-OCT-21	07-OCT-21	R5613858
Uranium (U)	0.800		0.050	ug/g	06-OCT-21	07-OCT-21	R5613858
Vanadium (V)	47.5		0.20	ug/g	06-OCT-21	07-OCT-21	R5613858
Zinc (Zn)	147		2.0	ug/g	06-OCT-21	07-OCT-21	R5613858
Zirconium (Zr)	4.1		1.0	ug/g	06-OCT-21	07-OCT-21	R5613858
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.041	DLHM	0.038	ug/g	05-OCT-21	07-OCT-21	R5611880
Acenaphthylene	0.231	DLHM	0.038	ug/g	05-OCT-21	07-OCT-21	R5611880
Acridine	<0.075	DLHM	0.075	ug/g	05-OCT-21	07-OCT-21	R5611880

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646459-33 TCRC-SG-009 Sampled By: JW/ JF on 28-SEP-21 @ 08:53 Matrix: SED							
Polycyclic Aromatic Hydrocarbons							
Anthracene	0.082	DLHM	0.030	ug/g	05-OCT-21	07-OCT-21	R5611880
Benzo(a)anthracene	0.375	R	0.075	ug/g	05-OCT-21	07-OCT-21	R5611880
Benzo(a)pyrene	0.561	DLHM	0.038	ug/g	05-OCT-21	07-OCT-21	R5611880
Benzo(b&j)fluoranthene	0.581	DLHM	0.075	ug/g	05-OCT-21	07-OCT-21	R5611880
Benzo(g,h,i)perylene	0.450	DLHM	0.075	ug/g	05-OCT-21	07-OCT-21	R5611880
Benzo(k)fluoranthene	0.214	DLHM	0.075	ug/g	05-OCT-21	07-OCT-21	R5611880
Chrysene	0.430	DLHM	0.075	ug/g	05-OCT-21	07-OCT-21	R5611880
Dibenz(a,h)anthracene	0.094	DLHM	0.038	ug/g	05-OCT-21	07-OCT-21	R5611880
Fluoroanthene	0.501	DLHM	0.038	ug/g	05-OCT-21	07-OCT-21	R5611880
Fluorene	0.052	DLHM	0.038	ug/g	05-OCT-21	07-OCT-21	R5611880
Indeno(1,2,3-cd)pyrene	0.303	DLHM	0.075	ug/g	05-OCT-21	07-OCT-21	R5611880
1-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	05-OCT-21	07-OCT-21	R5611880
2-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	05-OCT-21	07-OCT-21	R5611880
Naphthalene	<0.038	DLHM	0.038	ug/g	05-OCT-21	07-OCT-21	R5611880
Phenanthrene	0.210	DLHM	0.038	ug/g	05-OCT-21	07-OCT-21	R5611880
Pyrene	0.598	DLHM	0.038	ug/g	05-OCT-21	07-OCT-21	R5611880
Quinoline	<0.038	DLHM	0.038	ug/g	05-OCT-21	07-OCT-21	R5611880
Surrogate: 2-Fluorobiphenyl	87.3		60-140	%	05-OCT-21	07-OCT-21	R5611880
Surrogate: d14-Terphenyl	88.5		60-140	%	05-OCT-21	07-OCT-21	R5611880
B(a)P Total Potency Equivalent	0.811		0.053	ug/g	05-OCT-21	07-OCT-21	R5611880
IACR (CCME)	8.41		0.75		05-OCT-21	07-OCT-21	R5611880
Polychlorinated Biphenyls							
Aroclor 1016	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1221	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1232	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1242	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1248	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1254	0.186	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1260	0.300	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1262	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1268	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Total Polychlorinated Biphenyls	0.486		0.068	mg/kg	07-OCT-21	07-OCT-21	R5613829
Surrogate: d14-Terphenyl	90.7		50-140	%	07-OCT-21	07-OCT-21	R5613829

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Reference Information

QC Samples with Qualifiers & Comments:

QC Type Description	Parameter	Qualifier	Applies to Sample Number(s)
Matrix Spike	Aroclor 1254	E	L2646459-1, -10, -11, -12, -13, -14, -15, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Aroclor 1260	E	L2646459-1, -10, -11, -12, -13, -14, -15, -2, -3, -4, -5, -6, -7, -8, -9

Sample Parameter Qualifier key listed:

Qualifier	Description
DLHC	Detection Limit Raised: Dilution required due to high concentration of test analyte(s).
DLHM	Detection Limit Adjusted: Sample has High Moisture Content
DLM	Detection Limit Adjusted due to sample matrix effects (e.g. chemical interference, colour, turbidity).
E	Matrix Spike recovery outside ALS DQO due to heterogeneous analyte background in sample.
PSAL	Limited sample was available for Particle Size Analysis (100g minimum is standard). Measurement Uncertainty for PSA results may be higher than usual.
R	The ion abundance ratio(s) did not meet the acceptance criteria. Value is an estimated maximum.

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
B-HWS-R511-WT	Soil	Boron-HWE-O.Reg 153/04 (July 2011)	HW EXTR, EPA 6010B

A dried solid sample is extracted with calcium chloride, the sample undergoes a heating process. After cooling the sample is filtered and analyzed by ICP/OES.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011 and as of November 30, 2020), unless a subset of the Analytical Test Group (ATG) has been requested (the Protocol states that all analytes in an ATG must be reported).

CR-CR3-WT	Soil	Trivalent Chromium in Soil Calculation	BC WLAP LAB MANUAL / EPA 3060A & 7196A

This analysis is carried out using the method "Trivalent Chromium in Solids", as published in the BC WLAP Laboratory Methods Manual (2003). Chromium (III) is determined by subtraction of chromium (VI) from total chromium. Chromium (VI) is determined by the alkaline leach method, and total chromium is determined using CSR Analytical Method 8 "Strong Acid Leachable Metals (SALM) in Soil", BC Ministry of Environment, Lands and Parks, 26 June 2001. All results are reported as milligrams per dry kilogram of sediment/soil.

CR-CR6-IC-WT	Soil	Hexavalent Chromium in Soil	SW846 3060A/7199

This analysis is carried out using procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846, Method 7199, published by the United States Environmental Protection Agency (EPA). The procedure involves analysis for chromium (VI) by ion chromatography using diphenylcarbazide in a sulphuric acid solution.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

HG-200.2-CVAA-WT	Soil	Mercury in Soil by CVAAS	EPA 200.2/1631E (mod)

Soil samples are digested with nitric and hydrochloric acids, followed by analysis by CVAAS.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

MET-200.2-CCMS-WT	Soil	Metals in Soil by CRC ICPMS	EPA 200.2/6020B (mod)

Soil/sediment is dried, disaggregated, and sieved (2 mm). For tests intended to support Ontario regulations, the <2mm fraction is ground to pass through a 0.355 mm sieve. Strong Acid Leachable Metals in the <2mm fraction are solubilized by heated digestion with nitric and hydrochloric acids. Instrumental analysis is by Collision / Reaction Cell ICPMS.

Limitations: This method is intended to liberate environmentally available metals. Silicate minerals are not solubilized. Some metals may be only partially recovered (matrix dependent), including Al, Ba, Be, Cr, S, Sr, Ti, Tl, V, W, and Zr. Elemental Sulfur may be poorly recovered by this method. Volatile forms of sulfur (e.g. sulfide, H2S) may be excluded if lost during sampling, storage, or digestion.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011), unless a subset of the Analytical Test Group (ATG) has been requested (the Protocol states that all analytes in an ATG must be reported).

MOISTURE-WT	Soil	% Moisture	CCME PHC in Soil - Tier 1 (mod)
PAH-CCME-SQGL-WT	Soil	PAHs in Sediment	SW846 8270

Reference Information

The procedure uses a mechanical shaking technique to extract a representative sub-sample with a mixture of methanol and toluene. The extract is analyzed by GC/MSD. Depending on the analytical GC/MS column used benzo(j)fluoranthene may chromatographically co-elute with benzo(b)fluoranthene or benzo(k)fluoranthene.

PCB9-LOW-WT	Soil	PCBs to meet CCME Sediment Criteria	SW846 8270

A representative sub-sample of a soil sample is mixed with methanol and extracted with toluene using a shaker technique. An aliquot of the separated toluene is analyzed by GC/MSD.

PSA-MUST-SK	Soil	% Particles > 75um (Coarse/Fine)	ASTM D6913

An air-dried sample is reduced to < 2 mm size and mixed with a dispersing agent (Calgon solution). The sample is washed through a 200 mesh (75 µm) sieve. The retained mass of sample is used to determine % sand fraction.

Reference: ASTM D422-63

TOC-WT	Soil	TOC & FOC in Solids	CARTER 21.3.2

Soil is treated with excess acidic dichromate, which reacts with the organic carbon, oxidizing it to CO2. The residual dichromate is titrated with ferrous ammonium sulphate and TOC calculated by difference.

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
SK	ALS ENVIRONMENTAL - SASKATOON, SASKATCHEWAN, CANADA
WT	ALS ENVIRONMENTAL - WATERLOO, ONTARIO, CANADA

Chain of Custody Numbers:

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.
mg/kg - milligrams per kilogram based on dry weight of sample
mg/kg wwt - milligrams per kilogram based on wet weight of sample
mg/kg lwt - milligrams per kilogram based on lipid weight of sample
mg/L - unit of concentration based on volume, parts per million.
< - Less than.
D.L. - The reporting limit.
N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.
UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.
Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.

Quality Control Report

Workorder: L2646459 Report Date: 26-OCT-21

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
B-HWS-R511-WT	**Soil**							
Batch R5613991								
WG3633529-4 DUP		**L2646459-26**						
Boron (B), Hot Water Ext.		0.52	0.54		ug/g	3.8	30	07-OCT-21
WG3633529-2 IRM		**WT SAR4**						
Boron (B), Hot Water Ext.			120.1		%		70-130	07-OCT-21
WG3633529-3 LCS								
Boron (B), Hot Water Ext.			110.0		%		70-130	07-OCT-21
WG3633529-1 MB								
Boron (B), Hot Water Ext.			<0.10		ug/g		0.1	07-OCT-21
CR-CR6-IC-WT	**Soil**							
Batch R5614562								
WG3632147-4 CRM		**WT-SQC012**						
Chromium, Hexavalent			84.2		%		70-130	07-OCT-21
WG3632147-3 DUP		**L2646359-6**						
Chromium, Hexavalent		<0.20	<0.20	RPD-NA	ug/g	N/A	35	07-OCT-21
WG3632147-2 LCS								
Chromium, Hexavalent			96.7		%		80-120	07-OCT-21
WG3632147-1 MB								
Chromium, Hexavalent			<0.20		ug/g		0.2	07-OCT-21
HG-200.2-CVAA-WT	**Soil**							
Batch R5613508								
WG3632966-2 CRM		**WT-SS-2**						
Mercury (Hg)			100.2		%		70-130	07-OCT-21
WG3632966-6 DUP		**WG3632966-5**						
Mercury (Hg)		0.0079	0.0057		ug/g	33	40	07-OCT-21
WG3632966-3 LCS								
Mercury (Hg)			107.0		%		80-120	07-OCT-21
WG3632966-1 MB								
Mercury (Hg)			<0.0050		mg/kg		0.005	07-OCT-21
Batch R5613510								
WG3632992-2 CRM		**WT-SS-2**						
Mercury (Hg)			103.7		%		70-130	07-OCT-21
WG3632992-6 DUP		**WG3632992-5**						
Mercury (Hg)		0.815	0.884		ug/g	8.2	40	07-OCT-21
WG3632992-3 LCS								
Mercury (Hg)			104.5		%		80-120	07-OCT-21
WG3632992-1 MB								
Mercury (Hg)			<0.0050		mg/kg		0.005	07-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
HG-200.2-CVAA-WT	**Soil**							
Batch R5614407								
WG3633076-2 CRM		**WT-SS-2**						
Mercury (Hg)			108.7		%		70-130	08-OCT-21
WG3633076-6 DUP		**WG3633076-5**						
Mercury (Hg)		<0.0050	<0.0050	RPD-NA	ug/g	N/A	40	08-OCT-21
WG3633076-3 LCS								
Mercury (Hg)			106.5		%		80-120	08-OCT-21
WG3633076-1 MB								
Mercury (Hg)			<0.0050		mg/kg		0.005	08-OCT-21
Batch R5614414								
WG3633447-2 CRM		**WT-SS-2**						
Mercury (Hg)			102.5		%		70-130	08-OCT-21
WG3633447-6 DUP		**WG3633447-5**						
Mercury (Hg)		0.486	0.484		ug/g	0.4	40	08-OCT-21
WG3633447-3 LCS								
Mercury (Hg)			104.5		%		80-120	08-OCT-21
WG3633447-1 MB								
Mercury (Hg)			<0.0050		mg/kg		0.005	08-OCT-21
Batch R5623137								
WG3638953-2 CRM		**WT-SS-2**						
Mercury (Hg)			99.9		%		70-130	18-OCT-21
WG3638953-6 DUP		**WG3638953-5**						
Mercury (Hg)		<0.0050	<0.0050	RPD-NA	ug/g	N/A	40	18-OCT-21
WG3638953-3 LCS								
Mercury (Hg)			110.5		%		80-120	18-OCT-21
WG3638953-1 MB								
Mercury (Hg)			<0.0050		mg/kg		0.005	18-OCT-21
MET-200.2-CCMS-WT	**Soil**							
Batch R5613846								
WG3633076-2 CRM		**WT-SS-2**						
Aluminum (Al)			107.4		%		70-130	07-OCT-21
Antimony (Sb)			98.5		%		70-130	07-OCT-21
Arsenic (As)			101.6		%		70-130	07-OCT-21
Barium (Ba)			100.2		%		70-130	07-OCT-21
Beryllium (Be)			108.1		%		70-130	07-OCT-21
Bismuth (Bi)			0.14		mg/kg		0-0.34	07-OCT-21
Boron (B)			9.6		mg/kg		3.5-13.5	07-OCT-21
Cadmium (Cd)			102.2		%		70-130	07-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5613846								
WG3633076-2 CRM		**WT-SS-2**						
Calcium (Ca)			103.3		%		70-130	07-OCT-21
Chromium (Cr)			102.9		%		70-130	07-OCT-21
Cobalt (Co)			103.6		%		70-130	07-OCT-21
Copper (Cu)			120.3		%		70-130	07-OCT-21
Iron (Fe)			104.1		%		70-130	07-OCT-21
Lead (Pb)			103.1		%		70-130	07-OCT-21
Lithium (Li)			102.3		%		70-130	07-OCT-21
Magnesium (Mg)			109.0		%		70-130	07-OCT-21
Manganese (Mn)			103.7		%		70-130	07-OCT-21
Molybdenum (Mo)			101.9		%		70-130	07-OCT-21
Nickel (Ni)			104.1		%		70-130	07-OCT-21
Phosphorus (P)			99.9		%		70-130	07-OCT-21
Potassium (K)			105.5		%		70-130	07-OCT-21
Selenium (Se)			0.12		mg/kg		0-0.34	07-OCT-21
Silver (Ag)			78.5		%		70-130	07-OCT-21
Sodium (Na)			108.8		%		70-130	07-OCT-21
Strontium (Sr)			101.6		%		70-130	07-OCT-21
Thallium (Tl)			0.075		mg/kg		0.029-0.129	07-OCT-21
Tin (Sn)			102.3		%		70-130	07-OCT-21
Titanium (Ti)			108.2		%		70-130	07-OCT-21
Uranium (U)			103.1		%		70-130	07-OCT-21
Vanadium (V)			103.8		%		70-130	07-OCT-21
Zinc (Zn)			97.8		%		70-130	07-OCT-21
Zirconium (Zr)			99.6		%		70-130	07-OCT-21
WG3633076-6 DUP		**WG3633076-5**						
Aluminum (Al)		4870	4300		ug/g	12	40	07-OCT-21
Antimony (Sb)		<0.10	<0.10	RPD-NA	ug/g	N/A	30	07-OCT-21
Arsenic (As)		26.6	24.0		ug/g	10	30	07-OCT-21
Barium (Ba)		28.5	27.2		ug/g	4.6	40	07-OCT-21
Beryllium (Be)		0.14	0.11		ug/g	22	30	07-OCT-21
Bismuth (Bi)		<0.20	0.29	RPD-NA	ug/g	N/A	30	07-OCT-21
Boron (B)		<5.0	<5.0	RPD-NA	ug/g	N/A	30	07-OCT-21
Cadmium (Cd)		0.047	0.045		ug/g	5.3	30	07-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5613846								
WG3633076-6 DUP		**WG3633076-5**						
Calcium (Ca)		3450	2980		ug/g	15	30	07-OCT-21
Chromium (Cr)		18.4	14.5		ug/g	24	30	07-OCT-21
Cobalt (Co)		6.48	5.53		ug/g	16	30	07-OCT-21
Copper (Cu)		23.9	21.5		ug/g	10	30	07-OCT-21
Iron (Fe)		14300	11100		ug/g	25	30	07-OCT-21
Lead (Pb)		3.37	2.93		ug/g	14	40	07-OCT-21
Lithium (Li)		7.3	6.8		ug/g	6.6	30	07-OCT-21
Magnesium (Mg)		2310	2030		ug/g	13	30	07-OCT-21
Manganese (Mn)		110	94.9		ug/g	14	30	07-OCT-21
Molybdenum (Mo)		0.34	0.26		ug/g	24	40	07-OCT-21
Nickel (Ni)		13.4	12.2		ug/g	9.6	30	07-OCT-21
Phosphorus (P)		420	345		ug/g	20	30	07-OCT-21
Potassium (K)		960	880		ug/g	9.1	40	07-OCT-21
Selenium (Se)		<0.20	<0.20	RPD-NA	ug/g	N/A	30	07-OCT-21
Silver (Ag)		<0.10	<0.10	RPD-NA	ug/g	N/A	40	07-OCT-21
Sodium (Na)		160	153		ug/g	4.3	40	07-OCT-21
Strontium (Sr)		8.54	7.17		ug/g	17	40	07-OCT-21
Sulfur (S)		<1000	<1000	RPD-NA	ug/g	N/A	30	07-OCT-21
Thallium (Tl)		0.082	0.068		ug/g	18	30	07-OCT-21
Tin (Sn)		<2.0	<2.0	RPD-NA	ug/g	N/A	40	07-OCT-21
Titanium (Ti)		477	343		ug/g	33	40	07-OCT-21
Uranium (U)		0.907	0.795		ug/g	13	30	07-OCT-21
Vanadium (V)		24.9	18.8		ug/g	28	30	07-OCT-21
Zinc (Zn)		25.1	22.2		ug/g	12	30	07-OCT-21
Zirconium (Zr)		3.9	2.9		ug/g	28	30	07-OCT-21
WG3633076-4 LCS								
Aluminum (Al)			108.9		%		80-120	07-OCT-21
Antimony (Sb)			110.0		%		80-120	07-OCT-21
Arsenic (As)			110.4		%		80-120	07-OCT-21
Barium (Ba)			103.5		%		80-120	07-OCT-21
Beryllium (Be)			106.6		%		80-120	07-OCT-21
Bismuth (Bi)			110.3		%		80-120	07-OCT-21
Boron (B)			104.6		%		80-120	07-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5613846								
WG3633076-4 LCS								
Cadmium (Cd)			106.9		%		80-120	07-OCT-21
Calcium (Ca)			109.1		%		80-120	07-OCT-21
Chromium (Cr)			109.5		%		80-120	07-OCT-21
Cobalt (Co)			110.9		%		80-120	07-OCT-21
Copper (Cu)			110.0		%		80-120	07-OCT-21
Iron (Fe)			103.1		%		80-120	07-OCT-21
Lead (Pb)			107.7		%		80-120	07-OCT-21
Lithium (Li)			106.7		%		80-120	07-OCT-21
Magnesium (Mg)			117.0		%		80-120	07-OCT-21
Manganese (Mn)			108.5		%		80-120	07-OCT-21
Molybdenum (Mo)			108.2		%		80-120	07-OCT-21
Nickel (Ni)			108.7		%		80-120	07-OCT-21
Phosphorus (P)			111.6		%		80-120	07-OCT-21
Potassium (K)			108.0		%		80-120	07-OCT-21
Selenium (Se)			109.9		%		80-120	07-OCT-21
Silver (Ag)			96.9		%		80-120	07-OCT-21
Sodium (Na)			109.9		%		80-120	07-OCT-21
Strontium (Sr)			108.3		%		80-120	07-OCT-21
Sulfur (S)			109.6		%		80-120	07-OCT-21
Thallium (Tl)			110.0		%		80-120	07-OCT-21
Tin (Sn)			108.6		%		80-120	07-OCT-21
Titanium (Ti)			106.7		%		80-120	07-OCT-21
Uranium (U)			106.3		%		80-120	07-OCT-21
Vanadium (V)			111.4		%		80-120	07-OCT-21
Zinc (Zn)			104.1		%		80-120	07-OCT-21
Zirconium (Zr)			102.7		%		80-120	07-OCT-21
WG3633076-1 MB								
Aluminum (Al)			<50		mg/kg		50	07-OCT-21
Antimony (Sb)			<0.10		mg/kg		0.1	07-OCT-21
Arsenic (As)			<0.10		mg/kg		0.1	07-OCT-21
Barium (Ba)			<0.50		mg/kg		0.5	07-OCT-21
Beryllium (Be)			<0.10		mg/kg		0.1	07-OCT-21
Bismuth (Bi)			<0.20		mg/kg		0.2	07-OCT-21
Boron (B)			<5.0		mg/kg		5	07-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5613846								
WG3633076-1 MB								
Cadmium (Cd)			<0.020		mg/kg		0.02	07-OCT-21
Calcium (Ca)			<50		mg/kg		50	07-OCT-21
Chromium (Cr)			<0.50		mg/kg		0.5	07-OCT-21
Cobalt (Co)			<0.10		mg/kg		0.1	07-OCT-21
Copper (Cu)			<0.50		mg/kg		0.5	07-OCT-21
Iron (Fe)			<50		mg/kg		50	07-OCT-21
Lead (Pb)			<0.50		mg/kg		0.5	07-OCT-21
Lithium (Li)			<2.0		mg/kg		2	07-OCT-21
Magnesium (Mg)			<20		mg/kg		20	07-OCT-21
Manganese (Mn)			<1.0		mg/kg		1	07-OCT-21
Molybdenum (Mo)			<0.10		mg/kg		0.1	07-OCT-21
Nickel (Ni)			<0.50		mg/kg		0.5	07-OCT-21
Phosphorus (P)			<50		mg/kg		50	07-OCT-21
Potassium (K)			<100		mg/kg		100	07-OCT-21
Selenium (Se)			<0.20		mg/kg		0.2	07-OCT-21
Silver (Ag)			<0.10		mg/kg		0.1	07-OCT-21
Sodium (Na)			<50		mg/kg		50	07-OCT-21
Strontium (Sr)			<0.50		mg/kg		0.5	07-OCT-21
Sulfur (S)			<1000		mg/kg		1000	07-OCT-21
Thallium (Tl)			<0.050		mg/kg		0.05	07-OCT-21
Tin (Sn)			<2.0		mg/kg		2	07-OCT-21
Titanium (Ti)			<1.0		mg/kg		1	07-OCT-21
Uranium (U)			<0.050		mg/kg		0.05	07-OCT-21
Vanadium (V)			<0.20		mg/kg		0.2	07-OCT-21
Zinc (Zn)			<2.0		mg/kg		2	07-OCT-21
Zirconium (Zr)			<1.0		mg/kg		1	07-OCT-21
Batch R5613858								
WG3632992-2 CRM		**WT-SS-2**						
Aluminum (Al)			102.4		%		70-130	07-OCT-21
Antimony (Sb)			107.0		%		70-130	07-OCT-21
Arsenic (As)			110.6		%		70-130	07-OCT-21
Barium (Ba)			108.0		%		70-130	07-OCT-21
Beryllium (Be)			109.3		%		70-130	07-OCT-21
Bismuth (Bi)			0.17		mg/kg		0-0.34	07-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5613858								
WG3632992-2 CRM		**WT-SS-2**						
Boron (B)			8.7		mg/kg		3.5-13.5	07-OCT-21
Cadmium (Cd)			105.6		%		70-130	07-OCT-21
Calcium (Ca)			109.6		%		70-130	07-OCT-21
Chromium (Cr)			102.8		%		70-130	07-OCT-21
Cobalt (Co)			108.3		%		70-130	07-OCT-21
Copper (Cu)			110.2		%		70-130	07-OCT-21
Iron (Fe)			108.2		%		70-130	07-OCT-21
Lead (Pb)			111.9		%		70-130	07-OCT-21
Lithium (Li)			107.7		%		70-130	07-OCT-21
Magnesium (Mg)			109.0		%		70-130	07-OCT-21
Manganese (Mn)			105.7		%		70-130	07-OCT-21
Molybdenum (Mo)			114.1		%		70-130	07-OCT-21
Nickel (Ni)			108.1		%		70-130	07-OCT-21
Phosphorus (P)			109.6		%		70-130	07-OCT-21
Potassium (K)			103.1		%		70-130	07-OCT-21
Selenium (Se)			0.16		mg/kg		0-0.34	07-OCT-21
Silver (Ag)			111.1		%		70-130	07-OCT-21
Sodium (Na)			105.3		%		70-130	07-OCT-21
Strontium (Sr)			106.8		%		70-130	07-OCT-21
Thallium (Tl)			0.077		mg/kg		0.029-0.129	07-OCT-21
Tin (Sn)			107.1		%		70-130	07-OCT-21
Titanium (Ti)			97.8		%		70-130	07-OCT-21
Uranium (U)			104.2		%		70-130	07-OCT-21
Vanadium (V)			105.3		%		70-130	07-OCT-21
Zinc (Zn)			102.3		%		70-130	07-OCT-21
Zirconium (Zr)			99.7		%		70-130	07-OCT-21
WG3632992-6 DUP		**WG3632992-5**						
Aluminum (Al)		18000	16000		ug/g	12	40	07-OCT-21
Antimony (Sb)		2.96	2.62		ug/g	12	30	07-OCT-21
Arsenic (As)		59.3	54.4		ug/g	8.8	30	07-OCT-21
Barium (Ba)		264	239		ug/g	10	40	07-OCT-21
Beryllium (Be)		0.70	0.65		ug/g	6.6	30	07-OCT-21
Bismuth (Bi)		0.53	0.48		ug/g	11	30	07-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5613858								
WG3632992-6 DUP		**WG3632992-5**						
Boron (B)		12.5	11.1		ug/g	13	30	07-OCT-21
Cadmium (Cd)		0.637	0.606		ug/g	5.1	30	07-OCT-21
Calcium (Ca)		82800	81700		ug/g	1.3	30	07-OCT-21
Chromium (Cr)		473	442		ug/g	6.8	30	07-OCT-21
Cobalt (Co)		21.6	20.7		ug/g	4.5	30	07-OCT-21
Copper (Cu)		57.4	53.9		ug/g	6.3	30	07-OCT-21
Iron (Fe)		27600	25200		ug/g	9.0	30	07-OCT-21
Lead (Pb)		110	102		ug/g	7.3	40	07-OCT-21
Lithium (Li)		17.5	15.5		ug/g	13	30	07-OCT-21
Magnesium (Mg)		17200	14900		ug/g	14	30	07-OCT-21
Manganese (Mn)		893	840		ug/g	6.1	30	07-OCT-21
Molybdenum (Mo)		0.92	0.87		ug/g	6.1	40	07-OCT-21
Nickel (Ni)		31.9	28.9		ug/g	9.9	30	07-OCT-21
Phosphorus (P)		1140	1130		ug/g	0.7	30	07-OCT-21
Potassium (K)		4350	4210		ug/g	3.3	40	07-OCT-21
Selenium (Se)		0.80	0.76		ug/g	5.4	30	07-OCT-21
Silver (Ag)		0.64	0.58		ug/g	9.3	40	07-OCT-21
Sodium (Na)		741	650		ug/g	13	40	07-OCT-21
Strontium (Sr)		499	484		ug/g	3.0	40	07-OCT-21
Sulfur (S)		4600	4700		ug/g	2.3	30	07-OCT-21
Thallium (Tl)		0.273	0.252		ug/g	7.7	30	07-OCT-21
Tin (Sn)		6.9	6.3		ug/g	8.8	40	07-OCT-21
Titanium (Ti)		1270	1110		ug/g	13	40	07-OCT-21
Tungsten (W)		0.82	0.72		ug/g	14	30	07-OCT-21
Uranium (U)		0.650	0.593		ug/g	9.2	30	07-OCT-21
Vanadium (V)		48.4	45.9		ug/g	5.3	30	07-OCT-21
Zinc (Zn)		191	187		ug/g	2.2	30	07-OCT-21
Zirconium (Zr)		3.5	3.6		ug/g	3.2	30	07-OCT-21
WG3632992-4 LCS								
Aluminum (Al)			93.9		%		80-120	07-OCT-21
Antimony (Sb)			102.1		%		80-120	07-OCT-21
Arsenic (As)			96.2		%		80-120	07-OCT-21
Barium (Ba)			94.3		%		80-120	07-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5613858								
WG3632992-4 LCS								
Beryllium (Be)			96.1		%		80-120	07-OCT-21
Bismuth (Bi)			95.9		%		80-120	07-OCT-21
Boron (B)			91.1		%		80-120	07-OCT-21
Cadmium (Cd)			92.8		%		80-120	07-OCT-21
Calcium (Ca)			95.5		%		80-120	07-OCT-21
Chromium (Cr)			92.5		%		80-120	07-OCT-21
Cobalt (Co)			92.6		%		80-120	07-OCT-21
Copper (Cu)			91.3		%		80-120	07-OCT-21
Iron (Fe)			97.8		%		80-120	07-OCT-21
Lead (Pb)			95.9		%		80-120	07-OCT-21
Lithium (Li)			94.1		%		80-120	07-OCT-21
Magnesium (Mg)			97.9		%		80-120	07-OCT-21
Manganese (Mn)			93.5		%		80-120	07-OCT-21
Molybdenum (Mo)			102.3		%		80-120	07-OCT-21
Nickel (Ni)			90.6		%		80-120	07-OCT-21
Phosphorus (P)			107.4		%		80-120	07-OCT-21
Potassium (K)			96.0		%		80-120	07-OCT-21
Selenium (Se)			99.3		%		80-120	07-OCT-21
Silver (Ag)			91.8		%		80-120	07-OCT-21
Sodium (Na)			94.4		%		80-120	07-OCT-21
Strontium (Sr)			100.6		%		80-120	07-OCT-21
Sulfur (S)			91.2		%		80-120	07-OCT-21
Thallium (Tl)			97.7		%		80-120	07-OCT-21
Tin (Sn)			93.4		%		80-120	07-OCT-21
Titanium (Ti)			94.6		%		80-120	07-OCT-21
Tungsten (W)			96.4		%		80-120	07-OCT-21
Uranium (U)			93.2		%		80-120	07-OCT-21
Vanadium (V)			96.3		%		80-120	07-OCT-21
Zinc (Zn)			86.6		%		80-120	07-OCT-21
Zirconium (Zr)			99.5		%		80-120	07-OCT-21
WG3632992-1 MB								
Aluminum (Al)			<50		mg/kg		50	07-OCT-21
Antimony (Sb)			<0.10		mg/kg		0.1	07-OCT-21
Arsenic (As)			<0.10		mg/kg		0.1	07-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5613858								
WG3632992-1 MB								
Barium (Ba)			<0.50		mg/kg		0.5	07-OCT-21
Beryllium (Be)			<0.10		mg/kg		0.1	07-OCT-21
Bismuth (Bi)			<0.20		mg/kg		0.2	07-OCT-21
Boron (B)			<5.0		mg/kg		5	07-OCT-21
Cadmium (Cd)			<0.020		mg/kg		0.02	07-OCT-21
Calcium (Ca)			<50		mg/kg		50	07-OCT-21
Chromium (Cr)			<0.50		mg/kg		0.5	07-OCT-21
Cobalt (Co)			<0.10		mg/kg		0.1	07-OCT-21
Copper (Cu)			<0.50		mg/kg		0.5	07-OCT-21
Iron (Fe)			<50		mg/kg		50	07-OCT-21
Lead (Pb)			<0.50		mg/kg		0.5	07-OCT-21
Lithium (Li)			<2.0		mg/kg		2	07-OCT-21
Magnesium (Mg)			<20		mg/kg		20	07-OCT-21
Manganese (Mn)			<1.0		mg/kg		1	07-OCT-21
Molybdenum (Mo)			<0.10		mg/kg		0.1	07-OCT-21
Nickel (Ni)			<0.50		mg/kg		0.5	07-OCT-21
Phosphorus (P)			<50		mg/kg		50	07-OCT-21
Potassium (K)			<100		mg/kg		100	07-OCT-21
Selenium (Se)			<0.20		mg/kg		0.2	07-OCT-21
Silver (Ag)			<0.10		mg/kg		0.1	07-OCT-21
Sodium (Na)			<50		mg/kg		50	07-OCT-21
Strontium (Sr)			<0.50		mg/kg		0.5	07-OCT-21
Sulfur (S)			<1000		mg/kg		1000	07-OCT-21
Thallium (Tl)			<0.050		mg/kg		0.05	07-OCT-21
Tin (Sn)			<2.0		mg/kg		2	07-OCT-21
Titanium (Ti)			<1.0		mg/kg		1	07-OCT-21
Tungsten (W)			<0.50		mg/kg		0.5	07-OCT-21
Uranium (U)			<0.050		mg/kg		0.05	07-OCT-21
Vanadium (V)			<0.20		mg/kg		0.2	07-OCT-21
Zinc (Zn)			<2.0		mg/kg		2	07-OCT-21
Zirconium (Zr)			<1.0		mg/kg		1	07-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5613960								
WG3632588-2 CRM		**WT-SS-2**						
Aluminum (Al)			98.8		%		70-130	07-OCT-21
Antimony (Sb)			92.4		%		70-130	07-OCT-21
Arsenic (As)			105.1		%		70-130	07-OCT-21
Barium (Ba)			99.6		%		70-130	07-OCT-21
Beryllium (Be)			100.0		%		70-130	07-OCT-21
Bismuth (Bi)			0.24		mg/kg		0-0.34	07-OCT-21
Boron (B)			8.2		mg/kg		3.5-13.5	07-OCT-21
Cadmium (Cd)			106.0		%		70-130	07-OCT-21
Calcium (Ca)			102.4		%		70-130	07-OCT-21
Chromium (Cr)			97.5		%		70-130	07-OCT-21
Cobalt (Co)			102.4		%		70-130	07-OCT-21
Copper (Cu)			103.9		%		70-130	07-OCT-21
Iron (Fe)			103.7		%		70-130	07-OCT-21
Lead (Pb)			99.7		%		70-130	07-OCT-21
Lithium (Li)			100.1		%		70-130	07-OCT-21
Magnesium (Mg)			105.8		%		70-130	07-OCT-21
Manganese (Mn)			101.4		%		70-130	07-OCT-21
Molybdenum (Mo)			102.2		%		70-130	07-OCT-21
Nickel (Ni)			102.8		%		70-130	07-OCT-21
Phosphorus (P)			96.7		%		70-130	07-OCT-21
Potassium (K)			97.3		%		70-130	07-OCT-21
Selenium (Se)			0.12		mg/kg		0-0.34	07-OCT-21
Sodium (Na)			98.2		%		70-130	07-OCT-21
Strontium (Sr)			101.3		%		70-130	07-OCT-21
Thallium (Tl)			0.072		mg/kg		0.029-0.129	07-OCT-21
Tin (Sn)			98.1		%		70-130	07-OCT-21
Titanium (Ti)			93.0		%		70-130	07-OCT-21
Uranium (U)			93.0		%		70-130	07-OCT-21
Vanadium (V)			100.2		%		70-130	07-OCT-21
Zinc (Zn)			96.1		%		70-130	07-OCT-21
Zirconium (Zr)			92.4		%		70-130	07-OCT-21
WG3632588-6 DUP		**WG3632588-5**						
Aluminum (Al)		11200	11000		ug/g	1.7	40	07-OCT-21
Antimony (Sb)		0.64	0.61		ug/g	5.5	30	07-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5613960								
WG3632588-6 DUP		**WG3632588-5**						
Arsenic (As)		4.22	4.27		ug/g	1.2	30	07-OCT-21
Barium (Ba)		66.6	65.4		ug/g	1.9	40	07-OCT-21
Beryllium (Be)		0.56	0.50		ug/g	10	30	07-OCT-21
Bismuth (Bi)		<0.20	<0.20	RPD-NA	ug/g	N/A	30	07-OCT-21
Boron (B)		7.3	7.2		ug/g	1.5	30	07-OCT-21
Cadmium (Cd)		0.178	0.172		ug/g	3.0	30	07-OCT-21
Calcium (Ca)		86300	82600		ug/g	4.4	30	07-OCT-21
Chromium (Cr)		26.5	24.5		ug/g	7.9	30	07-OCT-21
Cobalt (Co)		8.26	8.09		ug/g	2.1	30	07-OCT-21
Copper (Cu)		36.6	33.9		ug/g	7.7	30	07-OCT-21
Iron (Fe)		19600	19000		ug/g	2.9	30	07-OCT-21
Lead (Pb)		14.8	14.3		ug/g	3.4	40	07-OCT-21
Lithium (Li)		16.9	16.1		ug/g	5.1	30	07-OCT-21
Magnesium (Mg)		12500	12300		ug/g	1.6	30	07-OCT-21
Manganese (Mn)		436	422		ug/g	3.3	30	07-OCT-21
Molybdenum (Mo)		0.68	0.64		ug/g	5.4	40	07-OCT-21
Nickel (Ni)		19.2	19.4		ug/g	1.2	30	07-OCT-21
Phosphorus (P)		817	770		ug/g	5.9	30	07-OCT-21
Potassium (K)		1770	1780		ug/g	0.6	40	07-OCT-21
Selenium (Se)		0.22	0.22		ug/g	1.4	30	07-OCT-21
Silver (Ag)		<0.10	<0.10	RPD-NA	ug/g	N/A	40	07-OCT-21
Sodium (Na)		1090	1080		ug/g	0.7	40	07-OCT-21
Strontium (Sr)		134	130		ug/g	3.7	40	07-OCT-21
Sulfur (S)		1400	1200		ug/g	15	30	07-OCT-21
Thallium (Tl)		0.122	0.119		ug/g	2.7	30	07-OCT-21
Tin (Sn)		<2.0	<2.0	RPD-NA	ug/g	N/A	40	07-OCT-21
Titanium (Ti)		211	223		ug/g	5.4	40	07-OCT-21
Tungsten (W)		<0.50	<0.50	RPD-NA	ug/g	N/A	30	07-OCT-21
Uranium (U)		0.524	0.525		ug/g	0.0	30	07-OCT-21
Vanadium (V)		27.4	27.2		ug/g	0.8	30	07-OCT-21
Zinc (Zn)		108	107		ug/g	0.9	30	07-OCT-21
Zirconium (Zr)		1.9	1.8		ug/g	5.8	30	07-OCT-21
WG3632588-4 LCS								

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5613960								
WG3632588-4 LCS								
Aluminum (Al)			103.5		%		80-120	07-OCT-21
Antimony (Sb)			104.9		%		80-120	07-OCT-21
Arsenic (As)			105.5		%		80-120	07-OCT-21
Barium (Ba)			105.1		%		80-120	07-OCT-21
Beryllium (Be)			101.2		%		80-120	07-OCT-21
Bismuth (Bi)			104.2		%		80-120	07-OCT-21
Boron (B)			96.7		%		80-120	07-OCT-21
Cadmium (Cd)			103.1		%		80-120	07-OCT-21
Calcium (Ca)			102.7		%		80-120	07-OCT-21
Chromium (Cr)			104.0		%		80-120	07-OCT-21
Cobalt (Co)			102.3		%		80-120	07-OCT-21
Copper (Cu)			101.0		%		80-120	07-OCT-21
Iron (Fe)			100.2		%		80-120	07-OCT-21
Lead (Pb)			106.2		%		80-120	07-OCT-21
Lithium (Li)			100.3		%		80-120	07-OCT-21
Magnesium (Mg)			105.8		%		80-120	07-OCT-21
Manganese (Mn)			104.3		%		80-120	07-OCT-21
Molybdenum (Mo)			107.7		%		80-120	07-OCT-21
Nickel (Ni)			100.5		%		80-120	07-OCT-21
Phosphorus (P)			110.3		%		80-120	07-OCT-21
Potassium (K)			104.3		%		80-120	07-OCT-21
Selenium (Se)			96.9		%		80-120	07-OCT-21
Silver (Ag)			97.4		%		80-120	07-OCT-21
Sodium (Na)			105.0		%		80-120	07-OCT-21
Strontium (Sr)			106.1		%		80-120	07-OCT-21
Sulfur (S)			95.6		%		80-120	07-OCT-21
Thallium (Tl)			107.5		%		80-120	07-OCT-21
Tin (Sn)			104.3		%		80-120	07-OCT-21
Titanium (Ti)			103.1		%		80-120	07-OCT-21
Tungsten (W)			105.3		%		80-120	07-OCT-21
Uranium (U)			103.8		%		80-120	07-OCT-21
Vanadium (V)			106.2		%		80-120	07-OCT-21
Zinc (Zn)			95.2		%		80-120	07-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5613960								
WG3632588-4 LCS								
Zirconium (Zr)			105.6		%		80-120	07-OCT-21
WG3632588-1 MB								
Aluminum (Al)			<50		mg/kg		50	07-OCT-21
Antimony (Sb)			<0.10		mg/kg		0.1	07-OCT-21
Arsenic (As)			<0.10		mg/kg		0.1	07-OCT-21
Barium (Ba)			<0.50		mg/kg		0.5	07-OCT-21
Beryllium (Be)			<0.10		mg/kg		0.1	07-OCT-21
Bismuth (Bi)			<0.20		mg/kg		0.2	07-OCT-21
Boron (B)			<5.0		mg/kg		5	07-OCT-21
Cadmium (Cd)			<0.020		mg/kg		0.02	07-OCT-21
Calcium (Ca)			<50		mg/kg		50	07-OCT-21
Chromium (Cr)			<0.50		mg/kg		0.5	07-OCT-21
Cobalt (Co)			<0.10		mg/kg		0.1	07-OCT-21
Copper (Cu)			<0.50		mg/kg		0.5	07-OCT-21
Iron (Fe)			<50		mg/kg		50	07-OCT-21
Lead (Pb)			<0.50		mg/kg		0.5	07-OCT-21
Lithium (Li)			<2.0		mg/kg		2	07-OCT-21
Magnesium (Mg)			<20		mg/kg		20	07-OCT-21
Manganese (Mn)			<1.0		mg/kg		1	07-OCT-21
Molybdenum (Mo)			<0.10		mg/kg		0.1	07-OCT-21
Nickel (Ni)			<0.50		mg/kg		0.5	07-OCT-21
Phosphorus (P)			<50		mg/kg		50	07-OCT-21
Potassium (K)			<100		mg/kg		100	07-OCT-21
Selenium (Se)			<0.20		mg/kg		0.2	07-OCT-21
Silver (Ag)			<0.10		mg/kg		0.1	07-OCT-21
Sodium (Na)			<50		mg/kg		50	07-OCT-21
Strontium (Sr)			<0.50		mg/kg		0.5	07-OCT-21
Sulfur (S)			<1000		mg/kg		1000	07-OCT-21
Thallium (Tl)			<0.050		mg/kg		0.05	07-OCT-21
Tin (Sn)			<2.0		mg/kg		2	07-OCT-21
Titanium (Ti)			<1.0		mg/kg		1	07-OCT-21
Tungsten (W)			<0.50		mg/kg		0.5	07-OCT-21
Uranium (U)			<0.050		mg/kg		0.05	07-OCT-21
Vanadium (V)			<0.20		mg/kg		0.2	07-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5613960								
WG3632588-1 MB								
Zinc (Zn)			<2.0		mg/kg		2	07-OCT-21
Zirconium (Zr)			<1.0		mg/kg		1	07-OCT-21
Batch R5613997								
WG3632966-2 CRM		**WT-SS-2**						
Aluminum (Al)			103.6		%		70-130	07-OCT-21
Antimony (Sb)			86.1		%		70-130	07-OCT-21
Arsenic (As)			101.4		%		70-130	07-OCT-21
Barium (Ba)			101.9		%		70-130	07-OCT-21
Beryllium (Be)			98.0		%		70-130	07-OCT-21
Bismuth (Bi)			0.13		mg/kg		0-0.34	07-OCT-21
Boron (B)			8.4		mg/kg		3.5-13.5	07-OCT-21
Calcium (Ca)			102.4		%		70-130	07-OCT-21
Chromium (Cr)			96.5		%		70-130	07-OCT-21
Cobalt (Co)			102.5		%		70-130	07-OCT-21
Copper (Cu)			102.5		%		70-130	07-OCT-21
Iron (Fe)			102.6		%		70-130	07-OCT-21
Lead (Pb)			100.7		%		70-130	07-OCT-21
Lithium (Li)			101.3		%		70-130	07-OCT-21
Magnesium (Mg)			106.2		%		70-130	07-OCT-21
Manganese (Mn)			98.3		%		70-130	07-OCT-21
Molybdenum (Mo)			91.2		%		70-130	07-OCT-21
Nickel (Ni)			102.2		%		70-130	07-OCT-21
Phosphorus (P)			99.1		%		70-130	07-OCT-21
Potassium (K)			90.9		%		70-130	07-OCT-21
Selenium (Se)			0.12		mg/kg		0-0.34	07-OCT-21
Silver (Ag)			115.6		%		70-130	07-OCT-21
Sodium (Na)			96.4		%		70-130	07-OCT-21
Strontium (Sr)			96.3		%		70-130	07-OCT-21
Thallium (Tl)			0.071		mg/kg		0.029-0.129	07-OCT-21
Tin (Sn)			90.4		%		70-130	07-OCT-21
Titanium (Ti)			93.3		%		70-130	07-OCT-21
Uranium (U)			97.5		%		70-130	07-OCT-21
Vanadium (V)			98.9		%		70-130	07-OCT-21
Zinc (Zn)			96.3		%		70-130	07-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5613997								
WG3632966-2 CRM		**WT-SS-2**						
Zirconium (Zr)			89.5		%		70-130	07-OCT-21
WG3632966-6 DUP		**WG3632966-5**						
Aluminum (Al)		2910	2710		ug/g	7.1	40	07-OCT-21
Antimony (Sb)		<0.10	<0.10	RPD-NA	ug/g	N/A	30	07-OCT-21
Arsenic (As)		1.54	1.36		ug/g	13	30	07-OCT-21
Barium (Ba)		8.61	7.95		ug/g	8.0	40	07-OCT-21
Beryllium (Be)		0.13	0.11		ug/g	15	30	07-OCT-21
Bismuth (Bi)		<0.20	<0.20	RPD-NA	ug/g	N/A	30	07-OCT-21
Boron (B)		<5.0	<5.0	RPD-NA	ug/g	N/A	30	07-OCT-21
Cadmium (Cd)		0.085	0.073		ug/g	15	30	07-OCT-21
Calcium (Ca)		50800	46500		ug/g	8.9	30	07-OCT-21
Chromium (Cr)		7.02	6.21		ug/g	12	30	07-OCT-21
Cobalt (Co)		2.69	2.44		ug/g	9.8	30	07-OCT-21
Copper (Cu)		4.61	4.11		ug/g	11	30	07-OCT-21
Iron (Fe)		8370	7490		ug/g	11	30	07-OCT-21
Lead (Pb)		2.96	2.35		ug/g	23	40	07-OCT-21
Lithium (Li)		4.1	4.1		ug/g	0.0	30	07-OCT-21
Magnesium (Mg)		13900	13000		ug/g	7.3	30	07-OCT-21
Manganese (Mn)		265	244		ug/g	8.1	30	07-OCT-21
Molybdenum (Mo)		<0.10	<0.10	RPD-NA	ug/g	N/A	40	07-OCT-21
Nickel (Ni)		6.34	5.83		ug/g	8.3	30	07-OCT-21
Phosphorus (P)		614	593		ug/g	3.4	30	07-OCT-21
Potassium (K)		440	420		ug/g	3.1	40	07-OCT-21
Selenium (Se)		<0.20	<0.20	RPD-NA	ug/g	N/A	30	07-OCT-21
Silver (Ag)		<0.10	<0.10	RPD-NA	ug/g	N/A	40	07-OCT-21
Sodium (Na)		180	165		ug/g	9.0	40	07-OCT-21
Strontium (Sr)		54.3	49.1		ug/g	10	40	07-OCT-21
Sulfur (S)		<1000	<1000	RPD-NA	ug/g	N/A	30	07-OCT-21
Thallium (Tl)		<0.050	<0.050	RPD-NA	ug/g	N/A	30	07-OCT-21
Tin (Sn)		<2.0	<2.0	RPD-NA	ug/g	N/A	40	07-OCT-21
Titanium (Ti)		191	173		ug/g	9.5	40	07-OCT-21
Tungsten (W)		<0.50	<0.50	RPD-NA	ug/g	N/A	30	07-OCT-21
Uranium (U)		0.295	0.261		ug/g	12	30	07-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5613997								
WG3632966-6 DUP		**WG3632966-5**						
Vanadium (V)		11.5	10.2		ug/g	11	30	07-OCT-21
Zinc (Zn)		17.4	14.5		ug/g	18	30	07-OCT-21
Zirconium (Zr)		1.0	<1.0	RPD-NA	ug/g	N/A	30	07-OCT-21
WG3632966-4 LCS								
Aluminum (Al)			105.2		%		80-120	07-OCT-21
Antimony (Sb)			105.4		%		80-120	07-OCT-21
Arsenic (As)			105.0		%		80-120	07-OCT-21
Barium (Ba)			99.7		%		80-120	07-OCT-21
Beryllium (Be)			98.3		%		80-120	07-OCT-21
Bismuth (Bi)			99.2		%		80-120	07-OCT-21
Boron (B)			95.3		%		80-120	07-OCT-21
Cadmium (Cd)			99.97		%		80-120	07-OCT-21
Calcium (Ca)			99.6		%		80-120	07-OCT-21
Chromium (Cr)			104.0		%		80-120	07-OCT-21
Cobalt (Co)			105.5		%		80-120	07-OCT-21
Copper (Cu)			103.9		%		80-120	07-OCT-21
Iron (Fe)			96.1		%		80-120	07-OCT-21
Lead (Pb)			99.2		%		80-120	07-OCT-21
Lithium (Li)			98.1		%		80-120	07-OCT-21
Magnesium (Mg)			110.9		%		80-120	07-OCT-21
Manganese (Mn)			103.5		%		80-120	07-OCT-21
Molybdenum (Mo)			102.9		%		80-120	07-OCT-21
Nickel (Ni)			103.3		%		80-120	07-OCT-21
Phosphorus (P)			106.8		%		80-120	07-OCT-21
Potassium (K)			103.4		%		80-120	07-OCT-21
Selenium (Se)			102.3		%		80-120	07-OCT-21
Silver (Ag)			91.9		%		80-120	07-OCT-21
Sodium (Na)			105.2		%		80-120	07-OCT-21
Strontium (Sr)			104.8		%		80-120	07-OCT-21
Sulfur (S)			99.7		%		80-120	07-OCT-21
Thallium (Tl)			99.3		%		80-120	07-OCT-21
Tin (Sn)			102.7		%		80-120	07-OCT-21
Titanium (Ti)			102.3		%		80-120	07-OCT-21
Tungsten (W)			99.5				80-120	

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5613997								
WG3632966-4 LCS								
Tungsten (W)			99.5		%		80-120	07-OCT-21
Uranium (U)			96.5		%		80-120	07-OCT-21
Vanadium (V)			106.7		%		80-120	07-OCT-21
Zinc (Zn)			98.4		%		80-120	07-OCT-21
Zirconium (Zr)			98.7		%		80-120	07-OCT-21
WG3632966-1 MB								
Aluminum (Al)			<50		mg/kg		50	07-OCT-21
Antimony (Sb)			<0.10		mg/kg		0.1	07-OCT-21
Arsenic (As)			<0.10		mg/kg		0.1	07-OCT-21
Barium (Ba)			<0.50		mg/kg		0.5	07-OCT-21
Beryllium (Be)			<0.10		mg/kg		0.1	07-OCT-21
Bismuth (Bi)			<0.20		mg/kg		0.2	07-OCT-21
Boron (B)			<5.0		mg/kg		5	07-OCT-21
Cadmium (Cd)			<0.020		mg/kg		0.02	07-OCT-21
Calcium (Ca)			<50		mg/kg		50	07-OCT-21
Chromium (Cr)			<0.50		mg/kg		0.5	07-OCT-21
Cobalt (Co)			<0.10		mg/kg		0.1	07-OCT-21
Copper (Cu)			<0.50		mg/kg		0.5	07-OCT-21
Iron (Fe)			<50		mg/kg		50	07-OCT-21
Lead (Pb)			<0.50		mg/kg		0.5	07-OCT-21
Lithium (Li)			<2.0		mg/kg		2	07-OCT-21
Magnesium (Mg)			<20		mg/kg		20	07-OCT-21
Manganese (Mn)			<1.0		mg/kg		1	07-OCT-21
Molybdenum (Mo)			<0.10		mg/kg		0.1	07-OCT-21
Nickel (Ni)			<0.50		mg/kg		0.5	07-OCT-21
Phosphorus (P)			<50		mg/kg		50	07-OCT-21
Potassium (K)			<100		mg/kg		100	07-OCT-21
Selenium (Se)			<0.20		mg/kg		0.2	07-OCT-21
Silver (Ag)			<0.10		mg/kg		0.1	07-OCT-21
Sodium (Na)			<50		mg/kg		50	07-OCT-21
Strontium (Sr)			<0.50		mg/kg		0.5	07-OCT-21
Sulfur (S)			<1000		mg/kg		1000	07-OCT-21
Thallium (Tl)			<0.050		mg/kg		0.05	07-OCT-21
Tin (Sn)			<2.0		mg/kg		2	07-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5613997								
WG3632966-1 MB								
Titanium (Ti)			<1.0		mg/kg		1	07-OCT-21
Tungsten (W)			<0.50		mg/kg		0.5	07-OCT-21
Uranium (U)			<0.050		mg/kg		0.05	07-OCT-21
Vanadium (V)			<0.20		mg/kg		0.2	07-OCT-21
Zinc (Zn)			<2.0		mg/kg		2	07-OCT-21
Zirconium (Zr)			<1.0		mg/kg		1	07-OCT-21
Batch R5614325								
WG3633447-2 CRM		**WT-SS-2**						
Aluminum (Al)			121.3		%		70-130	07-OCT-21
Antimony (Sb)			102.0		%		70-130	07-OCT-21
Arsenic (As)			116.9		%		70-130	07-OCT-21
Barium (Ba)			116.7		%		70-130	07-OCT-21
Beryllium (Be)			115.7		%		70-130	07-OCT-21
Bismuth (Bi)			0.13		mg/kg		0-0.34	07-OCT-21
Boron (B)			9.7		mg/kg		3.5-13.5	07-OCT-21
Cadmium (Cd)			116.8		%		70-130	07-OCT-21
Calcium (Ca)			118.8		%		70-130	07-OCT-21
Chromium (Cr)			114.9		%		70-130	07-OCT-21
Cobalt (Co)			117.2		%		70-130	07-OCT-21
Copper (Cu)			122.3		%		70-130	07-OCT-21
Iron (Fe)			119.9		%		70-130	07-OCT-21
Lead (Pb)			110.6		%		70-130	07-OCT-21
Lithium (Li)			115.1		%		70-130	07-OCT-21
Magnesium (Mg)			123.2		%		70-130	07-OCT-21
Manganese (Mn)			119.4		%		70-130	07-OCT-21
Molybdenum (Mo)			100.6		%		70-130	07-OCT-21
Nickel (Ni)			117.3		%		70-130	07-OCT-21
Phosphorus (P)			112.1		%		70-130	07-OCT-21
Potassium (K)			116.5		%		70-130	07-OCT-21
Selenium (Se)			0.14		mg/kg		0-0.34	07-OCT-21
Silver (Ag)			84.6		%		70-130	07-OCT-21
Sodium (Na)			121.3		%		70-130	07-OCT-21
Strontium (Sr)			112.3		%		70-130	07-OCT-21
Thallium (Tl)			0.080		mg/kg		0.029-0.129	07-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5614325								
WG3633447-2 CRM		**WT-SS-2**						
Tin (Sn)			105.2		%		70-130	07-OCT-21
Titanium (Ti)			112.1		%		70-130	07-OCT-21
Uranium (U)			98.5		%		70-130	07-OCT-21
Vanadium (V)			116.6		%		70-130	07-OCT-21
Zinc (Zn)			112.0		%		70-130	07-OCT-21
Zirconium (Zr)			108.9		%		70-130	07-OCT-21
WG3633447-6 DUP		**WG3633447-5**						
Aluminum (Al)		20200	19400		ug/g	4.0	40	07-OCT-21
Antimony (Sb)		1.28	1.19		ug/g	7.0	30	07-OCT-21
Arsenic (As)		12.7	11.4		ug/g	10	30	07-OCT-21
Barium (Ba)		286	274		ug/g	4.5	40	07-OCT-21
Beryllium (Be)		0.80	0.75		ug/g	6.1	30	07-OCT-21
Bismuth (Bi)		0.48	0.47		ug/g	1.1	30	07-OCT-21
Boron (B)		12.3	11.3		ug/g	8.4	30	07-OCT-21
Cadmium (Cd)		0.917	0.832		ug/g	9.8	30	07-OCT-21
Calcium (Ca)		74100	69800		ug/g	6.0	30	07-OCT-21
Chromium (Cr)		1720	1640		ug/g	4.6	30	07-OCT-21
Cobalt (Co)		26.8	25.4		ug/g	5.7	30	07-OCT-21
Copper (Cu)		57.3	54.0		ug/g	5.9	30	07-OCT-21
Iron (Fe)		34100	31700		ug/g	7.2	30	07-OCT-21
Lead (Pb)		185	164		ug/g	12	40	07-OCT-21
Lithium (Li)		18.0	16.7		ug/g	7.5	30	07-OCT-21
Magnesium (Mg)		14700	14000		ug/g	4.6	30	07-OCT-21
Manganese (Mn)		588	553		ug/g	6.2	30	07-OCT-21
Molybdenum (Mo)		0.98	0.94		ug/g	4.5	40	07-OCT-21
Nickel (Ni)		33.9	31.8		ug/g	6.4	30	07-OCT-21
Phosphorus (P)		1330	1230		ug/g	8.3	30	07-OCT-21
Potassium (K)		4240	3980		ug/g	6.4	40	07-OCT-21
Selenium (Se)		1.05	0.90		ug/g	15	30	07-OCT-21
Silver (Ag)		0.40	0.39		ug/g	3.9	40	07-OCT-21
Sodium (Na)		1030	965		ug/g	6.5	40	07-OCT-21
Strontium (Sr)		651	615		ug/g	5.8	40	07-OCT-21
Sulfur (S)		12900	11200		ug/g	14	30	07-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5614325								
WG3633447-6 DUP		**WG3633447-5**						
Thallium (Tl)		0.372	0.360		ug/g	3.4	30	07-OCT-21
Tin (Sn)		11.5	9.5		ug/g	18	40	07-OCT-21
Titanium (Ti)		1170	1100		ug/g	6.3	40	07-OCT-21
Tungsten (W)		0.55	0.54		ug/g	2.0	30	07-OCT-21
Uranium (U)		0.646	0.631		ug/g	2.4	30	07-OCT-21
Vanadium (V)		45.7	42.8		ug/g	6.6	30	07-OCT-21
Zinc (Zn)		247	227		ug/g	8.4	30	07-OCT-21
Zirconium (Zr)		6.2	5.9		ug/g	5.5	30	07-OCT-21
WG3633447-4 LCS								
Aluminum (Al)			104.9		%		80-120	07-OCT-21
Antimony (Sb)			103.9		%		80-120	07-OCT-21
Arsenic (As)			106.3		%		80-120	07-OCT-21
Barium (Ba)			102.7		%		80-120	07-OCT-21
Beryllium (Be)			106.6		%		80-120	07-OCT-21
Bismuth (Bi)			104.9		%		80-120	07-OCT-21
Boron (B)			102.6		%		80-120	07-OCT-21
Cadmium (Cd)			101.0		%		80-120	07-OCT-21
Calcium (Ca)			105.1		%		80-120	07-OCT-21
Chromium (Cr)			105.7		%		80-120	07-OCT-21
Cobalt (Co)			105.9		%		80-120	07-OCT-21
Copper (Cu)			105.1		%		80-120	07-OCT-21
Iron (Fe)			98.8		%		80-120	07-OCT-21
Lead (Pb)			105.3		%		80-120	07-OCT-21
Lithium (Li)			104.7		%		80-120	07-OCT-21
Magnesium (Mg)			111.9		%		80-120	07-OCT-21
Manganese (Mn)			104.3		%		80-120	07-OCT-21
Molybdenum (Mo)			102.6		%		80-120	07-OCT-21
Nickel (Ni)			104.6		%		80-120	07-OCT-21
Phosphorus (P)			106.2		%		80-120	07-OCT-21
Potassium (K)			104.6		%		80-120	07-OCT-21
Selenium (Se)			107.2		%		80-120	07-OCT-21
Silver (Ag)			91.9		%		80-120	07-OCT-21
Sodium (Na)			108.8		%		80-120	07-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5614325								
WG3633447-4 LCS								
Strontium (Sr)			107.2		%		80-120	07-OCT-21
Sulfur (S)			105.2		%		80-120	07-OCT-21
Thallium (Tl)			105.1		%		80-120	07-OCT-21
Tin (Sn)			101.6		%		80-120	07-OCT-21
Titanium (Ti)			101.3		%		80-120	07-OCT-21
Tungsten (W)			107.3		%		80-120	07-OCT-21
Uranium (U)			102.4		%		80-120	07-OCT-21
Vanadium (V)			107.9		%		80-120	07-OCT-21
Zinc (Zn)			100.8		%		80-120	07-OCT-21
Zirconium (Zr)			98.6		%		80-120	07-OCT-21
WG3633447-1 MB								
Aluminum (Al)			<50		mg/kg		50	07-OCT-21
Antimony (Sb)			<0.10		mg/kg		0.1	07-OCT-21
Arsenic (As)			<0.10		mg/kg		0.1	07-OCT-21
Barium (Ba)			<0.50		mg/kg		0.5	07-OCT-21
Beryllium (Be)			<0.10		mg/kg		0.1	07-OCT-21
Bismuth (Bi)			<0.20		mg/kg		0.2	07-OCT-21
Boron (B)			<5.0		mg/kg		5	07-OCT-21
Cadmium (Cd)			<0.020		mg/kg		0.02	07-OCT-21
Calcium (Ca)			<50		mg/kg		50	07-OCT-21
Chromium (Cr)			<0.50		mg/kg		0.5	07-OCT-21
Cobalt (Co)			<0.10		mg/kg		0.1	07-OCT-21
Copper (Cu)			<0.50		mg/kg		0.5	07-OCT-21
Iron (Fe)			<50		mg/kg		50	07-OCT-21
Lead (Pb)			<0.50		mg/kg		0.5	07-OCT-21
Lithium (Li)			<2.0		mg/kg		2	07-OCT-21
Magnesium (Mg)			<20		mg/kg		20	07-OCT-21
Manganese (Mn)			<1.0		mg/kg		1	07-OCT-21
Molybdenum (Mo)			<0.10		mg/kg		0.1	07-OCT-21
Nickel (Ni)			<0.50		mg/kg		0.5	07-OCT-21
Phosphorus (P)			<50		mg/kg		50	07-OCT-21
Potassium (K)			<100		mg/kg		100	07-OCT-21
Selenium (Se)			<0.20		mg/kg		0.2	07-OCT-21
Silver (Ag)			<0.10		mg/kg		0.1	07-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5614325								
WG3633447-1 MB								
Sodium (Na)			<50		mg/kg		50	07-OCT-21
Strontium (Sr)			<0.50		mg/kg		0.5	07-OCT-21
Sulfur (S)			<1000		mg/kg		1000	07-OCT-21
Thallium (Tl)			<0.050		mg/kg		0.05	07-OCT-21
Tin (Sn)			<2.0		mg/kg		2	07-OCT-21
Titanium (Ti)			<1.0		mg/kg		1	07-OCT-21
Tungsten (W)			<0.50		mg/kg		0.5	07-OCT-21
Uranium (U)			<0.050		mg/kg		0.05	07-OCT-21
Vanadium (V)			<0.20		mg/kg		0.2	07-OCT-21
Zinc (Zn)			<2.0		mg/kg		2	07-OCT-21
Zirconium (Zr)			<1.0		mg/kg		1	07-OCT-21
MOISTURE-WT	**Soil**							
Batch R5607044								
WG3630431-3 DUP		**L2646442-37**						
% Moisture		14.7	12.9		%	13	20	05-OCT-21
WG3630431-2 LCS								
% Moisture			100.1		%		90-110	05-OCT-21
WG3630431-1 MB								
% Moisture			<0.25		%		0.25	05-OCT-21
Batch R5607676								
WG3630462-3 DUP		**L2646459-11**						
% Moisture		87.5	87.7		%	0.2	20	05-OCT-21
WG3630462-2 LCS								
% Moisture			99.6		%		90-110	05-OCT-21
WG3630462-1 MB								
% Moisture			<0.25		%		0.25	05-OCT-21
Batch R5608747								
WG3630469-3 DUP		**L2646459-26**						
% Moisture		81.6	80.8		%	1.0	20	05-OCT-21
WG3630469-2 LCS								
% Moisture			98.8		%		90-110	05-OCT-21
WG3630469-1 MB								
% Moisture			<0.25		%		0.25	05-OCT-21
PAH-CCME-SQGL-WT	**Soil**							

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-CCME-SQGL-WT	**Soil**							
Batch R5608197								
WG3630571-3 DUP		**WG3630571-5**						
1-Methylnaphthalene		<0.0050	<0.0050	RPD-NA	ug/g	N/A	50	05-OCT-21
2-Methylnaphthalene		<0.0050	<0.0050	RPD-NA	ug/g	N/A	50	05-OCT-21
Acenaphthene		<0.0050	<0.0050	RPD-NA	ug/g	N/A	50	05-OCT-21
Acenaphthylene		<0.0050	<0.0050	RPD-NA	ug/g	N/A	50	05-OCT-21
Acridine		<0.010	<0.010	RPD-NA	ug/g	N/A	50	05-OCT-21
Anthracene		<0.0040	<0.0040	RPD-NA	ug/g	N/A	50	05-OCT-21
Benzo(a)anthracene		<0.010	<0.010	RPD-NA	ug/g	N/A	50	05-OCT-21
Benzo(a)pyrene		<0.0050	<0.0050	RPD-NA	ug/g	N/A	50	05-OCT-21
Benzo(b&j)fluoranthene		<0.010	<0.010	RPD-NA	ug/g	N/A	50	05-OCT-21
Benzo(g,h,i)perylene		<0.010	<0.010	RPD-NA	ug/g	N/A	50	05-OCT-21
Benzo(k)fluoranthene		<0.010	<0.010	RPD-NA	ug/g	N/A	50	05-OCT-21
Chrysene		<0.010	<0.010	RPD-NA	ug/g	N/A	50	05-OCT-21
Dibenz(a,h)anthracene		<0.0050	<0.0050	RPD-NA	ug/g	N/A	50	05-OCT-21
Fluoroanthene		<0.0050	<0.0050	RPD-NA	ug/g	N/A	50	05-OCT-21
Fluorene		<0.0050	<0.0050	RPD-NA	ug/g	N/A	50	05-OCT-21
Indeno(1,2,3-cd)pyrene		<0.010	<0.010	RPD-NA	ug/g	N/A	50	05-OCT-21
Naphthalene		<0.0050	<0.0050	RPD-NA	ug/g	N/A	50	05-OCT-21
Phenanthrene		<0.0050	<0.0050	RPD-NA	ug/g	N/A	50	05-OCT-21
Pyrene		<0.0050	<0.0050	RPD-NA	ug/g	N/A	50	05-OCT-21
Quinoline		<0.0050	<0.0050	RPD-NA	ug/g	N/A	50	05-OCT-21
WG3630571-2 LCS								
1-Methylnaphthalene			90.7		%		50-140	05-OCT-21
2-Methylnaphthalene			88.4		%		50-140	05-OCT-21
Acenaphthene			88.5		%		50-140	05-OCT-21
Acenaphthylene			89.7		%		50-140	05-OCT-21
Acridine			84.8		%		50-140	05-OCT-21
Anthracene			81.8		%		50-140	05-OCT-21
Benzo(a)anthracene			101.2		%		50-140	05-OCT-21
Benzo(a)pyrene			75.8		%		50-140	05-OCT-21
Benzo(b&j)fluoranthene			81.8		%		50-150	05-OCT-21
Benzo(g,h,i)perylene			77.0		%		50-140	05-OCT-21
Benzo(k)fluoranthene			81.8		%		50-140	05-OCT-21
Chrysene			90.8		%		50-140	05-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-CCME-SQGL-WT	**Soil**							
Batch R5608197								
WG3630571-2 LCS								
Dibenz(a,h)anthracene			81.6		%		50-140	05-OCT-21
Fluoroanthene			91.5		%		50-140	05-OCT-21
Fluorene			88.2		%		50-140	05-OCT-21
Indeno(1,2,3-cd)pyrene			79.6		%		50-140	05-OCT-21
Naphthalene			85.4		%		50-140	05-OCT-21
Phenanthrene			88.0		%		50-140	05-OCT-21
Pyrene			90.3		%		50-140	05-OCT-21
Quinoline			77.9		%		50-140	05-OCT-21
WG3630571-1 MB								
1-Methylnaphthalene			<0.0050		ug/g		0.005	05-OCT-21
2-Methylnaphthalene			<0.0050		ug/g		0.005	05-OCT-21
Acenaphthene			<0.0050		ug/g		0.005	05-OCT-21
Acenaphthylene			<0.0050		ug/g		0.005	05-OCT-21
Acridine			<0.010		ug/g		0.01	05-OCT-21
Anthracene			<0.0040		ug/g		0.004	05-OCT-21
Benzo(a)anthracene			<0.010		ug/g		0.01	05-OCT-21
Benzo(a)pyrene			<0.0050		ug/g		0.005	05-OCT-21
Benzo(b&j)fluoranthene			<0.010		ug/g		0.01	05-OCT-21
Benzo(g,h,i)perylene			<0.010		ug/g		0.01	05-OCT-21
Benzo(k)fluoranthene			<0.010		ug/g		0.01	05-OCT-21
Chrysene			<0.010		ug/g		0.01	05-OCT-21
Dibenz(a,h)anthracene			<0.0050		ug/g		0.005	05-OCT-21
Fluoroanthene			<0.0050		ug/g		0.005	05-OCT-21
Fluorene			<0.0050		ug/g		0.005	05-OCT-21
Indeno(1,2,3-cd)pyrene			<0.010		ug/g		0.01	05-OCT-21
Naphthalene			<0.0050		ug/g		0.005	05-OCT-21
Phenanthrene			<0.0050		ug/g		0.005	05-OCT-21
Pyrene			<0.0050		ug/g		0.005	05-OCT-21
Quinoline			<0.0050		ug/g		0.005	05-OCT-21
Surrogate: 2-Fluorobiphenyl			83.7		%		60-140	05-OCT-21
Surrogate: d14-Terphenyl			88.8		%		60-140	05-OCT-21
WG3630571-4 MS		**WG3630571-5**						
1-Methylnaphthalene			92.6		%		50-150	05-OCT-21
2-Methylnaphthalene			89.8		%		50-150	05-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-CCME-SQGL-WT	**Soil**							
Batch R5608197								
WG3630571-4 MS		**WG3630571-5**						
Acenaphthene			89.5		%		50-150	05-OCT-21
Acenaphthylene			89.5		%		50-150	05-OCT-21
Acridine			86.6		%		50-150	05-OCT-21
Anthracene			81.8		%		50-150	05-OCT-21
Benzo(a)anthracene			99.99		%		50-150	05-OCT-21
Benzo(a)pyrene			77.5		%		50-150	05-OCT-21
Benzo(b&j)fluoranthene			86.0		%		50-150	05-OCT-21
Benzo(g,h,i)perylene			79.1		%		50-150	05-OCT-21
Benzo(k)fluoranthene			84.7		%		50-150	05-OCT-21
Chrysene			94.1		%		50-150	05-OCT-21
Dibenz(a,h)anthracene			83.5		%		50-150	05-OCT-21
Fluoroanthene			92.8		%		50-150	05-OCT-21
Fluorene			89.9		%		50-150	05-OCT-21
Indeno(1,2,3-cd)pyrene			82.6		%		50-150	05-OCT-21
Naphthalene			86.9		%		50-150	05-OCT-21
Phenanthrene			89.6		%		50-150	05-OCT-21
Pyrene			91.7		%		50-150	05-OCT-21
Quinoline			80.1		%		50-150	05-OCT-21
Batch R5611880								
WG3631218-3 DUP		**WG3631218-5**						
1-Methylnaphthalene		<0.0050	<0.0050	RPD-NA	ug/g	N/A	50	06-OCT-21
2-Methylnaphthalene		<0.0050	<0.0050	RPD-NA	ug/g	N/A	50	06-OCT-21
Acenaphthene		<0.0050	<0.0050	RPD-NA	ug/g	N/A	50	06-OCT-21
Acenaphthylene		<0.0050	<0.0050	RPD-NA	ug/g	N/A	50	06-OCT-21
Acridine		<0.010	<0.010	RPD-NA	ug/g	N/A	50	06-OCT-21
Anthracene		<0.0040	<0.0040	RPD-NA	ug/g	N/A	50	06-OCT-21
Benzo(a)anthracene		<0.010	<0.010	RPD-NA	ug/g	N/A	50	06-OCT-21
Benzo(a)pyrene		<0.0050	<0.0050	RPD-NA	ug/g	N/A	50	06-OCT-21
Benzo(b&j)fluoranthene		<0.010	<0.010	RPD-NA	ug/g	N/A	50	06-OCT-21
Benzo(g,h,i)perylene		<0.010	<0.010	RPD-NA	ug/g	N/A	50	06-OCT-21
Benzo(k)fluoranthene		<0.010	<0.010	RPD-NA	ug/g	N/A	50	06-OCT-21
Chrysene		<0.010	<0.010	RPD-NA	ug/g	N/A	50	06-OCT-21
Dibenz(a,h)anthracene		<0.0050	<0.0050	RPD-NA	ug/g	N/A	50	06-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-CCME-SQGL-WT	**Soil**							
Batch R5611880								
WG3631218-3 DUP		**WG3631218-5**						
Fluoroanthene		<0.0050	<0.0050	RPD-NA	ug/g	N/A	50	06-OCT-21
Fluorene		<0.0050	<0.0050	RPD-NA	ug/g	N/A	50	06-OCT-21
Indeno(1,2,3-cd)pyrene		<0.010	<0.010	RPD-NA	ug/g	N/A	50	06-OCT-21
Naphthalene		<0.0050	<0.0050	RPD-NA	ug/g	N/A	50	06-OCT-21
Phenanthrene		<0.0050	<0.0050	RPD-NA	ug/g	N/A	50	06-OCT-21
Pyrene		<0.0050	<0.0050	RPD-NA	ug/g	N/A	50	06-OCT-21
Quinoline		<0.0050	<0.0050	RPD-NA	ug/g	N/A	50	06-OCT-21
WG3631218-2 LCS								
1-Methylnaphthalene			99.1		%		50-140	06-OCT-21
2-Methylnaphthalene			95.7		%		50-140	06-OCT-21
Acenaphthene			94.1		%		50-140	06-OCT-21
Acenaphthylene			85.5		%		50-140	06-OCT-21
Acridine			84.4		%		50-140	06-OCT-21
Anthracene			80.4		%		50-140	06-OCT-21
Benzo(a)anthracene			93.9		%		50-140	06-OCT-21
Benzo(a)pyrene			81.0		%		50-140	06-OCT-21
Benzo(b&j)fluoranthene			93.8		%		50-150	06-OCT-21
Benzo(g,h,i)perylene			82.3		%		50-140	06-OCT-21
Benzo(k)fluoranthene			92.8		%		50-140	06-OCT-21
Chrysene			104.3		%		50-140	06-OCT-21
Dibenz(a,h)anthracene			88.5		%		50-140	06-OCT-21
Fluoroanthene			92.1		%		50-140	06-OCT-21
Fluorene			91.7		%		50-140	06-OCT-21
Indeno(1,2,3-cd)pyrene			75.2		%		50-140	06-OCT-21
Naphthalene			90.4		%		50-140	06-OCT-21
Phenanthrene			96.3		%		50-140	06-OCT-21
Pyrene			90.6		%		50-140	06-OCT-21
Quinoline			75.2		%		50-140	06-OCT-21
WG3631218-1 MB								
1-Methylnaphthalene			<0.0050		ug/g		0.005	06-OCT-21
2-Methylnaphthalene			<0.0050		ug/g		0.005	06-OCT-21
Acenaphthene			<0.0050		ug/g		0.005	06-OCT-21
Acenaphthylene			<0.0050		ug/g		0.005	06-OCT-21
Acridine			<0.010		ug/g		0.01	06-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-CCME-SQGL-WT	**Soil**							
Batch R5611880								
WG3631218-1 MB								
Anthracene			<0.0040		ug/g		0.004	06-OCT-21
Benzo(a)anthracene			<0.010		ug/g		0.01	06-OCT-21
Benzo(a)pyrene			<0.0050		ug/g		0.005	06-OCT-21
Benzo(b&j)fluoranthene			<0.010		ug/g		0.01	06-OCT-21
Benzo(g,h,i)perylene			<0.010		ug/g		0.01	06-OCT-21
Benzo(k)fluoranthene			<0.010		ug/g		0.01	06-OCT-21
Chrysene			<0.010		ug/g		0.01	06-OCT-21
Dibenz(a,h)anthracene			<0.0050		ug/g		0.005	06-OCT-21
Fluoroanthene			<0.0050		ug/g		0.005	06-OCT-21
Fluorene			<0.0050		ug/g		0.005	06-OCT-21
Indeno(1,2,3-cd)pyrene			<0.010		ug/g		0.01	06-OCT-21
Naphthalene			<0.0050		ug/g		0.005	06-OCT-21
Phenanthrene			<0.0050		ug/g		0.005	06-OCT-21
Pyrene			<0.0050		ug/g		0.005	06-OCT-21
Quinoline			<0.0050		ug/g		0.005	06-OCT-21
Surrogate: 2-Fluorobiphenyl			84.8		%		60-140	06-OCT-21
Surrogate: d14-Terphenyl			83.9		%		60-140	06-OCT-21
WG3631218-4 MS		**WG3631218-5**						
1-Methylnaphthalene			100.9		%		50-150	06-OCT-21
2-Methylnaphthalene			98.7		%		50-150	06-OCT-21
Acenaphthene			96.7		%		50-150	06-OCT-21
Acenaphthylene			91.2		%		50-150	06-OCT-21
Acridine			94.3		%		50-150	06-OCT-21
Anthracene			86.0		%		50-150	06-OCT-21
Benzo(a)anthracene			103.7		%		50-150	06-OCT-21
Benzo(a)pyrene			84.9		%		50-150	06-OCT-21
Benzo(b&j)fluoranthene			96.0		%		50-150	06-OCT-21
Benzo(g,h,i)perylene			87.7		%		50-150	06-OCT-21
Benzo(k)fluoranthene			94.3		%		50-150	06-OCT-21
Chrysene			103.8		%		50-150	06-OCT-21
Dibenz(a,h)anthracene			93.0		%		50-150	06-OCT-21
Fluoroanthene			95.2		%		50-150	06-OCT-21
Fluorene			96.3		%		50-150	06-OCT-21
Indeno(1,2,3-cd)pyrene			87.6		%		50-150	06-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-CCME-SQGL-WT	**Soil**							
Batch R5611880								
WG3631218-4 MS		**WG3631218-5**						
Naphthalene			91.6		%		50-150	06-OCT-21
Phenanthrene			97.7		%		50-150	06-OCT-21
Pyrene			94.3		%		50-150	06-OCT-21
Quinoline			84.5		%		50-150	06-OCT-21
Batch R5614231								
WG3633110-3 DUP		**WG3633110-5**						
1-Methylnaphthalene		<0.025	<0.025	RPD-NA	ug/g	N/A	50	08-OCT-21
2-Methylnaphthalene		<0.025	<0.025	RPD-NA	ug/g	N/A	50	08-OCT-21
Acenaphthene		0.059	0.056		ug/g	6.4	50	08-OCT-21
Acenaphthylene		0.417	0.366		ug/g	13	50	08-OCT-21
Acridine		<0.050	<0.050	RPD-NA	ug/g	N/A	50	08-OCT-21
Anthracene		0.203	0.157		ug/g	26	50	08-OCT-21
Benzo(a)anthracene		1.04	0.679		ug/g	42	50	08-OCT-21
Benzo(a)pyrene		1.43	1.08		ug/g	28	50	08-OCT-21
Benzo(b&j)fluoranthene		1.37	0.947		ug/g	36	50	08-OCT-21
Benzo(g,h,i)perylene		0.918	0.704		ug/g	26	50	08-OCT-21
Benzo(k)fluoranthene		0.522	0.365		ug/g	35	50	08-OCT-21
Chrysene		1.11	0.765		ug/g	37	50	08-OCT-21
Dibenz(a,h)anthracene		0.225	0.171		ug/g	28	50	08-OCT-21
Fluoroanthene		1.10	0.730		ug/g	40	50	08-OCT-21
Fluorene		0.083	0.071		ug/g	16	50	08-OCT-21
Indeno(1,2,3-cd)pyrene		0.716	0.525		ug/g	31	50	08-OCT-21
Naphthalene		<0.025	0.030	RPD-NA	ug/g	N/A	50	08-OCT-21
Phenanthrene		0.354	0.300		ug/g	17	50	08-OCT-21
Pyrene		1.40	0.993		ug/g	34	50	08-OCT-21
Quinoline		<0.025	<0.025	RPD-NA	ug/g	N/A	50	08-OCT-21
WG3633110-2 LCS								
1-Methylnaphthalene			92.8		%		50-140	08-OCT-21
2-Methylnaphthalene			88.7		%		50-140	08-OCT-21
Acenaphthene			87.0		%		50-140	08-OCT-21
Acenaphthylene			77.8		%		50-140	08-OCT-21
Acridine			77.8		%		50-140	08-OCT-21
Anthracene			75.6		%		50-140	08-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-CCME-SQGL-WT	**Soil**							
Batch R5614231								
WG3633110-2 LCS								
Benzo(a)anthracene			83.4		%		50-140	08-OCT-21
Benzo(a)pyrene			73.2		%		50-140	08-OCT-21
Benzo(b&j)fluoranthene			82.3		%		50-150	08-OCT-21
Benzo(g,h,i)perylene			88.6		%		50-140	08-OCT-21
Benzo(k)fluoranthene			97.7		%		50-140	08-OCT-21
Chrysene			100.2		%		50-140	08-OCT-21
Dibenz(a,h)anthracene			89.2		%		50-140	08-OCT-21
Fluoroanthene			89.5		%		50-140	08-OCT-21
Fluorene			83.5		%		50-140	08-OCT-21
Indeno(1,2,3-cd)pyrene			76.3		%		50-140	08-OCT-21
Naphthalene			88.0		%		50-140	08-OCT-21
Phenanthrene			92.9		%		50-140	08-OCT-21
Pyrene			88.9		%		50-140	08-OCT-21
Quinoline			72.0		%		50-140	08-OCT-21
WG3633110-1 MB								
1-Methylnaphthalene			<0.0050		ug/g		0.005	08-OCT-21
2-Methylnaphthalene			<0.0050		ug/g		0.005	08-OCT-21
Acenaphthene			<0.0050		ug/g		0.005	08-OCT-21
Acenaphthylene			<0.0050		ug/g		0.005	08-OCT-21
Acridine			<0.010		ug/g		0.01	08-OCT-21
Anthracene			<0.0040		ug/g		0.004	08-OCT-21
Benzo(a)anthracene			<0.010		ug/g		0.01	08-OCT-21
Benzo(a)pyrene			<0.0050		ug/g		0.005	08-OCT-21
Benzo(b&j)fluoranthene			<0.010		ug/g		0.01	08-OCT-21
Benzo(g,h,i)perylene			<0.010		ug/g		0.01	08-OCT-21
Benzo(k)fluoranthene			<0.010		ug/g		0.01	08-OCT-21
Chrysene			<0.010		ug/g		0.01	08-OCT-21
Dibenz(a,h)anthracene			<0.0050		ug/g		0.005	08-OCT-21
Fluoroanthene			<0.0050		ug/g		0.005	08-OCT-21
Fluorene			<0.0050		ug/g		0.005	08-OCT-21
Indeno(1,2,3-cd)pyrene			<0.010		ug/g		0.01	08-OCT-21
Naphthalene			<0.0050		ug/g		0.005	08-OCT-21
Phenanthrene			<0.0050		ug/g		0.005	08-OCT-21
Pyrene			<0.0050		ug/g		0.005	08-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-CCME-SQGL-WT	**Soil**							
Batch R5614231								
WG3633110-1 MB								
Quinoline			<0.0050		ug/g		0.005	08-OCT-21
Surrogate: 2-Fluorobiphenyl			85.3		%		60-140	08-OCT-21
Surrogate: d14-Terphenyl			92.9		%		60-140	08-OCT-21
WG3633110-4 MS		**WG3633110-5**						
1-Methylnaphthalene			100.0		%		50-150	08-OCT-21
2-Methylnaphthalene			97.5		%		50-150	08-OCT-21
Acenaphthene			97.6		%		50-150	08-OCT-21
Acenaphthylene			56.6		%		50-150	08-OCT-21
Acridine			91.9		%		50-150	08-OCT-21
Anthracene			87.7		%		50-150	08-OCT-21
Benzo(a)anthracene			92.9		%		50-150	08-OCT-21
Benzo(a)pyrene			67.3		%		50-150	08-OCT-21
Benzo(b&j)fluoranthene			62.5		%		50-150	08-OCT-21
Benzo(g,h,i)perylene			64.7		%		50-150	08-OCT-21
Benzo(k)fluoranthene			80.6		%		50-150	08-OCT-21
Chrysene			85.1		%		50-150	08-OCT-21
Dibenz(a,h)anthracene			65.0		%		50-150	08-OCT-21
Fluoroanthene			86.0		%		50-150	08-OCT-21
Fluorene			100.9		%		50-150	08-OCT-21
Indeno(1,2,3-cd)pyrene			67.5		%		50-150	08-OCT-21
Naphthalene			93.7		%		50-150	08-OCT-21
Phenanthrene			95.7		%		50-150	08-OCT-21
Pyrene			85.9		%		50-150	08-OCT-21
Quinoline			91.2		%		50-150	08-OCT-21
PCB9-LOW-WT	**Soil**							
Batch R5611197								
WG3630436-3 DUP		**WG3630436-5**						
Aroclor 1016		<0.023	<0.023	RPD-NA	mg/kg	N/A	50	06-OCT-21
Aroclor 1221		<0.023	<0.023	RPD-NA	mg/kg	N/A	50	06-OCT-21
Aroclor 1232		<0.023	<0.023	RPD-NA	mg/kg	N/A	50	06-OCT-21
Aroclor 1242		<0.023	<0.023	RPD-NA	mg/kg	N/A	40	06-OCT-21
Aroclor 1248		<0.023	<0.023	RPD-NA	mg/kg	N/A	40	06-OCT-21
Aroclor 1254		0.090	0.106		mg/kg	16	40	06-OCT-21
Aroclor 1260		0.085	0.094		mg/kg	10	40	06-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PCB9-LOW-WT	**Soil**							
Batch R5611197								
WG3630436-3 DUP		**WG3630436-5**						
Aroclor 1262		<0.023	<0.023	RPD-NA	mg/kg	N/A	50	06-OCT-21
Aroclor 1268		<0.023	<0.023	RPD-NA	mg/kg	N/A	50	06-OCT-21
WG3630436-2 LCS								
Aroclor 1242			97.3		%		60-140	06-OCT-21
Aroclor 1248			93.3		%		60-140	06-OCT-21
Aroclor 1254			108.5		%		60-140	06-OCT-21
Aroclor 1260			127.3		%		60-140	06-OCT-21
WG3630436-1 MB								
Aroclor 1016			<0.0030		mg/kg		0.003	06-OCT-21
Aroclor 1221			<0.0030		mg/kg		0.003	06-OCT-21
Aroclor 1232			<0.0030		mg/kg		0.003	06-OCT-21
Aroclor 1242			<0.0030		mg/kg		0.003	06-OCT-21
Aroclor 1248			<0.0030		mg/kg		0.003	06-OCT-21
Aroclor 1254			<0.0030		mg/kg		0.003	06-OCT-21
Aroclor 1260			<0.0030		mg/kg		0.003	06-OCT-21
Aroclor 1262			<0.0030		mg/kg		0.003	06-OCT-21
Aroclor 1268			<0.0030		mg/kg		0.003	06-OCT-21
Surrogate: d14-Terphenyl			109.8		%		50-140	06-OCT-21
WG3630436-4 MS		**WG3630436-5**						
Aroclor 1242			98.6		%		60-140	06-OCT-21
Aroclor 1254			156.0	E	%		60-140	06-OCT-21
Aroclor 1260			206.6	E	%		60-140	06-OCT-21
Batch R5613829								
WG3631220-3 DUP		**WG3631220-5**						
Aroclor 1016		<0.023	<0.023	RPD-NA	mg/kg	N/A	50	07-OCT-21
Aroclor 1221		<0.023	<0.023	RPD-NA	mg/kg	N/A	50	07-OCT-21
Aroclor 1232		<0.023	<0.023	RPD-NA	mg/kg	N/A	50	07-OCT-21
Aroclor 1242		<0.023	0.024	RPD-NA	mg/kg	N/A	40	07-OCT-21
Aroclor 1248		<0.023	<0.023	RPD-NA	mg/kg	N/A	40	07-OCT-21
Aroclor 1254		0.178	0.182		mg/kg	2.0	40	07-OCT-21
Aroclor 1260		0.217	0.227		mg/kg	4.7	40	07-OCT-21
Aroclor 1262		<0.023	<0.023	RPD-NA	mg/kg	N/A	50	07-OCT-21
Aroclor 1268		<0.023	<0.023	RPD-NA	mg/kg	N/A	50	07-OCT-21
WG3631220-2 LCS								

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PCB9-LOW-WT	**Soil**							
Batch R5613829								
WG3631220-2 LCS								
Aroclor 1242			93.6		%		60-140	07-OCT-21
Aroclor 1248			87.5		%		60-140	07-OCT-21
Aroclor 1254			94.7		%		60-140	07-OCT-21
Aroclor 1260			91.8		%		60-140	07-OCT-21
WG3631220-1 MB								
Aroclor 1016			<0.0030		mg/kg		0.003	07-OCT-21
Aroclor 1221			<0.0030		mg/kg		0.003	07-OCT-21
Aroclor 1232			<0.0030		mg/kg		0.003	07-OCT-21
Aroclor 1242			<0.0030		mg/kg		0.003	07-OCT-21
Aroclor 1248			<0.0030		mg/kg		0.003	07-OCT-21
Aroclor 1254			<0.0030		mg/kg		0.003	07-OCT-21
Aroclor 1260			<0.0030		mg/kg		0.003	07-OCT-21
Aroclor 1262			<0.0030		mg/kg		0.003	07-OCT-21
Aroclor 1268			<0.0030		mg/kg		0.003	07-OCT-21
Surrogate: d14-Terphenyl			114.6		%		50-140	07-OCT-21
WG3631220-4 MS		**WG3631220-5**						
Aroclor 1242			123.9		%		60-140	07-OCT-21
Aroclor 1254			86.75		%		60-140	07-OCT-21
Aroclor 1260			95.3		%		60-140	07-OCT-21
PSA-MUST-SK	**Soil**							
Batch R5614882								
WG3632401-1 DUP		**L2646733-84**						
MUST PSA % > 75um		33.6	33.4	J	%	0.1	5	08-OCT-21
WG3632401-2 IRM		**2020-PSA_SOIL**						
MUST PSA % > 75um			42.4		%		37.9-47.9	08-OCT-21
Batch R5627100								
WG3643441-1 DUP		**L2646459-31**						
MUST PSA % > 75um		2.8	2.2	J	%	0.6	5	22-OCT-21
WG3643441-2 IRM		**2020-PSA_SOIL**						
MUST PSA % > 75um			44.5		%		37.9-47.9	22-OCT-21
TOC-WT	**Soil**							
Batch R5614708								
WG3633968-3 CRM		**WT-TOC-CRM**						
Total Organic Carbon			112.9		%		70-130	08-OCT-21
WG3633968-4 DUP		**L2646459-29**						

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
TOC-WT	**Soil**							
Batch R5614708								
WG3633968-4 DUP		**L2646459-29**						
Total Organic Carbon		6.31	6.35		%	0.7	20	08-OCT-21
Fraction Organic Carbon		0.0631	0.0635		g/g	0.7	25	08-OCT-21
WG3633968-2 LCS								
Total Organic Carbon			99.3		%		80-120	08-OCT-21
WG3633968-1 MB								
Total Organic Carbon			<0.10		%		0.1	08-OCT-21
Fraction Organic Carbon			<0.0010		g/g		0.001	08-OCT-21
Batch R5614716								
WG3633966-3 CRM		**WT-TOC-CRM**						
Total Organic Carbon			126.7		%		70-130	08-OCT-21
WG3633966-4 DUP		**L2646459-9**						
Total Organic Carbon		8.69	8.57		%	1.5	20	08-OCT-21
Fraction Organic Carbon		0.0869	0.0857		g/g	1.5	25	08-OCT-21
WG3633966-2 LCS								
Total Organic Carbon			90.8		%		80-120	08-OCT-21
WG3633966-1 MB								
Total Organic Carbon			<0.10		%		0.1	08-OCT-21
Fraction Organic Carbon			<0.0010		g/g		0.001	08-OCT-21
Batch R5614731								
WG3633097-3 CRM		**WT-TOC-CRM**						
Total Organic Carbon			85.2		%		70-130	07-OCT-21
WG3633097-4 DUP		**L2646123-40**						
Total Organic Carbon		0.12	0.10		%	16	20	07-OCT-21
Fraction Organic Carbon		0.0012	0.0010		g/g	16	25	07-OCT-21
WG3633097-2 LCS								
Total Organic Carbon			103.7		%		80-120	07-OCT-21
WG3633097-1 MB								
Total Organic Carbon			<0.10		%		0.1	07-OCT-21
Fraction Organic Carbon			<0.0010		g/g		0.001	07-OCT-21

Quality Control Report

Workorder: L2646459 Report Date: 26-OCT-21

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Legend:

Limit	ALS Control Limit (Data Quality Objectives)
DUP	Duplicate
RPD	Relative Percent Difference
N/A	Not Available
LCS	Laboratory Control Sample
SRM	Standard Reference Material
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ADE	Average Desorption Efficiency
MB	Method Blank
IRM	Internal Reference Material
CRM	Certified Reference Material
CCV	Continuing Calibration Verification
CVS	Calibration Verification Standard
LCSD	Laboratory Control Sample Duplicate

Sample Parameter Qualifier Definitions:

Qualifier	Description
E	Matrix Spike recovery outside ALS DQO due to heterogeneous analyte background in sample.
J	Duplicate results and limits are expressed in terms of absolute difference.
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Hold Time Exceedances:

All test results reported with this submission were conducted within ALS recommended hold times.

ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.

Chain of Custody (COC) / Analy

Canada Toll Free: 1 800

L2646459-COFC

ber: 20 - 001

Page 1 of 4

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Report To	Contact and company name below will appear on the final report
Company:	Golder Associates Ltd.
Contact:	Jill LaPorte
Phone:	905-723-2727
	Company address below will appear on the final report
Street:	100 Scotia Court
City/Province:	Whitby, Ontario
Postal Code:	L1N 8Y6
Invoice To	Same as Report To ☐ YES ☐ NO
	Copy of Invoice with Report ☐ YES ☐ NO
Company:	Golder Associates Ltd.
Contact:	Accounts Payables

Project Information

ALS Account # / Quote #:	15520 / Q86566
Job #:	1783886-8000
PO / AFE:	
LSD:	
ALS Lab Work Order # (ALS use only):	L2646459

Reports / Recipients

Select Report Format: ☑ PDF ☑ EXCEL ☐ EDD (DIGITAL)

Merge QC/QCI Reports with COA ☑ YES ☐ NO ☐ N/A

☐ Compare Results to Criteria on Report - provide details below if box checked

Select Distribution: ☑ EMAIL ☐ MAIL ☐ FAX

Email 1 or Fax: Jill_LaPorte@golder.com

Email 2:

Email 3:

Invoice Recipients

Select Invoice Distribution: ☑ EMAIL ☐ MAIL ☐ FAX

Email 1 or Fax: Jill_LaPorte@golder.com

Email 2: canadaaccountspayableinvoices@golder.com

Oil and Gas Required Fields (client use)

AFE/Cost Center:	PO#
Major/Minor Code:	Routing Code:
Requisitioner:	
Location:	

ALS Contact: Amanda Overholster

Sampler: J. Weir / J. Fraser

☑ Routine [R] if received by 3pm M-F - no surcharges apply

☐ 4 day [P4] if received by 3pm M-F - 20% rush surcharge minimum

☐ 3 day [P3] if received by 3pm M-F - 25% rush surcharge minimum

☐ 2 day [P2] if received by 3pm M-F - 50% rush surcharge minimum

☐ 1 day [E] if received by 3pm M-F - 100% rush surcharge. Additional fees may apply to rush requests on weekends, statutory holidays and non-routine tests

☐ Same day [E2] if received by 10am M-S - 200% rush surcharge.

Date and Time Required for all E&P TATs:

For all tests with rush TATs requested, please contact your AM to confirm availability.

AFFIX ALS BARCODE LABEL HERE (ALS use only)

Analysis Request

Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below

ALS Sample # (ALS use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	NUMBER OF CONTAINERS	HWS-Boron (B-HWS-R511-WT)	Cr3 (CR-CR3-WT)	Cr6 (CR-CR6-IC-WT)	Mercury (HG-200.2-CVAA-WT)	Metals (MET-200.2-CCMS-WT)	PAH (PAH-CCME-SOGL-WT)	MOISTURE-WT	TOC (TOC-WT)	PCB9 (PCB9-LOW-WT)	Specific Gravity (SPECGRAV-CL)	PSA (PSA-MUST-WT-SK)	Atterberg (ATTERBERG-SK)	SAMPLES ON HOLD	EXTENDED STORAGE REQUIRED	SUSPECTED HAZARD (see notes)
	TC1-SG-001	28Sep21	13:37	SED	6	X	X	X	X	X	X	X	X	X				X		
	TC1-SG-002	28Sep21	13:18		6	X	X	X	X	X	X	X	X	X				X		
	TC1-SG-003	28Sep21	13:00		6	X	X	X	X	X	X	X	X	X		X		X		
	TC1-SG-004	28Sep21	12:40		6	X	X	X	X	X	X	X	X	X				X		
	TC1-SG-005	28Sep21	11:15		6	X	X	X	X	X	X	X	X	X				X		
	TC2A-SG-001	28Sep21	16:55		6	X	X	X	X	X	X	X	X	X				X		
	TC2A-SG-002	28Sep21	16:35		6	X	X	X	X	X	X	X	X	X				X		
	TC2A-SG-003	28Sep21	16:05		6	X	X	X	X	X	X	X	X	X				X		
	DUP-201	28Sep21	—		6	X	X	X	X	X	X	X	X	X				X		
	TC2A-SG-004	28Sep21	16:50		6	X	X	X	X	X	X	X	X	X				X		
	TC2A-SG-005	28Sep21	17:10		6	X	X	X	X	X	X	X	X	X				X		
	TC2A-SG-006	28Sep21	15:25		6	X	X	X	X	X	X	X	X	X				X		

Drinking Water (DW) Samples[1] (client use)

Are samples taken from a Regulated DW System? ☐ YES ☑ NO

Are samples for human consumption/ use? ☐ YES ☐ NO

Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only)

Each sample includes one large ziploc bag of sediment to hold, the remaining containers can be processed for analysis

SAMPLE RECEIPT DETAILS (ALS use only)

Cooling Method: ☐ NONE ☑ ICE ☐ ICE PACKS ☐ FROZEN ☐ COOLING INITIATED

Submission Comments identified on Sample Receipt Notification: ☐ YES ☐ NO

Cooler Custody Seals Intact: ☐ YES ☐ N/A Sample Custody Seals Intact: ☐ YES ☐ N/A

INITIAL COOLER TEMPERATURES °C				FINAL COOLER TEMPERATURES °C			
8.6	8.5	11.2	9.7	13.6			

SHIPMENT RELEASE (client use)

Released by:	Date:	Time:
Jamie Weir	29 Sep 2021	11:30

INITIAL SHIPMENT RECEPTION (ALS use only)

Received by:	Date:	Time:
Karan	10/1/2021	12:57

FINAL SHIPMENT RECEPTION (ALS use only)

Received by:	Date:	Time:
W	10/1/21	16:00

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

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REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

1. If any water samples are taken from a Regulated Drinking Water (DW) System, please submit using an Authorized DW COC form.

Chain of Custody (COC) / Analytical Request Form

COC Number: 20 - 002

Page 2 of 4

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Canada Toll Free: 1 800 668 9878

Report To	Contact and company name below will appear on the final report
Company:	Golder Associates Ltd.
Contact:	Jill LaPorte
Phone:	905-723-2727
	Company address below will appear on the final report
Street:	100 Scotia Court
City/Province:	Whitby, Ontario
Postal Code:	L1N 8Y6
Invoice To	Same as Report To ☐ YES ☑ NO
	Copy of Invoice with Report ☑ YES ☐ NO
Company:	Golder Associates Ltd.
Contact:	Accounts Payable

Reports / Recipients

Select Report Format: ☑ PDF ☑ EXCEL ☐ EDD (DIGITAL)

Merge QC/QCI Reports with COA ☑ YES ☐ NO ☐ N/A

☐ Compare Results to Criteria on Report - provide details below if box checked

Select Distribution: ☑ EMAIL ☐ MAIL ☐ FAX

Email 1 or Fax: Jill_LaPorte@golder.com

Email 2: shawn_seguin@golder.com

Email 3:

Invoice Recipients

Select Invoice Distribution: ☑ EMAIL ☐ MAIL ☐ FAX

Email 1 or Fax: Jill_LaPorte@golder.com

Email 2: canadaaccountspayableinvoices@golder.com

Turnaround Time (TAT) Requested

☑ Routine [R] if received by 3pm M-F - no surcharges apply

☐ 4 day [P4] if received by 3pm M-F - 25% rush surcharge minimum

☐ 3 day [P3] if received by 12pm M-F - 50% rush surcharge minimum

☐ 2 day [P2] if received by 12pm M-F - 100% rush surcharge minimum

☐ *1 day [E] if received by 12pm M-F - 200% rush surcharge minimum

*1 day only available for Inorganics, Metals, & VOC

• Same day [E2] unavailable for TCLP/SPLP

AFFIX ALS BARCODE LABEL HERE (ALS use only)

Date and Time Required for all E&P TATs: dd-mmm-yy hh:mm am/pm

For all tests with rush TATs requested, please contact your AM to confirm availability.

Project Information

ALS Account # / Quote #: 15520 / Q86566

Job #: 1783886-8000-8006

PO / AFE:

LSD:

Oil and Gas Required Fields (client use)

AFE/Cost Center: PO#

Major/Minor Code: Routing Code:

Requisitioner:

Location:

ALS Lab Work Order # (ALS use only): L2646459

ALS Contact: Amanda Overholster **Sampler:** J. Weir / J. Frieze

Analysis Request

ALS Sample # (ALS use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	NUMBER OF CONTAINERS	TCLP (EPA 1311) PAH (PAH-TCLP-WT)	TCLP (EPA 1311) Metals (MET-TCLP-P-WT)	TCLP (EPA 1311) LEACH (LEACH-TCLP-WT)	MISC	SAMPLES ON HOLD	EXTENDED STORAGE REQUIRED	SUSPECTED HAZARD (see notes)
	TC2A-SG-006	28Sep21	15:25	Sediment	3	X	X	X				
	TC2A-SG-010	28Sep21	13:35	Sediment	3	X	X	X				
	TCRC-SG-001	28Sep21	11:00	Sediment	3	X	X	X				
				Sediment								
				Sediment								
				Sediment								
				Sediment								
				Sediment								
				Sediment								
				Sediment								
				Sediment								
				Sediment								

Limited Sample Size Authorization

If the sample provided contains less than the minimum required weight, the samples may be leached at a lower volume and qualified as Limited Sample Size:

☐ YES ☐ NO

Minimum Sample Size: 1X250 mL - No Headspace

Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only)

EQUIS Facility Code: 230179134

Please provide 2X250 mL sample if both mSPLP and TCLP leaching procedures are requested or if Dioxins and Furans are required.

SAMPLE RECEIPT DETAILS (ALS use only)

Cooling Method: ☐ NONE ☒ ICE ☐ ICE PACKS ☐ FROZEN ☐ COOLING INITIATED

Submission Comments identified on Sample Receipt Notification: ☐ YES ☐ NO

Cooler Custody Seals Intact: ☐ YES ☐ N/A Sample Custody Seals Intact: ☐ YES ☐ N/A

INITIAL COOLER TEMPERATURES °C				FINAL COOLER TEMPERATURES °C			
8.6	8.5	11.2	9.7	13.6			

SHIPMENT RELEASE (client use)

Released by:	Date:	Time:
Jamie Weir	29 Sep 2021	11:30

INITIAL SHIPMENT RECEPTION (ALS use only)

Received by:	Date:	Time:
Karan	10/1/2021	12:57

FINAL SHIPMENT RECEPTION (ALS use only)

Received by:	Date:	Time:
LL	10/1/21	18:00

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Refer to the Locations Tab for ALS Locations and Sampling Information

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions.

Reg. 406 mSPLP Metals scan includes: Sb,As,Ba,Be,B,Cd,Cr,Co,Cu,Pb,Mo,Ni,Se,Ag,Tl,U,V,Zn. Reg. 347/558 TCLP Metals+Inorganics includes: As,Ba,B,Cd,Cr,Pb,Se,Ag,U,Hg,Fluoride,CN (WAD),Nitrate+Nitrite as N

Chain of Custody (COC) / A

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Canada Toll Free: 1

L2646459-COFC

Number: 20 - 003

Page 3 of 4

MC

Report To	Contact and company name below will appear on the final report	Reports / Recipients	Turnaround Time (TAT) Requested
Company:	Golder Associates Ltd.	Select Report Format: ☑ PDF ☑ EXCEL ☐ EDD (DIGITAL)	☑ Routine [R] if received by 3pm M-F - no surcharges apply
Contact:	Jill LaPorte	Merge QC/QCI Reports with COA ☑ YES ☐ NO ☐ N/A	☐ 4 day [P4] if received by 3pm M-F - 20% rush surcharge minimum
Phone:	905-723-2727	☐ Compare Results to Criteria on Report - provide details below if box checked	☐ 3 day [P3] if received by 3pm M-F - 25% rush surcharge minimum
	Company address below will appear on the final report	Select Distribution: ☑ EMAIL ☐ MAIL ☐ FAX	☐ 2 day [P2] if received by 3pm M-F - 50% rush surcharge minimum
Street:	100 Scotia Court	Email 1 or Fax: Jill_LaPorte@golder.com	☐ 1 day [E] if received by 3pm M-F - 100% rush surcharge minimum
City/Province:	Whitby, Ontario	Email 2	☐ Same day [E2] if received by 10am M-S - 200% rush surcharge. Additional fees may apply to rush requests on weekends, statutory holidays and non-routine tests
Postal Code:	L1N 8Y6	Email 3	Date and Time Required for all E&P TATs:
Invoice To	Same as Report To ☐ YES ☐ NO	Invoice Recipients	For all tests with rush TATs requested, please contact your AM to confirm availability.
	Copy of Invoice with Report ☐ YES ☐ NO	Select Invoice Distribution: ☑ EMAIL ☐ MAIL ☐ FAX	
Company:	Golder Associates Ltd.	Email 1 or Fax: Jill_LaPorte@golder.com	
Contact:	Accounts Payables	Email 2: canadaaccountspayableinvoices@golder.com	

AFFIX ALS BARCODE LABEL HERE (ALS use only)

Project Information		Oil and Gas Required Fields (client use)	
ALS Account # / Quote #:	15520 / Q86566	AFE/Cost Center:	PO#:
Job #:	1783886-8000	Major/Minor Code:	Routing Code:
PO / AFE:		Requisitioner:	
LSD:		Location:	
ALS Lab Work Order # (ALS use only):	L2646459	ALS Contact: Amanda Overholster	Sampler: J. Weir / J. Freque

Analysis Request

Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below

ALS Sample # (ALS use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	NUMBER OF CONTAINERS	HWS-Boron (B-HWS-R511-WT)	Cr3 (CR-CR3-WT)	Cr6 (CR-CR6-IC-WT)	Mercury (HG-200.2-CVAA-WT)	Metals (MET-200.2-CCMS-WT)	PAH (PAH-CCME-SQG-WT)	MOISTURE-WT	TOC (TOC-WT)	PCB9 (PCB9-LOW-WT)		Specific Gravity (SPECGRAV-CL)	PSA (PSA-MUST-WT-SK)	Atterberg (ATTERBERG-SK)		SAMPLES ON HOLD	EXTENDED STORAGE REQUIRED	SUSPECTED HAZARD (see notes)
	TC2A-SG-007	28 Sep 21	14:15	SED	4				X	X	X	X	X	X						X		
	DUP-001	28 Sep 21	—	SED	4				X	X	X	X	X	X						X		
	TC2A-SG-008	28 Sep 21	14:35		4				X	X	X	X	X	X						X		
	TC2A-SG-009	28 Sep 21	14:00		4				X	X	X	X	X	X						X		
	TC2A-SG-010	28 Sep 21	13:35		6	X	X	X	X	X	X	X	X	X			X			X		
	TC2A-SG-011	28 Sep 21	13:00		4				X	X	X	X	X	X						X		
	TC2A-SG-012	28 Sep 21	14:30		4				X	X	X	X	X	X						X		
	TC2A-SG-013	28 Sep 21	15:05		4				X	X	X	X	X	X						X		
	TC0M-SG-002	28 Sep 21	13:55		4				X	X	X	X	X	X						X		
	TC0M-SG-003	28 Sep 21	14:50		4				X	X	X	X	X	X						X		
	TC0M-SG-004	28 Sep 21	14:20		4				X	X	X	X	X	X						X		
	TC0M-SG-005	28 Sep 21	15:07		4				X	X	X	X	X	X						X		

Drinking Water (DW) Samples[1] (client use)	Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only)
Are samples taken from a Regulated DW System? ☐ YES ☐ NO	Each sample includes one large ziploc bag of sediment to hold, the remaining containers can be processed for analysis.
Are samples for human consumption/ use? ☐ YES ☐ NO	

SAMPLE RECEIPT DETAILS (ALS use only)

Cooling Method: ☐ NONE ☒ ICE ☐ ICE PACKS ☐ FROZEN ☐ COOLING INITIATED

Submission Comments identified on Sample Receipt Notification: ☐ YES ☐ NO

Cooler Custody Seals Intact: ☐ YES ☐ N/A Sample Custody Seals Intact: ☐ YES ☐ N/A

INITIAL COOLER TEMPERATURES °C				FINAL COOLER TEMPERATURES °C			
8.6	8.5	11.2	9.7				

SHIPMENT RELEASE (client use)			INITIAL SHIPMENT RECEPTION (ALS use only)			FINAL SHIPMENT RECEPTION (ALS use only)		
Released by:	Date:	Time:	Received by:	Date:	Time:	Received by:	Date:	Time:
Jamie Weir	29 Sep 2021	11:30	Kazan	10/1/2021	12:57			

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

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Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy

1 If any water samples are taken from a Regulated Drinking Water (DW) System, please submit using an Authorized DW COC form.

Chain of Custody (COC) / Analytical Request Form

www.alsglobal.com

Canada Toll

L2646459-COFC

COC Number: 20 - C04

MC

Report To	Contact and company name below will appear on the final report	Reports / F	TAT) Requested
Company:	Golder Associates Ltd.	Select Report Format: ☑ PDF ☑ EXCEL ☐ EDD (DIGITAL)	☑ Routine [R] if received by 3pm M-F - no surcharges apply
Contact:	Jill LaPorte	Merge QC/QCI Reports with COA ☑ YES ☐ NO ☐ N/A	☐ 4 day [P4] if received by 3pm M-F - 20% rush surcharge minimum
Phone:	905-723-2727	☐ Compare Results to Criteria on Report - provide details below if box checked	☐ 3 day [P3] if received by 3pm M-F - 25% rush surcharge minimum
	Company address below will appear on the final report	Select Distribution: ☑ EMAIL ☐ MAIL ☐ FAX	☐ 2 day [P2] if received by 3pm M-F - 50% rush surcharge minimum
Street:	100 Scotia Court	Email 1 or Fax Jill_LaPorte@golder.com	☐ 1 day [E] if received by 3pm M-F - 100% rush surcharge minimum
City/Province:	Whitby, Ontario	Email 2	☐ Same day [E2] if received by 10am M-S - 200% rush surcharge. Additional fees may apply to rush requests on weekends, statutory holidays and non-routine tests
Postal Code:	L1N 8Y6	Email 3	Date and Time Required for all E&P TATs:
Invoice To	Same as Report To ☐ YES ☐ NO	Invoice Recipients	For all tests with rush TATs requested, please contact your AM to confirm availability.
	Copy of Invoice with Report ☐ YES ☐ NO	Select Invoice Distribution: ☑ EMAIL ☐ MAIL ☐ FAX	
Company:	Golder Associates Ltd.	Email 1 or Fax Jill_LaPorte@golder.com	
Contact:	Accounts Payables	Email 2 canadaaccountspayableinvoices@golder.com	

AFFIX ALS BARCODE LABEL HERE (ALS use only)

Project Information		Oil and Gas Required Fields (client use)	
ALS Account # / Quote #:	15520 / Q86566	AFE/Cost Center:	PO#
Job #:	1783886-8000	Major/Minor Code	Routing Code:
PO / AFE:		Requisitioner:	
LSD:		Location:	

ALS Lab Work Order # (ALS use only): L2646459

ALS Contact: Amanda Overholster

Sampler: J. Weir / J. Freeze

Analysis Request

Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below

ALS Sample # (ALS use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	NUMBER OF CONTAINERS	HWS-Boron (B-HWS-R511-WT)	Cr3 (CR-CR3-WT)	Cr6 (CR-CR6-IC-WT)	Mercury (HG-200.2-CVAA-WT)	Metals (MET-200.2-CCMS-WT)	PAH (PAH-CCME-SOGL-WT)	MOISTURE-WT	TOC (TOC-WT)	PCB9 (PCB9-LOW-WT)		Specific Gravity (SPECGRAV-CL)	PSA (PSA-MUST-WT-SK)	Atterberg (ATTERBERG-SK)		SAMPLES ON HOLD	EXTENDED STORAGE REQUIRED	SUSPECTED HAZARD (see notes)
	TCOM-SG-008	28Sep21	15:35	SED	4				X	X	X	X	X	X						X		
	TCRC-SG-001	28Sep21	11:00	SED	6	X	X	X	X	X	X	X	X	X			X			X		
	TCRC-SG-002	28Sep21	11:00	SED	4				X	X	X	X	X	X						X		
	TCRC-SG-003	28Sep21	10:40	SED	4				X	X	X	X	X	X						X		
	TCRC-SG-005	28Sep21	10:00	SED	4				X	X	X	X	X	X						X		
	TCRC-SG-006	28Sep21	11:30	SED	4				X	X	X	X	X	X						X		
	TCRC-SG-007	28Sep21	10:10	SED	5				X	X	X	X	X	X			X			X		
	TCRC-SG-008	28Sep21	09:15	SED	4				X	X	X	X	X	X						X		
	TCRC-SG-009	28Sep21	08:53	SED	4				X	X	X	X	X	X						Y		

Drinking Water (DW) Samples[1] (client use)	Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only)
Are samples taken from a Regulated DW System? ☐ YES ☐ NO	Each sample includes one large Ziploc bag of sediment to hold, the remaining containers can be processed for analysis
Are samples for human consumption/ use? ☐ YES ☐ NO	

SAMPLE RECEIPT DETAILS (ALS use only)

Cooling Method: ☐ NONE ☒ ICE ☐ ICE PACKS ☐ FROZEN ☐ COOLING INITIATED

Submission Comments identified on Sample Receipt Notification: ☐ YES ☐ NO

Cooler Custody Seals Intact: ☐ YES ☐ N/A Sample Custody Seals Intact: ☐ YES ☐ N/A

INITIAL COOLER TEMPERATURES °C				FINAL COOLER TEMPERATURES °C			
8.6	8.5	11.2	9.7				

SHIPMENT RELEASE (client use)			INITIAL SHIPMENT RECEPTION (ALS use only)			FINAL SHIPMENT RECEPTION (ALS use only)		
Released by:	Date:	Time:	Received by:	Date:	Time:	Received by:	Date:	Time:
Jamie Weir	21 Sep 2021	11:30	Kiran	10/1/2021	12:57			

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

AUG 2020 FRONT

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

1. If any water samples are taken from a Regulated Drinking Water (DW) System, please submit using an Authorized DW COC form.

GOLDER ASSOCIATES LTD (Whitby)
ATTN: Jill LaPorte
100 Scotia Court
Whitby ON L1N 8Y6

Date Received: 01-OCT-21
Report Date: 08-OCT-21 12:10 (MT)
Version: FINAL

Client Phone: 905-723-2727

Certificate of Analysis

Lab Work Order #: L2646481

Project P.O. #: NOT SUBMITTED
Job Reference: 1783886-8000-8006
C of C Numbers:
Legal Site Desc:

Amanda Overholster
Account Manager

[This report shall not be reproduced except in full without the written authority of the Laboratory.]

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646481-1 TC2A-SG-006 Sampled By: JW/ JF on 28-SEP-21 @ 15:25 Matrix: SEDIMENT							
Sample Preparation							
Initial pH	8.10		0.10	pH units		06-OCT-21	R5610356
Final pH	5.10		0.10	pH units		06-OCT-21	R5610356
TCLP Extractables							
Acenaphthene	<0.0050		0.0050	mg/L	06-OCT-21	08-OCT-21	R5614387
Acenaphthylene	<0.0050		0.0050	mg/L	06-OCT-21	08-OCT-21	R5614387
Anthracene	<0.0050		0.0050	mg/L	06-OCT-21	08-OCT-21	R5614387
Benzo(a)anthracene	<0.0050		0.0050	mg/L	06-OCT-21	08-OCT-21	R5614387
Benzo(a)pyrene	<0.0010		0.0010	mg/L	06-OCT-21	08-OCT-21	R5614387
Benzo(b&j)fluoranthene	<0.0050		0.0050	mg/L	06-OCT-21	08-OCT-21	R5614387
Benzo(g,h,i)perylene	<0.0050		0.0050	mg/L	06-OCT-21	08-OCT-21	R5614387
Benzo(k)fluoranthene	<0.0050		0.0050	mg/L	06-OCT-21	08-OCT-21	R5614387
Chrysene	<0.0050		0.0050	mg/L	06-OCT-21	08-OCT-21	R5614387
Dibenz(a,h)anthracene	<0.0050		0.0050	mg/L	06-OCT-21	08-OCT-21	R5614387
Fluoranthene	<0.0050		0.0050	mg/L	06-OCT-21	08-OCT-21	R5614387
Fluorene	<0.0050		0.0050	mg/L	06-OCT-21	08-OCT-21	R5614387
Indeno(1,2,3-cd)pyrene	<0.0050		0.0050	mg/L	06-OCT-21	08-OCT-21	R5614387
Naphthalene	<0.0050		0.0050	mg/L	06-OCT-21	08-OCT-21	R5614387
Phenanthrene	<0.0050		0.0050	mg/L	06-OCT-21	08-OCT-21	R5614387
Pyrene	<0.0050		0.0050	mg/L	06-OCT-21	08-OCT-21	R5614387
Surrogate: Chrysene d12	89.5		60-130	%	06-OCT-21	08-OCT-21	R5614387
Surrogate: Naphthalene d8	87.9		50-130	%	06-OCT-21	08-OCT-21	R5614387
Surrogate: Phenanthrene d10	102.2		60-130	%	06-OCT-21	08-OCT-21	R5614387
Quinoline	<0.0050		0.0050	mg/L	06-OCT-21	08-OCT-21	R5614387
TCLP Metals							
Arsenic (As)	<0.050		0.050	mg/L		06-OCT-21	R5611081
Barium (Ba)	1.12		0.50	mg/L		06-OCT-21	R5611081
Boron (B)	<2.5		2.5	mg/L		06-OCT-21	R5611081
Cadmium (Cd)	<0.0050		0.0050	mg/L		06-OCT-21	R5611081
Chromium (Cr)	<0.050		0.050	mg/L		06-OCT-21	R5611081
Lead (Pb)	0.054		0.025	mg/L		06-OCT-21	R5611081
Mercury (Hg)	<0.00010		0.00010	mg/L		06-OCT-21	R5611029
Selenium (Se)	<0.025		0.025	mg/L		06-OCT-21	R5611081
Silver (Ag)	<0.0050		0.0050	mg/L		06-OCT-21	R5611081
Uranium (U)	<0.25		0.25	mg/L		06-OCT-21	R5611081
L2646481-2 TC2A-SG-010 Sampled By: JW/ JF on 28-SEP-21 @ 13:35 Matrix: SEDIMENT							
Sample Preparation							
Initial pH	8.04		0.10	pH units		06-OCT-21	R5610356
Final pH	5.59		0.10	pH units		06-OCT-21	R5610356
TCLP Extractables							
Acenaphthene	<0.0050		0.0050	mg/L	06-OCT-21	08-OCT-21	R5614387

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646481-2 TC2A-SG-010 Sampled By: JW/ JF on 28-SEP-21 @ 13:35 Matrix: SEDIMENT							
TCLP Extractables							
Acenaphthylene	<0.0050		0.0050	mg/L	06-OCT-21	08-OCT-21	R5614387
Anthracene	<0.0050		0.0050	mg/L	06-OCT-21	08-OCT-21	R5614387
Benzo(a)anthracene	<0.0050		0.0050	mg/L	06-OCT-21	08-OCT-21	R5614387
Benzo(a)pyrene	<0.0010		0.0010	mg/L	06-OCT-21	08-OCT-21	R5614387
Benzo(b&j)fluoranthene	<0.0050		0.0050	mg/L	06-OCT-21	08-OCT-21	R5614387
Benzo(g,h,i)perylene	<0.0050		0.0050	mg/L	06-OCT-21	08-OCT-21	R5614387
Benzo(k)fluoranthene	<0.0050		0.0050	mg/L	06-OCT-21	08-OCT-21	R5614387
Chrysene	<0.0050		0.0050	mg/L	06-OCT-21	08-OCT-21	R5614387
Dibenz(a,h)anthracene	<0.0050		0.0050	mg/L	06-OCT-21	08-OCT-21	R5614387
Fluoranthene	<0.0050		0.0050	mg/L	06-OCT-21	08-OCT-21	R5614387
Fluorene	<0.0050		0.0050	mg/L	06-OCT-21	08-OCT-21	R5614387
Indeno(1,2,3-cd)pyrene	<0.0050		0.0050	mg/L	06-OCT-21	08-OCT-21	R5614387
Naphthalene	<0.0050		0.0050	mg/L	06-OCT-21	08-OCT-21	R5614387
Phenanthrene	<0.0050		0.0050	mg/L	06-OCT-21	08-OCT-21	R5614387
Pyrene	<0.0050		0.0050	mg/L	06-OCT-21	08-OCT-21	R5614387
Surrogate: Chrysene d12	83.4		60-130	%	06-OCT-21	08-OCT-21	R5614387
Surrogate: Naphthalene d8	103.1		50-130	%	06-OCT-21	08-OCT-21	R5614387
Surrogate: Phenanthrene d10	102.6		60-130	%	06-OCT-21	08-OCT-21	R5614387
Quinoline	<0.0050		0.0050	mg/L	06-OCT-21	08-OCT-21	R5614387
TCLP Metals							
Arsenic (As)	<0.050		0.050	mg/L		06-OCT-21	R5611081
Barium (Ba)	0.87		0.50	mg/L		06-OCT-21	R5611081
Boron (B)	<2.5		2.5	mg/L		06-OCT-21	R5611081
Cadmium (Cd)	<0.0050		0.0050	mg/L		06-OCT-21	R5611081
Chromium (Cr)	<0.050		0.050	mg/L		06-OCT-21	R5611081
Lead (Pb)	0.026		0.025	mg/L		06-OCT-21	R5611081
Mercury (Hg)	<0.00010		0.00010	mg/L		06-OCT-21	R5611029
Selenium (Se)	<0.025		0.025	mg/L		06-OCT-21	R5611081
Silver (Ag)	<0.0050		0.0050	mg/L		06-OCT-21	R5611081
Uranium (U)	<0.25		0.25	mg/L		06-OCT-21	R5611081
L2646481-3 TCRC-SG-001 Sampled By: JW/ JF on 28-SEP-21 @ 11:00 Matrix: SEDIMENT							
Sample Preparation							
Initial pH	8.05		0.10	pH units		06-OCT-21	R5610356
Final pH	4.57		0.10	pH units		06-OCT-21	R5610356
TCLP Extractables							
Acenaphthene	<0.0050		0.0050	mg/L	06-OCT-21	08-OCT-21	R5614387
Acenaphthylene	<0.0050		0.0050	mg/L	06-OCT-21	08-OCT-21	R5614387
Anthracene	<0.0050		0.0050	mg/L	06-OCT-21	08-OCT-21	R5614387
Benzo(a)anthracene	<0.0050		0.0050	mg/L	06-OCT-21	08-OCT-21	R5614387
Benzo(a)pyrene	<0.0010		0.0010	mg/L	06-OCT-21	08-OCT-21	R5614387

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646481-3 TCRC-SG-001 Sampled By: JW/ JF on 28-SEP-21 @ 11:00 Matrix: SEDIMENT							
TCLP Extractables							
Benzo(b&j)fluoranthene	<0.0050		0.0050	mg/L	06-OCT-21	08-OCT-21	R5614387
Benzo(g,h,i)perylene	<0.0050		0.0050	mg/L	06-OCT-21	08-OCT-21	R5614387
Benzo(k)fluoranthene	<0.0050		0.0050	mg/L	06-OCT-21	08-OCT-21	R5614387
Chrysene	<0.0050		0.0050	mg/L	06-OCT-21	08-OCT-21	R5614387
Dibenz(a,h)anthracene	<0.0050		0.0050	mg/L	06-OCT-21	08-OCT-21	R5614387
Fluoranthene	<0.0050		0.0050	mg/L	06-OCT-21	08-OCT-21	R5614387
Fluorene	<0.0050		0.0050	mg/L	06-OCT-21	08-OCT-21	R5614387
Indeno(1,2,3-cd)pyrene	<0.0050		0.0050	mg/L	06-OCT-21	08-OCT-21	R5614387
Naphthalene	<0.0050		0.0050	mg/L	06-OCT-21	08-OCT-21	R5614387
Phenanthrene	<0.0050		0.0050	mg/L	06-OCT-21	08-OCT-21	R5614387
Pyrene	<0.0050		0.0050	mg/L	06-OCT-21	08-OCT-21	R5614387
Surrogate: Chrysene d12	89.7		60-130	%	06-OCT-21	08-OCT-21	R5614387
Surrogate: Naphthalene d8	89.4		50-130	%	06-OCT-21	08-OCT-21	R5614387
Surrogate: Phenanthrene d10	98.3		60-130	%	06-OCT-21	08-OCT-21	R5614387
Quinoline	<0.0050		0.0050	mg/L	06-OCT-21	08-OCT-21	R5614387
TCLP Metals							
Arsenic (As)	<0.050		0.050	mg/L		06-OCT-21	R5611081
Barium (Ba)	1.21		0.50	mg/L		06-OCT-21	R5611081
Boron (B)	<2.5		2.5	mg/L		06-OCT-21	R5611081
Cadmium (Cd)	<0.0050		0.0050	mg/L		06-OCT-21	R5611081
Chromium (Cr)	0.068		0.050	mg/L		06-OCT-21	R5611081
Lead (Pb)	0.151		0.025	mg/L		06-OCT-21	R5611081
Mercury (Hg)	<0.00010		0.00010	mg/L		06-OCT-21	R5611029
Selenium (Se)	<0.025		0.025	mg/L		06-OCT-21	R5611081
Silver (Ag)	<0.0050		0.0050	mg/L		06-OCT-21	R5611081
Uranium (U)	<0.25		0.25	mg/L		06-OCT-21	R5611081

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
HG-TCLP-WT	Waste	Mercury (CVAA) for O.Reg 347	EPA 1631E

This analysis is carried out in accordance with the extraction procedure outlined in "Test Methods for Evaluating Solid Waste - Physical/Chemical Methods Volume 1C" SW-846 EPA Method 1311, published by the United States Environmental Protection Agency (EPA). In summary, the sample is extracted at a 20:1 liquid to solids ratio for 16 to 20 hours using either extraction fluid #1 (glacial acetic acid, water and sodium hydroxide) or extraction fluid #2 (glacial acetic acid), depending on the pH of the original sample. The extract is then filtered through a 0.6 to 0.8 micron glass fibre filter and analysed using atomic absorption spectrophotometry (EPA 1631E).

LEACH-TCLP-WT	Waste	Leachate Procedure for Reg 347	EPA 1311

Inorganic and Semi-Volatile Organic contaminants are leached from waste samples in strict accordance with US EPA Method 1311, "Toxicity Characteristic Leaching Procedure" (TCLP). Test results are reported in leachate concentration units (normally mg/L).

MET-TCLP-WT	Waste	O.Reg 347 TCLP Leachable Metals	EPA 6020B

This analysis is carried out in accordance with the extraction procedure outlined in "Test Methods for Evaluating Solid Waste - Physical/Chemical Methods Volume 1C" SW-846 EPA Method 1311, published by the United States Environmental Protection Agency (EPA). In summary, the sample is extracted at a 20:1 liquid to solids ratio for 16 to 20 hours using either extraction fluid #1 (glacial acetic acid, water and sodium hydroxide) or extraction fluid #2 (glacial acetic acid), depending on the pH of the original sample. The extract is then filtered through a 0.6 to 0.8 micron glass fibre filter. Instrumental analysis of the digested extract is by collision cell inductively coupled plasma - mass spectrometry (modifed from EPA Method 6020B).

PAH-TCLP-WT	Waste	PAH for O. Reg 347	SW846 8270 (PAH)

Samples are leached according to TCLP protocol and then the aqueous leachate is extracted and the resulting extracts are analyzed on GC/MSD. Depending on the analytical GC/MS column used benzo(j)fluoranthene may chromatographically co-elute with benzo(b)fluoranthene or benzo(k)fluoranthene.

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
WT	ALS ENVIRONMENTAL - WATERLOO, ONTARIO, CANADA

Chain of Custody Numbers:

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.
mg/kg - milligrams per kilogram based on dry weight of sample
mg/kg wwt - milligrams per kilogram based on wet weight of sample
mg/kg lwt - milligrams per kilogram based on lipid weight of sample
mg/L - unit of concentration based on volume, parts per million.
< - Less than.
D.L. - The reporting limit.
N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.
UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.
Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
HG-TCLP-WT	**Waste**							
Batch R5611029								
WG3632290-3 DUP		**L2646953-1**						
Mercury (Hg)		<0.00010	<0.00010	RPD-NA	mg/L	N/A	50	06-OCT-21
WG3632290-2 LCS								
Mercury (Hg)			99.0		%		70-130	06-OCT-21
WG3632290-1 MB								
Mercury (Hg)			<0.00010		mg/L		0.0001	06-OCT-21
WG3632290-4 MS		**L2646953-1**						
Mercury (Hg)			97.3		%		50-140	06-OCT-21
MET-TCLP-WT	**Waste**							
Batch R5611081								
WG3632269-4 DUP		**WG3632269-3**						
Silver (Ag)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	06-OCT-21
Arsenic (As)		<0.050	<0.050	RPD-NA	mg/L	N/A	50	06-OCT-21
Boron (B)		2.7	2.6		mg/L	4.9	50	06-OCT-21
Barium (Ba)		0.59	0.55		mg/L	7.5	50	06-OCT-21
Cadmium (Cd)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	06-OCT-21
Chromium (Cr)		<0.050	<0.050	RPD-NA	mg/L	N/A	50	06-OCT-21
Lead (Pb)		0.119	0.112		mg/L	6.4	50	06-OCT-21
Selenium (Se)		<0.025	<0.025	RPD-NA	mg/L	N/A	50	06-OCT-21
Uranium (U)		<0.25	<0.25	RPD-NA	mg/L	N/A	50	06-OCT-21
WG3632269-2 LCS								
Silver (Ag)			108.7		%		70-130	06-OCT-21
Arsenic (As)			103.0		%		70-130	06-OCT-21
Boron (B)			99.4		%		70-130	06-OCT-21
Barium (Ba)			109.1		%		70-130	06-OCT-21
Cadmium (Cd)			101.4		%		70-130	06-OCT-21
Chromium (Cr)			106.4		%		70-130	06-OCT-21
Lead (Pb)			103.6		%		70-130	06-OCT-21
Selenium (Se)			94.9		%		70-130	06-OCT-21
Uranium (U)			104.1		%		70-130	06-OCT-21
WG3632269-1 MB								
Silver (Ag)			<0.0050		mg/L		0.005	06-OCT-21
Arsenic (As)			<0.050		mg/L		0.05	06-OCT-21
Boron (B)			<2.5		mg/L		2.5	06-OCT-21
Barium (Ba)			<0.50		mg/L		0.5	06-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-TCLP-WT	**Waste**							
Batch R5611081								
WG3632269-1 MB								
Cadmium (Cd)			<0.0050		mg/L		0.005	06-OCT-21
Chromium (Cr)			<0.050		mg/L		0.05	06-OCT-21
Lead (Pb)			<0.025		mg/L		0.025	06-OCT-21
Selenium (Se)			<0.025		mg/L		0.025	06-OCT-21
Uranium (U)			<0.25		mg/L		0.25	06-OCT-21
WG3632269-5 MS		**WG3632269-3**						
Silver (Ag)			132.6		%		50-140	06-OCT-21
Arsenic (As)			115.5		%		50-140	06-OCT-21
Boron (B)			89.2		%		50-140	06-OCT-21
Barium (Ba)			109.4		%		50-140	06-OCT-21
Cadmium (Cd)			110.5		%		50-140	06-OCT-21
Chromium (Cr)			109.2		%		50-140	06-OCT-21
Lead (Pb)			103.8		%		50-140	06-OCT-21
Selenium (Se)			116.0		%		50-140	06-OCT-21
Uranium (U)			102.9		%		50-140	06-OCT-21
PAH-TCLP-WT	**Waste**							
Batch R5614387								
WG3632629-7 DUP		**WG3632629-4**						
Acenaphthene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	08-OCT-21
Acenaphthylene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	08-OCT-21
Anthracene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	08-OCT-21
Benzo(a)anthracene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	08-OCT-21
Benzo(a)pyrene		<0.0010	<0.0010	RPD-NA	mg/L	N/A	50	08-OCT-21
Benzo(b&j)fluoranthene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	08-OCT-21
Benzo(g,h,i)perylene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	08-OCT-21
Benzo(k)fluoranthene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	08-OCT-21
Chrysene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	08-OCT-21
Dibenz(a,h)anthracene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	08-OCT-21
Fluoranthene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	08-OCT-21
Fluorene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	08-OCT-21
Indeno(1,2,3-cd)pyrene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	08-OCT-21
Naphthalene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	08-OCT-21
Phenanthrene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	08-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-TCLP-WT	**Waste**							
Batch R5614387								
WG3632629-7 DUP		**WG3632629-4**						
Pyrene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	08-OCT-21
Quinoline		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	08-OCT-21
WG3632629-2 LCS								
Acenaphthene			90.1		%		50-130	08-OCT-21
Acenaphthylene			92.4		%		50-130	08-OCT-21
Anthracene			93.5		%		50-130	08-OCT-21
Benzo(a)anthracene			110.3		%		50-140	08-OCT-21
Benzo(a)pyrene			83.0		%		60-140	08-OCT-21
Benzo(b&j)fluoranthene			93.4		%		50-130	08-OCT-21
Benzo(g,h,i)perylene			117.3		%		50-140	08-OCT-21
Benzo(k)fluoranthene			93.8		%		50-150	08-OCT-21
Chrysene			110.6		%		50-140	08-OCT-21
Dibenz(a,h)anthracene			108.4		%		50-140	08-OCT-21
Fluoranthene			110.7		%		50-130	08-OCT-21
Fluorene			98.3		%		50-130	08-OCT-21
Indeno(1,2,3-cd)pyrene			96.6		%		50-140	08-OCT-21
Naphthalene			74.1		%		50-130	08-OCT-21
Phenanthrene			107.0		%		50-130	08-OCT-21
Pyrene			102.7		%		50-140	08-OCT-21
Quinoline			121.4		%		50-130	08-OCT-21
WG3632629-1 MB								
Acenaphthene			<0.0050		mg/L		0.005	08-OCT-21
Acenaphthylene			<0.0050		mg/L		0.005	08-OCT-21
Anthracene			<0.0050		mg/L		0.005	08-OCT-21
Benzo(a)anthracene			<0.0050		mg/L		0.005	08-OCT-21
Benzo(a)pyrene			<0.0010		mg/L		0.001	08-OCT-21
Benzo(b&j)fluoranthene			<0.0050		mg/L		0.005	08-OCT-21
Benzo(g,h,i)perylene			<0.0050		mg/L		0.005	08-OCT-21
Benzo(k)fluoranthene			<0.0050		mg/L		0.005	08-OCT-21
Chrysene			<0.0050		mg/L		0.005	08-OCT-21
Dibenz(a,h)anthracene			<0.0050		mg/L		0.005	08-OCT-21
Fluoranthene			<0.0050		mg/L		0.005	08-OCT-21
Fluorene			<0.0050		mg/L		0.005	08-OCT-21
Indeno(1,2,3-cd)pyrene			<0.0050		mg/L		0.005	08-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-TCLP-WT	**Waste**							
Batch R5614387								
WG3632629-1 MB								
Naphthalene			<0.0050		mg/L		0.005	08-OCT-21
Phenanthrene			<0.0050		mg/L		0.005	08-OCT-21
Pyrene			<0.0050		mg/L		0.005	08-OCT-21
Quinoline			<0.0050		mg/L		0.005	08-OCT-21
Surrogate: Naphthalene d8			85.6		%		50-130	08-OCT-21
Surrogate: Phenanthrene d10			108.8		%		60-130	08-OCT-21
Surrogate: Chrysene d12			98.4		%		60-130	08-OCT-21
WG3632629-3 MB								
Acenaphthene			<0.0050		mg/L		0.005	08-OCT-21
Acenaphthylene			<0.0050		mg/L		0.005	08-OCT-21
Anthracene			<0.0050		mg/L		0.005	08-OCT-21
Benzo(a)anthracene			<0.0050		mg/L		0.005	08-OCT-21
Benzo(a)pyrene			<0.0010		mg/L		0.001	08-OCT-21
Benzo(b&j)fluoranthene			<0.0050		mg/L		0.005	08-OCT-21
Benzo(g,h,i)perylene			<0.0050		mg/L		0.005	08-OCT-21
Benzo(k)fluoranthene			<0.0050		mg/L		0.005	08-OCT-21
Chrysene			<0.0050		mg/L		0.005	08-OCT-21
Dibenz(a,h)anthracene			<0.0050		mg/L		0.005	08-OCT-21
Fluoranthene			<0.0050		mg/L		0.005	08-OCT-21
Fluorene			<0.0050		mg/L		0.005	08-OCT-21
Indeno(1,2,3-cd)pyrene			<0.0050		mg/L		0.005	08-OCT-21
Naphthalene			<0.0050		mg/L		0.005	08-OCT-21
Phenanthrene			<0.0050		mg/L		0.005	08-OCT-21
Pyrene			<0.0050		mg/L		0.005	08-OCT-21
Quinoline			<0.0050		mg/L		0.005	08-OCT-21
Surrogate: Naphthalene d8			93.8		%		50-130	08-OCT-21
Surrogate: Phenanthrene d10			106.3		%		60-130	08-OCT-21
Surrogate: Chrysene d12			98.7		%		60-130	08-OCT-21
WG3632629-6 MS		**WG3632629-4**						
Acenaphthene			93.7		%		50-140	08-OCT-21
Acenaphthylene			94.4		%		50-140	08-OCT-21
Anthracene			93.5		%		50-150	08-OCT-21
Benzo(a)anthracene			115.9		%		50-140	08-OCT-21
Benzo(a)pyrene			89.4		%		50-140	08-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-TCLP-WT	**Waste**							
Batch R5614387								
WG3632629-6 MS		**WG3632629-4**						
Benzo(b&j)fluoranthene			99.3		%		50-150	08-OCT-21
Benzo(g,h,i)perylene			108.1		%		50-140	08-OCT-21
Benzo(k)fluoranthene			99.1		%		50-150	08-OCT-21
Chrysene			113.4		%		50-140	08-OCT-21
Dibenz(a,h)anthracene			103.5		%		50-140	08-OCT-21
Fluoranthene			109.9		%		50-140	08-OCT-21
Fluorene			100.9		%		50-140	08-OCT-21
Indeno(1,2,3-cd)pyrene			117.0		%		50-140	08-OCT-21
Naphthalene			67.4		%		50-140	08-OCT-21
Phenanthrene			103.0		%		50-150	08-OCT-21
Pyrene			103.6		%		50-150	08-OCT-21
Quinoline			121.1		%		50-150	08-OCT-21

Quality Control Report

Workorder: L2646481 Report Date: 08-OCT-21

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Legend:

Limit	ALS Control Limit (Data Quality Objectives)
DUP	Duplicate
RPD	Relative Percent Difference
N/A	Not Available
LCS	Laboratory Control Sample
SRM	Standard Reference Material
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ADE	Average Desorption Efficiency
MB	Method Blank
IRM	Internal Reference Material
CRM	Certified Reference Material
CCV	Continuing Calibration Verification
CVS	Calibration Verification Standard
LCSD	Laboratory Control Sample Duplicate

Sample Parameter Qualifier Definitions:

Qualifier	Description
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Hold Time Exceedances:

All test results reported with this submission were conducted within ALS recommended hold times.

ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.

Chain of Custody (COC) / Analytical Request Form

COC Number: 20 - 002

Canada Toll Free: 1 800 668 9878

www.alsglobal.com

Report To	Contact and company name below will appear on the final report
Company:	Golder Associates Ltd.
Contact:	Jill LaPorte
Phone:	905-723-2727
	Company address below will appear on the final report
Street:	100 Scotia Court
City/Province:	Whitby, Ontario
Postal Code:	L1N 8Y6
Invoice To	Same as Report To ☐ YES ☑ NO
	Copy of Invoice with Report ☑ YES ☐ NO
Company:	Golder Associates Ltd.
Contact:	Accounts Payable

Project Information

ALS Account # / Quote #:	16520 / Q86566
Job #:	1783886-8000-8006
PO / AFE:	
LSD:	
ALS Lab Work Order # (ALS use only):	L2646481

Reports / Recipients

Select Report Format: ☑ PDF ☑ EXCEL ☐ EDD (DIGITAL)

Merge QC/QCI Reports with COA ☑ YES ☐ NO ☐ N/A

☐ Compare Results to Criteria on Report - provide details below if box checked

Select Distribution: ☑ EMAIL ☐ MAIL ☐ FAX

Email 1 or Fax: Jill_LaPorte@golder.com

Email 2: shawn_seguin@golder.com

Email 3:

Invoice Recipients

Select Invoice Distribution: ☑ EMAIL ☐ MAIL ☐ FAX

Email 1 or Fax: Jill_LaPorte@golder.com

Email 2: canadaaccountspayableinvoices@golder.com

Oil and Gas Required Fields (client use)

AFE/Cost Center:	PO#
Major/Minor Code:	Routing Code:
Requisitioner:	
Location:	

ALS Contact: Amanda Overholster

Sampler: J. Weir / J. Fraser

Turnaround Time (TAT) Requested

☑ Routine [R] if received by 3pm M-F - no surcharges apply

☐ 4 day [P4] if received by 3pm M-F - 25% rush surcharge minimum

☐ 3 day [P3] if received by 12pm M-F - 50% rush surcharge minimum

☐ 2 day [P2] if received by 12pm M-F - 100% rush surcharge minimum

☐ *1 day [E] if received by 12pm M-F - 200% rush surcharge minimum

*1 day only available for Inorganics, Metals, & VOC

* Same day [E2] unavailable for TCLP/SPLP

AFFIX ALS BARCODE LABEL HERE (ALS use only)

Date and Time Required for all E&P TATs: dd-mmm-yy hh:mm am/pm

For all tests with rush TATs requested, please contact your AM to confirm availability.

Analysis Request

ALS Sample # (ALS use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	NUMBER OF CONTAINERS	TCLP (EPA 1311) PAH (PAH-TCLP-WT)	TCLP (EPA 1311) Metals (MET-TCLP-P-WT)	TCLP (EPA 1311) LEACH (LEACH-TCLP-WT)	MISC	SAMPLES ON HOLD	EXTENDED STORAGE REQUIRED	SUSPECTED HAZARD (see notes)
	TC2A-SG-006	28Sep21	13:25	Sediment	3	X	X	X				
	TC2M-SG-010	28Sep21	13:35	Sediment	3	X	X	X				
	TCRL-SG-001	28Sep21	11:00	Sediment	3	X	X	X				
				Sediment								
				Sediment								
				Sediment								
				Sediment								
				Sediment								
				Sediment								
				Sediment								
				Sediment								
				Sediment								

Limited Sample Size Authorization

If the sample provided contains less than the minimum required weight, the samples may be leached at a lower volume and qualified as Limited Sample Size:

☐ YES ☐ NO

Minimum Sample Size: 1X250 mL - No Headspace

Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only)

EQuIS Facility Code: 230179134

Please provide 2X250 mL sample if both mSPLP and TCLP leaching procedures are requested or if Dioxins and Furans are required.

SAMPLE RECEIPT DETAILS (ALS use only)

Cooling Method: ☐ NONE ☒ ICE ☐ ICE PACKS ☐ FROZEN ☐ COOLING INITIATED

Submission Comments identified on Sample Receipt Notification: ☐ YES ☐ NO

Cooler Custody Seals Intact: ☐ YES ☐ N/A Sample Custody Seals Intact: ☐ YES ☐ N/A

INITIAL COOLER TEMPERATURES °C				FINAL COOLER TEMPERATURES °C			
8.6	8.5	11.2	9.7				

SHIPMENT RELEASE (client use)

Released by:	Date:	Time:
Jamie Weir	29 Sep 2021	11:30

INITIAL SHIPMENT RECEPTION (ALS use only)

Received by:	Date:	Time:
Karen	10/1/2021	12:57

FINAL SHIPMENT RECEPTION (ALS use only)

Received by:	Date:	Time:

ALS 2022 FRONT

Refer to the Locations Tab for ALS Locations and Sampling Information

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions.

Reg. 406 mSPLP Metals scan includes: Sb,As,Ba,Be,B,Cd,Cr,Co,Cu,Pb,Mo,Ni,Se,Ag,Tl,U,V,Zn. Reg. 347/558 TCLP Metals+Inorganics includes: As,Ba,B,Cd,Cr,Pb,Se,Ag,U,Hg,Fluoride,CN (WAD),Nitrate+Nitrite as N

GOLDER ASSOCIATES LTD (Whitby)
ATTN: Jill LaPorte
100 Scotia Court
Whitby ON L1N 8Y6

Date Received: 04-OCT-21
Report Date: 26-OCT-21 12:44 (MT)
Version: FINAL

Client Phone: 905-723-2727

Certificate of Analysis

Lab Work Order #: L2646722

Project P.O. #: NOT SUBMITTED
Job Reference: 1783886-8000
C of C Numbers:
Legal Site Desc:

Amanda Overholster
Account Manager

[This report shall not be reproduced except in full without the written authority of the Laboratory.]

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646722-1 TC3A-SG-001 Sampled By: JW/ SB on 29-SEP-21 @ 13:15 Matrix: SEDIMENT							
Physical Tests							
% Moisture	85.2		0.25	%	05-OCT-21	06-OCT-21	R5609858
Particle Size							
General Texture Class	Fine				13-OCT-21	13-OCT-21	R5617706
MUST PSA % > 75um	10.0		1.0	%	13-OCT-21	13-OCT-21	R5617706
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0958		0.0010	g/g	08-OCT-21	08-OCT-21	R5614708
Total Organic Carbon	9.58		0.10	%	08-OCT-21	08-OCT-21	R5614708
Metals							
Aluminum (Al)	14700	DLM	100	ug/g	06-OCT-21	07-OCT-21	R5613997
Antimony (Sb)	1.64	DLM	0.20	ug/g	06-OCT-21	07-OCT-21	R5613997
Arsenic (As)	14.7	DLM	0.20	ug/g	06-OCT-21	07-OCT-21	R5613997
Barium (Ba)	253	DLM	1.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Beryllium (Be)	0.85	DLM	0.20	ug/g	06-OCT-21	07-OCT-21	R5613997
Bismuth (Bi)	1.54	DLM	0.40	ug/g	06-OCT-21	07-OCT-21	R5613997
Boron (B)	13	DLM	10	ug/g	06-OCT-21	07-OCT-21	R5613997
Cadmium (Cd)	1.09	DLM	0.040	ug/g	06-OCT-21	07-OCT-21	R5613997
Calcium (Ca)	121000	DLM	100	ug/g	06-OCT-21	07-OCT-21	R5613997
Chromium (Cr)	390	DLM	1.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Cobalt (Co)	13.7	DLM	0.20	ug/g	06-OCT-21	07-OCT-21	R5613997
Copper (Cu)	69.2	DLM	1.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Iron (Fe)	26000	DLM	100	ug/g	06-OCT-21	07-OCT-21	R5613997
Lead (Pb)	500	DLM	1.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Lithium (Li)	14.5	DLM	4.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Magnesium (Mg)	13000	DLM	40	ug/g	06-OCT-21	07-OCT-21	R5613997
Manganese (Mn)	546	DLM	2.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Mercury (Hg)	1.62		0.0050	ug/g	06-OCT-21	07-OCT-21	R5613508
Molybdenum (Mo)	1.90	DLM	0.20	ug/g	06-OCT-21	07-OCT-21	R5613997
Nickel (Ni)	26.3	DLM	1.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Phosphorus (P)	1280	DLM	100	ug/g	06-OCT-21	07-OCT-21	R5613997
Potassium (K)	3230	DLM	200	ug/g	06-OCT-21	07-OCT-21	R5613997
Selenium (Se)	2.09	DLM	0.40	ug/g	06-OCT-21	07-OCT-21	R5613997
Silver (Ag)	2.31	DLM	0.20	ug/g	06-OCT-21	07-OCT-21	R5613997
Sodium (Na)	670	DLM	100	ug/g	06-OCT-21	07-OCT-21	R5613997
Strontium (Sr)	613	DLM	1.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Sulfur (S)	12600	DLM	2000	ug/g	06-OCT-21	07-OCT-21	R5613997
Thallium (Tl)	0.58	DLM	0.10	ug/g	06-OCT-21	07-OCT-21	R5613997
Tin (Sn)	10.2	DLM	4.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Titanium (Ti)	874	DLM	2.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Tungsten (W)	1.3	DLM	1.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Uranium (U)	1.30	DLM	0.10	ug/g	06-OCT-21	07-OCT-21	R5613997
Vanadium (V)	41.8	DLM	0.40	ug/g	06-OCT-21	07-OCT-21	R5613997
Zinc (Zn)	287	DLM	4.0	ug/g	06-OCT-21	07-OCT-21	R5613997

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646722-1 TC3A-SG-001 Sampled By: JW/ SB on 29-SEP-21 @ 13:15 Matrix: SEDIMENT							
Metals							
Zirconium (Zr)	3.0	DLM	2.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.039	DLHM	0.038	ug/g	05-OCT-21	07-OCT-21	R5611880
Acenaphthylene	0.116	DLHM	0.038	ug/g	05-OCT-21	07-OCT-21	R5611880
Acridine	<0.075	DLHM	0.075	ug/g	05-OCT-21	07-OCT-21	R5611880
Anthracene	0.081	DLHM	0.030	ug/g	05-OCT-21	07-OCT-21	R5611880
Benzo(a)anthracene	0.377	R	0.075	ug/g	05-OCT-21	07-OCT-21	R5611880
Benzo(a)pyrene	0.485	DLHM	0.038	ug/g	05-OCT-21	07-OCT-21	R5611880
Benzo(b&j)fluoranthene	0.662	DLHM	0.075	ug/g	05-OCT-21	07-OCT-21	R5611880
Benzo(g,h,i)perylene	0.478	DLHM	0.075	ug/g	05-OCT-21	07-OCT-21	R5611880
Benzo(k)fluoranthene	0.263	DLHM	0.075	ug/g	05-OCT-21	07-OCT-21	R5611880
Chrysene	0.559	DLHM	0.075	ug/g	05-OCT-21	07-OCT-21	R5611880
Dibenz(a,h)anthracene	0.099	DLHM	0.038	ug/g	05-OCT-21	07-OCT-21	R5611880
Fluoroanthene	0.728	DLHM	0.038	ug/g	05-OCT-21	07-OCT-21	R5611880
Fluorene	0.045	DLHM	0.038	ug/g	05-OCT-21	07-OCT-21	R5611880
Indeno(1,2,3-cd)pyrene	0.362	DLHM	0.075	ug/g	05-OCT-21	07-OCT-21	R5611880
1-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	05-OCT-21	07-OCT-21	R5611880
2-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	05-OCT-21	07-OCT-21	R5611880
Naphthalene	<0.038	DLHM	0.038	ug/g	05-OCT-21	07-OCT-21	R5611880
Phenanthrene	0.309	DLHM	0.038	ug/g	05-OCT-21	07-OCT-21	R5611880
Pyrene	0.727	DLHM	0.038	ug/g	05-OCT-21	07-OCT-21	R5611880
Quinoline	<0.038	DLHM	0.038	ug/g	05-OCT-21	07-OCT-21	R5611880
Surrogate: 2-Fluorobiphenyl	88.4		60-140	%	05-OCT-21	07-OCT-21	R5611880
Surrogate: d14-Terphenyl	90.7		60-140	%	05-OCT-21	07-OCT-21	R5611880
B(a)P Total Potency Equivalent	0.761		0.053	ug/g	05-OCT-21	07-OCT-21	R5611880
IACR (CCME)	9.14		0.75		05-OCT-21	07-OCT-21	R5611880
Polychlorinated Biphenyls							
Aroclor 1016	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1221	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1232	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1242	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1248	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1254	0.208	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1260	0.180	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1262	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1268	<0.023	DLHM	0.023	mg/kg	07-OCT-21	07-OCT-21	R5613829
Total Polychlorinated Biphenyls	0.388		0.068	mg/kg	07-OCT-21	07-OCT-21	R5613829
Surrogate: d14-Terphenyl	93.6		50-140	%	07-OCT-21	07-OCT-21	R5613829
L2646722-2 TC3A-SG-002 Sampled By: JW/ SB on 29-SEP-21 @ 13:50 Matrix: SEDIMENT							
Physical Tests							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646722-2 TC3A-SG-002 Sampled By: JW/ SB on 29-SEP-21 @ 13:50 Matrix: SEDIMENT							
Physical Tests							
% Moisture	80.8		0.25	%	05-OCT-21	06-OCT-21	R5609858
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.112		0.0010	g/g	08-OCT-21	08-OCT-21	R5614708
Total Organic Carbon	11.2		0.10	%	08-OCT-21	08-OCT-21	R5614708
Metals							
Aluminum (Al)	12700	DLM	100	ug/g	06-OCT-21	07-OCT-21	R5613997
Antimony (Sb)	2.37	DLM	0.20	ug/g	06-OCT-21	07-OCT-21	R5613997
Arsenic (As)	21.5	DLM	0.20	ug/g	06-OCT-21	07-OCT-21	R5613997
Barium (Ba)	215	DLM	1.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Beryllium (Be)	0.67	DLM	0.20	ug/g	06-OCT-21	07-OCT-21	R5613997
Bismuth (Bi)	1.98	DLM	0.40	ug/g	06-OCT-21	07-OCT-21	R5613997
Boron (B)	14	DLM	10	ug/g	06-OCT-21	07-OCT-21	R5613997
Cadmium (Cd)	1.36	DLM	0.040	ug/g	06-OCT-21	07-OCT-21	R5613997
Calcium (Ca)	72600	DLM	100	ug/g	06-OCT-21	07-OCT-21	R5613997
Chromium (Cr)	264	DLM	1.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Cobalt (Co)	15.7	DLM	0.20	ug/g	06-OCT-21	07-OCT-21	R5613997
Copper (Cu)	103	DLM	1.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Iron (Fe)	27600	DLM	100	ug/g	06-OCT-21	07-OCT-21	R5613997
Lead (Pb)	308	DLM	1.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Lithium (Li)	12.6	DLM	4.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Magnesium (Mg)	11400	DLM	40	ug/g	06-OCT-21	07-OCT-21	R5613997
Manganese (Mn)	469	DLM	2.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Mercury (Hg)	1.38		0.0050	ug/g	06-OCT-21	07-OCT-21	R5613508
Molybdenum (Mo)	1.28	DLM	0.20	ug/g	06-OCT-21	07-OCT-21	R5613997
Nickel (Ni)	28.2	DLM	1.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Phosphorus (P)	1250	DLM	100	ug/g	06-OCT-21	07-OCT-21	R5613997
Potassium (K)	2590	DLM	200	ug/g	06-OCT-21	07-OCT-21	R5613997
Selenium (Se)	2.00	DLM	0.40	ug/g	06-OCT-21	07-OCT-21	R5613997
Silver (Ag)	1.20	DLM	0.20	ug/g	06-OCT-21	07-OCT-21	R5613997
Sodium (Na)	480	DLM	100	ug/g	06-OCT-21	07-OCT-21	R5613997
Strontium (Sr)	340	DLM	1.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Sulfur (S)	9600	DLM	2000	ug/g	06-OCT-21	07-OCT-21	R5613997
Thallium (Tl)	0.42	DLM	0.10	ug/g	06-OCT-21	07-OCT-21	R5613997
Tin (Sn)	28.4	DLM	4.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Titanium (Ti)	699	DLM	2.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Tungsten (W)	<1.0	DLM	1.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Uranium (U)	0.82	DLM	0.10	ug/g	06-OCT-21	07-OCT-21	R5613997
Vanadium (V)	36.9	DLM	0.40	ug/g	06-OCT-21	07-OCT-21	R5613997
Zinc (Zn)	509	DLM	4.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Zirconium (Zr)	2.8	DLM	2.0	ug/g	06-OCT-21	07-OCT-21	R5613997
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.121	DLHM	0.025	ug/g	05-OCT-21	07-OCT-21	R5611880

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646722-2 TC3A-SG-002 Sampled By: JW/ SB on 29-SEP-21 @ 13:50 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
Acenaphthylene	0.208	DLHM	0.025	ug/g	05-OCT-21	07-OCT-21	R5611880
Acridine	0.111	AI	0.050	ug/g	05-OCT-21	07-OCT-21	R5611880
Anthracene	0.248	DLHM	0.020	ug/g	05-OCT-21	07-OCT-21	R5611880
Benzo(a)anthracene	0.833	DLHM	0.050	ug/g	05-OCT-21	07-OCT-21	R5611880
Benzo(a)pyrene	0.869	DLHM	0.025	ug/g	05-OCT-21	07-OCT-21	R5611880
Benzo(b&j)fluoranthene	1.18	DLHM	0.050	ug/g	05-OCT-21	07-OCT-21	R5611880
Benzo(g,h,i)perylene	0.749	DLHM	0.050	ug/g	05-OCT-21	07-OCT-21	R5611880
Benzo(k)fluoranthene	0.447	DLHM	0.050	ug/g	05-OCT-21	07-OCT-21	R5611880
Chrysene	1.01	DLHM	0.050	ug/g	05-OCT-21	07-OCT-21	R5611880
Dibenz(a,h)anthracene	0.170	DLHM	0.025	ug/g	05-OCT-21	07-OCT-21	R5611880
Fluoroanthene	1.68	DLHM	0.025	ug/g	05-OCT-21	07-OCT-21	R5611880
Fluorene	0.161	DLHM	0.025	ug/g	05-OCT-21	07-OCT-21	R5611880
Indeno(1,2,3-cd)pyrene	0.604	DLHM	0.050	ug/g	05-OCT-21	07-OCT-21	R5611880
1-Methylnaphthalene	0.063	DLHM	0.025	ug/g	05-OCT-21	07-OCT-21	R5611880
2-Methylnaphthalene	0.083	DLHM	0.025	ug/g	05-OCT-21	07-OCT-21	R5611880
Naphthalene	0.070	DLHM	0.025	ug/g	05-OCT-21	07-OCT-21	R5611880
Phenanthrene	0.915	DLHM	0.025	ug/g	05-OCT-21	07-OCT-21	R5611880
Pyrene	1.53	DLHM	0.025	ug/g	05-OCT-21	07-OCT-21	R5611880
Quinoline	<0.025	DLHM	0.025	ug/g	05-OCT-21	07-OCT-21	R5611880
Surrogate: 2-Fluorobiphenyl	87.6		60-140	%	05-OCT-21	07-OCT-21	R5611880
Surrogate: d14-Terphenyl	86.4		60-140	%	05-OCT-21	07-OCT-21	R5611880
B(a)P Total Potency Equivalent	1.36		0.036	ug/g	05-OCT-21	07-OCT-21	R5611880
IACR (CCME)	16.6		0.50		05-OCT-21	07-OCT-21	R5611880
Polychlorinated Biphenyls							
Aroclor 1016	<0.015	DLHM	0.015	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1221	<0.015	DLHM	0.015	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1232	<0.015	DLHM	0.015	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1242	<0.015	DLHM	0.015	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1248	<0.015	DLHM	0.015	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1254	0.327	DLHM	0.015	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1260	0.165	DLHM	0.015	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1262	<0.015	DLHM	0.015	mg/kg	07-OCT-21	07-OCT-21	R5613829
Aroclor 1268	<0.015	DLHM	0.015	mg/kg	07-OCT-21	07-OCT-21	R5613829
Total Polychlorinated Biphenyls	0.492		0.045	mg/kg	07-OCT-21	07-OCT-21	R5613829
Surrogate: d14-Terphenyl	82.6		50-140	%	07-OCT-21	07-OCT-21	R5613829
L2646722-3 TC3A-SG-003 Sampled By: JW/ SB on 29-SEP-21 @ 14:15 Matrix: SEDIMENT							
Physical Tests							
% Moisture	84.6		0.25	%	05-OCT-21	06-OCT-21	R5609858
Particle Size							
General Texture Class	Fine				13-OCT-21	13-OCT-21	R5617706

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646722-3 TC3A-SG-003 Sampled By: JW/ SB on 29-SEP-21 @ 14:15 Matrix: SEDIMENT							
Particle Size							
MUST PSA % > 75um	3.8		1.0	%	13-OCT-21	13-OCT-21	R5617706
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0928		0.0010	g/g	08-OCT-21	08-OCT-21	R5614708
Total Organic Carbon	9.28		0.10	%	08-OCT-21	08-OCT-21	R5614708
Metals							
Aluminum (Al)	16500		50	ug/g	07-OCT-21	08-OCT-21	R5614612
Antimony (Sb)	1.15		0.10	ug/g	07-OCT-21	08-OCT-21	R5614612
Arsenic (As)	10.9		0.10	ug/g	07-OCT-21	08-OCT-21	R5614612
Barium (Ba)	261		0.50	ug/g	07-OCT-21	08-OCT-21	R5614612
Beryllium (Be)	0.67		0.10	ug/g	07-OCT-21	08-OCT-21	R5614612
Bismuth (Bi)	2.08		0.20	ug/g	07-OCT-21	08-OCT-21	R5614612
Boron (B)	12.1		5.0	ug/g	07-OCT-21	08-OCT-21	R5614612
Boron (B), Hot Water Ext.	0.23		0.10	ug/g	08-OCT-21	08-OCT-21	R5614610
Cadmium (Cd)	0.919		0.020	ug/g	07-OCT-21	08-OCT-21	R5614612
Calcium (Ca)	98400		50	ug/g	07-OCT-21	08-OCT-21	R5614612
Chromium (Cr)	406		0.50	ug/g	07-OCT-21	08-OCT-21	R5614612
Cobalt (Co)	13.7		0.10	ug/g	07-OCT-21	08-OCT-21	R5614612
Copper (Cu)	59.1		0.50	ug/g	07-OCT-21	08-OCT-21	R5614612
Iron (Fe)	26100		50	ug/g	07-OCT-21	08-OCT-21	R5614612
Lead (Pb)	196		0.50	ug/g	07-OCT-21	08-OCT-21	R5614612
Lithium (Li)	15.3		2.0	ug/g	07-OCT-21	08-OCT-21	R5614612
Magnesium (Mg)	12000		20	ug/g	07-OCT-21	08-OCT-21	R5614612
Manganese (Mn)	719		1.0	ug/g	07-OCT-21	08-OCT-21	R5614612
Mercury (Hg)	0.802		0.0050	ug/g	07-OCT-21	08-OCT-21	R5614405
Molybdenum (Mo)	1.25		0.10	ug/g	07-OCT-21	08-OCT-21	R5614612
Nickel (Ni)	26.3		0.50	ug/g	07-OCT-21	08-OCT-21	R5614612
Phosphorus (P)	1220		50	ug/g	07-OCT-21	08-OCT-21	R5614612
Potassium (K)	3650		100	ug/g	07-OCT-21	08-OCT-21	R5614612
Selenium (Se)	1.47		0.20	ug/g	07-OCT-21	08-OCT-21	R5614612
Silver (Ag)	1.03		0.10	ug/g	07-OCT-21	08-OCT-21	R5614612
Sodium (Na)	605		50	ug/g	07-OCT-21	08-OCT-21	R5614612
Strontium (Sr)	447		0.50	ug/g	07-OCT-21	08-OCT-21	R5614612
Sulfur (S)	11000		1000	ug/g	07-OCT-21	08-OCT-21	R5614612
Thallium (Tl)	0.328		0.050	ug/g	07-OCT-21	08-OCT-21	R5614612
Tin (Sn)	9.4		2.0	ug/g	07-OCT-21	08-OCT-21	R5614612
Titanium (Ti)	999		1.0	ug/g	07-OCT-21	08-OCT-21	R5614612
Tungsten (W)	0.60		0.50	ug/g	07-OCT-21	08-OCT-21	R5614612
Uranium (U)	0.870		0.050	ug/g	07-OCT-21	08-OCT-21	R5614612
Vanadium (V)	41.9		0.20	ug/g	07-OCT-21	08-OCT-21	R5614612
Zinc (Zn)	226		2.0	ug/g	07-OCT-21	08-OCT-21	R5614612
Zirconium (Zr)	3.5		1.0	ug/g	07-OCT-21	08-OCT-21	R5614612
Speciated Metals							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646722-3 TC3A-SG-003 Sampled By: JW/ SB on 29-SEP-21 @ 14:15 Matrix: SEDIMENT							
Speciated Metals							
Chromium, Trivalent	405		10	ug/g		11-OCT-21	
Chromium, Hexavalent	0.96		0.20	ug/g	07-OCT-21	08-OCT-21	R5615340
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.043	DLHM	0.025	ug/g	05-OCT-21	07-OCT-21	R5611880
Acenaphthylene	0.177	DLHM	0.025	ug/g	05-OCT-21	07-OCT-21	R5611880
Acridine	<0.050	DLHM	0.050	ug/g	05-OCT-21	07-OCT-21	R5611880
Anthracene	0.100	DLHM	0.020	ug/g	05-OCT-21	07-OCT-21	R5611880
Benzo(a)anthracene	0.505	R	0.050	ug/g	05-OCT-21	07-OCT-21	R5611880
Benzo(a)pyrene	0.670	DLHM	0.025	ug/g	05-OCT-21	07-OCT-21	R5611880
Benzo(b&j)fluoranthene	0.809	DLHM	0.050	ug/g	05-OCT-21	07-OCT-21	R5611880
Benzo(g,h,i)perylene	0.549	DLHM	0.050	ug/g	05-OCT-21	07-OCT-21	R5611880
Benzo(k)fluoranthene	0.271	DLHM	0.050	ug/g	05-OCT-21	07-OCT-21	R5611880
Chrysene	0.619	DLHM	0.050	ug/g	05-OCT-21	07-OCT-21	R5611880
Dibenz(a,h)anthracene	0.127	DLHM	0.025	ug/g	05-OCT-21	07-OCT-21	R5611880
Fluoroanthene	0.779	DLHM	0.025	ug/g	05-OCT-21	07-OCT-21	R5611880
Fluorene	0.056	DLHM	0.025	ug/g	05-OCT-21	07-OCT-21	R5611880
Indeno(1,2,3-cd)pyrene	0.466	DLHM	0.050	ug/g	05-OCT-21	07-OCT-21	R5611880
1-Methylnaphthalene	<0.025	DLHM	0.025	ug/g	05-OCT-21	07-OCT-21	R5611880
2-Methylnaphthalene	0.025	DLHM	0.025	ug/g	05-OCT-21	07-OCT-21	R5611880
Naphthalene	0.040	DLHM	0.025	ug/g	05-OCT-21	07-OCT-21	R5611880
Phenanthrene	0.371	DLHM	0.025	ug/g	05-OCT-21	07-OCT-21	R5611880
Pyrene	0.825	DLHM	0.025	ug/g	05-OCT-21	07-OCT-21	R5611880
Quinoline	<0.025	DLHM	0.025	ug/g	05-OCT-21	07-OCT-21	R5611880
Surrogate: 2-Fluorobiphenyl	89.1		60-140	%	05-OCT-21	07-OCT-21	R5611880
Surrogate: d14-Terphenyl	90.1		60-140	%	05-OCT-21	07-OCT-21	R5611880
B(a)P Total Potency Equivalent	1.01		0.036	ug/g	05-OCT-21	07-OCT-21	R5611880
IACR (CCME)	11.2		0.50		05-OCT-21	07-OCT-21	R5611880
Polychlorinated Biphenyls							
Aroclor 1016	<0.034	DLHM	0.034	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1221	<0.034	DLHM	0.034	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1232	<0.034	DLHM	0.034	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1242	<0.034	DLHM	0.034	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1248	<0.034	DLHM	0.034	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1254	0.196	DLHM	0.034	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1260	0.227	DLHM	0.034	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1262	<0.034	DLHM	0.034	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1268	<0.034	DLHM	0.034	mg/kg	13-OCT-21	13-OCT-21	R5616907
Total Polychlorinated Biphenyls	0.42		0.10	mg/kg	13-OCT-21	13-OCT-21	R5616907
Surrogate: d14-Terphenyl	107.4		50-140	%	13-OCT-21	13-OCT-21	R5616907
L2646722-4 TC4-SG-001 Sampled By: JW/ SB on 29-SEP-21 @ 15:15 Matrix: SEDIMENT							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646722-4 TC4-SG-001 Sampled By: JW/ SB on 29-SEP-21 @ 15:15 Matrix: SEDIMENT							
Physical Tests							
% Moisture	38.3		0.25	%	05-OCT-21	06-OCT-21	R5609858
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0281		0.0010	g/g	08-OCT-21	08-OCT-21	R5614708
Total Organic Carbon	2.81		0.10	%	08-OCT-21	08-OCT-21	R5614708
Metals							
Aluminum (Al)	4870		50	ug/g	06-OCT-21	07-OCT-21	R5613858
Antimony (Sb)	1.31		0.10	ug/g	06-OCT-21	07-OCT-21	R5613858
Arsenic (As)	2.67		0.10	ug/g	06-OCT-21	07-OCT-21	R5613858
Barium (Ba)	62.1		0.50	ug/g	06-OCT-21	07-OCT-21	R5613858
Beryllium (Be)	0.26		0.10	ug/g	06-OCT-21	07-OCT-21	R5613858
Bismuth (Bi)	7.29		0.20	ug/g	06-OCT-21	07-OCT-21	R5613858
Boron (B)	7.5		5.0	ug/g	06-OCT-21	07-OCT-21	R5613858
Cadmium (Cd)	0.255		0.020	ug/g	06-OCT-21	07-OCT-21	R5613858
Calcium (Ca)	56800		50	ug/g	06-OCT-21	07-OCT-21	R5613858
Chromium (Cr)	36.7		0.50	ug/g	06-OCT-21	07-OCT-21	R5613858
Cobalt (Co)	5.48		0.10	ug/g	06-OCT-21	07-OCT-21	R5613858
Copper (Cu)	80.2		0.50	ug/g	06-OCT-21	07-OCT-21	R5613858
Iron (Fe)	14500		50	ug/g	06-OCT-21	07-OCT-21	R5613858
Lead (Pb)	174		0.50	ug/g	06-OCT-21	07-OCT-21	R5613858
Lithium (Li)	5.7		2.0	ug/g	06-OCT-21	07-OCT-21	R5613858
Magnesium (Mg)	9710		20	ug/g	06-OCT-21	07-OCT-21	R5613858
Manganese (Mn)	185		1.0	ug/g	06-OCT-21	07-OCT-21	R5613858
Mercury (Hg)	0.203	DLM	0.010	ug/g	06-OCT-21	07-OCT-21	R5613510
Molybdenum (Mo)	0.44		0.10	ug/g	06-OCT-21	07-OCT-21	R5613858
Nickel (Ni)	9.88		0.50	ug/g	06-OCT-21	07-OCT-21	R5613858
Phosphorus (P)	886		50	ug/g	06-OCT-21	07-OCT-21	R5613858
Potassium (K)	1080		100	ug/g	06-OCT-21	07-OCT-21	R5613858
Selenium (Se)	0.22		0.20	ug/g	06-OCT-21	07-OCT-21	R5613858
Silver (Ag)	0.12		0.10	ug/g	06-OCT-21	07-OCT-21	R5613858
Sodium (Na)	199		50	ug/g	06-OCT-21	07-OCT-21	R5613858
Strontium (Sr)	109		0.50	ug/g	06-OCT-21	07-OCT-21	R5613858
Sulfur (S)	1200		1000	ug/g	06-OCT-21	07-OCT-21	R5613858
Thallium (Tl)	0.102		0.050	ug/g	06-OCT-21	07-OCT-21	R5613858
Tin (Sn)	10.9		2.0	ug/g	06-OCT-21	07-OCT-21	R5613858
Titanium (Ti)	424		1.0	ug/g	06-OCT-21	07-OCT-21	R5613858
Tungsten (W)	0.61		0.50	ug/g	06-OCT-21	07-OCT-21	R5613858
Uranium (U)	0.416		0.050	ug/g	06-OCT-21	07-OCT-21	R5613858
Vanadium (V)	19.0		0.20	ug/g	06-OCT-21	07-OCT-21	R5613858
Zinc (Zn)	142		2.0	ug/g	06-OCT-21	07-OCT-21	R5613858
Zirconium (Zr)	1.5		1.0	ug/g	06-OCT-21	07-OCT-21	R5613858
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	2.83	DLM	0.013	ug/g	07-OCT-21	08-OCT-21	R5614231

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646722-4 TC4-SG-001 Sampled By: JW/ SB on 29-SEP-21 @ 15:15 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
Acenaphthylene	0.153	DLM	0.013	ug/g	07-OCT-21	08-OCT-21	R5614231
Acridine	0.908	DLM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Anthracene	10.5	DLM	0.010	ug/g	07-OCT-21	08-OCT-21	R5614231
Benzo(a)anthracene	16.1	DLM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Benzo(a)pyrene	10.9	DLM	0.013	ug/g	07-OCT-21	08-OCT-21	R5614231
Benzo(b&j)fluoranthene	14.6	DLM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Benzo(g,h,i)perylene	5.89	DLM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Benzo(k)fluoranthene	5.12	DLM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Chrysene	14.9	DLM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Dibenz(a,h)anthracene	2.00	DLM	0.013	ug/g	07-OCT-21	08-OCT-21	R5614231
Fluoroanthene	34.2	DLM	0.013	ug/g	07-OCT-21	08-OCT-21	R5614231
Fluorene	4.44	DLM	0.013	ug/g	07-OCT-21	08-OCT-21	R5614231
Indeno(1,2,3-cd)pyrene	5.85	DLM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
1-Methylnaphthalene	0.567	DLM	0.013	ug/g	07-OCT-21	08-OCT-21	R5614231
2-Methylnaphthalene	0.532	DLM	0.013	ug/g	07-OCT-21	08-OCT-21	R5614231
Naphthalene	0.612	DLM	0.013	ug/g	07-OCT-21	08-OCT-21	R5614231
Phenanthrene	30.6	DLM	0.013	ug/g	07-OCT-21	08-OCT-21	R5614231
Pyrene	25.8	DLM	0.013	ug/g	07-OCT-21	08-OCT-21	R5614231
Quinoline	0.032	DLM	0.013	ug/g	07-OCT-21	08-OCT-21	R5614231
Surrogate: 2-Fluorobiphenyl	78.1		60-140	%	07-OCT-21	08-OCT-21	R5614231
Surrogate: d14-Terphenyl	78.4		60-140	%	07-OCT-21	08-OCT-21	R5614231
B(a)P Total Potency Equivalent	17.3		0.020	ug/g	07-OCT-21	08-OCT-21	R5614231
IACR (CCME)	220		0.25		07-OCT-21	08-OCT-21	R5614231
Polychlorinated Biphenyls							
Aroclor 1016	<0.0095	DLM	0.0095	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1221	<0.0095	DLM	0.0095	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1232	<0.0095	DLM	0.0095	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1242	<0.0095	DLM	0.0095	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1248	<0.0095	DLM	0.0095	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1254	0.0414	DLM	0.0045	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1260	0.0184	DLM	0.0045	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1262	<0.0045	DLM	0.0045	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1268	<0.0045	DLM	0.0045	mg/kg	13-OCT-21	13-OCT-21	R5616907
Total Polychlorinated Biphenyls	0.059		0.014	mg/kg	13-OCT-21	13-OCT-21	R5616907
Surrogate: d14-Terphenyl	95.8		50-140	%	13-OCT-21	13-OCT-21	R5616907
L2646722-5 TC4 SG-002 Sampled By: JW/ SB on 29-SEP-21 @ 16:00 Matrix: SEDIMENT							
Physical Tests							
% Moisture	85.8		0.25	%	05-OCT-21	06-OCT-21	R5609858
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0798		0.0010	g/g	08-OCT-21	08-OCT-21	R5614708

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646722-5 TC4 SG-002 Sampled By: JW/ SB on 29-SEP-21 @ 16:00 Matrix: SEDIMENT							
Organic / Inorganic Carbon							
Total Organic Carbon	7.98		0.10	%	08-OCT-21	08-OCT-21	R5614708
Metals							
Aluminum (Al)	15100		50	ug/g	08-OCT-21	08-OCT-21	R5614725
Antimony (Sb)	1.22		0.10	ug/g	08-OCT-21	08-OCT-21	R5614725
Arsenic (As)	9.61		0.10	ug/g	08-OCT-21	08-OCT-21	R5614725
Barium (Ba)	235		0.50	ug/g	08-OCT-21	08-OCT-21	R5614725
Beryllium (Be)	0.57		0.10	ug/g	08-OCT-21	08-OCT-21	R5614725
Bismuth (Bi)	2.09		0.20	ug/g	08-OCT-21	08-OCT-21	R5614725
Boron (B)	12.4		5.0	ug/g	08-OCT-21	08-OCT-21	R5614725
Cadmium (Cd)	1.18		0.020	ug/g	08-OCT-21	08-OCT-21	R5614725
Calcium (Ca)	101000		50	ug/g	08-OCT-21	08-OCT-21	R5614725
Chromium (Cr)	345		0.50	ug/g	08-OCT-21	08-OCT-21	R5614725
Cobalt (Co)	13.0		0.10	ug/g	08-OCT-21	08-OCT-21	R5614725
Copper (Cu)	64.8		0.50	ug/g	08-OCT-21	08-OCT-21	R5614725
Iron (Fe)	23800		50	ug/g	08-OCT-21	08-OCT-21	R5614725
Lead (Pb)	234		0.50	ug/g	08-OCT-21	08-OCT-21	R5614725
Lithium (Li)	13.3		2.0	ug/g	08-OCT-21	08-OCT-21	R5614725
Magnesium (Mg)	11400		20	ug/g	08-OCT-21	08-OCT-21	R5614725
Manganese (Mn)	586		1.0	ug/g	08-OCT-21	08-OCT-21	R5614725
Mercury (Hg)	0.729	DLM	0.010	ug/g	08-OCT-21	11-OCT-21	R5615364
Molybdenum (Mo)	1.11		0.10	ug/g	08-OCT-21	08-OCT-21	R5614725
Nickel (Ni)	24.9		0.50	ug/g	08-OCT-21	08-OCT-21	R5614725
Phosphorus (P)	1150		50	ug/g	08-OCT-21	08-OCT-21	R5614725
Potassium (K)	3490		100	ug/g	08-OCT-21	08-OCT-21	R5614725
Selenium (Se)	1.48		0.20	ug/g	08-OCT-21	08-OCT-21	R5614725
Silver (Ag)	0.99		0.10	ug/g	08-OCT-21	08-OCT-21	R5614725
Sodium (Na)	592		50	ug/g	08-OCT-21	08-OCT-21	R5614725
Strontium (Sr)	481		0.50	ug/g	08-OCT-21	08-OCT-21	R5614725
Sulfur (S)	9100		1000	ug/g	08-OCT-21	08-OCT-21	R5614725
Thallium (Tl)	0.348		0.050	ug/g	08-OCT-21	08-OCT-21	R5614725
Tin (Sn)	10.1		2.0	ug/g	08-OCT-21	08-OCT-21	R5614725
Titanium (Ti)	945		1.0	ug/g	08-OCT-21	08-OCT-21	R5614725
Tungsten (W)	0.62		0.50	ug/g	08-OCT-21	08-OCT-21	R5614725
Uranium (U)	0.783		0.050	ug/g	08-OCT-21	08-OCT-21	R5614725
Vanadium (V)	39.0		0.20	ug/g	08-OCT-21	08-OCT-21	R5614725
Zinc (Zn)	257		2.0	ug/g	08-OCT-21	08-OCT-21	R5614725
Zirconium (Zr)	3.0		1.0	ug/g	08-OCT-21	08-OCT-21	R5614725
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.074	DLHM	0.038	ug/g	07-OCT-21	08-OCT-21	R5614231
Acenaphthylene	0.227	DLHM	0.038	ug/g	07-OCT-21	08-OCT-21	R5614231
Acridine	<0.075	DLHM	0.075	ug/g	07-OCT-21	08-OCT-21	R5614231

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646722-5 TC4 SG-002 Sampled By: JW/ SB on 29-SEP-21 @ 16:00 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
Anthracene	0.217	DLHM	0.030	ug/g	07-OCT-21	08-OCT-21	R5614231
Benzo(a)anthracene	0.977	DLHM	0.075	ug/g	07-OCT-21	08-OCT-21	R5614231
Benzo(a)pyrene	1.15	DLHM	0.038	ug/g	07-OCT-21	08-OCT-21	R5614231
Benzo(b&j)fluoranthene	1.45	DLHM	0.075	ug/g	07-OCT-21	08-OCT-21	R5614231
Benzo(g,h,i)perylene	0.843	DLHM	0.075	ug/g	07-OCT-21	08-OCT-21	R5614231
Benzo(k)fluoranthene	0.570	DLHM	0.075	ug/g	07-OCT-21	08-OCT-21	R5614231
Chrysene	1.13	DLHM	0.075	ug/g	07-OCT-21	08-OCT-21	R5614231
Dibenz(a,h)anthracene	0.208	DLHM	0.038	ug/g	07-OCT-21	08-OCT-21	R5614231
Fluoroanthene	1.48	DLHM	0.038	ug/g	07-OCT-21	08-OCT-21	R5614231
Fluorene	0.089	DLHM	0.038	ug/g	07-OCT-21	08-OCT-21	R5614231
Indeno(1,2,3-cd)pyrene	0.634	DLHM	0.075	ug/g	07-OCT-21	08-OCT-21	R5614231
1-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	07-OCT-21	08-OCT-21	R5614231
2-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	07-OCT-21	08-OCT-21	R5614231
Naphthalene	0.042	DLHM	0.038	ug/g	07-OCT-21	08-OCT-21	R5614231
Phenanthrene	0.690	DLHM	0.038	ug/g	07-OCT-21	08-OCT-21	R5614231
Pyrene	1.46	DLHM	0.038	ug/g	07-OCT-21	08-OCT-21	R5614231
Quinoline	<0.038	DLHM	0.038	ug/g	07-OCT-21	08-OCT-21	R5614231
Surrogate: 2-Fluorobiphenyl	91.9		60-140	%	07-OCT-21	08-OCT-21	R5614231
Surrogate: d14-Terphenyl	88.8		60-140	%	07-OCT-21	08-OCT-21	R5614231
B(a)P Total Potency Equivalent	1.74		0.053	ug/g	07-OCT-21	08-OCT-21	R5614231
IACR (CCME)	20.5		0.75		07-OCT-21	08-OCT-21	R5614231
Polychlorinated Biphenyls							
Aroclor 1016	<0.034	DLHM	0.034	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1221	<0.034	DLHM	0.034	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1232	<0.034	DLHM	0.034	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1242	<0.034	DLHM	0.034	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1248	<0.034	DLHM	0.034	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1254	0.316	DLHM	0.034	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1260	0.241	DLHM	0.034	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1262	<0.034	DLHM	0.034	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1268	<0.034	DLHM	0.034	mg/kg	13-OCT-21	13-OCT-21	R5616907
Total Polychlorinated Biphenyls	0.56		0.10	mg/kg	13-OCT-21	13-OCT-21	R5616907
Surrogate: d14-Terphenyl	89.8		50-140	%	13-OCT-21	13-OCT-21	R5616907
L2646722-6 TC4-SG-006 Sampled By: JW/ SB on 29-SEP-21 @ 16:37 Matrix: SEDIMENT							
Physical Tests							
% Moisture	85.1		0.25	%	05-OCT-21	06-OCT-21	R5609858
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0767		0.0010	g/g	12-OCT-21	12-OCT-21	R5615928
Total Organic Carbon	7.67		0.10	%	12-OCT-21	12-OCT-21	R5615928
Metals							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646722-6 TC4-SG-006 Sampled By: JW/ SB on 29-SEP-21 @ 16:37 Matrix: SEDIMENT							
Metals							
Aluminum (Al)	14000		50	ug/g	06-OCT-21	07-OCT-21	R5613858
Antimony (Sb)	0.77		0.10	ug/g	06-OCT-21	07-OCT-21	R5613858
Arsenic (As)	8.10		0.10	ug/g	06-OCT-21	07-OCT-21	R5613858
Barium (Ba)	257		0.50	ug/g	06-OCT-21	07-OCT-21	R5613858
Beryllium (Be)	0.59		0.10	ug/g	06-OCT-21	07-OCT-21	R5613858
Bismuth (Bi)	0.87		0.20	ug/g	06-OCT-21	07-OCT-21	R5613858
Boron (B)	10.8		5.0	ug/g	06-OCT-21	07-OCT-21	R5613858
Cadmium (Cd)	0.796		0.020	ug/g	06-OCT-21	07-OCT-21	R5613858
Calcium (Ca)	136000		50	ug/g	06-OCT-21	07-OCT-21	R5613858
Chromium (Cr)	266		0.50	ug/g	06-OCT-21	07-OCT-21	R5613858
Cobalt (Co)	10.4		0.10	ug/g	06-OCT-21	07-OCT-21	R5613858
Copper (Cu)	53.4		0.50	ug/g	06-OCT-21	07-OCT-21	R5613858
Iron (Fe)	21700		50	ug/g	06-OCT-21	07-OCT-21	R5613858
Lead (Pb)	115		0.50	ug/g	06-OCT-21	07-OCT-21	R5613858
Lithium (Li)	13.4		2.0	ug/g	06-OCT-21	07-OCT-21	R5613858
Magnesium (Mg)	11200		20	ug/g	06-OCT-21	07-OCT-21	R5613858
Manganese (Mn)	807		1.0	ug/g	06-OCT-21	07-OCT-21	R5613858
Mercury (Hg)	0.473	DLM	0.010	ug/g	06-OCT-21	07-OCT-21	R5613510
Molybdenum (Mo)	1.03		0.10	ug/g	06-OCT-21	07-OCT-21	R5613858
Nickel (Ni)	21.6		0.50	ug/g	06-OCT-21	07-OCT-21	R5613858
Phosphorus (P)	1260		50	ug/g	06-OCT-21	07-OCT-21	R5613858
Potassium (K)	3070		100	ug/g	06-OCT-21	07-OCT-21	R5613858
Selenium (Se)	1.44		0.20	ug/g	06-OCT-21	07-OCT-21	R5613858
Silver (Ag)	0.78		0.10	ug/g	06-OCT-21	07-OCT-21	R5613858
Sodium (Na)	578		50	ug/g	06-OCT-21	07-OCT-21	R5613858
Strontium (Sr)	650		0.50	ug/g	06-OCT-21	07-OCT-21	R5613858
Sulfur (S)	8000		1000	ug/g	06-OCT-21	07-OCT-21	R5613858
Thallium (Tl)	0.287		0.050	ug/g	06-OCT-21	07-OCT-21	R5613858
Tin (Sn)	7.2		2.0	ug/g	06-OCT-21	07-OCT-21	R5613858
Titanium (Ti)	813		1.0	ug/g	06-OCT-21	07-OCT-21	R5613858
Tungsten (W)	0.63		0.50	ug/g	06-OCT-21	07-OCT-21	R5613858
Uranium (U)	0.826		0.050	ug/g	06-OCT-21	07-OCT-21	R5613858
Vanadium (V)	35.7		0.20	ug/g	06-OCT-21	07-OCT-21	R5613858
Zinc (Zn)	192		2.0	ug/g	06-OCT-21	07-OCT-21	R5613858
Zirconium (Zr)	2.5		1.0	ug/g	06-OCT-21	07-OCT-21	R5613858
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.053	DLHM	0.038	ug/g	07-OCT-21	08-OCT-21	R5614231
Acenaphthylene	0.236	DLHM	0.038	ug/g	07-OCT-21	08-OCT-21	R5614231
Acridine	<0.075	DLHM	0.075	ug/g	07-OCT-21	08-OCT-21	R5614231
Anthracene	0.181	DLHM	0.030	ug/g	07-OCT-21	08-OCT-21	R5614231
Benzo(a)anthracene	0.697	R	0.075	ug/g	07-OCT-21	08-OCT-21	R5614231

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646722-6 TC4-SG-006 Sampled By: JW/ SB on 29-SEP-21 @ 16:37 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
Benzo(a)pyrene	0.894	DLHM	0.038	ug/g	07-OCT-21	08-OCT-21	R5614231
Benzo(b&j)fluoranthene	0.907	DLHM	0.075	ug/g	07-OCT-21	08-OCT-21	R5614231
Benzo(g,h,i)perylene	0.632	DLHM	0.075	ug/g	07-OCT-21	08-OCT-21	R5614231
Benzo(k)fluoranthene	0.385	DLHM	0.075	ug/g	07-OCT-21	08-OCT-21	R5614231
Chrysene	0.787	DLHM	0.075	ug/g	07-OCT-21	08-OCT-21	R5614231
Dibenz(a,h)anthracene	0.150	DLHM	0.038	ug/g	07-OCT-21	08-OCT-21	R5614231
Fluoroanthene	0.919	DLHM	0.038	ug/g	07-OCT-21	08-OCT-21	R5614231
Fluorene	0.079	DLHM	0.038	ug/g	07-OCT-21	08-OCT-21	R5614231
Indeno(1,2,3-cd)pyrene	0.443	DLHM	0.075	ug/g	07-OCT-21	08-OCT-21	R5614231
1-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	07-OCT-21	08-OCT-21	R5614231
2-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	07-OCT-21	08-OCT-21	R5614231
Naphthalene	<0.038	DLHM	0.038	ug/g	07-OCT-21	08-OCT-21	R5614231
Phenanthrene	0.442	DLHM	0.038	ug/g	07-OCT-21	08-OCT-21	R5614231
Pyrene	1.03	DLHM	0.038	ug/g	07-OCT-21	08-OCT-21	R5614231
Quinoline	<0.038	DLHM	0.038	ug/g	07-OCT-21	08-OCT-21	R5614231
Surrogate: 2-Fluorobiphenyl	92.3		60-140	%	07-OCT-21	08-OCT-21	R5614231
Surrogate: d14-Terphenyl	80.3		60-140	%	07-OCT-21	08-OCT-21	R5614231
B(a)P Total Potency Equivalent	1.30		0.053	ug/g	07-OCT-21	08-OCT-21	R5614231
IACR (CCME)	13.9		0.75		07-OCT-21	08-OCT-21	R5614231
Polychlorinated Biphenyls							
Aroclor 1016	<0.034	DLHM	0.034	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1221	<0.034	DLHM	0.034	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1232	<0.034	DLHM	0.034	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1242	<0.034	DLHM	0.034	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1248	<0.034	DLHM	0.034	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1254	0.206	DLHM	0.034	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1260	0.188	DLHM	0.034	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1262	<0.034	DLHM	0.034	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1268	<0.034	DLHM	0.034	mg/kg	13-OCT-21	13-OCT-21	R5616907
Total Polychlorinated Biphenyls	0.39		0.10	mg/kg	13-OCT-21	13-OCT-21	R5616907
Surrogate: d14-Terphenyl	100.7		50-140	%	13-OCT-21	13-OCT-21	R5616907
L2646722-7 DUP-002 Sampled By: JW/ SB on 29-SEP-21 Matrix: SEDIMENT							
Physical Tests							
% Moisture	84.2		0.25	%	05-OCT-21	06-OCT-21	R5609858
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0823		0.0010	g/g	12-OCT-21	12-OCT-21	R5615928
Total Organic Carbon	8.23		0.10	%	12-OCT-21	12-OCT-21	R5615928
Metals							
Aluminum (Al)	14300		50	ug/g	06-OCT-21	07-OCT-21	R5613858
Antimony (Sb)	0.81		0.10	ug/g	06-OCT-21	07-OCT-21	R5613858

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646722-7 DUP-002 Sampled By: JW/ SB on 29-SEP-21 Matrix: SEDIMENT							
Metals							
Arsenic (As)	8.09		0.10	ug/g	06-OCT-21	07-OCT-21	R5613858
Barium (Ba)	257		0.50	ug/g	06-OCT-21	07-OCT-21	R5613858
Beryllium (Be)	0.58		0.10	ug/g	06-OCT-21	07-OCT-21	R5613858
Bismuth (Bi)	0.99		0.20	ug/g	06-OCT-21	07-OCT-21	R5613858
Boron (B)	11.7		5.0	ug/g	06-OCT-21	07-OCT-21	R5613858
Cadmium (Cd)	0.777		0.020	ug/g	06-OCT-21	07-OCT-21	R5613858
Calcium (Ca)	129000		50	ug/g	06-OCT-21	07-OCT-21	R5613858
Chromium (Cr)	268		0.50	ug/g	06-OCT-21	07-OCT-21	R5613858
Cobalt (Co)	10.6		0.10	ug/g	06-OCT-21	07-OCT-21	R5613858
Copper (Cu)	54.2		0.50	ug/g	06-OCT-21	07-OCT-21	R5613858
Iron (Fe)	22800		50	ug/g	06-OCT-21	07-OCT-21	R5613858
Lead (Pb)	116		0.50	ug/g	06-OCT-21	07-OCT-21	R5613858
Lithium (Li)	13.3		2.0	ug/g	06-OCT-21	07-OCT-21	R5613858
Magnesium (Mg)	11100		20	ug/g	06-OCT-21	07-OCT-21	R5613858
Manganese (Mn)	819		1.0	ug/g	06-OCT-21	07-OCT-21	R5613858
Mercury (Hg)	0.563	DLM	0.010	ug/g	06-OCT-21	07-OCT-21	R5613510
Molybdenum (Mo)	1.03		0.10	ug/g	06-OCT-21	07-OCT-21	R5613858
Nickel (Ni)	22.1		0.50	ug/g	06-OCT-21	07-OCT-21	R5613858
Phosphorus (P)	1270		50	ug/g	06-OCT-21	07-OCT-21	R5613858
Potassium (K)	3220		100	ug/g	06-OCT-21	07-OCT-21	R5613858
Selenium (Se)	1.32		0.20	ug/g	06-OCT-21	07-OCT-21	R5613858
Silver (Ag)	0.79		0.10	ug/g	06-OCT-21	07-OCT-21	R5613858
Sodium (Na)	550		50	ug/g	06-OCT-21	07-OCT-21	R5613858
Strontium (Sr)	611		0.50	ug/g	06-OCT-21	07-OCT-21	R5613858
Sulfur (S)	8600		1000	ug/g	06-OCT-21	07-OCT-21	R5613858
Thallium (Tl)	0.286		0.050	ug/g	06-OCT-21	07-OCT-21	R5613858
Tin (Sn)	7.2		2.0	ug/g	06-OCT-21	07-OCT-21	R5613858
Titanium (Ti)	866		1.0	ug/g	06-OCT-21	07-OCT-21	R5613858
Tungsten (W)	0.66		0.50	ug/g	06-OCT-21	07-OCT-21	R5613858
Uranium (U)	0.863		0.050	ug/g	06-OCT-21	07-OCT-21	R5613858
Vanadium (V)	36.7		0.20	ug/g	06-OCT-21	07-OCT-21	R5613858
Zinc (Zn)	196		2.0	ug/g	06-OCT-21	07-OCT-21	R5613858
Zirconium (Zr)	2.4		1.0	ug/g	06-OCT-21	07-OCT-21	R5613858
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.054	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Acenaphthylene	0.179	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Acridine	<0.060	DLM	0.060	ug/g	07-OCT-21	08-OCT-21	R5614231
Anthracene	0.156	DLHM	0.020	ug/g	07-OCT-21	08-OCT-21	R5614231
Benzo(a)anthracene	0.632	R	0.050	ug/g	07-OCT-21	08-OCT-21	R5614231
Benzo(a)pyrene	0.750	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Benzo(b&j)fluoranthene	0.872	DLHM	0.050	ug/g	07-OCT-21	08-OCT-21	R5614231

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646722-7 DUP-002 Sampled By: JW/ SB on 29-SEP-21 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
Benzo(g,h,i)perylene	0.543	DLHM	0.050	ug/g	07-OCT-21	08-OCT-21	R5614231
Benzo(k)fluoranthene	0.339	DLHM	0.050	ug/g	07-OCT-21	08-OCT-21	R5614231
Chrysene	0.743	DLHM	0.050	ug/g	07-OCT-21	08-OCT-21	R5614231
Dibenz(a,h)anthracene	0.132	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Fluoroanthene	1.06	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Fluorene	0.069	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Indeno(1,2,3-cd)pyrene	0.424	DLHM	0.050	ug/g	07-OCT-21	08-OCT-21	R5614231
1-Methylnaphthalene	<0.025	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
2-Methylnaphthalene	<0.025	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Naphthalene	0.025	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Phenanthrene	0.513	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Pyrene	1.07	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Quinoline	<0.025	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Surrogate: 2-Fluorobiphenyl	94.7		60-140	%	07-OCT-21	08-OCT-21	R5614231
Surrogate: d14-Terphenyl	84.6		60-140	%	07-OCT-21	08-OCT-21	R5614231
B(a)P Total Potency Equivalent	1.12		0.036	ug/g	07-OCT-21	08-OCT-21	R5614231
IACR (CCME)	12.7		0.50		07-OCT-21	08-OCT-21	R5614231
Polychlorinated Biphenyls							
Aroclor 1016	<0.023	DLHM	0.023	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1221	<0.023	DLHM	0.023	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1232	<0.023	DLHM	0.023	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1242	<0.023	DLHM	0.023	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1248	<0.023	DLHM	0.023	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1254	0.298	DLHM	0.023	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1260	0.179	DLHM	0.023	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1262	<0.023	DLHM	0.023	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1268	<0.023	DLHM	0.023	mg/kg	13-OCT-21	13-OCT-21	R5616907
Total Polychlorinated Biphenyls	0.477		0.068	mg/kg	13-OCT-21	13-OCT-21	R5616907
Surrogate: d14-Terphenyl	106.6		50-140	%	13-OCT-21	13-OCT-21	R5616907
L2646722-8 TC4-SG-007 Sampled By: JW/ SB on 29-SEP-21 @ 16:30 Matrix: SEDIMENT							
Physical Tests							
% Moisture	82.6		0.25	%	05-OCT-21	06-OCT-21	R5609858
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0805		0.0010	g/g	12-OCT-21	12-OCT-21	R5615928
Total Organic Carbon	8.05		0.10	%	12-OCT-21	12-OCT-21	R5615928
Metals							
Aluminum (Al)	19900		50	ug/g	08-OCT-21	08-OCT-21	R5614725
Antimony (Sb)	0.90		0.10	ug/g	08-OCT-21	08-OCT-21	R5614725
Arsenic (As)	8.17		0.10	ug/g	08-OCT-21	08-OCT-21	R5614725
Barium (Ba)	308		0.50	ug/g	08-OCT-21	08-OCT-21	R5614725

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

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Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646722-8 TC4-SG-007 Sampled By: JW/ SB on 29-SEP-21 @ 16:30 Matrix: SEDIMENT							
Metals							
Beryllium (Be)	0.75		0.10	ug/g	08-OCT-21	08-OCT-21	R5614725
Bismuth (Bi)	0.90		0.20	ug/g	08-OCT-21	08-OCT-21	R5614725
Boron (B)	13.3		5.0	ug/g	08-OCT-21	08-OCT-21	R5614725
Cadmium (Cd)	0.894		0.020	ug/g	08-OCT-21	08-OCT-21	R5614725
Calcium (Ca)	106000		50	ug/g	08-OCT-21	08-OCT-21	R5614725
Chromium (Cr)	481		0.50	ug/g	08-OCT-21	08-OCT-21	R5614725
Cobalt (Co)	13.1		0.10	ug/g	08-OCT-21	08-OCT-21	R5614725
Copper (Cu)	53.0		0.50	ug/g	08-OCT-21	08-OCT-21	R5614725
Iron (Fe)	29100		50	ug/g	08-OCT-21	08-OCT-21	R5614725
Lead (Pb)	114		0.50	ug/g	08-OCT-21	08-OCT-21	R5614725
Lithium (Li)	17.8		2.0	ug/g	08-OCT-21	08-OCT-21	R5614725
Magnesium (Mg)	12900		20	ug/g	08-OCT-21	08-OCT-21	R5614725
Manganese (Mn)	921		1.0	ug/g	08-OCT-21	08-OCT-21	R5614725
Mercury (Hg)	0.422	DLM	0.010	ug/g	08-OCT-21	11-OCT-21	R5615364
Molybdenum (Mo)	1.23		0.10	ug/g	08-OCT-21	08-OCT-21	R5614725
Nickel (Ni)	28.6		0.50	ug/g	08-OCT-21	08-OCT-21	R5614725
Phosphorus (P)	1320		50	ug/g	08-OCT-21	08-OCT-21	R5614725
Potassium (K)	4310		100	ug/g	08-OCT-21	08-OCT-21	R5614725
Selenium (Se)	1.46		0.20	ug/g	08-OCT-21	08-OCT-21	R5614725
Silver (Ag)	0.76		0.10	ug/g	08-OCT-21	08-OCT-21	R5614725
Sodium (Na)	704		50	ug/g	08-OCT-21	08-OCT-21	R5614725
Strontium (Sr)	496		0.50	ug/g	08-OCT-21	08-OCT-21	R5614725
Sulfur (S)	10300		1000	ug/g	08-OCT-21	08-OCT-21	R5614725
Thallium (Tl)	0.332		0.050	ug/g	08-OCT-21	08-OCT-21	R5614725
Tin (Sn)	7.0		2.0	ug/g	08-OCT-21	08-OCT-21	R5614725
Titanium (Ti)	1280		1.0	ug/g	08-OCT-21	08-OCT-21	R5614725
Tungsten (W)	<0.50		0.50	ug/g	08-OCT-21	08-OCT-21	R5614725
Uranium (U)	0.974		0.050	ug/g	08-OCT-21	08-OCT-21	R5614725
Vanadium (V)	48.1		0.20	ug/g	08-OCT-21	08-OCT-21	R5614725
Zinc (Zn)	180		2.0	ug/g	08-OCT-21	08-OCT-21	R5614725
Zirconium (Zr)	3.8		1.0	ug/g	08-OCT-21	08-OCT-21	R5614725
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.049	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Acenaphthylene	0.321	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Acridine	<0.050	DLHM	0.050	ug/g	07-OCT-21	08-OCT-21	R5614231
Anthracene	0.176	DLHM	0.020	ug/g	07-OCT-21	08-OCT-21	R5614231
Benzo(a)anthracene	0.653	R	0.050	ug/g	07-OCT-21	08-OCT-21	R5614231
Benzo(a)pyrene	0.975	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Benzo(b&j)fluoranthene	0.905	DLHM	0.050	ug/g	07-OCT-21	08-OCT-21	R5614231
Benzo(g,h,i)perylene	0.645	DLHM	0.050	ug/g	07-OCT-21	08-OCT-21	R5614231
Benzo(k)fluoranthene	0.307	DLHM	0.050	ug/g	07-OCT-21	08-OCT-21	R5614231

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646722-8 TC4-SG-007 Sampled By: JW/ SB on 29-SEP-21 @ 16:30 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
Chrysene	0.728	DLHM	0.050	ug/g	07-OCT-21	08-OCT-21	R5614231
Dibenz(a,h)anthracene	0.156	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Fluoroanthene	0.717	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Fluorene	0.070	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Indeno(1,2,3-cd)pyrene	0.428	DLHM	0.050	ug/g	07-OCT-21	08-OCT-21	R5614231
1-Methylnaphthalene	<0.025	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
2-Methylnaphthalene	<0.025	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Naphthalene	0.026	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Phenanthrene	0.294	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Pyrene	0.971	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Quinoline	<0.025	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Surrogate: 2-Fluorobiphenyl	93.3		60-140	%	07-OCT-21	08-OCT-21	R5614231
Surrogate: d14-Terphenyl	84.3		60-140	%	07-OCT-21	08-OCT-21	R5614231
B(a)P Total Potency Equivalent	1.37		0.036	ug/g	07-OCT-21	08-OCT-21	R5614231
IACR (CCME)	13.5		0.50		07-OCT-21	08-OCT-21	R5614231
Polychlorinated Biphenyls							
Aroclor 1016	<0.023	DLHM	0.023	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1221	<0.023	DLHM	0.023	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1232	<0.023	DLHM	0.023	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1242	<0.023	DLHM	0.023	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1248	<0.023	DLHM	0.023	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1254	0.262	DLHM	0.023	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1260	0.224	DLHM	0.023	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1262	<0.023	DLHM	0.023	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1268	<0.023	DLHM	0.023	mg/kg	13-OCT-21	13-OCT-21	R5616907
Total Polychlorinated Biphenyls	0.486		0.068	mg/kg	13-OCT-21	13-OCT-21	R5616907
Surrogate: d14-Terphenyl	93.8		50-140	%	13-OCT-21	13-OCT-21	R5616907
L2646722-9 DUP-202 Sampled By: JW/ SB on 29-SEP-21 Matrix: SEDIMENT							
Physical Tests							
% Moisture	83.7		0.25	%	05-OCT-21	06-OCT-21	R5609858
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0864		0.0010	g/g	08-OCT-21	08-OCT-21	R5614708
Total Organic Carbon	8.64		0.10	%	08-OCT-21	08-OCT-21	R5614708
Metals							
Aluminum (Al)	18400		50	ug/g	09-OCT-21	12-OCT-21	R5616337
Antimony (Sb)	0.68		0.10	ug/g	09-OCT-21	12-OCT-21	R5616337
Arsenic (As)	7.41		0.10	ug/g	09-OCT-21	12-OCT-21	R5616337
Barium (Ba)	274		0.50	ug/g	09-OCT-21	12-OCT-21	R5616337
Beryllium (Be)	0.64		0.10	ug/g	09-OCT-21	12-OCT-21	R5616337
Bismuth (Bi)	0.68		0.20	ug/g	09-OCT-21	12-OCT-21	R5616337

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

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Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646722-9 DUP-202 Sampled By: JW/ SB on 29-SEP-21 Matrix: SEDIMENT							
Metals							
Boron (B)	8.6		5.0	ug/g	09-OCT-21	12-OCT-21	R5616337
Cadmium (Cd)	0.804		0.020	ug/g	09-OCT-21	12-OCT-21	R5616337
Calcium (Ca)	72300		50	ug/g	09-OCT-21	12-OCT-21	R5616337
Chromium (Cr)	463		0.50	ug/g	09-OCT-21	12-OCT-21	R5616337
Cobalt (Co)	12.1		0.10	ug/g	09-OCT-21	12-OCT-21	R5616337
Copper (Cu)	47.8		0.50	ug/g	09-OCT-21	12-OCT-21	R5616337
Iron (Fe)	25700		50	ug/g	09-OCT-21	12-OCT-21	R5616337
Lead (Pb)	93.1		0.50	ug/g	09-OCT-21	12-OCT-21	R5616337
Lithium (Li)	13.0		2.0	ug/g	09-OCT-21	12-OCT-21	R5616337
Magnesium (Mg)	11600		20	ug/g	09-OCT-21	12-OCT-21	R5616337
Manganese (Mn)	873		1.0	ug/g	09-OCT-21	12-OCT-21	R5616337
Mercury (Hg)	0.402		0.0050	ug/g	09-OCT-21	11-OCT-21	R5615382
Molybdenum (Mo)	0.96		0.10	ug/g	09-OCT-21	12-OCT-21	R5616337
Nickel (Ni)	26.1		0.50	ug/g	09-OCT-21	12-OCT-21	R5616337
Phosphorus (P)	1130		50	ug/g	09-OCT-21	12-OCT-21	R5616337
Potassium (K)	3640		100	ug/g	09-OCT-21	12-OCT-21	R5616337
Selenium (Se)	1.24		0.20	ug/g	09-OCT-21	12-OCT-21	R5616337
Silver (Ag)	0.65		0.10	ug/g	09-OCT-21	12-OCT-21	R5616337
Sodium (Na)	545		50	ug/g	09-OCT-21	12-OCT-21	R5616337
Strontium (Sr)	370		0.50	ug/g	09-OCT-21	12-OCT-21	R5616337
Sulfur (S)	9300		1000	ug/g	09-OCT-21	12-OCT-21	R5616337
Thallium (Tl)	0.274		0.050	ug/g	09-OCT-21	12-OCT-21	R5616337
Tin (Sn)	5.9		2.0	ug/g	09-OCT-21	12-OCT-21	R5616337
Titanium (Ti)	973		1.0	ug/g	09-OCT-21	12-OCT-21	R5616337
Tungsten (W)	<0.50		0.50	ug/g	09-OCT-21	12-OCT-21	R5616337
Uranium (U)	0.872		0.050	ug/g	09-OCT-21	12-OCT-21	R5616337
Vanadium (V)	40.6		0.20	ug/g	09-OCT-21	12-OCT-21	R5616337
Zinc (Zn)	172		2.0	ug/g	09-OCT-21	12-OCT-21	R5616337
Zirconium (Zr)	3.1		1.0	ug/g	09-OCT-21	12-OCT-21	R5616337
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.059	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Acenaphthylene	0.417	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Acridine	<0.050	DLHM	0.050	ug/g	07-OCT-21	08-OCT-21	R5614231
Anthracene	0.203	DLHM	0.020	ug/g	07-OCT-21	08-OCT-21	R5614231
Benzo(a)anthracene	1.04	R	0.050	ug/g	07-OCT-21	08-OCT-21	R5614231
Benzo(a)pyrene	1.43	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Benzo(b&j)fluoranthene	1.37	DLHM	0.050	ug/g	07-OCT-21	08-OCT-21	R5614231
Benzo(g,h,i)perylene	0.918	DLHM	0.050	ug/g	07-OCT-21	08-OCT-21	R5614231
Benzo(k)fluoranthene	0.522	DLHM	0.050	ug/g	07-OCT-21	08-OCT-21	R5614231
Chrysene	1.11	DLHM	0.050	ug/g	07-OCT-21	08-OCT-21	R5614231
Dibenz(a,h)anthracene	0.225	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646722-9 DUP-202 Sampled By: JW/ SB on 29-SEP-21 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
Fluoroanthene	1.10	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Fluorene	0.083	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Indeno(1,2,3-cd)pyrene	0.716	DLHM	0.050	ug/g	07-OCT-21	08-OCT-21	R5614231
1-Methylnaphthalene	<0.025	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
2-Methylnaphthalene	<0.025	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Naphthalene	<0.025	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Phenanthrene	0.354	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Pyrene	1.40	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Quinoline	<0.025	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Surrogate: 2-Fluorobiphenyl	88.0		60-140	%	07-OCT-21	08-OCT-21	R5614231
Surrogate: d14-Terphenyl	79.0		60-140	%	07-OCT-21	08-OCT-21	R5614231
B(a)P Total Potency Equivalent	2.04		0.036	ug/g	07-OCT-21	08-OCT-21	R5614231
IACR (CCME)	20.7		0.50		07-OCT-21	08-OCT-21	R5614231
Polychlorinated Biphenyls							
Aroclor 1016	<0.023	DLHM	0.023	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1221	<0.023	DLHM	0.023	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1232	<0.023	DLHM	0.023	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1242	<0.023	DLHM	0.023	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1248	<0.023	DLHM	0.023	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1254	0.243	DLHM	0.023	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1260	0.222	DLHM	0.023	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1262	<0.023	DLHM	0.023	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1268	<0.023	DLHM	0.023	mg/kg	13-OCT-21	13-OCT-21	R5616907
Total Polychlorinated Biphenyls	0.465		0.068	mg/kg	13-OCT-21	13-OCT-21	R5616907
Surrogate: d14-Terphenyl	100.1		50-140	%	13-OCT-21	13-OCT-21	R5616907
L2646722-10 TC4-SG-009 Sampled By: JW/ SB on 29-SEP-21 @ 15:30 Matrix: SEDIMENT							
Physical Tests							
% Moisture	85.3		0.25	%	05-OCT-21	06-OCT-21	R5609858
Liquid Limit (LL)	157		1	%	15-OCT-21	15-OCT-21	R5619861
Moisture at Plastic Limit	83		1	%	15-OCT-21	15-OCT-21	R5619861
Plasticity Index (PI)	75		1	%	15-OCT-21	15-OCT-21	R5619861
Specific Gravity	1.10		0.010	kg/L		25-OCT-21	R5628726
Particle Size							
General Texture Class	Fine				13-OCT-21	13-OCT-21	R5617706
MUST PSA % > 75um	10.2		1.0	%	13-OCT-21	13-OCT-21	R5617706
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0917		0.0010	g/g	08-OCT-21	08-OCT-21	R5614708
Total Organic Carbon	9.17		0.10	%	08-OCT-21	08-OCT-21	R5614708
Metals							
Aluminum (Al)	20900		50	ug/g	07-OCT-21	08-OCT-21	R5614612

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646722-10 TC4-SG-009 Sampled By: JW/ SB on 29-SEP-21 @ 15:30 Matrix: SEDIMENT							
Metals							
Antimony (Sb)	0.57		0.10	ug/g	07-OCT-21	08-OCT-21	R5614612
Arsenic (As)	5.37		0.10	ug/g	07-OCT-21	08-OCT-21	R5614612
Barium (Ba)	288		0.50	ug/g	07-OCT-21	08-OCT-21	R5614612
Beryllium (Be)	0.82		0.10	ug/g	07-OCT-21	08-OCT-21	R5614612
Bismuth (Bi)	0.33		0.20	ug/g	07-OCT-21	08-OCT-21	R5614612
Boron (B)	13.5		5.0	ug/g	07-OCT-21	08-OCT-21	R5614612
Boron (B), Hot Water Ext.	0.29		0.10	ug/g	08-OCT-21	08-OCT-21	R5614610
Cadmium (Cd)	0.723		0.020	ug/g	07-OCT-21	08-OCT-21	R5614612
Calcium (Ca)	77200		50	ug/g	07-OCT-21	08-OCT-21	R5614612
Chromium (Cr)	221		0.50	ug/g	07-OCT-21	08-OCT-21	R5614612
Cobalt (Co)	12.1		0.10	ug/g	07-OCT-21	08-OCT-21	R5614612
Copper (Cu)	48.7		0.50	ug/g	07-OCT-21	08-OCT-21	R5614612
Iron (Fe)	28800		50	ug/g	07-OCT-21	08-OCT-21	R5614612
Lead (Pb)	77.8		0.50	ug/g	07-OCT-21	08-OCT-21	R5614612
Lithium (Li)	18.9		2.0	ug/g	07-OCT-21	08-OCT-21	R5614612
Magnesium (Mg)	11500		20	ug/g	07-OCT-21	08-OCT-21	R5614612
Manganese (Mn)	1020		1.0	ug/g	07-OCT-21	08-OCT-21	R5614612
Mercury (Hg)	0.192		0.0050	ug/g	07-OCT-21	08-OCT-21	R5614405
Molybdenum (Mo)	1.16		0.10	ug/g	07-OCT-21	08-OCT-21	R5614612
Nickel (Ni)	28.1		0.50	ug/g	07-OCT-21	08-OCT-21	R5614612
Phosphorus (P)	1110		50	ug/g	07-OCT-21	08-OCT-21	R5614612
Potassium (K)	4310		100	ug/g	07-OCT-21	08-OCT-21	R5614612
Selenium (Se)	1.42		0.20	ug/g	07-OCT-21	08-OCT-21	R5614612
Silver (Ag)	0.36		0.10	ug/g	07-OCT-21	08-OCT-21	R5614612
Sodium (Na)	727		50	ug/g	07-OCT-21	08-OCT-21	R5614612
Strontium (Sr)	349		0.50	ug/g	07-OCT-21	08-OCT-21	R5614612
Sulfur (S)	9200		1000	ug/g	07-OCT-21	08-OCT-21	R5614612
Thallium (Tl)	0.317		0.050	ug/g	07-OCT-21	08-OCT-21	R5614612
Tin (Sn)	3.5		2.0	ug/g	07-OCT-21	08-OCT-21	R5614612
Titanium (Ti)	1330		1.0	ug/g	07-OCT-21	08-OCT-21	R5614612
Tungsten (W)	<0.50		0.50	ug/g	07-OCT-21	08-OCT-21	R5614612
Uranium (U)	0.991		0.050	ug/g	07-OCT-21	08-OCT-21	R5614612
Vanadium (V)	46.7		0.20	ug/g	07-OCT-21	08-OCT-21	R5614612
Zinc (Zn)	137		2.0	ug/g	07-OCT-21	08-OCT-21	R5614612
Zirconium (Zr)	3.8		1.0	ug/g	07-OCT-21	08-OCT-21	R5614612
Speciated Metals							
Chromium, Trivalent	220		10	ug/g		11-OCT-21	
Chromium, Hexavalent	0.69		0.20	ug/g	07-OCT-21	08-OCT-21	R5615340
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.108	DLHM	0.038	ug/g	07-OCT-21	08-OCT-21	R5614231
Acenaphthylene	0.487	DLHM	0.038	ug/g	07-OCT-21	08-OCT-21	R5614231

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646722-10 TC4-SG-009 Sampled By: JW/ SB on 29-SEP-21 @ 15:30 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
Acridine	<0.075	DLHM	0.075	ug/g	07-OCT-21	08-OCT-21	R5614231
Anthracene	0.291	DLHM	0.030	ug/g	07-OCT-21	08-OCT-21	R5614231
Benzo(a)anthracene	1.36	R	0.075	ug/g	07-OCT-21	08-OCT-21	R5614231
Benzo(a)pyrene	1.87	DLHM	0.038	ug/g	07-OCT-21	08-OCT-21	R5614231
Benzo(b&j)fluoranthene	1.48	DLHM	0.075	ug/g	07-OCT-21	08-OCT-21	R5614231
Benzo(g,h,i)perylene	1.05	DLHM	0.075	ug/g	07-OCT-21	08-OCT-21	R5614231
Benzo(k)fluoranthene	0.586	DLHM	0.075	ug/g	07-OCT-21	08-OCT-21	R5614231
Chrysene	1.32	DLHM	0.075	ug/g	07-OCT-21	08-OCT-21	R5614231
Dibenz(a,h)anthracene	0.258	DLHM	0.038	ug/g	07-OCT-21	08-OCT-21	R5614231
Fluoroanthene	1.21	DLHM	0.038	ug/g	07-OCT-21	08-OCT-21	R5614231
Fluorene	0.102	DLHM	0.038	ug/g	07-OCT-21	08-OCT-21	R5614231
Indeno(1,2,3-cd)pyrene	0.781	DLHM	0.075	ug/g	07-OCT-21	08-OCT-21	R5614231
1-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	07-OCT-21	08-OCT-21	R5614231
2-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	07-OCT-21	08-OCT-21	R5614231
Naphthalene	0.042	DLHM	0.038	ug/g	07-OCT-21	08-OCT-21	R5614231
Phenanthrene	0.426	DLHM	0.038	ug/g	07-OCT-21	08-OCT-21	R5614231
Pyrene	1.79	DLHM	0.038	ug/g	07-OCT-21	08-OCT-21	R5614231
Quinoline	<0.038	DLHM	0.038	ug/g	07-OCT-21	08-OCT-21	R5614231
Surrogate: 2-Fluorobiphenyl	91.6		60-140	%	07-OCT-21	08-OCT-21	R5614231
Surrogate: d14-Terphenyl	87.1		60-140	%	07-OCT-21	08-OCT-21	R5614231
B(a)P Total Potency Equivalent	2.57		0.053	ug/g	07-OCT-21	08-OCT-21	R5614231
IACR (CCME)	24.3		0.75		07-OCT-21	08-OCT-21	R5614231
Polychlorinated Biphenyls							
Aroclor 1016	<0.034	DLHM	0.034	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1221	<0.034	DLHM	0.034	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1232	<0.034	DLHM	0.034	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1242	<0.034	DLHM	0.034	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1248	<0.034	DLHM	0.034	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1254	0.175	DLHM	0.034	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1260	0.141	DLHM	0.034	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1262	<0.034	DLHM	0.034	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1268	<0.034	DLHM	0.034	mg/kg	13-OCT-21	13-OCT-21	R5616907
Total Polychlorinated Biphenyls	0.32		0.10	mg/kg	13-OCT-21	13-OCT-21	R5616907
Surrogate: d14-Terphenyl	97.4		50-140	%	13-OCT-21	13-OCT-21	R5616907
L2646722-11 TC4-SG-009A Sampled By: JW/ SB on 29-SEP-21 @ 14:10 Matrix: SEDIMENT							
Physical Tests							
% Moisture	73.0		0.25	%	06-OCT-21	07-OCT-21	R5612561
Liquid Limit (LL)	86		1	%	15-OCT-21	15-OCT-21	R5619861
Moisture at Plastic Limit	74		1	%	15-OCT-21	15-OCT-21	R5619861
Plasticity Index (PI)	11		1	%	15-OCT-21	15-OCT-21	R5619861

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646722-11 TC4-SG-009A Sampled By: JW/ SB on 29-SEP-21 @ 14:10 Matrix: SEDIMENT							
Physical Tests							
Specific Gravity	1.16		0.010	kg/L		25-OCT-21	R5628726
Particle Size							
General Texture Class	Fine				13-OCT-21	13-OCT-21	R5617706
MUST PSA % > 75um	4.0		1.0	%	13-OCT-21	13-OCT-21	R5617706
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0894		0.0010	g/g	08-OCT-21	08-OCT-21	R5614708
Total Organic Carbon	8.94		0.10	%	08-OCT-21	08-OCT-21	R5614708
Metals							
Aluminum (Al)	21200		50	ug/g	07-OCT-21	08-OCT-21	R5614612
Antimony (Sb)	1.07		0.10	ug/g	07-OCT-21	08-OCT-21	R5614612
Arsenic (As)	11.7		0.10	ug/g	07-OCT-21	08-OCT-21	R5614612
Barium (Ba)	249		0.50	ug/g	07-OCT-21	08-OCT-21	R5614612
Beryllium (Be)	0.93		0.10	ug/g	07-OCT-21	08-OCT-21	R5614612
Bismuth (Bi)	1.11		0.20	ug/g	07-OCT-21	08-OCT-21	R5614612
Boron (B)	12.5		5.0	ug/g	07-OCT-21	08-OCT-21	R5614612
Boron (B), Hot Water Ext.	0.27		0.10	ug/g	08-OCT-21	08-OCT-21	R5614610
Cadmium (Cd)	1.17		0.020	ug/g	07-OCT-21	08-OCT-21	R5614612
Calcium (Ca)	26200		50	ug/g	07-OCT-21	08-OCT-21	R5614612
Chromium (Cr)	743		0.50	ug/g	07-OCT-21	08-OCT-21	R5614612
Cobalt (Co)	13.9		0.10	ug/g	07-OCT-21	08-OCT-21	R5614612
Copper (Cu)	54.7		0.50	ug/g	07-OCT-21	08-OCT-21	R5614612
Iron (Fe)	28900		50	ug/g	07-OCT-21	08-OCT-21	R5614612
Lead (Pb)	170		0.50	ug/g	07-OCT-21	08-OCT-21	R5614612
Lithium (Li)	21.7		2.0	ug/g	07-OCT-21	08-OCT-21	R5614612
Magnesium (Mg)	12900		20	ug/g	07-OCT-21	08-OCT-21	R5614612
Manganese (Mn)	610		1.0	ug/g	07-OCT-21	08-OCT-21	R5614612
Mercury (Hg)	0.570		0.0050	ug/g	07-OCT-21	08-OCT-21	R5614405
Molybdenum (Mo)	0.87		0.10	ug/g	07-OCT-21	08-OCT-21	R5614612
Nickel (Ni)	31.6		0.50	ug/g	07-OCT-21	08-OCT-21	R5614612
Phosphorus (P)	1090		50	ug/g	07-OCT-21	08-OCT-21	R5614612
Potassium (K)	4700		100	ug/g	07-OCT-21	08-OCT-21	R5614612
Selenium (Se)	1.28		0.20	ug/g	07-OCT-21	08-OCT-21	R5614612
Silver (Ag)	1.12		0.10	ug/g	07-OCT-21	08-OCT-21	R5614612
Sodium (Na)	555		50	ug/g	07-OCT-21	08-OCT-21	R5614612
Strontium (Sr)	121		0.50	ug/g	07-OCT-21	08-OCT-21	R5614612
Sulfur (S)	5700		1000	ug/g	07-OCT-21	08-OCT-21	R5614612
Thallium (Tl)	0.388		0.050	ug/g	07-OCT-21	08-OCT-21	R5614612
Tin (Sn)	8.3		2.0	ug/g	07-OCT-21	08-OCT-21	R5614612
Titanium (Ti)	1390		1.0	ug/g	07-OCT-21	08-OCT-21	R5614612
Tungsten (W)	<0.50		0.50	ug/g	07-OCT-21	08-OCT-21	R5614612
Uranium (U)	0.798		0.050	ug/g	07-OCT-21	08-OCT-21	R5614612
Vanadium (V)	51.8		0.20	ug/g	07-OCT-21	08-OCT-21	R5614612

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646722-11 TC4-SG-009A Sampled By: JW/ SB on 29-SEP-21 @ 14:10 Matrix: SEDIMENT							
Metals							
Zinc (Zn)	201		2.0	ug/g	07-OCT-21	08-OCT-21	R5614612
Zirconium (Zr)	5.9		1.0	ug/g	07-OCT-21	08-OCT-21	R5614612
Speciated Metals							
Chromium, Trivalent	741		10	ug/g		11-OCT-21	
Chromium, Hexavalent	1.83	DLHM	0.40	ug/g	07-OCT-21	08-OCT-21	R5615340
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.178	DLHM	0.015	ug/g	07-OCT-21	08-OCT-21	R5614231
Acenaphthylene	1.00	DLHM	0.015	ug/g	07-OCT-21	08-OCT-21	R5614231
Acridine	<0.140	DLM	0.14	ug/g	07-OCT-21	08-OCT-21	R5614231
Anthracene	0.741	DLHM	0.012	ug/g	07-OCT-21	08-OCT-21	R5614231
Benzo(a)anthracene	2.39	R	0.030	ug/g	07-OCT-21	08-OCT-21	R5614231
Benzo(a)pyrene	3.33	DLHM	0.015	ug/g	07-OCT-21	08-OCT-21	R5614231
Benzo(b&j)fluoranthene	2.72	DLHM	0.030	ug/g	07-OCT-21	08-OCT-21	R5614231
Benzo(g,h,i)perylene	1.98	DLHM	0.030	ug/g	07-OCT-21	08-OCT-21	R5614231
Benzo(k)fluoranthene	1.09	DLHM	0.030	ug/g	07-OCT-21	08-OCT-21	R5614231
Chrysene	2.48	DLHM	0.030	ug/g	07-OCT-21	08-OCT-21	R5614231
Dibenz(a,h)anthracene	0.496	DLHM	0.015	ug/g	07-OCT-21	08-OCT-21	R5614231
Fluoroanthene	2.09	DLHM	0.015	ug/g	07-OCT-21	08-OCT-21	R5614231
Fluorene	0.180	DLHM	0.015	ug/g	07-OCT-21	08-OCT-21	R5614231
Indeno(1,2,3-cd)pyrene	1.49	DLHM	0.030	ug/g	07-OCT-21	08-OCT-21	R5614231
1-Methylnaphthalene	0.087	DLHM	0.015	ug/g	07-OCT-21	08-OCT-21	R5614231
2-Methylnaphthalene	0.100	DLHM	0.015	ug/g	07-OCT-21	08-OCT-21	R5614231
Naphthalene	0.106	DLHM	0.015	ug/g	07-OCT-21	08-OCT-21	R5614231
Phenanthrene	0.873	DLHM	0.015	ug/g	07-OCT-21	08-OCT-21	R5614231
Pyrene	3.61	DLHM	0.015	ug/g	07-OCT-21	08-OCT-21	R5614231
Quinoline	<0.015	DLHM	0.015	ug/g	07-OCT-21	08-OCT-21	R5614231
Surrogate: 2-Fluorobiphenyl	89.6		60-140	%	07-OCT-21	08-OCT-21	R5614231
Surrogate: d14-Terphenyl	88.5		60-140	%	07-OCT-21	08-OCT-21	R5614231
B(a)P Total Potency Equivalent	4.64		0.021	ug/g	07-OCT-21	08-OCT-21	R5614231
IACR (CCME)	44.3		0.30		07-OCT-21	08-OCT-21	R5614231
Polychlorinated Biphenyls							
Aroclor 1016	<0.014	DLHM	0.014	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1221	<0.014	DLHM	0.014	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1232	<0.014	DLHM	0.014	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1242	<0.0420	DLM	0.042	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1248	<0.014	DLHM	0.014	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1254	0.519	DLHM	0.014	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1260	0.424	DLHM	0.014	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1262	<0.014	DLHM	0.014	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1268	<0.014	DLHM	0.014	mg/kg	13-OCT-21	13-OCT-21	R5616907
Total Polychlorinated Biphenyls	0.943		0.041	mg/kg	13-OCT-21	13-OCT-21	R5616907
Surrogate: d14-Terphenyl	101.0		50-140	%	13-OCT-21	13-OCT-21	R5616907

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646722-11 TC4-SG-009A Sampled By: JW/ SB on 29-SEP-21 @ 14:10 Matrix: SEDIMENT							
Polychlorinated Biphenyls							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Reference Information

QC Samples with Qualifiers & Comments:

QC Type Description	Parameter	Qualifier	Applies to Sample Number(s)
Matrix Spike	Aroclor 1254	MS-B	L2646722-10, -11, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Aroclor 1260	MS-B	L2646722-10, -11, -3, -4, -5, -6, -7, -8, -9

Sample Parameter Qualifier key listed:

Qualifier	Description
AI	Analytical interferences may be present. Result may be biased high.
DLHM	Detection Limit Adjusted: Sample has High Moisture Content
DLM	Detection Limit Adjusted due to sample matrix effects (e.g. chemical interference, colour, turbidity).
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
R	The ion abundance ratio(s) did not meet the acceptance criteria. Value is an estimated maximum.

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
ATTERBERG-SK	Soil	Atterberg limits	CARTER CSSS 58

The liquid limit (or upper plastic limit) is the point at which the soil becomes semifluid, like softened butter. In operational terms, the liquid limit is defined as the water content at which a trapezoidal groove cut in moist soil is closed after 25 taps on a hard rubber plate (ASTM D-18, 1958).

The plastic limit (or lower plastic limit) is defined as the water content at which soil begins to crumble on being rolled into a thread 1/8 inch (or 3 mm) in diameter. It represents the lowest water content at which soil can be deformed readily without cracking.

The plastic index (which is the difference between the liquid and plastic limits) gives an indication of the "clayeyness" or plasticity of a clay and is employed in engineering classification systems for soils.

This method is equivalent to ASTM D4318-10.

B-HWS-R511-WT	Soil	Boron-HWE-O.Reg 153/04 (July 2011)	HW EXTR, EPA 6010B

A dried solid sample is extracted with calcium chloride, the sample undergoes a heating process. After cooling the sample is filtered and analyzed by ICP/OES.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011 and as of November 30, 2020), unless a subset of the Analytical Test Group (ATG) has been requested (the Protocol states that all analytes in an ATG must be reported).

CR-CR3-WT	Soil	Trivalent Chromium in Soil Calculation	BC WLAP LAB MANUAL / EPA 3060A & 7196A

This analysis is carried out using the method "Trivalent Chromium in Solids", as published in the BC WLAP Laboratory Methods Manual (2003). Chromium (III) is determined by subtraction of chromium (VI) from total chromium. Chromium (VI) is determined by the alkaline leach method, and total chromium is determined using CSR Analytical Method 8 "Strong Acid Leachable Metals (SALM) in Soil", BC Ministry of Environment, Lands and Parks, 26 June 2001. All results are reported as milligrams per dry kilogram of sediment/soil.

CR-CR6-IC-WT	Soil	Hexavalent Chromium in Soil	SW846 3060A/7199

This analysis is carried out using procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846, Method 7199, published by the United States Environmental Protection Agency (EPA). The procedure involves analysis for chromium (VI) by ion chromatography using diphenylcarbazide in a sulphuric acid solution.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

HG-200.2-CVAA-WT	Soil	Mercury in Soil by CVAAS	EPA 200.2/1631E (mod)

Soil samples are digested with nitric and hydrochloric acids, followed by analysis by CVAAS.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

MET-200.2-CCMS-WT	Soil	Metals in Soil by CRC ICPMS	EPA 200.2/6020B (mod)

Soil/sediment is dried, disaggregated, and sieved (2 mm). For tests intended to support Ontario regulations, the <2mm fraction is ground to pass through a 0.355 mm sieve. Strong Acid Leachable Metals in the <2mm fraction are solubilized by heated digestion with nitric and hydrochloric acids. Instrumental analysis is by Collision / Reaction Cell ICPMS.

Limitations: This method is intended to liberate environmentally available metals. Silicate minerals are not solubilized. Some metals may be only partially recovered (matrix dependent), including Al, Ba, Be, Cr, S, Sr, Ti, Tl, V, W, and Zr. Elemental Sulfur may be poorly recovered by this method. Volatile forms of sulfur (e.g. sulfide, H2S) may be excluded if lost during sampling, storage, or digestion.

Reference Information

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011), unless a subset of the Analytical Test Group (ATG) has been requested (the Protocol states that all analytes in an ATG must be reported).

MOISTURE-WT	Soil	% Moisture	CCME PHC in Soil - Tier 1 (mod)
PAH-CCME-SQGL-WT	Soil	PAHs in Sediment	SW846 8270

The procedure uses a mechanical shaking technique to extract a representative sub-sample with a mixture of methanol and toluene. The extract is analyzed by GC/MSD. Depending on the analytical GC/MS column used benzo(j)fluoranthene may chromatographically co-elute with benzo(b)fluoranthene or benzo(k)fluoranthene.

PCB9-LOW-WT	Soil	PCBs to meet CCME Sediment Criteria	SW846 8270

A representative sub-sample of a soil sample is mixed with methanol and extracted with toluene using a shaker technique. An aliquot of the separated toluene is analyzed by GC/MSD.

PSA-MUST-SK	Soil	% Particles > 75um (Coarse/Fine)	ASTM D6913

An air-dried sample is reduced to < 2 mm size and mixed with a dispersing agent (Calgon solution). The sample is washed through a 200 mesh (75 µm) sieve. The retained mass of sample is used to determine % sand fraction.

Reference: ASTM D422-63

SPECGRAV-CL	Soil	Specific Gravity	ASTM D 5057

A portion of sample is weighed in a container that is calibrated for volume. Specific Gravity is reported as the mass of sample per mass of an equal volume of pure water, where the density of pure water is taken to be 1.00 g/mL.

TOC-WT	Soil	TOC & FOC in Solids	CARTER 21.3.2

Soil is treated with excess acidic dichromate, which reacts with the organic carbon, oxidizing it to CO2. The residual dichromate is titrated with ferrous ammonium sulphate and TOC calculated by difference.

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
SK	ALS ENVIRONMENTAL - SASKATOON, SASKATCHEWAN, CANADA
WT	ALS ENVIRONMENTAL - WATERLOO, ONTARIO, CANADA
CL	ALS ENVIRONMENTAL - CALGARY, ALBERTA, CANADA

Chain of Custody Numbers:

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.
mg/kg - milligrams per kilogram based on dry weight of sample
mg/kg wwt - milligrams per kilogram based on wet weight of sample
mg/kg lwt - milligrams per kilogram based on lipid weight of sample
mg/L - unit of concentration based on volume, parts per million.
< - Less than.
D.L. - The reporting limit.
N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.
UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.
Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.

Quality Control Report

Workorder: L2646722 Report Date: 26-OCT-21

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
ATTERBERG-SK	**Soil**							
Batch R5619861								
WG3634787-1 DUP		**L2648161-1**						
Liquid Limit (LL)		78	78		%	0.2	20	15-OCT-21
Moisture at Plastic Limit		55	56		%	1.7	20	15-OCT-21
Plasticity Index (PI)		23	23		%	3.4	20	15-OCT-21
WG3634787-2 IRM		**ATB-1_SOIL**						
Liquid Limit (LL)			107.5		%		80-120	15-OCT-21
Moisture at Plastic Limit			112.4		%		80-120	15-OCT-21
Plasticity Index (PI)			99.6		%		80-120	15-OCT-21
B-HWS-R511-WT	**Soil**							
Batch R5614610								
WG3633912-4 DUP		**L2647481-1**						
Boron (B), Hot Water Ext.		<0.10	<0.10	RPD-NA	ug/g	N/A	30	08-OCT-21
WG3633912-2 IRM		**WT SAR4**						
Boron (B), Hot Water Ext.			98.4		%		70-130	08-OCT-21
WG3633912-3 LCS								
Boron (B), Hot Water Ext.			102.0		%		70-130	08-OCT-21
WG3633912-1 MB								
Boron (B), Hot Water Ext.			<0.10		ug/g		0.1	08-OCT-21
CR-CR6-IC-WT	**Soil**							
Batch R5615340								
WG3633610-4 CRM		**WT-SQC012**						
Chromium, Hexavalent			79.6		%		70-130	08-OCT-21
WG3633610-3 DUP		**L2647650-3**						
Chromium, Hexavalent		0.26	0.22		ug/g	15	35	08-OCT-21
WG3633610-2 LCS								
Chromium, Hexavalent			92.5		%		80-120	08-OCT-21
WG3633610-1 MB								
Chromium, Hexavalent			<0.20		ug/g		0.2	08-OCT-21
HG-200.2-CVAA-WT	**Soil**							
Batch R5613508								
WG3632966-2 CRM		**WT-SS-2**						
Mercury (Hg)			100.2		%		70-130	07-OCT-21
WG3632966-6 DUP		**WG3632966-5**						
Mercury (Hg)		0.0079	0.0057		ug/g	33	40	07-OCT-21
WG3632966-3 LCS								
Mercury (Hg)			107.0		%		80-120	07-OCT-21
WG3632966-1 MB								

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
HG-200.2-CVAA-WT	**Soil**							
Batch R5613508								
WG3632966-1 MB								
Mercury (Hg)			<0.0050		mg/kg		0.005	07-OCT-21
Batch R5613510								
WG3632992-2 CRM		**WT-SS-2**						
Mercury (Hg)			103.7		%		70-130	07-OCT-21
WG3632992-6 DUP		**WG3632992-5**						
Mercury (Hg)		0.815	0.884		ug/g	8.2	40	07-OCT-21
WG3632992-3 LCS								
Mercury (Hg)			104.5		%		80-120	07-OCT-21
WG3632992-1 MB								
Mercury (Hg)			<0.0050		mg/kg		0.005	07-OCT-21
Batch R5614405								
WG3633895-2 CRM		**WT-SS-2**						
Mercury (Hg)			99.7		%		70-130	08-OCT-21
WG3633895-6 DUP		**WG3633895-5**						
Mercury (Hg)		0.0061	0.0058		ug/g	5.1	40	08-OCT-21
WG3633895-3 LCS								
Mercury (Hg)			102.0		%		80-120	08-OCT-21
WG3633895-1 MB								
Mercury (Hg)			<0.0050		mg/kg		0.005	08-OCT-21
Batch R5615364								
WG3634056-2 CRM		**WT-SS-2**						
Mercury (Hg)			107.0		%		70-130	11-OCT-21
WG3634056-6 DUP		**WG3634056-5**						
Mercury (Hg)		0.422	0.434		ug/g	2.7	40	11-OCT-21
WG3634056-3 LCS								
Mercury (Hg)			103.0		%		80-120	11-OCT-21
WG3634056-1 MB								
Mercury (Hg)			<0.0050		mg/kg		0.005	11-OCT-21
Batch R5615382								
WG3634832-9 CRM		**WT-SS-2**						
Mercury (Hg)			102.0		%		70-130	11-OCT-21
WG3634832-13 DUP		**WG3634832-12**						
Mercury (Hg)		0.0129	0.0126		ug/g	2.5	40	11-OCT-21
WG3634832-10 LCS								
Mercury (Hg)			99.5		%		80-120	11-OCT-21
WG3634832-8 MB								

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
HG-200.2-CVAA-WT	**Soil**							
Batch R5615382								
WG3634832-8 MB								
Mercury (Hg)			<0.0050		mg/kg		0.005	11-OCT-21
MET-200.2-CCMS-WT	**Soil**							
Batch R5613858								
WG3632992-2 CRM		**WT-SS-2**						
Aluminum (Al)			102.4		%		70-130	07-OCT-21
Antimony (Sb)			107.0		%		70-130	07-OCT-21
Arsenic (As)			110.6		%		70-130	07-OCT-21
Barium (Ba)			108.0		%		70-130	07-OCT-21
Beryllium (Be)			109.3		%		70-130	07-OCT-21
Bismuth (Bi)			0.17		mg/kg		0-0.34	07-OCT-21
Boron (B)			8.7		mg/kg		3.5-13.5	07-OCT-21
Cadmium (Cd)			105.6		%		70-130	07-OCT-21
Calcium (Ca)			109.6		%		70-130	07-OCT-21
Chromium (Cr)			102.8		%		70-130	07-OCT-21
Cobalt (Co)			108.3		%		70-130	07-OCT-21
Copper (Cu)			110.2		%		70-130	07-OCT-21
Iron (Fe)			108.2		%		70-130	07-OCT-21
Lead (Pb)			111.9		%		70-130	07-OCT-21
Lithium (Li)			107.7		%		70-130	07-OCT-21
Magnesium (Mg)			109.0		%		70-130	07-OCT-21
Manganese (Mn)			105.7		%		70-130	07-OCT-21
Molybdenum (Mo)			114.1		%		70-130	07-OCT-21
Nickel (Ni)			108.1		%		70-130	07-OCT-21
Phosphorus (P)			109.6		%		70-130	07-OCT-21
Potassium (K)			103.1		%		70-130	07-OCT-21
Selenium (Se)			0.16		mg/kg		0-0.34	07-OCT-21
Silver (Ag)			111.1		%		70-130	07-OCT-21
Sodium (Na)			105.3		%		70-130	07-OCT-21
Strontium (Sr)			106.8		%		70-130	07-OCT-21
Thallium (Tl)			0.077		mg/kg		0.029-0.129	07-OCT-21
Tin (Sn)			107.1		%		70-130	07-OCT-21
Titanium (Ti)			97.8		%		70-130	07-OCT-21
Uranium (U)			104.2		%		70-130	07-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5613858								
WG3632992-2 CRM		**WT-SS-2**						
Vanadium (V)			105.3		%		70-130	07-OCT-21
Zinc (Zn)			102.3		%		70-130	07-OCT-21
Zirconium (Zr)			99.7		%		70-130	07-OCT-21
WG3632992-6 DUP		**WG3632992-5**						
Aluminum (Al)		18000	16000		ug/g	12	40	07-OCT-21
Antimony (Sb)		2.96	2.62		ug/g	12	30	07-OCT-21
Arsenic (As)		59.3	54.4		ug/g	8.8	30	07-OCT-21
Barium (Ba)		264	239		ug/g	10	40	07-OCT-21
Beryllium (Be)		0.70	0.65		ug/g	6.6	30	07-OCT-21
Bismuth (Bi)		0.53	0.48		ug/g	11	30	07-OCT-21
Boron (B)		12.5	11.1		ug/g	13	30	07-OCT-21
Cadmium (Cd)		0.637	0.606		ug/g	5.1	30	07-OCT-21
Calcium (Ca)		82800	81700		ug/g	1.3	30	07-OCT-21
Chromium (Cr)		473	442		ug/g	6.8	30	07-OCT-21
Cobalt (Co)		21.6	20.7		ug/g	4.5	30	07-OCT-21
Copper (Cu)		57.4	53.9		ug/g	6.3	30	07-OCT-21
Iron (Fe)		27600	25200		ug/g	9.0	30	07-OCT-21
Lead (Pb)		110	102		ug/g	7.3	40	07-OCT-21
Lithium (Li)		17.5	15.5		ug/g	13	30	07-OCT-21
Magnesium (Mg)		17200	14900		ug/g	14	30	07-OCT-21
Manganese (Mn)		893	840		ug/g	6.1	30	07-OCT-21
Molybdenum (Mo)		0.92	0.87		ug/g	6.1	40	07-OCT-21
Nickel (Ni)		31.9	28.9		ug/g	9.9	30	07-OCT-21
Phosphorus (P)		1140	1130		ug/g	0.7	30	07-OCT-21
Potassium (K)		4350	4210		ug/g	3.3	40	07-OCT-21
Selenium (Se)		0.80	0.76		ug/g	5.4	30	07-OCT-21
Silver (Ag)		0.64	0.58		ug/g	9.3	40	07-OCT-21
Sodium (Na)		741	650		ug/g	13	40	07-OCT-21
Strontium (Sr)		499	484		ug/g	3.0	40	07-OCT-21
Sulfur (S)		4600	4700		ug/g	2.3	30	07-OCT-21
Thallium (Tl)		0.273	0.252		ug/g	7.7	30	07-OCT-21
Tin (Sn)		6.9	6.3		ug/g	8.8	40	07-OCT-21
Titanium (Ti)		1270	1110		ug/g	13	40	07-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5613858								
WG3632992-6 DUP		**WG3632992-5**						
Tungsten (W)		0.82	0.72		ug/g	14	30	07-OCT-21
Uranium (U)		0.650	0.593		ug/g	9.2	30	07-OCT-21
Vanadium (V)		48.4	45.9		ug/g	5.3	30	07-OCT-21
Zinc (Zn)		191	187		ug/g	2.2	30	07-OCT-21
Zirconium (Zr)		3.5	3.6		ug/g	3.2	30	07-OCT-21
WG3632992-4 LCS								
Aluminum (Al)			93.9		%		80-120	07-OCT-21
Antimony (Sb)			102.1		%		80-120	07-OCT-21
Arsenic (As)			96.2		%		80-120	07-OCT-21
Barium (Ba)			94.3		%		80-120	07-OCT-21
Beryllium (Be)			96.1		%		80-120	07-OCT-21
Bismuth (Bi)			95.9		%		80-120	07-OCT-21
Boron (B)			91.1		%		80-120	07-OCT-21
Cadmium (Cd)			92.8		%		80-120	07-OCT-21
Calcium (Ca)			95.5		%		80-120	07-OCT-21
Chromium (Cr)			92.5		%		80-120	07-OCT-21
Cobalt (Co)			92.6		%		80-120	07-OCT-21
Copper (Cu)			91.3		%		80-120	07-OCT-21
Iron (Fe)			97.8		%		80-120	07-OCT-21
Lead (Pb)			95.9		%		80-120	07-OCT-21
Lithium (Li)			94.1		%		80-120	07-OCT-21
Magnesium (Mg)			97.9		%		80-120	07-OCT-21
Manganese (Mn)			93.5		%		80-120	07-OCT-21
Molybdenum (Mo)			102.3		%		80-120	07-OCT-21
Nickel (Ni)			90.6		%		80-120	07-OCT-21
Phosphorus (P)			107.4		%		80-120	07-OCT-21
Potassium (K)			96.0		%		80-120	07-OCT-21
Selenium (Se)			99.3		%		80-120	07-OCT-21
Silver (Ag)			91.8		%		80-120	07-OCT-21
Sodium (Na)			94.4		%		80-120	07-OCT-21
Strontium (Sr)			100.6		%		80-120	07-OCT-21
Sulfur (S)			91.2		%		80-120	07-OCT-21
Thallium (Tl)			97.7		%		80-120	07-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5613858								
WG3632992-4 LCS								
Tin (Sn)			93.4		%		80-120	07-OCT-21
Titanium (Ti)			94.6		%		80-120	07-OCT-21
Tungsten (W)			96.4		%		80-120	07-OCT-21
Uranium (U)			93.2		%		80-120	07-OCT-21
Vanadium (V)			96.3		%		80-120	07-OCT-21
Zinc (Zn)			86.6		%		80-120	07-OCT-21
Zirconium (Zr)			99.5		%		80-120	07-OCT-21
WG3632992-1 MB								
Aluminum (Al)			<50		mg/kg		50	07-OCT-21
Antimony (Sb)			<0.10		mg/kg		0.1	07-OCT-21
Arsenic (As)			<0.10		mg/kg		0.1	07-OCT-21
Barium (Ba)			<0.50		mg/kg		0.5	07-OCT-21
Beryllium (Be)			<0.10		mg/kg		0.1	07-OCT-21
Bismuth (Bi)			<0.20		mg/kg		0.2	07-OCT-21
Boron (B)			<5.0		mg/kg		5	07-OCT-21
Cadmium (Cd)			<0.020		mg/kg		0.02	07-OCT-21
Calcium (Ca)			<50		mg/kg		50	07-OCT-21
Chromium (Cr)			<0.50		mg/kg		0.5	07-OCT-21
Cobalt (Co)			<0.10		mg/kg		0.1	07-OCT-21
Copper (Cu)			<0.50		mg/kg		0.5	07-OCT-21
Iron (Fe)			<50		mg/kg		50	07-OCT-21
Lead (Pb)			<0.50		mg/kg		0.5	07-OCT-21
Lithium (Li)			<2.0		mg/kg		2	07-OCT-21
Magnesium (Mg)			<20		mg/kg		20	07-OCT-21
Manganese (Mn)			<1.0		mg/kg		1	07-OCT-21
Molybdenum (Mo)			<0.10		mg/kg		0.1	07-OCT-21
Nickel (Ni)			<0.50		mg/kg		0.5	07-OCT-21
Phosphorus (P)			<50		mg/kg		50	07-OCT-21
Potassium (K)			<100		mg/kg		100	07-OCT-21
Selenium (Se)			<0.20		mg/kg		0.2	07-OCT-21
Silver (Ag)			<0.10		mg/kg		0.1	07-OCT-21
Sodium (Na)			<50		mg/kg		50	07-OCT-21
Strontium (Sr)			<0.50		mg/kg		0.5	07-OCT-21
Sulfur (S)			<1000		mg/kg		1000	07-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5613858								
WG3632992-1 MB								
Thallium (Tl)			<0.050		mg/kg		0.05	07-OCT-21
Tin (Sn)			<2.0		mg/kg		2	07-OCT-21
Titanium (Ti)			<1.0		mg/kg		1	07-OCT-21
Tungsten (W)			<0.50		mg/kg		0.5	07-OCT-21
Uranium (U)			<0.050		mg/kg		0.05	07-OCT-21
Vanadium (V)			<0.20		mg/kg		0.2	07-OCT-21
Zinc (Zn)			<2.0		mg/kg		2	07-OCT-21
Zirconium (Zr)			<1.0		mg/kg		1	07-OCT-21
Batch R5613997								
WG3632966-2 CRM		**WT-SS-2**						
Aluminum (Al)			103.6		%		70-130	07-OCT-21
Antimony (Sb)			86.1		%		70-130	07-OCT-21
Arsenic (As)			101.4		%		70-130	07-OCT-21
Barium (Ba)			101.9		%		70-130	07-OCT-21
Beryllium (Be)			98.0		%		70-130	07-OCT-21
Bismuth (Bi)			0.13		mg/kg		0-0.34	07-OCT-21
Boron (B)			8.4		mg/kg		3.5-13.5	07-OCT-21
Calcium (Ca)			102.4		%		70-130	07-OCT-21
Chromium (Cr)			96.5		%		70-130	07-OCT-21
Cobalt (Co)			102.5		%		70-130	07-OCT-21
Copper (Cu)			102.5		%		70-130	07-OCT-21
Iron (Fe)			102.6		%		70-130	07-OCT-21
Lead (Pb)			100.7		%		70-130	07-OCT-21
Lithium (Li)			101.3		%		70-130	07-OCT-21
Magnesium (Mg)			106.2		%		70-130	07-OCT-21
Manganese (Mn)			98.3		%		70-130	07-OCT-21
Molybdenum (Mo)			91.2		%		70-130	07-OCT-21
Nickel (Ni)			102.2		%		70-130	07-OCT-21
Phosphorus (P)			99.1		%		70-130	07-OCT-21
Potassium (K)			90.9		%		70-130	07-OCT-21
Selenium (Se)			0.12		mg/kg		0-0.34	07-OCT-21
Silver (Ag)			115.6		%		70-130	07-OCT-21
Sodium (Na)			96.4		%		70-130	07-OCT-21
Strontium (Sr)			96.3		%		70-130	07-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5613997								
WG3632966-2 CRM		**WT-SS-2**						
Thallium (Tl)			0.071		mg/kg		0.029-0.129	07-OCT-21
Tin (Sn)			90.4		%		70-130	07-OCT-21
Titanium (Ti)			93.3		%		70-130	07-OCT-21
Uranium (U)			97.5		%		70-130	07-OCT-21
Vanadium (V)			98.9		%		70-130	07-OCT-21
Zinc (Zn)			96.3		%		70-130	07-OCT-21
Zirconium (Zr)			89.5		%		70-130	07-OCT-21
WG3632966-6 DUP		**WG3632966-5**						
Aluminum (Al)		2910	2710		ug/g	7.1	40	07-OCT-21
Antimony (Sb)		<0.10	<0.10	RPD-NA	ug/g	N/A	30	07-OCT-21
Arsenic (As)		1.54	1.36		ug/g	13	30	07-OCT-21
Barium (Ba)		8.61	7.95		ug/g	8.0	40	07-OCT-21
Beryllium (Be)		0.13	0.11		ug/g	15	30	07-OCT-21
Bismuth (Bi)		<0.20	<0.20	RPD-NA	ug/g	N/A	30	07-OCT-21
Boron (B)		<5.0	<5.0	RPD-NA	ug/g	N/A	30	07-OCT-21
Cadmium (Cd)		0.085	0.073		ug/g	15	30	07-OCT-21
Calcium (Ca)		50800	46500		ug/g	8.9	30	07-OCT-21
Chromium (Cr)		7.02	6.21		ug/g	12	30	07-OCT-21
Cobalt (Co)		2.69	2.44		ug/g	9.8	30	07-OCT-21
Copper (Cu)		4.61	4.11		ug/g	11	30	07-OCT-21
Iron (Fe)		8370	7490		ug/g	11	30	07-OCT-21
Lead (Pb)		2.96	2.35		ug/g	23	40	07-OCT-21
Lithium (Li)		4.1	4.1		ug/g	0.0	30	07-OCT-21
Magnesium (Mg)		13900	13000		ug/g	7.3	30	07-OCT-21
Manganese (Mn)		265	244		ug/g	8.1	30	07-OCT-21
Molybdenum (Mo)		<0.10	<0.10	RPD-NA	ug/g	N/A	40	07-OCT-21
Nickel (Ni)		6.34	5.83		ug/g	8.3	30	07-OCT-21
Phosphorus (P)		614	593		ug/g	3.4	30	07-OCT-21
Potassium (K)		440	420		ug/g	3.1	40	07-OCT-21
Selenium (Se)		<0.20	<0.20	RPD-NA	ug/g	N/A	30	07-OCT-21
Silver (Ag)		<0.10	<0.10	RPD-NA	ug/g	N/A	40	07-OCT-21
Sodium (Na)		180	165		ug/g	9.0	40	07-OCT-21
Strontium (Sr)		54.3	49.1		ug/g	10	40	07-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5613997								
WG3632966-6 DUP		**WG3632966-5**						
Sulfur (S)		<1000	<1000	RPD-NA	ug/g	N/A	30	07-OCT-21
Thallium (Tl)		<0.050	<0.050	RPD-NA	ug/g	N/A	30	07-OCT-21
Tin (Sn)		<2.0	<2.0	RPD-NA	ug/g	N/A	40	07-OCT-21
Titanium (Ti)		191	173		ug/g	9.5	40	07-OCT-21
Tungsten (W)		<0.50	<0.50	RPD-NA	ug/g	N/A	30	07-OCT-21
Uranium (U)		0.295	0.261		ug/g	12	30	07-OCT-21
Vanadium (V)		11.5	10.2		ug/g	11	30	07-OCT-21
Zinc (Zn)		17.4	14.5		ug/g	18	30	07-OCT-21
Zirconium (Zr)		1.0	<1.0	RPD-NA	ug/g	N/A	30	07-OCT-21
WG3632966-4 LCS								
Aluminum (Al)			105.2		%		80-120	07-OCT-21
Antimony (Sb)			105.4		%		80-120	07-OCT-21
Arsenic (As)			105.0		%		80-120	07-OCT-21
Barium (Ba)			99.7		%		80-120	07-OCT-21
Beryllium (Be)			98.3		%		80-120	07-OCT-21
Bismuth (Bi)			99.2		%		80-120	07-OCT-21
Boron (B)			95.3		%		80-120	07-OCT-21
Cadmium (Cd)			99.97		%		80-120	07-OCT-21
Calcium (Ca)			99.6		%		80-120	07-OCT-21
Chromium (Cr)			104.0		%		80-120	07-OCT-21
Cobalt (Co)			105.5		%		80-120	07-OCT-21
Copper (Cu)			103.9		%		80-120	07-OCT-21
Iron (Fe)			96.1		%		80-120	07-OCT-21
Lead (Pb)			99.2		%		80-120	07-OCT-21
Lithium (Li)			98.1		%		80-120	07-OCT-21
Magnesium (Mg)			110.9		%		80-120	07-OCT-21
Manganese (Mn)			103.5		%		80-120	07-OCT-21
Molybdenum (Mo)			102.9		%		80-120	07-OCT-21
Nickel (Ni)			103.3		%		80-120	07-OCT-21
Phosphorus (P)			106.8		%		80-120	07-OCT-21
Potassium (K)			103.4		%		80-120	07-OCT-21
Selenium (Se)			102.3		%		80-120	07-OCT-21
Silver (Ag)			91.9		%		80-120	07-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5613997								
WG3632966-4 LCS								
Sodium (Na)			105.2		%		80-120	07-OCT-21
Strontium (Sr)			104.8		%		80-120	07-OCT-21
Sulfur (S)			99.7		%		80-120	07-OCT-21
Thallium (Tl)			99.3		%		80-120	07-OCT-21
Tin (Sn)			102.7		%		80-120	07-OCT-21
Titanium (Ti)			102.3		%		80-120	07-OCT-21
Tungsten (W)			99.5		%		80-120	07-OCT-21
Uranium (U)			96.5		%		80-120	07-OCT-21
Vanadium (V)			106.7		%		80-120	07-OCT-21
Zinc (Zn)			98.4		%		80-120	07-OCT-21
Zirconium (Zr)			98.7		%		80-120	07-OCT-21
WG3632966-1 MB								
Aluminum (Al)			<50		mg/kg		50	07-OCT-21
Antimony (Sb)			<0.10		mg/kg		0.1	07-OCT-21
Arsenic (As)			<0.10		mg/kg		0.1	07-OCT-21
Barium (Ba)			<0.50		mg/kg		0.5	07-OCT-21
Beryllium (Be)			<0.10		mg/kg		0.1	07-OCT-21
Bismuth (Bi)			<0.20		mg/kg		0.2	07-OCT-21
Boron (B)			<5.0		mg/kg		5	07-OCT-21
Cadmium (Cd)			<0.020		mg/kg		0.02	07-OCT-21
Calcium (Ca)			<50		mg/kg		50	07-OCT-21
Chromium (Cr)			<0.50		mg/kg		0.5	07-OCT-21
Cobalt (Co)			<0.10		mg/kg		0.1	07-OCT-21
Copper (Cu)			<0.50		mg/kg		0.5	07-OCT-21
Iron (Fe)			<50		mg/kg		50	07-OCT-21
Lead (Pb)			<0.50		mg/kg		0.5	07-OCT-21
Lithium (Li)			<2.0		mg/kg		2	07-OCT-21
Magnesium (Mg)			<20		mg/kg		20	07-OCT-21
Manganese (Mn)			<1.0		mg/kg		1	07-OCT-21
Molybdenum (Mo)			<0.10		mg/kg		0.1	07-OCT-21
Nickel (Ni)			<0.50		mg/kg		0.5	07-OCT-21
Phosphorus (P)			<50		mg/kg		50	07-OCT-21
Potassium (K)			<100		mg/kg		100	07-OCT-21
Selenium (Se)			<0.20		mg/kg		0.2	07-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5613997								
WG3632966-1 MB								
Silver (Ag)			<0.10		mg/kg		0.1	07-OCT-21
Sodium (Na)			<50		mg/kg		50	07-OCT-21
Strontium (Sr)			<0.50		mg/kg		0.5	07-OCT-21
Sulfur (S)			<1000		mg/kg		1000	07-OCT-21
Thallium (Tl)			<0.050		mg/kg		0.05	07-OCT-21
Tin (Sn)			<2.0		mg/kg		2	07-OCT-21
Titanium (Ti)			<1.0		mg/kg		1	07-OCT-21
Tungsten (W)			<0.50		mg/kg		0.5	07-OCT-21
Uranium (U)			<0.050		mg/kg		0.05	07-OCT-21
Vanadium (V)			<0.20		mg/kg		0.2	07-OCT-21
Zinc (Zn)			<2.0		mg/kg		2	07-OCT-21
Zirconium (Zr)			<1.0		mg/kg		1	07-OCT-21
Batch R5614612								
WG3633895-2 CRM		**WT-SS-2**						
Aluminum (Al)			108.3		%		70-130	08-OCT-21
Antimony (Sb)			101.6		%		70-130	08-OCT-21
Arsenic (As)			111.0		%		70-130	08-OCT-21
Barium (Ba)			110.3		%		70-130	08-OCT-21
Beryllium (Be)			118.3		%		70-130	08-OCT-21
Bismuth (Bi)			0.23		mg/kg		0-0.34	08-OCT-21
Boron (B)			9.4		mg/kg		3.5-13.5	08-OCT-21
Cadmium (Cd)			109.1		%		70-130	08-OCT-21
Calcium (Ca)			111.8		%		70-130	08-OCT-21
Chromium (Cr)			105.5		%		70-130	08-OCT-21
Cobalt (Co)			107.3		%		70-130	08-OCT-21
Copper (Cu)			112.6		%		70-130	08-OCT-21
Iron (Fe)			111.0		%		70-130	08-OCT-21
Lead (Pb)			107.5		%		70-130	08-OCT-21
Lithium (Li)			116.0		%		70-130	08-OCT-21
Magnesium (Mg)			112.5		%		70-130	08-OCT-21
Manganese (Mn)			108.8		%		70-130	08-OCT-21
Molybdenum (Mo)			104.7		%		70-130	08-OCT-21
Nickel (Ni)			108.9		%		70-130	08-OCT-21
Phosphorus (P)			108.4		%		70-130	08-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5614612								
WG3633895-2 CRM		**WT-SS-2**						
Potassium (K)			107.2		%		70-130	08-OCT-21
Selenium (Se)			0.13		mg/kg		0-0.34	08-OCT-21
Silver (Ag)			102.1		%		70-130	08-OCT-21
Sodium (Na)			106.2		%		70-130	08-OCT-21
Strontium (Sr)			109.0		%		70-130	08-OCT-21
Thallium (Tl)			0.072		mg/kg		0.029-0.129	08-OCT-21
Tin (Sn)			107.9		%		70-130	08-OCT-21
Titanium (Ti)			104.7		%		70-130	08-OCT-21
Uranium (U)			98.5		%		70-130	08-OCT-21
Vanadium (V)			109.3		%		70-130	08-OCT-21
Zinc (Zn)			99.5		%		70-130	08-OCT-21
Zirconium (Zr)			99.2		%		70-130	08-OCT-21
WG3633895-6 DUP		**WG3633895-5**						
Aluminum (Al)		7800	7190		ug/g	8.1	40	08-OCT-21
Antimony (Sb)		<0.10	<0.10	RPD-NA	ug/g	N/A	30	08-OCT-21
Arsenic (As)		2.89	2.70		ug/g	7.0	30	08-OCT-21
Barium (Ba)		33.9	32.4		ug/g	4.4	40	08-OCT-21
Beryllium (Be)		0.35	0.31		ug/g	12	30	08-OCT-21
Bismuth (Bi)		<0.20	<0.20	RPD-NA	ug/g	N/A	30	08-OCT-21
Boron (B)		6.1	5.8		ug/g	4.8	30	08-OCT-21
Cadmium (Cd)		0.125	0.115		ug/g	7.6	30	08-OCT-21
Calcium (Ca)		117000	104000		ug/g	11	30	08-OCT-21
Chromium (Cr)		13.4	12.3		ug/g	8.5	30	08-OCT-21
Cobalt (Co)		5.19	4.67		ug/g	11	30	08-OCT-21
Copper (Cu)		13.8	12.6		ug/g	9.3	30	08-OCT-21
Iron (Fe)		14600	13800		ug/g	5.8	30	08-OCT-21
Lead (Pb)		39.0	38.2		ug/g	2.1	40	08-OCT-21
Lithium (Li)		8.5	7.7		ug/g	11	30	08-OCT-21
Magnesium (Mg)		18200	16600		ug/g	9.2	30	08-OCT-21
Manganese (Mn)		486	437		ug/g	11	30	08-OCT-21
Molybdenum (Mo)		0.23	0.23		ug/g	3.6	40	08-OCT-21
Nickel (Ni)		10.6	9.69		ug/g	9.0	30	08-OCT-21
Phosphorus (P)		780	703		ug/g	10	30	08-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5614612								
WG3633895-6 DUP		**WG3633895-5**						
Potassium (K)		1250	1160		ug/g	7.2	40	08-OCT-21
Selenium (Se)		<0.20	<0.20	RPD-NA	ug/g	N/A	30	08-OCT-21
Silver (Ag)		<0.10	<0.10	RPD-NA	ug/g	N/A	40	08-OCT-21
Sodium (Na)		188	175		ug/g	7.3	40	08-OCT-21
Strontium (Sr)		144	142		ug/g	1.7	40	08-OCT-21
Sulfur (S)		<1000	<1000	RPD-NA	ug/g	N/A	30	08-OCT-21
Thallium (Tl)		0.076	0.071		ug/g	7.2	30	08-OCT-21
Tin (Sn)		<2.0	<2.0	RPD-NA	ug/g	N/A	40	08-OCT-21
Titanium (Ti)		388	356		ug/g	8.5	40	08-OCT-21
Tungsten (W)		<0.50	<0.50	RPD-NA	ug/g	N/A	30	08-OCT-21
Uranium (U)		0.382	0.388		ug/g	1.6	30	08-OCT-21
Vanadium (V)		24.9	22.6		ug/g	9.9	30	08-OCT-21
Zinc (Zn)		41.9	38.5		ug/g	8.3	30	08-OCT-21
Zirconium (Zr)		2.5	2.5		ug/g	0.1	30	08-OCT-21
WG3633895-4 LCS								
Aluminum (Al)			111.2		%		80-120	08-OCT-21
Antimony (Sb)			114.8		%		80-120	08-OCT-21
Arsenic (As)			110.9		%		80-120	08-OCT-21
Barium (Ba)			112.8		%		80-120	08-OCT-21
Beryllium (Be)			112.9		%		80-120	08-OCT-21
Bismuth (Bi)			107.0		%		80-120	08-OCT-21
Boron (B)			106.2		%		80-120	08-OCT-21
Cadmium (Cd)			106.1		%		80-120	08-OCT-21
Calcium (Ca)			112.4		%		80-120	08-OCT-21
Chromium (Cr)			109.4		%		80-120	08-OCT-21
Cobalt (Co)			108.4		%		80-120	08-OCT-21
Copper (Cu)			106.3		%		80-120	08-OCT-21
Iron (Fe)			111.8		%		80-120	08-OCT-21
Lead (Pb)			103.7		%		80-120	08-OCT-21
Lithium (Li)			111.6		%		80-120	08-OCT-21
Magnesium (Mg)			116.5		%		80-120	08-OCT-21
Manganese (Mn)			108.8		%		80-120	08-OCT-21
Molybdenum (Mo)			111.6		%		80-120	08-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5614612								
WG3633895-4 LCS								
Nickel (Ni)			108.2		%		80-120	08-OCT-21
Phosphorus (P)			115.2		%		80-120	08-OCT-21
Potassium (K)			112.9		%		80-120	08-OCT-21
Selenium (Se)			109.0		%		80-120	08-OCT-21
Silver (Ag)			96.8		%		80-120	08-OCT-21
Sodium (Na)			112.0		%		80-120	08-OCT-21
Strontium (Sr)			113.1		%		80-120	08-OCT-21
Sulfur (S)			111.5		%		80-120	08-OCT-21
Thallium (Tl)			104.1		%		80-120	08-OCT-21
Tin (Sn)			107.3		%		80-120	08-OCT-21
Titanium (Ti)			110.0		%		80-120	08-OCT-21
Tungsten (W)			99.6		%		80-120	08-OCT-21
Uranium (U)			102.7		%		80-120	08-OCT-21
Vanadium (V)			112.4		%		80-120	08-OCT-21
Zinc (Zn)			101.1		%		80-120	08-OCT-21
Zirconium (Zr)			106.6		%		80-120	08-OCT-21
WG3633895-1 MB								
Aluminum (Al)			<50		mg/kg		50	08-OCT-21
Antimony (Sb)			<0.10		mg/kg		0.1	08-OCT-21
Arsenic (As)			<0.10		mg/kg		0.1	08-OCT-21
Barium (Ba)			<0.50		mg/kg		0.5	08-OCT-21
Beryllium (Be)			<0.10		mg/kg		0.1	08-OCT-21
Bismuth (Bi)			<0.20		mg/kg		0.2	08-OCT-21
Boron (B)			<5.0		mg/kg		5	08-OCT-21
Cadmium (Cd)			<0.020		mg/kg		0.02	08-OCT-21
Calcium (Ca)			<50		mg/kg		50	08-OCT-21
Chromium (Cr)			<0.50		mg/kg		0.5	08-OCT-21
Cobalt (Co)			<0.10		mg/kg		0.1	08-OCT-21
Copper (Cu)			<0.50		mg/kg		0.5	08-OCT-21
Iron (Fe)			<50		mg/kg		50	08-OCT-21
Lead (Pb)			<0.50		mg/kg		0.5	08-OCT-21
Lithium (Li)			<2.0		mg/kg		2	08-OCT-21
Magnesium (Mg)			<20		mg/kg		20	08-OCT-21
Manganese (Mn)			<1.0		mg/kg		1	08-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5614612								
WG3633895-1 MB								
Molybdenum (Mo)			<0.10		mg/kg		0.1	08-OCT-21
Nickel (Ni)			<0.50		mg/kg		0.5	08-OCT-21
Phosphorus (P)			<50		mg/kg		50	08-OCT-21
Potassium (K)			<100		mg/kg		100	08-OCT-21
Selenium (Se)			<0.20		mg/kg		0.2	08-OCT-21
Silver (Ag)			<0.10		mg/kg		0.1	08-OCT-21
Sodium (Na)			<50		mg/kg		50	08-OCT-21
Strontium (Sr)			<0.50		mg/kg		0.5	08-OCT-21
Sulfur (S)			<1000		mg/kg		1000	08-OCT-21
Thallium (Tl)			<0.050		mg/kg		0.05	08-OCT-21
Tin (Sn)			<2.0		mg/kg		2	08-OCT-21
Titanium (Ti)			<1.0		mg/kg		1	08-OCT-21
Tungsten (W)			<0.50		mg/kg		0.5	08-OCT-21
Uranium (U)			<0.050		mg/kg		0.05	08-OCT-21
Vanadium (V)			<0.20		mg/kg		0.2	08-OCT-21
Zinc (Zn)			<2.0		mg/kg		2	08-OCT-21
Zirconium (Zr)			<1.0		mg/kg		1	08-OCT-21
Batch R5614725								
WG3634056-2 CRM		**WT-SS-2**						
Aluminum (Al)			115.9		%		70-130	08-OCT-21
Antimony (Sb)			106.1		%		70-130	08-OCT-21
Arsenic (As)			117.3		%		70-130	08-OCT-21
Barium (Ba)			128.7		%		70-130	08-OCT-21
Beryllium (Be)			120.0		%		70-130	08-OCT-21
Bismuth (Bi)			0.14		mg/kg		0-0.34	08-OCT-21
Boron (B)			9.5		mg/kg		3.5-13.5	08-OCT-21
Cadmium (Cd)			111.6		%		70-130	08-OCT-21
Calcium (Ca)			120.9		%		70-130	08-OCT-21
Chromium (Cr)			112.6		%		70-130	08-OCT-21
Cobalt (Co)			115.1		%		70-130	08-OCT-21
Copper (Cu)			116.1		%		70-130	08-OCT-21
Iron (Fe)			119.2		%		70-130	08-OCT-21
Lead (Pb)			109.1		%		70-130	08-OCT-21
Lithium (Li)			116.8		%		70-130	08-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5614725								
WG3634056-2 CRM		**WT-SS-2**						
Magnesium (Mg)			119.4		%		70-130	08-OCT-21
Manganese (Mn)			116.1		%		70-130	08-OCT-21
Molybdenum (Mo)			110.8		%		70-130	08-OCT-21
Nickel (Ni)			114.9		%		70-130	08-OCT-21
Phosphorus (P)			118.3		%		70-130	08-OCT-21
Potassium (K)			121.7		%		70-130	08-OCT-21
Selenium (Se)			0.15		mg/kg		0-0.34	08-OCT-21
Silver (Ag)			104.4		%		70-130	08-OCT-21
Sodium (Na)			122.1		%		70-130	08-OCT-21
Strontium (Sr)			116.9		%		70-130	08-OCT-21
Thallium (Tl)			0.083		mg/kg		0.029-0.129	08-OCT-21
Tin (Sn)			103.4		%		70-130	08-OCT-21
Titanium (Ti)			109.3		%		70-130	08-OCT-21
Uranium (U)			105.0		%		70-130	08-OCT-21
Vanadium (V)			115.6		%		70-130	08-OCT-21
Zinc (Zn)			108.3		%		70-130	08-OCT-21
Zirconium (Zr)			113.2		%		70-130	08-OCT-21
WG3634056-6 DUP		**WG3634056-5**						
Aluminum (Al)		19900	20300		ug/g	1.8	40	08-OCT-21
Antimony (Sb)		0.90	0.85		ug/g	6.1	30	08-OCT-21
Arsenic (As)		8.17	8.11		ug/g	0.8	30	08-OCT-21
Barium (Ba)		308	314		ug/g	1.9	40	08-OCT-21
Beryllium (Be)		0.75	0.77		ug/g	2.2	30	08-OCT-21
Bismuth (Bi)		0.90	0.76		ug/g	17	30	08-OCT-21
Boron (B)		13.3	12.8		ug/g	3.9	30	08-OCT-21
Cadmium (Cd)		0.894	0.875		ug/g	2.2	30	08-OCT-21
Calcium (Ca)		106000	103000		ug/g	2.8	30	08-OCT-21
Chromium (Cr)		481	492		ug/g	2.2	30	08-OCT-21
Cobalt (Co)		13.1	13.4		ug/g	2.0	30	08-OCT-21
Copper (Cu)		53.0	53.3		ug/g	0.7	30	08-OCT-21
Iron (Fe)		29100	29300		ug/g	0.7	30	08-OCT-21
Lead (Pb)		114	113		ug/g	0.7	40	08-OCT-21
Lithium (Li)		17.8	17.8		ug/g	0.3	30	08-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5614725								
WG3634056-6 DUP		**WG3634056-5**						
Magnesium (Mg)		12900	13100		ug/g	1.6	30	08-OCT-21
Manganese (Mn)		921	921		ug/g	0.1	30	08-OCT-21
Molybdenum (Mo)		1.23	1.19		ug/g	2.5	40	08-OCT-21
Nickel (Ni)		28.6	29.4		ug/g	2.8	30	08-OCT-21
Phosphorus (P)		1320	1280		ug/g	3.4	30	08-OCT-21
Potassium (K)		4310	4540		ug/g	5.3	40	08-OCT-21
Selenium (Se)		1.46	1.44		ug/g	1.7	30	08-OCT-21
Silver (Ag)		0.76	0.72		ug/g	6.5	40	08-OCT-21
Sodium (Na)		704	679		ug/g	3.5	40	08-OCT-21
Strontium (Sr)		496	486		ug/g	2.1	40	08-OCT-21
Sulfur (S)		10300	9900		ug/g	4.1	30	08-OCT-21
Thallium (Tl)		0.332	0.335		ug/g	0.7	30	08-OCT-21
Tin (Sn)		7.0	7.1		ug/g	1.0	40	08-OCT-21
Titanium (Ti)		1280	1280		ug/g	0.0	40	08-OCT-21
Tungsten (W)		<0.50	<0.50	RPD-NA	ug/g	N/A	30	08-OCT-21
Uranium (U)		0.974	0.978		ug/g	0.4	30	08-OCT-21
Vanadium (V)		48.1	48.2		ug/g	0.2	30	08-OCT-21
Zinc (Zn)		180	189		ug/g	4.9	30	08-OCT-21
Zirconium (Zr)		3.8	3.9		ug/g	0.7	30	08-OCT-21
WG3634056-4 LCS								
Aluminum (Al)			102.8		%		80-120	08-OCT-21
Antimony (Sb)			102.7		%		80-120	08-OCT-21
Arsenic (As)			102.5		%		80-120	08-OCT-21
Barium (Ba)			103.5		%		80-120	08-OCT-21
Beryllium (Be)			98.4		%		80-120	08-OCT-21
Bismuth (Bi)			98.2		%		80-120	08-OCT-21
Boron (B)			94.2		%		80-120	08-OCT-21
Cadmium (Cd)			96.0		%		80-120	08-OCT-21
Calcium (Ca)			99.7		%		80-120	08-OCT-21
Chromium (Cr)			100.5		%		80-120	08-OCT-21
Cobalt (Co)			99.5		%		80-120	08-OCT-21
Copper (Cu)			97.8		%		80-120	08-OCT-21
Iron (Fe)			101.3		%		80-120	08-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5614725								
WG3634056-4 LCS								
Lead (Pb)			92.8		%		80-120	08-OCT-21
Lithium (Li)			97.9		%		80-120	08-OCT-21
Magnesium (Mg)			105.7		%		80-120	08-OCT-21
Manganese (Mn)			100.9		%		80-120	08-OCT-21
Molybdenum (Mo)			100.2		%		80-120	08-OCT-21
Nickel (Ni)			98.4		%		80-120	08-OCT-21
Phosphorus (P)			105.2		%		80-120	08-OCT-21
Potassium (K)			102.7		%		80-120	08-OCT-21
Selenium (Se)			100.4		%		80-120	08-OCT-21
Silver (Ag)			86.9		%		80-120	08-OCT-21
Sodium (Na)			104.9		%		80-120	08-OCT-21
Strontium (Sr)			103.6		%		80-120	08-OCT-21
Sulfur (S)			99.6		%		80-120	08-OCT-21
Thallium (Tl)			97.3		%		80-120	08-OCT-21
Tin (Sn)			97.4		%		80-120	08-OCT-21
Titanium (Ti)			100.1		%		80-120	08-OCT-21
Tungsten (W)			88.1		%		80-120	08-OCT-21
Uranium (U)			91.3		%		80-120	08-OCT-21
Vanadium (V)			103.9		%		80-120	08-OCT-21
Zinc (Zn)			92.9		%		80-120	08-OCT-21
Zirconium (Zr)			95.9		%		80-120	08-OCT-21
WG3634056-1 MB								
Aluminum (Al)			<50		mg/kg		50	08-OCT-21
Antimony (Sb)			<0.10		mg/kg		0.1	08-OCT-21
Arsenic (As)			<0.10		mg/kg		0.1	08-OCT-21
Barium (Ba)			<0.50		mg/kg		0.5	08-OCT-21
Beryllium (Be)			<0.10		mg/kg		0.1	08-OCT-21
Bismuth (Bi)			<0.20		mg/kg		0.2	08-OCT-21
Boron (B)			<5.0		mg/kg		5	08-OCT-21
Cadmium (Cd)			<0.020		mg/kg		0.02	08-OCT-21
Calcium (Ca)			<50		mg/kg		50	08-OCT-21
Chromium (Cr)			<0.50		mg/kg		0.5	08-OCT-21
Cobalt (Co)			<0.10		mg/kg		0.1	08-OCT-21
Copper (Cu)			<0.50		mg/kg		0.5	08-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5614725								
WG3634056-1 MB								
Iron (Fe)			<50		mg/kg		50	08-OCT-21
Lead (Pb)			<0.50		mg/kg		0.5	08-OCT-21
Lithium (Li)			<2.0		mg/kg		2	08-OCT-21
Magnesium (Mg)			<20		mg/kg		20	08-OCT-21
Manganese (Mn)			<1.0		mg/kg		1	08-OCT-21
Molybdenum (Mo)			<0.10		mg/kg		0.1	08-OCT-21
Nickel (Ni)			<0.50		mg/kg		0.5	08-OCT-21
Phosphorus (P)			<50		mg/kg		50	08-OCT-21
Potassium (K)			<100		mg/kg		100	08-OCT-21
Selenium (Se)			<0.20		mg/kg		0.2	08-OCT-21
Silver (Ag)			<0.10		mg/kg		0.1	08-OCT-21
Sodium (Na)			<50		mg/kg		50	08-OCT-21
Strontium (Sr)			<0.50		mg/kg		0.5	08-OCT-21
Sulfur (S)			<1000		mg/kg		1000	08-OCT-21
Thallium (Tl)			<0.050		mg/kg		0.05	08-OCT-21
Tin (Sn)			<2.0		mg/kg		2	08-OCT-21
Titanium (Ti)			<1.0		mg/kg		1	08-OCT-21
Tungsten (W)			<0.50		mg/kg		0.5	08-OCT-21
Uranium (U)			<0.050		mg/kg		0.05	08-OCT-21
Vanadium (V)			<0.20		mg/kg		0.2	08-OCT-21
Zinc (Zn)			<2.0		mg/kg		2	08-OCT-21
Zirconium (Zr)			<1.0		mg/kg		1	08-OCT-21
Batch R5616337								
WG3634832-9 CRM		**WT-SS-2**						
Aluminum (Al)			106.6		%		70-130	12-OCT-21
Antimony (Sb)			91.2		%		70-130	12-OCT-21
Arsenic (As)			100.5		%		70-130	12-OCT-21
Barium (Ba)			109.4		%		70-130	12-OCT-21
Beryllium (Be)			93.9		%		70-130	12-OCT-21
Bismuth (Bi)			0.13		mg/kg		0-0.34	12-OCT-21
Boron (B)			7.8		mg/kg		3.5-13.5	12-OCT-21
Cadmium (Cd)			94.8		%		70-130	12-OCT-21
Calcium (Ca)			92.1		%		70-130	12-OCT-21
Chromium (Cr)			101.0		%		70-130	12-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5616337								
WG3634832-9 CRM		**WT-SS-2**						
Cobalt (Co)			97.8		%		70-130	12-OCT-21
Copper (Cu)			96.9		%		70-130	12-OCT-21
Iron (Fe)			98.3		%		70-130	12-OCT-21
Lead (Pb)			90.0		%		70-130	12-OCT-21
Lithium (Li)			84.9		%		70-130	12-OCT-21
Magnesium (Mg)			102.2		%		70-130	12-OCT-21
Manganese (Mn)			106.3		%		70-130	12-OCT-21
Molybdenum (Mo)			93.3		%		70-130	12-OCT-21
Nickel (Ni)			97.6		%		70-130	12-OCT-21
Phosphorus (P)			101.0		%		70-130	12-OCT-21
Potassium (K)			95.6		%		70-130	12-OCT-21
Selenium (Se)			0.15		mg/kg		0-0.34	12-OCT-21
Silver (Ag)			86.0		%		70-130	12-OCT-21
Sodium (Na)			97.4		%		70-130	12-OCT-21
Strontium (Sr)			91.1		%		70-130	12-OCT-21
Thallium (Tl)			0.072		mg/kg		0.029-0.129	12-OCT-21
Tin (Sn)			91.7		%		70-130	12-OCT-21
Titanium (Ti)			96.1		%		70-130	12-OCT-21
Uranium (U)			93.7		%		70-130	12-OCT-21
Vanadium (V)			97.5		%		70-130	12-OCT-21
Zinc (Zn)			92.9		%		70-130	12-OCT-21
Zirconium (Zr)			91.1		%		70-130	12-OCT-21
WG3634832-13 DUP		**WG3634832-12**						
Aluminum (Al)		12600	13000		ug/g	3.4	40	12-OCT-21
Antimony (Sb)		0.37	0.43		ug/g	15	30	12-OCT-21
Arsenic (As)		7.80	7.82		ug/g	0.3	30	12-OCT-21
Barium (Ba)		89.3	92.2		ug/g	3.2	40	12-OCT-21
Beryllium (Be)		0.55	0.59		ug/g	7.5	30	12-OCT-21
Bismuth (Bi)		<0.20	<0.20	RPD-NA	ug/g	N/A	30	12-OCT-21
Boron (B)		11.0	12.1		ug/g	9.6	30	12-OCT-21
Cadmium (Cd)		0.234	0.244		ug/g	4.0	30	12-OCT-21
Calcium (Ca)		72500	77200		ug/g	6.2	30	12-OCT-21
Chromium (Cr)		21.5	21.9		ug/g	1.7	30	12-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5616337								
WG3634832-13 DUP		**WG3634832-12**						
Cobalt (Co)		9.23	9.50		ug/g	2.8	30	12-OCT-21
Copper (Cu)		17.3	17.5		ug/g	1.1	30	12-OCT-21
Iron (Fe)		20900	21100		ug/g	1.2	30	12-OCT-21
Lead (Pb)		10.1	11.0		ug/g	8.6	40	12-OCT-21
Lithium (Li)		18.2	19.8		ug/g	8.4	30	12-OCT-21
Magnesium (Mg)		22300	22600		ug/g	1.5	30	12-OCT-21
Manganese (Mn)		428	426		ug/g	0.5	30	12-OCT-21
Molybdenum (Mo)		2.73	2.98		ug/g	8.6	40	12-OCT-21
Nickel (Ni)		24.2	24.4		ug/g	0.5	30	12-OCT-21
Phosphorus (P)		375	352		ug/g	6.5	30	12-OCT-21
Potassium (K)		2130	2150		ug/g	1.0	40	12-OCT-21
Selenium (Se)		<0.20	<0.20	RPD-NA	ug/g	N/A	30	12-OCT-21
Silver (Ag)		<0.10	<0.10	RPD-NA	ug/g	N/A	40	12-OCT-21
Sodium (Na)		441	440		ug/g	0.3	40	12-OCT-21
Strontium (Sr)		90.6	95.2		ug/g	5.0	40	12-OCT-21
Sulfur (S)		<1000	<1000	RPD-NA	ug/g	N/A	30	12-OCT-21
Thallium (Tl)		0.223	0.237		ug/g	5.9	30	12-OCT-21
Tin (Sn)		<2.0	<2.0	RPD-NA	ug/g	N/A	40	12-OCT-21
Titanium (Ti)		190	200		ug/g	4.8	40	12-OCT-21
Tungsten (W)		<0.50	<0.50	RPD-NA	ug/g	N/A	30	12-OCT-21
Uranium (U)		1.08	1.23		ug/g	14	30	12-OCT-21
Vanadium (V)		31.6	31.9		ug/g	1.0	30	12-OCT-21
Zinc (Zn)		49.6	50.1		ug/g	1.0	30	12-OCT-21
Zirconium (Zr)		9.6	10.2		ug/g	6.5	30	12-OCT-21
WG3634832-11 LCS								
Aluminum (Al)			100.8		%		80-120	12-OCT-21
Antimony (Sb)			90.7		%		80-120	12-OCT-21
Arsenic (As)			100.2		%		80-120	12-OCT-21
Barium (Ba)			99.8		%		80-120	12-OCT-21
Beryllium (Be)			89.9		%		80-120	12-OCT-21
Bismuth (Bi)			89.8		%		80-120	12-OCT-21
Boron (B)			85.2		%		80-120	12-OCT-21
Cadmium (Cd)			92.8		%		80-120	12-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5616337								
WG3634832-11 LCS								
Calcium (Ca)			91.3		%		80-120	12-OCT-21
Chromium (Cr)			96.4		%		80-120	12-OCT-21
Cobalt (Co)			97.1		%		80-120	12-OCT-21
Copper (Cu)			94.6		%		80-120	12-OCT-21
Iron (Fe)			100.5		%		80-120	12-OCT-21
Lead (Pb)			88.3		%		80-120	12-OCT-21
Lithium (Li)			81.4		%		80-120	12-OCT-21
Magnesium (Mg)			109.2		%		80-120	12-OCT-21
Manganese (Mn)			98.1		%		80-120	12-OCT-21
Molybdenum (Mo)			92.6		%		80-120	12-OCT-21
Nickel (Ni)			95.2		%		80-120	12-OCT-21
Phosphorus (P)			106.1		%		80-120	12-OCT-21
Potassium (K)			107.1		%		80-120	12-OCT-21
Selenium (Se)			95.6		%		80-120	12-OCT-21
Silver (Ag)			81.7		%		80-120	12-OCT-21
Sodium (Na)			99.4		%		80-120	12-OCT-21
Strontium (Sr)			94.2		%		80-120	12-OCT-21
Sulfur (S)			94.5		%		80-120	12-OCT-21
Thallium (Tl)			87.7		%		80-120	12-OCT-21
Tin (Sn)			90.9		%		80-120	12-OCT-21
Titanium (Ti)			98.5		%		80-120	12-OCT-21
Tungsten (W)			87.9		%		80-120	12-OCT-21
Uranium (U)			90.3		%		80-120	12-OCT-21
Vanadium (V)			99.3		%		80-120	12-OCT-21
Zinc (Zn)			91.6		%		80-120	12-OCT-21
Zirconium (Zr)			89.0		%		80-120	12-OCT-21
WG3634832-8 MB								
Aluminum (Al)			<50		mg/kg		50	12-OCT-21
Antimony (Sb)			<0.10		mg/kg		0.1	12-OCT-21
Arsenic (As)			<0.10		mg/kg		0.1	12-OCT-21
Barium (Ba)			<0.50		mg/kg		0.5	12-OCT-21
Beryllium (Be)			<0.10		mg/kg		0.1	12-OCT-21
Bismuth (Bi)			<0.20		mg/kg		0.2	12-OCT-21
Boron (B)			<5.0		mg/kg		5	12-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5616337								
WG3634832-8 MB								
Cadmium (Cd)			<0.020		mg/kg		0.02	12-OCT-21
Calcium (Ca)			<50		mg/kg		50	12-OCT-21
Chromium (Cr)			<0.50		mg/kg		0.5	12-OCT-21
Cobalt (Co)			<0.10		mg/kg		0.1	12-OCT-21
Copper (Cu)			<0.50		mg/kg		0.5	12-OCT-21
Iron (Fe)			<50		mg/kg		50	12-OCT-21
Lead (Pb)			<0.50		mg/kg		0.5	12-OCT-21
Lithium (Li)			<2.0		mg/kg		2	12-OCT-21
Magnesium (Mg)			<20		mg/kg		20	12-OCT-21
Manganese (Mn)			<1.0		mg/kg		1	12-OCT-21
Molybdenum (Mo)			<0.10		mg/kg		0.1	12-OCT-21
Nickel (Ni)			<0.50		mg/kg		0.5	12-OCT-21
Phosphorus (P)			<50		mg/kg		50	12-OCT-21
Potassium (K)			<100		mg/kg		100	12-OCT-21
Selenium (Se)			<0.20		mg/kg		0.2	12-OCT-21
Silver (Ag)			<0.10		mg/kg		0.1	12-OCT-21
Sodium (Na)			<50		mg/kg		50	12-OCT-21
Strontium (Sr)			<0.50		mg/kg		0.5	12-OCT-21
Sulfur (S)			<1000		mg/kg		1000	12-OCT-21
Thallium (Tl)			<0.050		mg/kg		0.05	12-OCT-21
Tin (Sn)			<2.0		mg/kg		2	12-OCT-21
Titanium (Ti)			<1.0		mg/kg		1	12-OCT-21
Tungsten (W)			<0.50		mg/kg		0.5	12-OCT-21
Uranium (U)			<0.050		mg/kg		0.05	12-OCT-21
Vanadium (V)			<0.20		mg/kg		0.2	12-OCT-21
Zinc (Zn)			<2.0		mg/kg		2	12-OCT-21
Zirconium (Zr)			<1.0		mg/kg		1	12-OCT-21
MOISTURE-WT	**Soil**							
Batch R5609858								
WG3631667-3 DUP		**L2646722-1**						
% Moisture		85.2	85.1		%	0.2	20	06-OCT-21
WG3631667-2 LCS								
% Moisture			98.7		%		90-110	06-OCT-21
WG3631667-1 MB								

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MOISTURE-WT	**Soil**							
Batch R5609858								
WG3631667-1 MB								
% Moisture			<0.25		%		0.25	06-OCT-21
Batch R5612561								
WG3632585-3 DUP		**L2644400-24**						
% Moisture		14.0	14.1		%	0.5	20	07-OCT-21
WG3632585-2 LCS								
% Moisture			98.8		%		90-110	07-OCT-21
WG3632585-1 MB								
% Moisture			<0.25		%		0.25	07-OCT-21
PAH-CCME-SQGL-WT	**Soil**							
Batch R5611880								
WG3631218-3 DUP		**WG3631218-5**						
1-Methylnaphthalene		<0.0050	<0.0050	RPD-NA	ug/g	N/A	50	06-OCT-21
2-Methylnaphthalene		<0.0050	<0.0050	RPD-NA	ug/g	N/A	50	06-OCT-21
Acenaphthene		<0.0050	<0.0050	RPD-NA	ug/g	N/A	50	06-OCT-21
Acenaphthylene		<0.0050	<0.0050	RPD-NA	ug/g	N/A	50	06-OCT-21
Acridine		<0.010	<0.010	RPD-NA	ug/g	N/A	50	06-OCT-21
Anthracene		<0.0040	<0.0040	RPD-NA	ug/g	N/A	50	06-OCT-21
Benzo(a)anthracene		<0.010	<0.010	RPD-NA	ug/g	N/A	50	06-OCT-21
Benzo(a)pyrene		<0.0050	<0.0050	RPD-NA	ug/g	N/A	50	06-OCT-21
Benzo(b&j)fluoranthene		<0.010	<0.010	RPD-NA	ug/g	N/A	50	06-OCT-21
Benzo(g,h,i)perylene		<0.010	<0.010	RPD-NA	ug/g	N/A	50	06-OCT-21
Benzo(k)fluoranthene		<0.010	<0.010	RPD-NA	ug/g	N/A	50	06-OCT-21
Chrysene		<0.010	<0.010	RPD-NA	ug/g	N/A	50	06-OCT-21
Dibenz(a,h)anthracene		<0.0050	<0.0050	RPD-NA	ug/g	N/A	50	06-OCT-21
Fluoroanthene		<0.0050	<0.0050	RPD-NA	ug/g	N/A	50	06-OCT-21
Fluorene		<0.0050	<0.0050	RPD-NA	ug/g	N/A	50	06-OCT-21
Indeno(1,2,3-cd)pyrene		<0.010	<0.010	RPD-NA	ug/g	N/A	50	06-OCT-21
Naphthalene		<0.0050	<0.0050	RPD-NA	ug/g	N/A	50	06-OCT-21
Phenanthrene		<0.0050	<0.0050	RPD-NA	ug/g	N/A	50	06-OCT-21
Pyrene		<0.0050	<0.0050	RPD-NA	ug/g	N/A	50	06-OCT-21
Quinoline		<0.0050	<0.0050	RPD-NA	ug/g	N/A	50	06-OCT-21
WG3631218-2 LCS								
1-Methylnaphthalene			99.1		%		50-140	06-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-CCME-SQGL-WT	**Soil**							
Batch R5611880								
WG3631218-2 LCS								
2-Methylnaphthalene			95.7		%		50-140	06-OCT-21
Acenaphthene			94.1		%		50-140	06-OCT-21
Acenaphthylene			85.5		%		50-140	06-OCT-21
Acridine			84.4		%		50-140	06-OCT-21
Anthracene			80.4		%		50-140	06-OCT-21
Benzo(a)anthracene			93.9		%		50-140	06-OCT-21
Benzo(a)pyrene			81.0		%		50-140	06-OCT-21
Benzo(b&j)fluoranthene			93.8		%		50-150	06-OCT-21
Benzo(g,h,i)perylene			82.3		%		50-140	06-OCT-21
Benzo(k)fluoranthene			92.8		%		50-140	06-OCT-21
Chrysene			104.3		%		50-140	06-OCT-21
Dibenz(a,h)anthracene			88.5		%		50-140	06-OCT-21
Fluoroanthene			92.1		%		50-140	06-OCT-21
Fluorene			91.7		%		50-140	06-OCT-21
Indeno(1,2,3-cd)pyrene			75.2		%		50-140	06-OCT-21
Naphthalene			90.4		%		50-140	06-OCT-21
Phenanthrene			96.3		%		50-140	06-OCT-21
Pyrene			90.6		%		50-140	06-OCT-21
Quinoline			75.2		%		50-140	06-OCT-21
WG3631218-1 MB								
1-Methylnaphthalene			<0.0050		ug/g		0.005	06-OCT-21
2-Methylnaphthalene			<0.0050		ug/g		0.005	06-OCT-21
Acenaphthene			<0.0050		ug/g		0.005	06-OCT-21
Acenaphthylene			<0.0050		ug/g		0.005	06-OCT-21
Acridine			<0.010		ug/g		0.01	06-OCT-21
Anthracene			<0.0040		ug/g		0.004	06-OCT-21
Benzo(a)anthracene			<0.010		ug/g		0.01	06-OCT-21
Benzo(a)pyrene			<0.0050		ug/g		0.005	06-OCT-21
Benzo(b&j)fluoranthene			<0.010		ug/g		0.01	06-OCT-21
Benzo(g,h,i)perylene			<0.010		ug/g		0.01	06-OCT-21
Benzo(k)fluoranthene			<0.010		ug/g		0.01	06-OCT-21
Chrysene			<0.010		ug/g		0.01	06-OCT-21
Dibenz(a,h)anthracene			<0.0050		ug/g		0.005	06-OCT-21
Fluoroanthene			<0.0050		ug/g		0.005	06-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-CCME-SQGL-WT	**Soil**							
Batch R5611880								
WG3631218-1 MB								
Fluorene			<0.0050		ug/g		0.005	06-OCT-21
Indeno(1,2,3-cd)pyrene			<0.010		ug/g		0.01	06-OCT-21
Naphthalene			<0.0050		ug/g		0.005	06-OCT-21
Phenanthrene			<0.0050		ug/g		0.005	06-OCT-21
Pyrene			<0.0050		ug/g		0.005	06-OCT-21
Quinoline			<0.0050		ug/g		0.005	06-OCT-21
Surrogate: 2-Fluorobiphenyl			84.8		%		60-140	06-OCT-21
Surrogate: d14-Terphenyl			83.9		%		60-140	06-OCT-21
WG3631218-4 MS		**WG3631218-5**						
1-Methylnaphthalene			100.9		%		50-150	06-OCT-21
2-Methylnaphthalene			98.7		%		50-150	06-OCT-21
Acenaphthene			96.7		%		50-150	06-OCT-21
Acenaphthylene			91.2		%		50-150	06-OCT-21
Acridine			94.3		%		50-150	06-OCT-21
Anthracene			86.0		%		50-150	06-OCT-21
Benzo(a)anthracene			103.7		%		50-150	06-OCT-21
Benzo(a)pyrene			84.9		%		50-150	06-OCT-21
Benzo(b&j)fluoranthene			96.0		%		50-150	06-OCT-21
Benzo(g,h,i)perylene			87.7		%		50-150	06-OCT-21
Benzo(k)fluoranthene			94.3		%		50-150	06-OCT-21
Chrysene			103.8		%		50-150	06-OCT-21
Dibenz(a,h)anthracene			93.0		%		50-150	06-OCT-21
Fluoroanthene			95.2		%		50-150	06-OCT-21
Fluorene			96.3		%		50-150	06-OCT-21
Indeno(1,2,3-cd)pyrene			87.6		%		50-150	06-OCT-21
Naphthalene			91.6		%		50-150	06-OCT-21
Phenanthrene			97.7		%		50-150	06-OCT-21
Pyrene			94.3		%		50-150	06-OCT-21
Quinoline			84.5		%		50-150	06-OCT-21
Batch R5614231								
WG3633110-3 DUP		**WG3633110-5**						
1-Methylnaphthalene		<0.025	<0.025	RPD-NA	ug/g	N/A	50	08-OCT-21
2-Methylnaphthalene		<0.025	<0.025	RPD-NA	ug/g	N/A	50	08-OCT-21
Acenaphthene		0.059	0.056		ug/g	6.4	50	08-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-CCME-SQGL-WT	**Soil**							
Batch R5614231								
WG3633110-3 DUP		**WG3633110-5**						
Acenaphthylene		0.417	0.366		ug/g	13	50	08-OCT-21
Acridine		<0.050	<0.050	RPD-NA	ug/g	N/A	50	08-OCT-21
Anthracene		0.203	0.157		ug/g	26	50	08-OCT-21
Benzo(a)anthracene		1.04	0.679		ug/g	42	50	08-OCT-21
Benzo(a)pyrene		1.43	1.08		ug/g	28	50	08-OCT-21
Benzo(b&j)fluoranthene		1.37	0.947		ug/g	36	50	08-OCT-21
Benzo(g,h,i)perylene		0.918	0.704		ug/g	26	50	08-OCT-21
Benzo(k)fluoranthene		0.522	0.365		ug/g	35	50	08-OCT-21
Chrysene		1.11	0.765		ug/g	37	50	08-OCT-21
Dibenz(a,h)anthracene		0.225	0.171		ug/g	28	50	08-OCT-21
Fluoroanthene		1.10	0.730		ug/g	40	50	08-OCT-21
Fluorene		0.083	0.071		ug/g	16	50	08-OCT-21
Indeno(1,2,3-cd)pyrene		0.716	0.525		ug/g	31	50	08-OCT-21
Naphthalene		<0.025	0.030	RPD-NA	ug/g	N/A	50	08-OCT-21
Phenanthrene		0.354	0.300		ug/g	17	50	08-OCT-21
Pyrene		1.40	0.993		ug/g	34	50	08-OCT-21
Quinoline		<0.025	<0.025	RPD-NA	ug/g	N/A	50	08-OCT-21
WG3633110-2 LCS								
1-Methylnaphthalene			92.8		%		50-140	08-OCT-21
2-Methylnaphthalene			88.7		%		50-140	08-OCT-21
Acenaphthene			87.0		%		50-140	08-OCT-21
Acenaphthylene			77.8		%		50-140	08-OCT-21
Acridine			77.8		%		50-140	08-OCT-21
Anthracene			75.6		%		50-140	08-OCT-21
Benzo(a)anthracene			83.4		%		50-140	08-OCT-21
Benzo(a)pyrene			73.2		%		50-140	08-OCT-21
Benzo(b&j)fluoranthene			82.3		%		50-150	08-OCT-21
Benzo(g,h,i)perylene			88.6		%		50-140	08-OCT-21
Benzo(k)fluoranthene			97.7		%		50-140	08-OCT-21
Chrysene			100.2		%		50-140	08-OCT-21
Dibenz(a,h)anthracene			89.2		%		50-140	08-OCT-21
Fluoroanthene			89.5		%		50-140	08-OCT-21
Fluorene			83.5		%		50-140	08-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-CCME-SQGL-WT	**Soil**							
Batch R5614231								
WG3633110-2 LCS								
Indeno(1,2,3-cd)pyrene			76.3		%		50-140	08-OCT-21
Naphthalene			88.0		%		50-140	08-OCT-21
Phenanthrene			92.9		%		50-140	08-OCT-21
Pyrene			88.9		%		50-140	08-OCT-21
Quinoline			72.0		%		50-140	08-OCT-21
WG3633110-1 MB								
1-Methylnaphthalene			<0.0050		ug/g		0.005	08-OCT-21
2-Methylnaphthalene			<0.0050		ug/g		0.005	08-OCT-21
Acenaphthene			<0.0050		ug/g		0.005	08-OCT-21
Acenaphthylene			<0.0050		ug/g		0.005	08-OCT-21
Acridine			<0.010		ug/g		0.01	08-OCT-21
Anthracene			<0.0040		ug/g		0.004	08-OCT-21
Benzo(a)anthracene			<0.010		ug/g		0.01	08-OCT-21
Benzo(a)pyrene			<0.0050		ug/g		0.005	08-OCT-21
Benzo(b&j)fluoranthene			<0.010		ug/g		0.01	08-OCT-21
Benzo(g,h,i)perylene			<0.010		ug/g		0.01	08-OCT-21
Benzo(k)fluoranthene			<0.010		ug/g		0.01	08-OCT-21
Chrysene			<0.010		ug/g		0.01	08-OCT-21
Dibenz(a,h)anthracene			<0.0050		ug/g		0.005	08-OCT-21
Fluoroanthene			<0.0050		ug/g		0.005	08-OCT-21
Fluorene			<0.0050		ug/g		0.005	08-OCT-21
Indeno(1,2,3-cd)pyrene			<0.010		ug/g		0.01	08-OCT-21
Naphthalene			<0.0050		ug/g		0.005	08-OCT-21
Phenanthrene			<0.0050		ug/g		0.005	08-OCT-21
Pyrene			<0.0050		ug/g		0.005	08-OCT-21
Quinoline			<0.0050		ug/g		0.005	08-OCT-21
Surrogate: 2-Fluorobiphenyl			85.3		%		60-140	08-OCT-21
Surrogate: d14-Terphenyl			92.9		%		60-140	08-OCT-21
WG3633110-4 MS		**WG3633110-5**						
1-Methylnaphthalene			100.0		%		50-150	08-OCT-21
2-Methylnaphthalene			97.5		%		50-150	08-OCT-21
Acenaphthene			97.6		%		50-150	08-OCT-21
Acenaphthylene			56.6		%		50-150	08-OCT-21
Acridine			91.9		%		50-150	08-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-CCME-SQGL-WT	**Soil**							
Batch R5614231								
WG3633110-4 MS		**WG3633110-5**						
Anthracene			87.7		%		50-150	08-OCT-21
Benzo(a)anthracene			92.9		%		50-150	08-OCT-21
Benzo(a)pyrene			67.3		%		50-150	08-OCT-21
Benzo(b&j)fluoranthene			62.5		%		50-150	08-OCT-21
Benzo(g,h,i)perylene			64.7		%		50-150	08-OCT-21
Benzo(k)fluoranthene			80.6		%		50-150	08-OCT-21
Chrysene			85.1		%		50-150	08-OCT-21
Dibenz(a,h)anthracene			65.0		%		50-150	08-OCT-21
Fluoroanthene			86.0		%		50-150	08-OCT-21
Fluorene			100.9		%		50-150	08-OCT-21
Indeno(1,2,3-cd)pyrene			67.5		%		50-150	08-OCT-21
Naphthalene			93.7		%		50-150	08-OCT-21
Phenanthrene			95.7		%		50-150	08-OCT-21
Pyrene			85.9		%		50-150	08-OCT-21
Quinoline			91.2		%		50-150	08-OCT-21
PCB9-LOW-WT	**Soil**							
Batch R5613829								
WG3631220-3 DUP		**WG3631220-5**						
Aroclor 1016		<0.023	<0.023	RPD-NA	mg/kg	N/A	50	07-OCT-21
Aroclor 1221		<0.023	<0.023	RPD-NA	mg/kg	N/A	50	07-OCT-21
Aroclor 1232		<0.023	<0.023	RPD-NA	mg/kg	N/A	50	07-OCT-21
Aroclor 1242		<0.023	0.024	RPD-NA	mg/kg	N/A	40	07-OCT-21
Aroclor 1248		<0.023	<0.023	RPD-NA	mg/kg	N/A	40	07-OCT-21
Aroclor 1254		0.178	0.182		mg/kg	2.0	40	07-OCT-21
Aroclor 1260		0.217	0.227		mg/kg	4.7	40	07-OCT-21
Aroclor 1262		<0.023	<0.023	RPD-NA	mg/kg	N/A	50	07-OCT-21
Aroclor 1268		<0.023	<0.023	RPD-NA	mg/kg	N/A	50	07-OCT-21
WG3631220-2 LCS								
Aroclor 1242			93.6		%		60-140	07-OCT-21
Aroclor 1248			87.5		%		60-140	07-OCT-21
Aroclor 1254			94.7		%		60-140	07-OCT-21
Aroclor 1260			91.8		%		60-140	07-OCT-21
WG3631220-1 MB								
Aroclor 1016			<0.0030		mg/kg		0.003	07-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PCB9-LOW-WT	**Soil**							
Batch R5613829								
WG3631220-1 MB								
Aroclor 1221			<0.0030		mg/kg		0.003	07-OCT-21
Aroclor 1232			<0.0030		mg/kg		0.003	07-OCT-21
Aroclor 1242			<0.0030		mg/kg		0.003	07-OCT-21
Aroclor 1248			<0.0030		mg/kg		0.003	07-OCT-21
Aroclor 1254			<0.0030		mg/kg		0.003	07-OCT-21
Aroclor 1260			<0.0030		mg/kg		0.003	07-OCT-21
Aroclor 1262			<0.0030		mg/kg		0.003	07-OCT-21
Aroclor 1268			<0.0030		mg/kg		0.003	07-OCT-21
Surrogate: d14-Terphenyl			114.6		%		50-140	07-OCT-21
WG3631220-4 MS		**WG3631220-5**						
Aroclor 1242			123.9		%		60-140	07-OCT-21
Aroclor 1254			86.75		%		60-140	07-OCT-21
Aroclor 1260			95.3		%		60-140	07-OCT-21
Batch R5616907								
WG3635528-3 DUP		**WG3635528-5**						
Aroclor 1016		<0.034	<0.034	RPD-NA	mg/kg	N/A	50	13-OCT-21
Aroclor 1221		<0.034	<0.034	RPD-NA	mg/kg	N/A	50	13-OCT-21
Aroclor 1232		<0.034	<0.034	RPD-NA	mg/kg	N/A	50	13-OCT-21
Aroclor 1242		<0.034	<0.034	RPD-NA	mg/kg	N/A	40	13-OCT-21
Aroclor 1248		<0.034	<0.034	RPD-NA	mg/kg	N/A	40	13-OCT-21
Aroclor 1254		0.196	0.202		mg/kg	3.0	40	13-OCT-21
Aroclor 1260		0.227	0.257		mg/kg	12	40	13-OCT-21
Aroclor 1262		<0.034	<0.034	RPD-NA	mg/kg	N/A	50	13-OCT-21
Aroclor 1268		<0.034	<0.034	RPD-NA	mg/kg	N/A	50	13-OCT-21
WG3635528-2 LCS								
Aroclor 1242			91.8		%		60-140	13-OCT-21
Aroclor 1248			83.0		%		60-140	13-OCT-21
Aroclor 1254			109.8		%		60-140	13-OCT-21
Aroclor 1260			109.1		%		60-140	13-OCT-21
WG3635528-1 MB								
Aroclor 1016			<0.0030		mg/kg		0.003	13-OCT-21
Aroclor 1221			<0.0030		mg/kg		0.003	13-OCT-21
Aroclor 1232			<0.0030		mg/kg		0.003	13-OCT-21
Aroclor 1242			<0.0030		mg/kg		0.003	13-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PCB9-LOW-WT	**Soil**							
Batch R5616907								
WG3635528-1 MB								
Aroclor 1248			<0.0030		mg/kg		0.003	13-OCT-21
Aroclor 1254			<0.0030		mg/kg		0.003	13-OCT-21
Aroclor 1260			<0.0030		mg/kg		0.003	13-OCT-21
Aroclor 1262			<0.0030		mg/kg		0.003	13-OCT-21
Aroclor 1268			<0.0030		mg/kg		0.003	13-OCT-21
Surrogate: d14-Terphenyl			119.3		%		50-140	13-OCT-21
WG3635528-4 MS		**WG3635528-5**						
Aroclor 1242			106.5		%		60-140	13-OCT-21
Aroclor 1254			N/A	MS-B	%		-	13-OCT-21
Aroclor 1260			N/A	MS-B	%		-	13-OCT-21
PSA-MUST-SK	**Soil**							
Batch R5617706								
WG3634919-1 DUP		**L2647211-1**						
MUST PSA % > 75um		9.8	9.0	J	%	0.7	5	13-OCT-21
WG3634919-2 IRM		**2020-PSA_SOIL**						
MUST PSA % > 75um			43.0		%		37.9-47.9	13-OCT-21
SPECGRAV-CL	**Soil**							
Batch R5628726								
WG3645808-2 DUP		**L2646722-10**						
Specific Gravity		1.10	1.11		kg/L	0.9	20	25-OCT-21
WG3645808-1 IRM		**DI_H2O**						
Specific Gravity			100.0		%		90-110	25-OCT-21
TOC-WT	**Soil**							
Batch R5614708								
WG3633968-3 CRM		**WT-TOC-CRM**						
Total Organic Carbon			112.9		%		70-130	08-OCT-21
WG3633968-4 DUP		**L2646459-29**						
Total Organic Carbon		6.31	6.35		%	0.7	20	08-OCT-21
Fraction Organic Carbon		0.0631	0.0635		g/g	0.7	25	08-OCT-21
WG3633968-2 LCS								
Total Organic Carbon			99.3		%		80-120	08-OCT-21
WG3633968-1 MB								
Total Organic Carbon			<0.10		%		0.1	08-OCT-21
Fraction Organic Carbon			<0.0010		g/g		0.001	08-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
TOC-WT	**Soil**							
Batch R5615928								
WG3635506-3 CRM		**WT-TOC-CRM**						
Total Organic Carbon			120.8		%		70-130	12-OCT-21
WG3635506-4 DUP		**L2646722-6**						
Total Organic Carbon		7.67	8.03		%	4.6	20	12-OCT-21
Fraction Organic Carbon		0.0767	0.0803		g/g	4.6	25	12-OCT-21
WG3635506-2 LCS								
Total Organic Carbon			91.7		%		80-120	12-OCT-21
WG3635506-1 MB								
Total Organic Carbon			<0.10		%		0.1	12-OCT-21
Fraction Organic Carbon			<0.0010		g/g		0.001	12-OCT-21

Quality Control Report

Workorder: L2646722 Report Date: 26-OCT-21

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Legend:

Limit	ALS Control Limit (Data Quality Objectives)
DUP	Duplicate
RPD	Relative Percent Difference
N/A	Not Available
LCS	Laboratory Control Sample
SRM	Standard Reference Material
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ADE	Average Desorption Efficiency
MB	Method Blank
IRM	Internal Reference Material
CRM	Certified Reference Material
CCV	Continuing Calibration Verification
CVS	Calibration Verification Standard
LCSD	Laboratory Control Sample Duplicate

Sample Parameter Qualifier Definitions:

Qualifier	Description
DLHM	Detection Limit Adjusted: Sample has High Moisture Content
J	Duplicate results and limits are expressed in terms of absolute difference.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Hold Time Exceedances:

All test results reported with this submission were conducted within ALS recommended hold times.

ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.

Chain of Custody

L2646722-COFC

COC Number: 20 - 125

Page 1 of 2

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Report To	Contact and company name below will appear on the final report
Company:	Golder Associates Ltd.
Contact:	Jill LaPorte
Phone:	905-723-2727
	Company address below will appear on the final report
Street:	100 Scotia Court
City/Province:	Whitby, Ontario
Postal Code:	L1N 8Y6
Invoice To	Same as Report To ☑ YES ☐ NO
	Copy of Invoice with Report ☑ YES ☐ NO
Company:	Golder Associates Ltd.
Contact:	Accounts Payables

Reports / Recipients

Select Report Format: ☑ PDF ☑ EXCEL ☐ EDD (DIGITAL)

Merge QC/QCI Reports with COA ☑ YES ☐ NO ☐ N/A

☑ Compare Results to Criteria on Report - provide details below if box checked

Select Distribution: ☑ EMAIL ☐ MAIL ☐ FAX

Email 1 or Fax: Jill_LaPorte@golder.com

Email 2: Shawn_Seguin@golder.com

Email 3:

Invoice Recipients

Select Invoice Distribution: ☑ EMAIL ☐ MAIL ☐ FAX

Email 1 or Fax: Jill_LaPorte@golder.com

Email 2: canadaaccountspayableinvoices@golder.com

Turnaround Time (TAT) Requested

☑ Routine [R] if received by 3pm M-F - no surcharges apply

☐ 4 day [P4] if received by 3pm M-F - 20% rush surcharge minimum

☐ 3 day [P3] if received by 3pm M-F - 25% rush surcharge minimum

☐ 2 day [P2] if received by 3pm M-F - 50% rush surcharge minimum

☐ 1 day [E] if received by 3pm M-F - 100% rush surcharge minimum

☐ Same day [E2] if received by 10am M-S - 200% rush surcharge. Additional fees may apply to rush requests on weekends, statutory holidays and non-routine tests

AFFIX ALS BARCODE LABEL HERE (ALS use only)

Date and Time Required for all E&P TATs:

For all tests with rush TATs requested, please contact your AM to confirm availability.

Project Information

ALS Account # / Quote #:	15520 / Q86566
Job #:	1783886-8000
PO / AFE:	
LSD:	

Oil and Gas Required Fields (client use)

AFE/Cost Center:	PO#
Major/Minor Code:	Routing Code:
Requisitioner:	
Location:	

ALS Lab Work Order # (ALS use only): L2646722

ALS Contact: Amanda Overholster

Sampler: J. Weir / S Brenegan

Analysis Request

Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below

ALS Sample # (ALS use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	NUMBER OF CONTAINERS	HWS-Boron (B-HWS-R511-WT)	Cr3 (CR-CR3-WT)	Cr6 (CR-CR6-IC-WT)	Mercury (HG-200.2-CVAA-WT)	Metals (MET-200.2-CCMS-WT)	PAH (PAH-CCME-SQGL-WT)	MOISTURE-WT	TOC (TOC-WT)	PCB9 (PCB9-LOW-WT)		Specific Gravity (SPECGRAV-CL)	PSA (PSA-MUST-WT-SK)	Atterberg (ATTERBERG-SK)		SAMPLES ON HOLD	EXTENDED STORAGE REQUIRED	SUSPECTED HAZARD (see notes)
	TC3A-SG-001	29-SEP-21	13:15	Sediment	4				X	X	X	X	X	X			X					
	TC3A-SG-002	29-SEP-21	13:50	Sediment	4				X	X	X	X	X	X							X	
	TC3A-SG-003	29-SEP-21	14:15	Sediment	6	X	X	X	X	X	X	X	X	X			X				X	
	TC4-SG-001	29-SEP-21	15:15	Sediment	4				X	X	X	X	X	X							X	
	TC4-SG-002	29-SEP-21	16:00	Sediment	4				X	X	X	X	X	X							X	
	TC4-SG-006	29-SEP-21	16:37	Sediment	4				X	X	X	X	X	X							X	
	DUP-002	29-SEP-21	—	Sediment	3				X	X	X	X	X	X							—	
	TC4-SG-007	29-SEP-21	16:30	Sediment	4				X	X	X	X	X	X							X	
	DUP-202	29-SEP-21	—	Sediment	3				X	X	X	X	X	X							—	
	TC4-SG-009	29-SEP-21	15:30	Sediment	10	X	X	X	X	X	X	X	X	X			X	X	X		X	
	TC4-SC-009A	29-SEP-21	14:10	Sediment	9	X	X	X	X	X	X	X	X	X			X	X	X		—	

Drinking Water (DW) Samples[1] (client use)

Are samples taken from a Regulated DW System? ☐ YES ☑ NO

Are samples for human consumption/ use? ☐ YES ☑ NO

Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only)

Each sample (excluding TC4-SC-009A, DUP-002, and DUP-202) includes one large ziploc bag of sediment to hold, the remaining containers can be processed for analysis. EQUIS code: 230179134 and TC3A-SG-001

SAMPLE RECEIPT DETAILS (ALS use only)

Cooling Method: ☐ NONE ☑ ICE ☐ ICE PACKS ☐ FROZEN ☐ COOLING INITIATED

Submission Comments identified on Sample Receipt Notification: ☐ YES ☐ NO

Cooler Custody Seals Intact: ☐ YES ☐ N/A Sample Custody Seals Intact: ☐ YES ☐ N/A

INITIAL COOLER TEMPERATURES °C				FINAL COOLER TEMPERATURES °C			
11.7	11.2	7.8	9.0	8.7	11.1		

SHIPMENT RELEASE (client use)

Released by:	Date:	Time:
Jamie Weir	01 OCT 21	0830

INITIAL SHIPMENT RECEPTION (ALS use only)

Received by:	Date:	Time:
Karan	10/4/2021	10:06

FINAL SHIPMENT RECEPTION (ALS use only)

Received by:	Date:	Time:
	10/4/21	1600

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

AUG 2020 FRONT

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white report copy.

1. If any water samples are taken from a **Regulated Drinking Water (DW) System**, please submit using an **Authorized DW COC form**.

GOLDER ASSOCIATES LTD (Whitby)
ATTN: Jill LaPorte
100 Scotia Court
Whitby ON L1N 8Y6

Date Received: 04-OCT-21
Report Date: 08-OCT-21 12:13 (MT)
Version: FINAL

Client Phone: 905-723-2727

Certificate of Analysis

Lab Work Order #: L2646730

Project P.O. #: NOT SUBMITTED
Job Reference: 1783886-8000-8006
C of C Numbers:
Legal Site Desc:

Amanda Overholster
Account Manager

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646730-1 TC3A-SG-003 Sampled By: JS on 29-SEP-21 @ 14:15 Matrix: SEDIMENT							
Sample Preparation							
Initial pH	7.46		0.10	pH units		06-OCT-21	R5610356
Final pH	5.37		0.10	pH units		06-OCT-21	R5610356
TCLP Extractables							
Acenaphthene	<0.0050		0.0050	mg/L	06-OCT-21	08-OCT-21	R5614387
Acenaphthylene	<0.0050		0.0050	mg/L	06-OCT-21	08-OCT-21	R5614387
Anthracene	<0.0050		0.0050	mg/L	06-OCT-21	08-OCT-21	R5614387
Benzo(a)anthracene	<0.0050		0.0050	mg/L	06-OCT-21	08-OCT-21	R5614387
Benzo(a)pyrene	<0.0010		0.0010	mg/L	06-OCT-21	08-OCT-21	R5614387
Benzo(b&j)fluoranthene	<0.0050		0.0050	mg/L	06-OCT-21	08-OCT-21	R5614387
Benzo(g,h,i)perylene	<0.0050		0.0050	mg/L	06-OCT-21	08-OCT-21	R5614387
Benzo(k)fluoranthene	<0.0050		0.0050	mg/L	06-OCT-21	08-OCT-21	R5614387
Chrysene	<0.0050		0.0050	mg/L	06-OCT-21	08-OCT-21	R5614387
Dibenz(a,h)anthracene	<0.0050		0.0050	mg/L	06-OCT-21	08-OCT-21	R5614387
Fluoranthene	<0.0050		0.0050	mg/L	06-OCT-21	08-OCT-21	R5614387
Fluorene	<0.0050		0.0050	mg/L	06-OCT-21	08-OCT-21	R5614387
Indeno(1,2,3-cd)pyrene	<0.0050		0.0050	mg/L	06-OCT-21	08-OCT-21	R5614387
Naphthalene	<0.0050		0.0050	mg/L	06-OCT-21	08-OCT-21	R5614387
Phenanthrene	<0.0050		0.0050	mg/L	06-OCT-21	08-OCT-21	R5614387
Pyrene	<0.0050		0.0050	mg/L	06-OCT-21	08-OCT-21	R5614387
Surrogate: Chrysene d12	83.6		60-130	%	06-OCT-21	08-OCT-21	R5614387
Surrogate: Naphthalene d8	84.3		50-130	%	06-OCT-21	08-OCT-21	R5614387
Surrogate: Phenanthrene d10	100.8		60-130	%	06-OCT-21	08-OCT-21	R5614387
Quinoline	<0.0050		0.0050	mg/L	06-OCT-21	08-OCT-21	R5614387
TCLP Metals							
Arsenic (As)	0.088		0.050	mg/L		06-OCT-21	R5611081
Barium (Ba)	1.22		0.50	mg/L		06-OCT-21	R5611081
Boron (B)	<2.5		2.5	mg/L		06-OCT-21	R5611081
Cadmium (Cd)	<0.0050		0.0050	mg/L		06-OCT-21	R5611081
Chromium (Cr)	<0.050		0.050	mg/L		06-OCT-21	R5611081
Lead (Pb)	0.214		0.025	mg/L		06-OCT-21	R5611081
Mercury (Hg)	<0.00010		0.00010	mg/L		06-OCT-21	R5611029
Selenium (Se)	<0.025		0.025	mg/L		06-OCT-21	R5611081
Silver (Ag)	<0.0050		0.0050	mg/L		06-OCT-21	R5611081
Uranium (U)	<0.25		0.25	mg/L		06-OCT-21	R5611081
L2646730-2 TC4 -SG-009 Sampled By: JS on 29-SEP-21 @ 15:30 Matrix: SEDIMENT							
Sample Preparation							
Initial pH	8.34		0.10	pH units		06-OCT-21	R5610356
Final pH	5.50		0.10	pH units		06-OCT-21	R5610356
TCLP Extractables							
Acenaphthene	<0.0050		0.0050	mg/L	06-OCT-21	08-OCT-21	R5614387

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646730-2 TC4 -SG-009 Sampled By: JS on 29-SEP-21 @ 15:30 Matrix: SEDIMENT							
TCLP Extractables							
Acenaphthylene	<0.0050		0.0050	mg/L	06-OCT-21	08-OCT-21	R5614387
Anthracene	<0.0050		0.0050	mg/L	06-OCT-21	08-OCT-21	R5614387
Benzo(a)anthracene	<0.0050		0.0050	mg/L	06-OCT-21	08-OCT-21	R5614387
Benzo(a)pyrene	<0.0010		0.0010	mg/L	06-OCT-21	08-OCT-21	R5614387
Benzo(b&j)fluoranthene	<0.0050		0.0050	mg/L	06-OCT-21	08-OCT-21	R5614387
Benzo(g,h,i)perylene	<0.0050		0.0050	mg/L	06-OCT-21	08-OCT-21	R5614387
Benzo(k)fluoranthene	<0.0050		0.0050	mg/L	06-OCT-21	08-OCT-21	R5614387
Chrysene	<0.0050		0.0050	mg/L	06-OCT-21	08-OCT-21	R5614387
Dibenz(a,h)anthracene	<0.0050		0.0050	mg/L	06-OCT-21	08-OCT-21	R5614387
Fluoranthene	<0.0050		0.0050	mg/L	06-OCT-21	08-OCT-21	R5614387
Fluorene	<0.0050		0.0050	mg/L	06-OCT-21	08-OCT-21	R5614387
Indeno(1,2,3-cd)pyrene	<0.0050		0.0050	mg/L	06-OCT-21	08-OCT-21	R5614387
Naphthalene	<0.0050		0.0050	mg/L	06-OCT-21	08-OCT-21	R5614387
Phenanthrene	<0.0050		0.0050	mg/L	06-OCT-21	08-OCT-21	R5614387
Pyrene	<0.0050		0.0050	mg/L	06-OCT-21	08-OCT-21	R5614387
Surrogate: Chrysene d12	100.1		60-130	%	06-OCT-21	08-OCT-21	R5614387
Surrogate: Naphthalene d8	87.9		50-130	%	06-OCT-21	08-OCT-21	R5614387
Surrogate: Phenanthrene d10	106.0		60-130	%	06-OCT-21	08-OCT-21	R5614387
Quinoline	<0.0050		0.0050	mg/L	06-OCT-21	08-OCT-21	R5614387
TCLP Metals							
Arsenic (As)	<0.050		0.050	mg/L		06-OCT-21	R5611081
Barium (Ba)	0.84		0.50	mg/L		06-OCT-21	R5611081
Boron (B)	<2.5		2.5	mg/L		06-OCT-21	R5611081
Cadmium (Cd)	<0.0050		0.0050	mg/L		06-OCT-21	R5611081
Chromium (Cr)	<0.050		0.050	mg/L		06-OCT-21	R5611081
Lead (Pb)	<0.025		0.025	mg/L		06-OCT-21	R5611081
Mercury (Hg)	<0.00010		0.00010	mg/L		06-OCT-21	R5611029
Selenium (Se)	<0.025		0.025	mg/L		06-OCT-21	R5611081
Silver (Ag)	<0.0050		0.0050	mg/L		06-OCT-21	R5611081
Uranium (U)	<0.25		0.25	mg/L		06-OCT-21	R5611081
L2646730-3 TC4 -SC-009A Sampled By: JS on 29-SEP-21 @ 14:10 Matrix: SEDIMENT							
Sample Preparation							
Initial pH	7.64		0.10	pH units		06-OCT-21	R5610356
Final pH	5.42		0.10	pH units		06-OCT-21	R5610356
TCLP Extractables							
Acenaphthene	<0.0050		0.0050	mg/L	06-OCT-21	08-OCT-21	R5614387
Acenaphthylene	<0.0050		0.0050	mg/L	06-OCT-21	08-OCT-21	R5614387
Anthracene	<0.0050		0.0050	mg/L	06-OCT-21	08-OCT-21	R5614387
Benzo(a)anthracene	<0.0050		0.0050	mg/L	06-OCT-21	08-OCT-21	R5614387
Benzo(a)pyrene	<0.0010		0.0010	mg/L	06-OCT-21	08-OCT-21	R5614387

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646730-3 TC4 -SC-009A Sampled By: JS on 29-SEP-21 @ 14:10 Matrix: SEDIMENT							
TCLP Extractables							
Benzo(b&j)fluoranthene	<0.0050		0.0050	mg/L	06-OCT-21	08-OCT-21	R5614387
Benzo(g,h,i)perylene	<0.0050		0.0050	mg/L	06-OCT-21	08-OCT-21	R5614387
Benzo(k)fluoranthene	<0.0050		0.0050	mg/L	06-OCT-21	08-OCT-21	R5614387
Chrysene	<0.0050		0.0050	mg/L	06-OCT-21	08-OCT-21	R5614387
Dibenz(a,h)anthracene	<0.0050		0.0050	mg/L	06-OCT-21	08-OCT-21	R5614387
Fluoranthene	<0.0050		0.0050	mg/L	06-OCT-21	08-OCT-21	R5614387
Fluorene	<0.0050		0.0050	mg/L	06-OCT-21	08-OCT-21	R5614387
Indeno(1,2,3-cd)pyrene	<0.0050		0.0050	mg/L	06-OCT-21	08-OCT-21	R5614387
Naphthalene	<0.0050		0.0050	mg/L	06-OCT-21	08-OCT-21	R5614387
Phenanthrene	<0.0050		0.0050	mg/L	06-OCT-21	08-OCT-21	R5614387
Pyrene	<0.0050		0.0050	mg/L	06-OCT-21	08-OCT-21	R5614387
Surrogate: Chrysene d12	93.0		60-130	%	06-OCT-21	08-OCT-21	R5614387
Surrogate: Naphthalene d8	91.8		50-130	%	06-OCT-21	08-OCT-21	R5614387
Surrogate: Phenanthrene d10	104.1		60-130	%	06-OCT-21	08-OCT-21	R5614387
Quinoline	<0.0050		0.0050	mg/L	06-OCT-21	08-OCT-21	R5614387
TCLP Metals							
Arsenic (As)	<0.050		0.050	mg/L		06-OCT-21	R5611081
Barium (Ba)	0.91		0.50	mg/L		06-OCT-21	R5611081
Boron (B)	<2.5		2.5	mg/L		06-OCT-21	R5611081
Cadmium (Cd)	<0.0050		0.0050	mg/L		06-OCT-21	R5611081
Chromium (Cr)	<0.050		0.050	mg/L		06-OCT-21	R5611081
Lead (Pb)	0.051		0.025	mg/L		06-OCT-21	R5611081
Mercury (Hg)	<0.00010		0.00010	mg/L		06-OCT-21	R5611029
Selenium (Se)	<0.025		0.025	mg/L		06-OCT-21	R5611081
Silver (Ag)	<0.0050		0.0050	mg/L		06-OCT-21	R5611081
Uranium (U)	<0.25		0.25	mg/L		06-OCT-21	R5611081

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
HG-TCLP-WT	Waste	Mercury (CVAA) for O.Reg 347	EPA 1631E

This analysis is carried out in accordance with the extraction procedure outlined in "Test Methods for Evaluating Solid Waste - Physical/Chemical Methods Volume 1C" SW-846 EPA Method 1311, published by the United States Environmental Protection Agency (EPA). In summary, the sample is extracted at a 20:1 liquid to solids ratio for 16 to 20 hours using either extraction fluid #1 (glacial acetic acid, water and sodium hydroxide) or extraction fluid #2 (glacial acetic acid), depending on the pH of the original sample. The extract is then filtered through a 0.6 to 0.8 micron glass fibre filter and analysed using atomic absorption spectrophotometry (EPA 1631E).

LEACH-TCLP-WT	Waste	Leachate Procedure for Reg 347	EPA 1311

Inorganic and Semi-Volatile Organic contaminants are leached from waste samples in strict accordance with US EPA Method 1311, "Toxicity Characteristic Leaching Procedure" (TCLP). Test results are reported in leachate concentration units (normally mg/L).

MET-TCLP-WT	Waste	O.Reg 347 TCLP Leachable Metals	EPA 6020B

This analysis is carried out in accordance with the extraction procedure outlined in "Test Methods for Evaluating Solid Waste - Physical/Chemical Methods Volume 1C" SW-846 EPA Method 1311, published by the United States Environmental Protection Agency (EPA). In summary, the sample is extracted at a 20:1 liquid to solids ratio for 16 to 20 hours using either extraction fluid #1 (glacial acetic acid, water and sodium hydroxide) or extraction fluid #2 (glacial acetic acid), depending on the pH of the original sample. The extract is then filtered through a 0.6 to 0.8 micron glass fibre filter. Instrumental analysis of the digested extract is by collision cell inductively coupled plasma - mass spectrometry (modifed from EPA Method 6020B).

PAH-TCLP-WT	Waste	PAH for O. Reg 347	SW846 8270 (PAH)

Samples are leached according to TCLP protocol and then the aqueous leachate is extracted and the resulting extracts are analyzed on GC/MSD. Depending on the analytical GC/MS column used benzo(j)fluoranthene may chromatographically co-elute with benzo(b)fluoranthene or benzo(k)fluoranthene.

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
WT	ALS ENVIRONMENTAL - WATERLOO, ONTARIO, CANADA

Chain of Custody Numbers:

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.
mg/kg - milligrams per kilogram based on dry weight of sample
mg/kg wwt - milligrams per kilogram based on wet weight of sample
mg/kg lwt - milligrams per kilogram based on lipid weight of sample
mg/L - unit of concentration based on volume, parts per million.
< - Less than.
D.L. - The reporting limit.
N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.
UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.
Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
HG-TCLP-WT	**Waste**							
Batch R5611029								
WG3632290-3 DUP		**L2646953-1**						
Mercury (Hg)		<0.00010	<0.00010	RPD-NA	mg/L	N/A	50	06-OCT-21
WG3632290-2 LCS								
Mercury (Hg)			99.0		%		70-130	06-OCT-21
WG3632290-1 MB								
Mercury (Hg)			<0.00010		mg/L		0.0001	06-OCT-21
WG3632290-4 MS		**L2646953-1**						
Mercury (Hg)			97.3		%		50-140	06-OCT-21
MET-TCLP-WT	**Waste**							
Batch R5611081								
WG3632269-4 DUP		**WG3632269-3**						
Silver (Ag)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	06-OCT-21
Arsenic (As)		<0.050	<0.050	RPD-NA	mg/L	N/A	50	06-OCT-21
Boron (B)		2.7	2.6		mg/L	4.9	50	06-OCT-21
Barium (Ba)		0.59	0.55		mg/L	7.5	50	06-OCT-21
Cadmium (Cd)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	06-OCT-21
Chromium (Cr)		<0.050	<0.050	RPD-NA	mg/L	N/A	50	06-OCT-21
Lead (Pb)		0.119	0.112		mg/L	6.4	50	06-OCT-21
Selenium (Se)		<0.025	<0.025	RPD-NA	mg/L	N/A	50	06-OCT-21
Uranium (U)		<0.25	<0.25	RPD-NA	mg/L	N/A	50	06-OCT-21
WG3632269-2 LCS								
Silver (Ag)			108.7		%		70-130	06-OCT-21
Arsenic (As)			103.0		%		70-130	06-OCT-21
Boron (B)			99.4		%		70-130	06-OCT-21
Barium (Ba)			109.1		%		70-130	06-OCT-21
Cadmium (Cd)			101.4		%		70-130	06-OCT-21
Chromium (Cr)			106.4		%		70-130	06-OCT-21
Lead (Pb)			103.6		%		70-130	06-OCT-21
Selenium (Se)			94.9		%		70-130	06-OCT-21
Uranium (U)			104.1		%		70-130	06-OCT-21
WG3632269-1 MB								
Silver (Ag)			<0.0050		mg/L		0.005	06-OCT-21
Arsenic (As)			<0.050		mg/L		0.05	06-OCT-21
Boron (B)			<2.5		mg/L		2.5	06-OCT-21
Barium (Ba)			<0.50		mg/L		0.5	06-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-TCLP-WT	**Waste**							
Batch R5611081								
WG3632269-1 MB								
Cadmium (Cd)			<0.0050		mg/L		0.005	06-OCT-21
Chromium (Cr)			<0.050		mg/L		0.05	06-OCT-21
Lead (Pb)			<0.025		mg/L		0.025	06-OCT-21
Selenium (Se)			<0.025		mg/L		0.025	06-OCT-21
Uranium (U)			<0.25		mg/L		0.25	06-OCT-21
WG3632269-5 MS		**WG3632269-3**						
Silver (Ag)			132.6		%		50-140	06-OCT-21
Arsenic (As)			115.5		%		50-140	06-OCT-21
Boron (B)			89.2		%		50-140	06-OCT-21
Barium (Ba)			109.4		%		50-140	06-OCT-21
Cadmium (Cd)			110.5		%		50-140	06-OCT-21
Chromium (Cr)			109.2		%		50-140	06-OCT-21
Lead (Pb)			103.8		%		50-140	06-OCT-21
Selenium (Se)			116.0		%		50-140	06-OCT-21
Uranium (U)			102.9		%		50-140	06-OCT-21
PAH-TCLP-WT	**Waste**							
Batch R5614387								
WG3632629-7 DUP		**WG3632629-4**						
Acenaphthene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	08-OCT-21
Acenaphthylene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	08-OCT-21
Anthracene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	08-OCT-21
Benzo(a)anthracene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	08-OCT-21
Benzo(a)pyrene		<0.0010	<0.0010	RPD-NA	mg/L	N/A	50	08-OCT-21
Benzo(b&j)fluoranthene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	08-OCT-21
Benzo(g,h,i)perylene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	08-OCT-21
Benzo(k)fluoranthene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	08-OCT-21
Chrysene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	08-OCT-21
Dibenz(a,h)anthracene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	08-OCT-21
Fluoranthene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	08-OCT-21
Fluorene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	08-OCT-21
Indeno(1,2,3-cd)pyrene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	08-OCT-21
Naphthalene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	08-OCT-21
Phenanthrene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	08-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-TCLP-WT	**Waste**							
Batch R5614387								
WG3632629-7 DUP		**WG3632629-4**						
Pyrene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	08-OCT-21
Quinoline		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	08-OCT-21
WG3632629-2 LCS								
Acenaphthene			90.1		%		50-130	08-OCT-21
Acenaphthylene			92.4		%		50-130	08-OCT-21
Anthracene			93.5		%		50-130	08-OCT-21
Benzo(a)anthracene			110.3		%		50-140	08-OCT-21
Benzo(a)pyrene			83.0		%		60-140	08-OCT-21
Benzo(b&j)fluoranthene			93.4		%		50-130	08-OCT-21
Benzo(g,h,i)perylene			117.3		%		50-140	08-OCT-21
Benzo(k)fluoranthene			93.8		%		50-150	08-OCT-21
Chrysene			110.6		%		50-140	08-OCT-21
Dibenz(a,h)anthracene			108.4		%		50-140	08-OCT-21
Fluoranthene			110.7		%		50-130	08-OCT-21
Fluorene			98.3		%		50-130	08-OCT-21
Indeno(1,2,3-cd)pyrene			96.6		%		50-140	08-OCT-21
Naphthalene			74.1		%		50-130	08-OCT-21
Phenanthrene			107.0		%		50-130	08-OCT-21
Pyrene			102.7		%		50-140	08-OCT-21
Quinoline			121.4		%		50-130	08-OCT-21
WG3632629-1 MB								
Acenaphthene			<0.0050		mg/L		0.005	08-OCT-21
Acenaphthylene			<0.0050		mg/L		0.005	08-OCT-21
Anthracene			<0.0050		mg/L		0.005	08-OCT-21
Benzo(a)anthracene			<0.0050		mg/L		0.005	08-OCT-21
Benzo(a)pyrene			<0.0010		mg/L		0.001	08-OCT-21
Benzo(b&j)fluoranthene			<0.0050		mg/L		0.005	08-OCT-21
Benzo(g,h,i)perylene			<0.0050		mg/L		0.005	08-OCT-21
Benzo(k)fluoranthene			<0.0050		mg/L		0.005	08-OCT-21
Chrysene			<0.0050		mg/L		0.005	08-OCT-21
Dibenz(a,h)anthracene			<0.0050		mg/L		0.005	08-OCT-21
Fluoranthene			<0.0050		mg/L		0.005	08-OCT-21
Fluorene			<0.0050		mg/L		0.005	08-OCT-21
Indeno(1,2,3-cd)pyrene			<0.0050		mg/L		0.005	08-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-TCLP-WT	**Waste**							
Batch R5614387								
WG3632629-1 MB								
Naphthalene			<0.0050		mg/L		0.005	08-OCT-21
Phenanthrene			<0.0050		mg/L		0.005	08-OCT-21
Pyrene			<0.0050		mg/L		0.005	08-OCT-21
Quinoline			<0.0050		mg/L		0.005	08-OCT-21
Surrogate: Naphthalene d8			85.6		%		50-130	08-OCT-21
Surrogate: Phenanthrene d10			108.8		%		60-130	08-OCT-21
Surrogate: Chrysene d12			98.4		%		60-130	08-OCT-21
WG3632629-3 MB								
Acenaphthene			<0.0050		mg/L		0.005	08-OCT-21
Acenaphthylene			<0.0050		mg/L		0.005	08-OCT-21
Anthracene			<0.0050		mg/L		0.005	08-OCT-21
Benzo(a)anthracene			<0.0050		mg/L		0.005	08-OCT-21
Benzo(a)pyrene			<0.0010		mg/L		0.001	08-OCT-21
Benzo(b&j)fluoranthene			<0.0050		mg/L		0.005	08-OCT-21
Benzo(g,h,i)perylene			<0.0050		mg/L		0.005	08-OCT-21
Benzo(k)fluoranthene			<0.0050		mg/L		0.005	08-OCT-21
Chrysene			<0.0050		mg/L		0.005	08-OCT-21
Dibenz(a,h)anthracene			<0.0050		mg/L		0.005	08-OCT-21
Fluoranthene			<0.0050		mg/L		0.005	08-OCT-21
Fluorene			<0.0050		mg/L		0.005	08-OCT-21
Indeno(1,2,3-cd)pyrene			<0.0050		mg/L		0.005	08-OCT-21
Naphthalene			<0.0050		mg/L		0.005	08-OCT-21
Phenanthrene			<0.0050		mg/L		0.005	08-OCT-21
Pyrene			<0.0050		mg/L		0.005	08-OCT-21
Quinoline			<0.0050		mg/L		0.005	08-OCT-21
Surrogate: Naphthalene d8			93.8		%		50-130	08-OCT-21
Surrogate: Phenanthrene d10			106.3		%		60-130	08-OCT-21
Surrogate: Chrysene d12			98.7		%		60-130	08-OCT-21
WG3632629-6 MS		**WG3632629-4**						
Acenaphthene			93.7		%		50-140	08-OCT-21
Acenaphthylene			94.4		%		50-140	08-OCT-21
Anthracene			93.5		%		50-150	08-OCT-21
Benzo(a)anthracene			115.9		%		50-140	08-OCT-21
Benzo(a)pyrene			89.4		%		50-140	08-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-TCLP-WT	**Waste**							
Batch R5614387								
WG3632629-6 MS		**WG3632629-4**						
Benzo(b&j)fluoranthene			99.3		%		50-150	08-OCT-21
Benzo(g,h,i)perylene			108.1		%		50-140	08-OCT-21
Benzo(k)fluoranthene			99.1		%		50-150	08-OCT-21
Chrysene			113.4		%		50-140	08-OCT-21
Dibenz(a,h)anthracene			103.5		%		50-140	08-OCT-21
Fluoranthene			109.9		%		50-140	08-OCT-21
Fluorene			100.9		%		50-140	08-OCT-21
Indeno(1,2,3-cd)pyrene			117.0		%		50-140	08-OCT-21
Naphthalene			67.4		%		50-140	08-OCT-21
Phenanthrene			103.0		%		50-150	08-OCT-21
Pyrene			103.6		%		50-150	08-OCT-21
Quinoline			121.1		%		50-150	08-OCT-21

Quality Control Report

Workorder: L2646730 Report Date: 08-OCT-21

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Legend:

Limit	ALS Control Limit (Data Quality Objectives)
DUP	Duplicate
RPD	Relative Percent Difference
N/A	Not Available
LCS	Laboratory Control Sample
SRM	Standard Reference Material
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ADE	Average Desorption Efficiency
MB	Method Blank
IRM	Internal Reference Material
CRM	Certified Reference Material
CCV	Continuing Calibration Verification
CVS	Calibration Verification Standard
LCSD	Laboratory Control Sample Duplicate

Sample Parameter Qualifier Definitions:

Qualifier	Description
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Hold Time Exceedances:

All test results reported with this submission were conducted within ALS recommended hold times.

ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.

Chain of Custody

L2646730-COFC

COC Number: 20 - 006

Page 2 of 2

www.alsglobal.com

Report To	Contact and company name below will appear on the final report
Company:	Golder Associates Ltd.
Contact:	Jill LaPorte
Phone:	905-723-2727
	Company address below will appear on the final report
Street:	100 Scotia Court
City/Province:	Whitby, Ontario
Postal Code:	L1N 8Y6
Invoice To	Same as Report To ☑ YES ☐ NO
	Copy of Invoice with Report ☑ YES ☐ NO
Company:	Golder Associates Ltd.
Contact:	Accounts Payable

Reports / Recipients

Select Report Format: ☑ PDF ☑ EXCEL ☐ EDD (DIGITAL)

Merge QC/QCI Reports with COA ☑ YES ☐ NO ☐ N/A

☑ Compare Results to Criteria on Report - provide details below if box checked

Select Distribution: ☑ EMAIL ☐ MAIL ☐ FAX

Email 1 or Fax: Jill_LaPorte@golder.com

Email 2: shawn_seguin@golder.com

Email 3:

Invoice Recipients

Select Invoice Distribution: ☑ EMAIL ☐ MAIL ☐ FAX

Email 1 or Fax: Jill_LaPorte@golder.com

Email 2: canadaaccountspayableinvoices@golder.com

Turnaround Time (TAT) Requested

☑ Routine [R] if received by 3pm M-F - no surcharges apply

☐ 4 day [P4] if received by 3pm M-F - 25% rush surcharge minimum

☐ 3 day [P3] if received by 12pm M-F - 50% rush surcharge minimum

☐ 2 day [P2] if received by 12pm M-F - 100% rush surcharge minimum

☐ *1 day [E] if received by 12pm M-F - 200% rush surcharge minimum

*1 day only available for Inorganics, Metals, & VOC

• Same day [E2] unavailable for TCLP/SPLP

Date and Time Required for all E&P TATs:

For all tests with rush TATs requested, please contact your AM to confirm availability.

AFFIX ALS BARCODE LABEL HERE (ALS use only)

Project Information

ALS Account # / Quote #:	15520 / Q86566
Job #:	1783886-8000-8006
PO / AFE:	
LSD:	

Oil and Gas Required Fields (client use)

AFE/Cost Center:	PO#
Major/Minor Code:	Routing Code:
Requisitioner:	
Location:	

ALS Lab Work Order # (ALS use only): L2646730

ALS Contact: Amanda Overholster

Sampler: J Weir / S Breheyuk

Analysis Request

ALS Sample # (ALS use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	NUMBER OF CONTAINERS	TCLP (EPA 1311) PAH (PAH-TCLP-WT)	TCLP (EPA 1311) Metals (MET-TCLP-P-WT)	TCLP (EPA 1311) LEACH (LEACH-TCLP-WT)	MISC	SAMPLES ON HOLD	EXTENDED STORAGE REQUIRED	SUSPECTED HAZARD (see notes)
	TC3A-SG-003	29-SEP-21	14:15	Sediment	3	X	X	X				
	TC4-SG-009	29-SEP-21	15:30	Sediment	3	X	X	X			W	
	TC4-SC-009A	29-SEP-21	14:10	Sediment	3	X	X	X			P	
				Sediment							I	
				Sediment								
				Sediment								
				Sediment								
				Sediment								
				Sediment								
				Sediment								
				Sediment								
				Sediment								
				Sediment								
				Sediment								

Limited Sample Size Authorization

If the sample provided contains less than the minimum required weight, the samples may be leached at a lower volume and qualified as Limited Sample Size:

☐ YES ☐ NO

Minimum Sample Size: 1X250 mL - No Headspace

Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only)

EGMS Facility code 230.79134

Please provide 2X250 mL sample if both mSPLP and TCLP leaching procedures are requested or if Dioxins and Furans are required.

SAMPLE RECEIPT DETAILS (ALS use only)

Cooling Method: ☐ NONE ☒ ICE ☐ ICE PACKS ☐ FROZEN ☐ COOLING INITIATED

Submission Comments identified on Sample Receipt Notification: ☐ YES ☐ NO

Cooler Custody Seals Intact: ☐ YES ☐ N/A Sample Custody Seals Intact: ☐ YES ☐ N/A

INITIAL COOLER TEMPERATURES °C				FINAL COOLER TEMPERATURES °C			
11.7	11.2	7.8	9.0	8.7	11.1		

SHIPMENT RELEASE (client use)

Released by: Jamie Weir | Date: 01 OCT 21 | Time: 08:30

INITIAL SHIPMENT RECEPTION (ALS use only)

Received by: Karan | Date: 10/4/2021 | Time: 16:06

FINAL SHIPMENT RECEPTION (ALS use only)

Received by: | Date: 10/4/21 | Time: 7:00

Refer to the Locations Tab for ALS Locations and Sampling Information

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions.

Reg. 406 mSPLP Metals scan includes: Sb,As,Ba,Be,B,Cd,Cr,Co,Cu,Pb,Mo,Ni,Se,Ag,Tl,U,V,Zn. Reg. 347/558 TCLP Metals+Inorganics includes: As,Ba,B,Cd,Cr,Pb,Se,Ag,U,Hg,Fluoride,CN (WAD),Nitrate+Nitrite as N

AUG 2020 FRONT

GOLDER ASSOCIATES LTD (Whitby)
ATTN: Jill LaPorte
100 Scotia Court
Whitby ON L1N 8Y6

Date Received: 04-OCT-21
Report Date: 03-NOV-21 15:12 (MT)
Version: FINAL

Client Phone: 905-723-2727

Certificate of Analysis

Lab Work Order #: L2646743

Project P.O. #: NOT SUBMITTED
Job Reference: 1783886-8000-8006
C of C Numbers:
Legal Site Desc:

Amanda Overholster
Account Manager

[This report shall not be reproduced except in full without the written authority of the Laboratory.]

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646743-1 TC4-SG-004 Sampled By: CLIENT on 30-SEP-21 @ 11:20 Matrix: SEDIMENT							
Physical Tests							
% Moisture	86.9		0.25	%	04-OCT-21	04-OCT-21	R5607680
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0890		0.0010	g/g	12-OCT-21	12-OCT-21	R5615928
Total Organic Carbon	8.90		0.10	%	12-OCT-21	12-OCT-21	R5615928
Metals							
Aluminum (Al)	20300	DLM	100	ug/g	08-OCT-21	12-OCT-21	R5616383
Antimony (Sb)	0.71	DLM	0.20	ug/g	08-OCT-21	12-OCT-21	R5616383
Arsenic (As)	6.71	DLM	0.20	ug/g	08-OCT-21	12-OCT-21	R5616383
Barium (Ba)	263	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Beryllium (Be)	0.74	DLM	0.20	ug/g	08-OCT-21	12-OCT-21	R5616383
Bismuth (Bi)	0.49	DLM	0.40	ug/g	08-OCT-21	12-OCT-21	R5616383
Boron (B)	13	DLM	10	ug/g	08-OCT-21	12-OCT-21	R5616383
Cadmium (Cd)	0.767	DLM	0.040	ug/g	08-OCT-21	12-OCT-21	R5616383
Calcium (Ca)	58200	DLM	100	ug/g	08-OCT-21	12-OCT-21	R5616383
Chromium (Cr)	355	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Cobalt (Co)	12.5	DLM	0.20	ug/g	08-OCT-21	12-OCT-21	R5616383
Copper (Cu)	46.1	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Iron (Fe)	27700	DLM	100	ug/g	08-OCT-21	12-OCT-21	R5616383
Lead (Pb)	85.4	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Lithium (Li)	18.0	DLM	4.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Magnesium (Mg)	12000	DLM	40	ug/g	08-OCT-21	12-OCT-21	R5616383
Manganese (Mn)	850	DLM	2.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Mercury (Hg)	0.315	DLM	0.010	ug/g	08-OCT-21	11-OCT-21	R5615365
Molybdenum (Mo)	1.29	DLM	0.20	ug/g	08-OCT-21	12-OCT-21	R5616383
Nickel (Ni)	27.5	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Phosphorus (P)	1030	DLM	100	ug/g	08-OCT-21	12-OCT-21	R5616383
Potassium (K)	4250	DLM	200	ug/g	08-OCT-21	12-OCT-21	R5616383
Selenium (Se)	1.58	DLM	0.40	ug/g	08-OCT-21	12-OCT-21	R5616383
Silver (Ag)	0.52	DLM	0.20	ug/g	08-OCT-21	12-OCT-21	R5616383
Sodium (Na)	630	DLM	100	ug/g	08-OCT-21	12-OCT-21	R5616383
Strontium (Sr)	292	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Sulfur (S)	9600	DLM	2000	ug/g	08-OCT-21	12-OCT-21	R5616383
Thallium (Tl)	0.34	DLM	0.10	ug/g	08-OCT-21	12-OCT-21	R5616383
Tin (Sn)	4.7	DLM	4.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Titanium (Ti)	1210	DLM	2.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Tungsten (W)	<1.0	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Uranium (U)	1.07	DLM	0.10	ug/g	08-OCT-21	12-OCT-21	R5616383
Vanadium (V)	46.2	DLM	0.40	ug/g	08-OCT-21	12-OCT-21	R5616383
Zinc (Zn)	161	DLM	4.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Zirconium (Zr)	4.1	DLM	2.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.066		0.038	ug/g	12-OCT-21	12-OCT-21	R5615834

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646743-1 TC4-SG-004 Sampled By: CLIENT on 30-SEP-21 @ 11:20 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
Acenaphthylene	0.466		0.038	ug/g	12-OCT-21	12-OCT-21	R5615834
Acridine	<0.075	DLHM	0.075	ug/g	12-OCT-21	12-OCT-21	R5615834
Anthracene	0.179		0.030	ug/g	12-OCT-21	12-OCT-21	R5615834
Benzo(a)anthracene	0.704	R	0.075	ug/g	12-OCT-21	12-OCT-21	R5615834
Benzo(a)pyrene	1.12		0.038	ug/g	12-OCT-21	12-OCT-21	R5615834
Benzo(b&j)fluoranthene	0.925		0.075	ug/g	12-OCT-21	12-OCT-21	R5615834
Benzo(g,h,i)perylene	0.888		0.075	ug/g	12-OCT-21	12-OCT-21	R5615834
Benzo(k)fluoranthene	0.344		0.075	ug/g	12-OCT-21	12-OCT-21	R5615834
Chrysene	0.739		0.075	ug/g	12-OCT-21	12-OCT-21	R5615834
Dibenz(a,h)anthracene	0.193		0.038	ug/g	12-OCT-21	12-OCT-21	R5615834
Fluoroanthene	0.670		0.038	ug/g	12-OCT-21	12-OCT-21	R5615834
Fluorene	0.086	R	0.038	ug/g	12-OCT-21	12-OCT-21	R5615834
Indeno(1,2,3-cd)pyrene	0.674		0.075	ug/g	12-OCT-21	12-OCT-21	R5615834
1-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	12-OCT-21	12-OCT-21	R5615834
2-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	12-OCT-21	12-OCT-21	R5615834
Naphthalene	<0.038	DLHM	0.038	ug/g	12-OCT-21	12-OCT-21	R5615834
Phenanthrene	0.257		0.038	ug/g	12-OCT-21	12-OCT-21	R5615834
Pyrene	0.958		0.038	ug/g	12-OCT-21	12-OCT-21	R5615834
Quinoline	<0.038	DLHM	0.038	ug/g	12-OCT-21	12-OCT-21	R5615834
Surrogate: 2-Fluorobiphenyl	87.0		60-140	%	12-OCT-21	12-OCT-21	R5615834
Surrogate: d14-Terphenyl	75.9		60-140	%	12-OCT-21	12-OCT-21	R5615834
B(a)P Total Potency Equivalent	1.59		0.053	ug/g	12-OCT-21	12-OCT-21	R5615834
IACR (CCME)	14.6		0.75		12-OCT-21	12-OCT-21	R5615834
Polychlorinated Biphenyls							
Aroclor 1016	<0.115	RRR	0.12	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1221	<0.115	RRR	0.12	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1232	<0.115	RRR	0.12	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1242	<0.115	RRR	0.12	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1248	<0.115	RRR	0.12	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1254	0.166	DLHM	0.023	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1260	0.156	DLHM	0.023	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1262	<0.023	DLHM	0.023	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1268	<0.023	DLHM	0.023	mg/kg	13-OCT-21	13-OCT-21	R5616396
Total Polychlorinated Biphenyls	0.322		0.26	mg/kg	13-OCT-21	13-OCT-21	R5616396
Surrogate: d14-Terphenyl	97.6		50-140	%	13-OCT-21	13-OCT-21	R5616396
Report Remarks : RRR: Due to sample matrix interferences, PCB recoveries could not be determined in the matrix spike unless spiked with 5X the normal concentration and therefore the detection limit has been raised accordingly.							
L2646743-2 TC4-SG-005 Sampled By: CLIENT on 30-SEP-21 @ 12:00 Matrix: SEDIMENT							
Physical Tests							
% Moisture	85.0		0.25	%	04-OCT-21	04-OCT-21	R5607680

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646743-2 TC4-SG-005 Sampled By: CLIENT on 30-SEP-21 @ 12:00 Matrix: SEDIMENT							
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0960		0.0010	g/g	12-OCT-21	12-OCT-21	R5615928
Total Organic Carbon	9.60		0.10	%	12-OCT-21	12-OCT-21	R5615928
Metals							
Aluminum (Al)	20600	DLM	100	ug/g	08-OCT-21	12-OCT-21	R5616383
Antimony (Sb)	0.68	DLM	0.20	ug/g	08-OCT-21	12-OCT-21	R5616383
Arsenic (As)	5.93	DLM	0.20	ug/g	08-OCT-21	12-OCT-21	R5616383
Barium (Ba)	254	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Beryllium (Be)	0.76	DLM	0.20	ug/g	08-OCT-21	12-OCT-21	R5616383
Bismuth (Bi)	0.41	DLM	0.40	ug/g	08-OCT-21	12-OCT-21	R5616383
Boron (B)	13	DLM	10	ug/g	08-OCT-21	12-OCT-21	R5616383
Cadmium (Cd)	0.680	DLM	0.040	ug/g	08-OCT-21	12-OCT-21	R5616383
Calcium (Ca)	52400	DLM	100	ug/g	08-OCT-21	12-OCT-21	R5616383
Chromium (Cr)	255	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Cobalt (Co)	12.1	DLM	0.20	ug/g	08-OCT-21	12-OCT-21	R5616383
Copper (Cu)	45.5	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Iron (Fe)	27700	DLM	100	ug/g	08-OCT-21	12-OCT-21	R5616383
Lead (Pb)	79.6	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Lithium (Li)	18.9	DLM	4.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Magnesium (Mg)	11200	DLM	40	ug/g	08-OCT-21	12-OCT-21	R5616383
Manganese (Mn)	924	DLM	2.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Mercury (Hg)	0.291	DLM	0.010	ug/g	08-OCT-21	11-OCT-21	R5615365
Molybdenum (Mo)	1.25	DLM	0.20	ug/g	08-OCT-21	12-OCT-21	R5616383
Nickel (Ni)	27.3	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Phosphorus (P)	1010	DLM	100	ug/g	08-OCT-21	12-OCT-21	R5616383
Potassium (K)	4160	DLM	200	ug/g	08-OCT-21	12-OCT-21	R5616383
Selenium (Se)	1.46	DLM	0.40	ug/g	08-OCT-21	12-OCT-21	R5616383
Silver (Ag)	0.46	DLM	0.20	ug/g	08-OCT-21	12-OCT-21	R5616383
Sodium (Na)	600	DLM	100	ug/g	08-OCT-21	12-OCT-21	R5616383
Strontium (Sr)	254	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Sulfur (S)	8800	DLM	2000	ug/g	08-OCT-21	12-OCT-21	R5616383
Thallium (Tl)	0.34	DLM	0.10	ug/g	08-OCT-21	12-OCT-21	R5616383
Tin (Sn)	4.3	DLM	4.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Titanium (Ti)	1240	DLM	2.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Tungsten (W)	<1.0	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Uranium (U)	1.03	DLM	0.10	ug/g	08-OCT-21	12-OCT-21	R5616383
Vanadium (V)	46.1	DLM	0.40	ug/g	08-OCT-21	12-OCT-21	R5616383
Zinc (Zn)	150	DLM	4.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Zirconium (Zr)	3.8	DLM	2.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.078	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Acenaphthylene	0.431	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646743-2 TC4-SG-005 Sampled By: CLIENT on 30-SEP-21 @ 12:00 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
Acridine	<0.050	DLHM	0.050	ug/g	07-OCT-21	08-OCT-21	R5614231
Anthracene	0.238	DLHM	0.020	ug/g	07-OCT-21	08-OCT-21	R5614231
Benzo(a)anthracene	0.840	R	0.050	ug/g	07-OCT-21	08-OCT-21	R5614231
Benzo(a)pyrene	1.21	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Benzo(b&j)fluoranthene	1.04	DLHM	0.050	ug/g	07-OCT-21	08-OCT-21	R5614231
Benzo(g,h,i)perylene	0.781	DLHM	0.050	ug/g	07-OCT-21	08-OCT-21	R5614231
Benzo(k)fluoranthene	0.407	DLHM	0.050	ug/g	07-OCT-21	08-OCT-21	R5614231
Chrysene	0.871	DLHM	0.050	ug/g	07-OCT-21	08-OCT-21	R5614231
Dibenz(a,h)anthracene	0.193	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Fluoroanthene	0.872	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Fluorene	0.092	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Indeno(1,2,3-cd)pyrene	0.595	DLHM	0.050	ug/g	07-OCT-21	08-OCT-21	R5614231
1-Methylnaphthalene	0.025	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
2-Methylnaphthalene	0.025	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Naphthalene	0.036	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Phenanthrene	0.356	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Pyrene	1.17	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Quinoline	<0.025	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Surrogate: 2-Fluorobiphenyl	92.4		60-140	%	07-OCT-21	08-OCT-21	R5614231
Surrogate: d14-Terphenyl	79.7		60-140	%	07-OCT-21	08-OCT-21	R5614231
B(a)P Total Potency Equivalent	1.71		0.036	ug/g	07-OCT-21	08-OCT-21	R5614231
IACR (CCME)	16.5		0.50		07-OCT-21	08-OCT-21	R5614231
Polychlorinated Biphenyls							
Aroclor 1016	<0.115	RRR	0.12	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1221	<0.115	RRR	0.12	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1232	<0.115	RRR	0.12	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1242	<0.115	RRR	0.12	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1248	<0.115	RRR	0.12	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1254	0.127	DLHM	0.023	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1260	0.115	DLHM	0.023	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1262	<0.023	DLHM	0.023	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1268	<0.023	DLHM	0.023	mg/kg	13-OCT-21	13-OCT-21	R5616396
Total Polychlorinated Biphenyls	<0.2610		0.26	mg/kg	13-OCT-21	13-OCT-21	R5616396
Surrogate: d14-Terphenyl	102.0		50-140	%	13-OCT-21	13-OCT-21	R5616396
Report Remarks : RRR: Due to sample matrix interferences, PCB recoveries could not be determined in the matrix spike unless spiked with 5X the normal concentration and therefore the detection limit has been raised accordingly.							
L2646743-3 TC4-SG-008 Sampled By: CLIENT on 30-SEP-21 @ 12:20 Matrix: SEDIMENT							
Physical Tests							
% Moisture	84.7		0.25	%	04-OCT-21	04-OCT-21	R5607680
Organic / Inorganic Carbon							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646743-3 TC4-SG-008 Sampled By: CLIENT on 30-SEP-21 @ 12:20 Matrix: SEDIMENT							
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0847		0.0010	g/g	12-OCT-21	12-OCT-21	R5615928
Total Organic Carbon	8.47		0.10	%	12-OCT-21	12-OCT-21	R5615928
Metals							
Aluminum (Al)	18400	DLM	100	ug/g	08-OCT-21	12-OCT-21	R5616383
Antimony (Sb)	0.66	DLM	0.20	ug/g	08-OCT-21	12-OCT-21	R5616383
Arsenic (As)	6.79	DLM	0.20	ug/g	08-OCT-21	12-OCT-21	R5616383
Barium (Ba)	259	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Beryllium (Be)	0.75	DLM	0.20	ug/g	08-OCT-21	12-OCT-21	R5616383
Bismuth (Bi)	0.48	DLM	0.40	ug/g	08-OCT-21	12-OCT-21	R5616383
Boron (B)	11	DLM	10	ug/g	08-OCT-21	12-OCT-21	R5616383
Cadmium (Cd)	0.735	DLM	0.040	ug/g	08-OCT-21	12-OCT-21	R5616383
Calcium (Ca)	62200	DLM	100	ug/g	08-OCT-21	12-OCT-21	R5616383
Chromium (Cr)	316	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Cobalt (Co)	12.4	DLM	0.20	ug/g	08-OCT-21	12-OCT-21	R5616383
Copper (Cu)	48.3	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Iron (Fe)	27300	DLM	100	ug/g	08-OCT-21	12-OCT-21	R5616383
Lead (Pb)	81.8	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Lithium (Li)	17.3	DLM	4.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Magnesium (Mg)	11700	DLM	40	ug/g	08-OCT-21	12-OCT-21	R5616383
Manganese (Mn)	819	DLM	2.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Mercury (Hg)	0.319	DLM	0.010	ug/g	08-OCT-21	11-OCT-21	R5615365
Molybdenum (Mo)	0.99	DLM	0.20	ug/g	08-OCT-21	12-OCT-21	R5616383
Nickel (Ni)	27.1	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Phosphorus (P)	1080	DLM	100	ug/g	08-OCT-21	12-OCT-21	R5616383
Potassium (K)	3910	DLM	200	ug/g	08-OCT-21	12-OCT-21	R5616383
Selenium (Se)	1.43	DLM	0.40	ug/g	08-OCT-21	12-OCT-21	R5616383
Silver (Ag)	0.49	DLM	0.20	ug/g	08-OCT-21	12-OCT-21	R5616383
Sodium (Na)	580	DLM	100	ug/g	08-OCT-21	12-OCT-21	R5616383
Strontium (Sr)	295	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Sulfur (S)	8700	DLM	2000	ug/g	08-OCT-21	12-OCT-21	R5616383
Thallium (Tl)	0.32	DLM	0.10	ug/g	08-OCT-21	12-OCT-21	R5616383
Tin (Sn)	4.5	DLM	4.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Titanium (Ti)	1110	DLM	2.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Tungsten (W)	<1.0	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Uranium (U)	0.96	DLM	0.10	ug/g	08-OCT-21	12-OCT-21	R5616383
Vanadium (V)	43.1	DLM	0.40	ug/g	08-OCT-21	12-OCT-21	R5616383
Zinc (Zn)	160	DLM	4.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Zirconium (Zr)	3.9	DLM	2.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.084	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Acenaphthylene	0.491	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646743-3 TC4-SG-008 Sampled By: CLIENT on 30-SEP-21 @ 12:20 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
Acridine	<0.050	DLHM	0.050	ug/g	07-OCT-21	08-OCT-21	R5614231
Anthracene	0.314	DLHM	0.020	ug/g	07-OCT-21	08-OCT-21	R5614231
Benzo(a)anthracene	1.07	R	0.050	ug/g	07-OCT-21	08-OCT-21	R5614231
Benzo(a)pyrene	1.39	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Benzo(b&j)fluoranthene	1.19	DLHM	0.050	ug/g	07-OCT-21	08-OCT-21	R5614231
Benzo(g,h,i)perylene	0.893	DLHM	0.050	ug/g	07-OCT-21	08-OCT-21	R5614231
Benzo(k)fluoranthene	0.425	DLHM	0.050	ug/g	07-OCT-21	08-OCT-21	R5614231
Chrysene	1.08	DLHM	0.050	ug/g	07-OCT-21	08-OCT-21	R5614231
Dibenz(a,h)anthracene	0.218	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Fluoroanthene	1.03	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Fluorene	0.101	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Indeno(1,2,3-cd)pyrene	0.640	DLHM	0.050	ug/g	07-OCT-21	08-OCT-21	R5614231
1-Methylnaphthalene	0.030	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
2-Methylnaphthalene	0.025	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Naphthalene	0.039	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Phenanthrene	0.402	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Pyrene	1.46	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Quinoline	<0.025	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Surrogate: 2-Fluorobiphenyl	88.4		60-140	%	07-OCT-21	08-OCT-21	R5614231
Surrogate: d14-Terphenyl	82.4		60-140	%	07-OCT-21	08-OCT-21	R5614231
B(a)P Total Potency Equivalent	1.96		0.036	ug/g	07-OCT-21	08-OCT-21	R5614231
IACR (CCME)	18.9		0.50		07-OCT-21	08-OCT-21	R5614231
Polychlorinated Biphenyls							
Aroclor 1016	<0.115	RRR	0.12	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1221	<0.115	RRR	0.12	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1232	<0.115	RRR	0.12	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1242	<0.115	RRR	0.12	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1248	<0.115	RRR	0.12	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1254	0.143	DLHM	0.023	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1260	0.125	DLHM	0.023	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1262	<0.023	DLHM	0.023	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1268	<0.023	DLHM	0.023	mg/kg	13-OCT-21	13-OCT-21	R5616396
Total Polychlorinated Biphenyls	0.268		0.26	mg/kg	13-OCT-21	13-OCT-21	R5616396
Surrogate: d14-Terphenyl	83.8		50-140	%	13-OCT-21	13-OCT-21	R5616396
Report Remarks : RRR: Due to sample matrix interferences, PCB recoveries could not be determined in the matrix spike unless spiked with 5X the normal concentration and therefore the detection limit has been raised accordingly.							
L2646743-4 TC4-SG-012 Sampled By: CLIENT on 30-SEP-21 @ 12:45 Matrix: SEDIMENT							
Physical Tests							
% Moisture	86.0		0.25	%	04-OCT-21	04-OCT-21	R5607680
Organic / Inorganic Carbon							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646743-4 TC4-SG-012 Sampled By: CLIENT on 30-SEP-21 @ 12:45 Matrix: SEDIMENT							
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0944		0.0010	g/g	12-OCT-21	12-OCT-21	R5615928
Total Organic Carbon	9.44		0.10	%	12-OCT-21	12-OCT-21	R5615928
Metals							
Aluminum (Al)	23200		50	ug/g	08-OCT-21	08-OCT-21	R5614725
Antimony (Sb)	0.78		0.10	ug/g	08-OCT-21	08-OCT-21	R5614725
Arsenic (As)	6.62		0.10	ug/g	08-OCT-21	08-OCT-21	R5614725
Barium (Ba)	291		0.50	ug/g	08-OCT-21	08-OCT-21	R5614725
Beryllium (Be)	0.88		0.10	ug/g	08-OCT-21	08-OCT-21	R5614725
Bismuth (Bi)	0.56		0.20	ug/g	08-OCT-21	08-OCT-21	R5614725
Boron (B)	14.3		5.0	ug/g	08-OCT-21	08-OCT-21	R5614725
Cadmium (Cd)	0.786		0.020	ug/g	08-OCT-21	08-OCT-21	R5614725
Calcium (Ca)	53200		50	ug/g	08-OCT-21	08-OCT-21	R5614725
Chromium (Cr)	311		0.50	ug/g	08-OCT-21	08-OCT-21	R5614725
Cobalt (Co)	13.8		0.10	ug/g	08-OCT-21	08-OCT-21	R5614725
Copper (Cu)	62.7		0.50	ug/g	08-OCT-21	08-OCT-21	R5614725
Iron (Fe)	31900		50	ug/g	08-OCT-21	08-OCT-21	R5614725
Lead (Pb)	94.3		0.50	ug/g	08-OCT-21	08-OCT-21	R5614725
Lithium (Li)	21.2		2.0	ug/g	08-OCT-21	08-OCT-21	R5614725
Magnesium (Mg)	12900		20	ug/g	08-OCT-21	08-OCT-21	R5614725
Manganese (Mn)	982		1.0	ug/g	08-OCT-21	08-OCT-21	R5614725
Mercury (Hg)	0.347	DLM	0.010	ug/g	08-OCT-21	11-OCT-21	R5615364
Molybdenum (Mo)	1.14		0.10	ug/g	08-OCT-21	08-OCT-21	R5614725
Nickel (Ni)	31.6		0.50	ug/g	08-OCT-21	08-OCT-21	R5614725
Phosphorus (P)	1280		50	ug/g	08-OCT-21	08-OCT-21	R5614725
Potassium (K)	4990		100	ug/g	08-OCT-21	08-OCT-21	R5614725
Selenium (Se)	1.85		0.20	ug/g	08-OCT-21	08-OCT-21	R5614725
Silver (Ag)	0.55		0.10	ug/g	08-OCT-21	08-OCT-21	R5614725
Sodium (Na)	759		50	ug/g	08-OCT-21	08-OCT-21	R5614725
Strontium (Sr)	256		0.50	ug/g	08-OCT-21	08-OCT-21	R5614725
Sulfur (S)	9600		1000	ug/g	08-OCT-21	08-OCT-21	R5614725
Thallium (Tl)	0.362		0.050	ug/g	08-OCT-21	08-OCT-21	R5614725
Tin (Sn)	5.1		2.0	ug/g	08-OCT-21	08-OCT-21	R5614725
Titanium (Ti)	1450		1.0	ug/g	08-OCT-21	08-OCT-21	R5614725
Tungsten (W)	0.54		0.50	ug/g	08-OCT-21	08-OCT-21	R5614725
Uranium (U)	1.01		0.050	ug/g	08-OCT-21	08-OCT-21	R5614725
Vanadium (V)	52.5		0.20	ug/g	08-OCT-21	08-OCT-21	R5614725
Zinc (Zn)	180		2.0	ug/g	08-OCT-21	08-OCT-21	R5614725
Zirconium (Zr)	4.6		1.0	ug/g	08-OCT-21	08-OCT-21	R5614725
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.051	DLHM	0.038	ug/g	07-OCT-21	08-OCT-21	R5614231
Acenaphthylene	0.270	DLHM	0.038	ug/g	07-OCT-21	08-OCT-21	R5614231

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646743-4 TC4-SG-012 Sampled By: CLIENT on 30-SEP-21 @ 12:45 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
Acridine	<0.075	DLHM	0.075	ug/g	07-OCT-21	08-OCT-21	R5614231
Anthracene	0.169	DLHM	0.030	ug/g	07-OCT-21	08-OCT-21	R5614231
Benzo(a)anthracene	0.684	R	0.075	ug/g	07-OCT-21	08-OCT-21	R5614231
Benzo(a)pyrene	0.916	DLHM	0.038	ug/g	07-OCT-21	08-OCT-21	R5614231
Benzo(b&j)fluoranthene	0.966	DLHM	0.075	ug/g	07-OCT-21	08-OCT-21	R5614231
Benzo(g,h,i)perylene	0.607	DLHM	0.075	ug/g	07-OCT-21	08-OCT-21	R5614231
Benzo(k)fluoranthene	0.321	DLHM	0.075	ug/g	07-OCT-21	08-OCT-21	R5614231
Chrysene	0.751	DLHM	0.075	ug/g	07-OCT-21	08-OCT-21	R5614231
Dibenz(a,h)anthracene	0.150	DLHM	0.038	ug/g	07-OCT-21	08-OCT-21	R5614231
Fluoroanthene	0.776	DLHM	0.038	ug/g	07-OCT-21	08-OCT-21	R5614231
Fluorene	0.068	DLHM	0.038	ug/g	07-OCT-21	08-OCT-21	R5614231
Indeno(1,2,3-cd)pyrene	0.463	DLHM	0.075	ug/g	07-OCT-21	08-OCT-21	R5614231
1-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	07-OCT-21	08-OCT-21	R5614231
2-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	07-OCT-21	08-OCT-21	R5614231
Naphthalene	<0.038	DLHM	0.038	ug/g	07-OCT-21	08-OCT-21	R5614231
Phenanthrene	0.271	DLHM	0.038	ug/g	07-OCT-21	08-OCT-21	R5614231
Pyrene	0.942	DLHM	0.038	ug/g	07-OCT-21	08-OCT-21	R5614231
Quinoline	<0.038	DLHM	0.038	ug/g	07-OCT-21	08-OCT-21	R5614231
Surrogate: 2-Fluorobiphenyl	90.1		60-140	%	07-OCT-21	08-OCT-21	R5614231
Surrogate: d14-Terphenyl	84.3		60-140	%	07-OCT-21	08-OCT-21	R5614231
B(a)P Total Potency Equivalent	1.32		0.053	ug/g	07-OCT-21	08-OCT-21	R5614231
IACR (CCME)	13.9		0.75		07-OCT-21	08-OCT-21	R5614231
Polychlorinated Biphenyls							
Aroclor 1016	<0.115	RRR	0.12	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1221	<0.115	RRR	0.12	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1232	<0.115	RRR	0.12	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1242	<0.115	RRR	0.12	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1248	<0.115	RRR	0.12	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1254	0.113	DLHM	0.023	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1260	0.127	DLHM	0.023	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1262	<0.023	DLHM	0.023	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1268	<0.023	DLHM	0.023	mg/kg	13-OCT-21	13-OCT-21	R5616396
Total Polychlorinated Biphenyls	<0.261		0.26	mg/kg	13-OCT-21	13-OCT-21	R5616396
Surrogate: d14-Terphenyl	90.6		50-140	%	13-OCT-21	13-OCT-21	R5616396
Report Remarks : RRR: Due to sample matrix interferences, PCB recoveries could not be determined in the matrix spike unless spiked with 5X the normal concentration and therefore the detection limit has been raised accordingly.							
L2646743-5 TC4-SG-011 Sampled By: CLIENT on 30-SEP-21 @ 14:15 Matrix: SEDIMENT							
Physical Tests							
% Moisture	82.6		0.25	%	04-OCT-21	04-OCT-21	R5607680
Organic / Inorganic Carbon							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646743-5 TC4-SG-011 Sampled By: CLIENT on 30-SEP-21 @ 14:15 Matrix: SEDIMENT							
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0736		0.0010	g/g	12-OCT-21	12-OCT-21	R5615928
Total Organic Carbon	7.36		0.10	%	12-OCT-21	12-OCT-21	R5615928
Metals							
Aluminum (Al)	13700		50	ug/g	08-OCT-21	08-OCT-21	R5614725
Antimony (Sb)	1.09		0.10	ug/g	08-OCT-21	08-OCT-21	R5614725
Arsenic (As)	7.56		0.10	ug/g	08-OCT-21	08-OCT-21	R5614725
Barium (Ba)	223		0.50	ug/g	08-OCT-21	08-OCT-21	R5614725
Beryllium (Be)	0.59		0.10	ug/g	08-OCT-21	08-OCT-21	R5614725
Bismuth (Bi)	0.96		0.20	ug/g	08-OCT-21	08-OCT-21	R5614725
Boron (B)	9.9		5.0	ug/g	08-OCT-21	08-OCT-21	R5614725
Cadmium (Cd)	0.714		0.020	ug/g	08-OCT-21	08-OCT-21	R5614725
Calcium (Ca)	119000		50	ug/g	08-OCT-21	08-OCT-21	R5614725
Chromium (Cr)	183		0.50	ug/g	08-OCT-21	08-OCT-21	R5614725
Cobalt (Co)	10.2		0.10	ug/g	08-OCT-21	08-OCT-21	R5614725
Copper (Cu)	62.6		0.50	ug/g	08-OCT-21	08-OCT-21	R5614725
Iron (Fe)	22800		50	ug/g	08-OCT-21	08-OCT-21	R5614725
Lead (Pb)	137		0.50	ug/g	08-OCT-21	08-OCT-21	R5614725
Lithium (Li)	13.2		2.0	ug/g	08-OCT-21	08-OCT-21	R5614725
Magnesium (Mg)	11500		20	ug/g	08-OCT-21	08-OCT-21	R5614725
Manganese (Mn)	673		1.0	ug/g	08-OCT-21	08-OCT-21	R5614725
Mercury (Hg)	0.468	DLM	0.010	ug/g	08-OCT-21	11-OCT-21	R5615364
Molybdenum (Mo)	0.99		0.10	ug/g	08-OCT-21	08-OCT-21	R5614725
Nickel (Ni)	20.9		0.50	ug/g	08-OCT-21	08-OCT-21	R5614725
Phosphorus (P)	1240		50	ug/g	08-OCT-21	08-OCT-21	R5614725
Potassium (K)	2990		100	ug/g	08-OCT-21	08-OCT-21	R5614725
Selenium (Se)	1.29		0.20	ug/g	08-OCT-21	08-OCT-21	R5614725
Silver (Ag)	1.96		0.10	ug/g	08-OCT-21	08-OCT-21	R5614725
Sodium (Na)	534		50	ug/g	08-OCT-21	08-OCT-21	R5614725
Strontium (Sr)	539		0.50	ug/g	08-OCT-21	08-OCT-21	R5614725
Sulfur (S)	7300		1000	ug/g	08-OCT-21	08-OCT-21	R5614725
Thallium (Tl)	0.293		0.050	ug/g	08-OCT-21	08-OCT-21	R5614725
Tin (Sn)	7.0		2.0	ug/g	08-OCT-21	08-OCT-21	R5614725
Titanium (Ti)	845		1.0	ug/g	08-OCT-21	08-OCT-21	R5614725
Tungsten (W)	0.55		0.50	ug/g	08-OCT-21	08-OCT-21	R5614725
Uranium (U)	0.800		0.050	ug/g	08-OCT-21	08-OCT-21	R5614725
Vanadium (V)	35.9		0.20	ug/g	08-OCT-21	08-OCT-21	R5614725
Zinc (Zn)	215		2.0	ug/g	08-OCT-21	08-OCT-21	R5614725
Zirconium (Zr)	2.9		1.0	ug/g	08-OCT-21	08-OCT-21	R5614725
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.089	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Acenaphthylene	0.233	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646743-5 TC4-SG-011 Sampled By: CLIENT on 30-SEP-21 @ 14:15 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
Acridine	0.096	AI	0.050	ug/g	07-OCT-21	08-OCT-21	R5614231
Anthracene	0.300	DLHM	0.020	ug/g	07-OCT-21	08-OCT-21	R5614231
Benzo(a)anthracene	1.38	DLHM	0.050	ug/g	07-OCT-21	08-OCT-21	R5614231
Benzo(a)pyrene	1.56	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Benzo(b&j)fluoranthene	1.80	DLHM	0.050	ug/g	07-OCT-21	08-OCT-21	R5614231
Benzo(g,h,i)perylene	0.985	DLHM	0.050	ug/g	07-OCT-21	08-OCT-21	R5614231
Benzo(k)fluoranthene	0.637	DLHM	0.050	ug/g	07-OCT-21	08-OCT-21	R5614231
Chrysene	1.49	DLHM	0.050	ug/g	07-OCT-21	08-OCT-21	R5614231
Dibenz(a,h)anthracene	0.268	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Fluoroanthene	2.17	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Fluorene	0.118	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Indeno(1,2,3-cd)pyrene	0.828	DLHM	0.050	ug/g	07-OCT-21	08-OCT-21	R5614231
1-Methylnaphthalene	0.027	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
2-Methylnaphthalene	0.040	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Naphthalene	0.040	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Phenanthrene	0.874	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Pyrene	2.04	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Quinoline	<0.025	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Surrogate: 2-Fluorobiphenyl	91.6		60-140	%	07-OCT-21	08-OCT-21	R5614231
Surrogate: d14-Terphenyl	86.0		60-140	%	07-OCT-21	08-OCT-21	R5614231
B(a)P Total Potency Equivalent	2.31		0.036	ug/g	07-OCT-21	08-OCT-21	R5614231
IACR (CCME)	25.9		0.50		07-OCT-21	08-OCT-21	R5614231
Polychlorinated Biphenyls							
Aroclor 1016	<0.38	DLM	0.38	mg/kg	15-OCT-21	15-OCT-21	R5616396
Aroclor 1221	<0.38	DLM	0.38	mg/kg	15-OCT-21	15-OCT-21	R5616396
Aroclor 1232	<0.38	DLM	0.38	mg/kg	15-OCT-21	15-OCT-21	R5616396
Aroclor 1242	<0.38	DLM	0.38	mg/kg	15-OCT-21	15-OCT-21	R5616396
Aroclor 1248	<0.38	DLM	0.38	mg/kg	15-OCT-21	15-OCT-21	R5616396
Aroclor 1254	0.086	DLHM	0.015	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1260	0.094	DLHM	0.015	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1262	<0.015	DLHM	0.015	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1268	<0.015	DLHM	0.015	mg/kg	13-OCT-21	13-OCT-21	R5616396
Total Polychlorinated Biphenyls	<0.85		0.85	mg/kg	15-OCT-21	15-OCT-21	R5616396
Surrogate: d14-Terphenyl	92.6		50-140	%	13-OCT-21	13-OCT-21	R5616396
Report Remarks : RRR: Due to sample matrix interferences, PCB recoveries could not be determined in the matrix spike unless spiked with 5X the normal concentration and therefore the detection limit has been raised accordingly.							
L2646743-6 TC4-SG-013 Sampled By: CLIENT on 30-SEP-21 @ 14:30 Matrix: SEDIMENT							
Physical Tests							
% Moisture	61.2		0.25	%	04-OCT-21	04-OCT-21	R5607680
Particle Size							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646743-6 TC4-SG-013 Sampled By: CLIENT on 30-SEP-21 @ 14:30 Matrix: SEDIMENT							
Particle Size							
General Texture Class	Fine				13-OCT-21	13-OCT-21	R5617706
MUST PSA % > 75um	45.9		1.0	%	13-OCT-21	13-OCT-21	R5617706
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0268		0.0010	g/g	12-OCT-21	12-OCT-21	R5615928
Total Organic Carbon	2.68		0.10	%	12-OCT-21	12-OCT-21	R5615928
Metals							
Aluminum (Al)	7670		50	ug/g	08-OCT-21	08-OCT-21	R5614725
Antimony (Sb)	0.39		0.10	ug/g	08-OCT-21	08-OCT-21	R5614725
Arsenic (As)	2.72		0.10	ug/g	08-OCT-21	08-OCT-21	R5614725
Barium (Ba)	92.6		0.50	ug/g	08-OCT-21	08-OCT-21	R5614725
Beryllium (Be)	0.34		0.10	ug/g	08-OCT-21	08-OCT-21	R5614725
Bismuth (Bi)	<0.20		0.20	ug/g	08-OCT-21	08-OCT-21	R5614725
Boron (B)	6.8		5.0	ug/g	08-OCT-21	08-OCT-21	R5614725
Cadmium (Cd)	0.170		0.020	ug/g	08-OCT-21	08-OCT-21	R5614725
Calcium (Ca)	30700		50	ug/g	08-OCT-21	08-OCT-21	R5614725
Chromium (Cr)	25.1		0.50	ug/g	08-OCT-21	08-OCT-21	R5614725
Cobalt (Co)	5.49		0.10	ug/g	08-OCT-21	08-OCT-21	R5614725
Copper (Cu)	25.2		0.50	ug/g	08-OCT-21	08-OCT-21	R5614725
Iron (Fe)	17100		50	ug/g	08-OCT-21	08-OCT-21	R5614725
Lead (Pb)	87.6		0.50	ug/g	08-OCT-21	08-OCT-21	R5614725
Lithium (Li)	7.5		2.0	ug/g	08-OCT-21	08-OCT-21	R5614725
Magnesium (Mg)	9740		20	ug/g	08-OCT-21	08-OCT-21	R5614725
Manganese (Mn)	240		1.0	ug/g	08-OCT-21	08-OCT-21	R5614725
Mercury (Hg)	0.252	DLM	0.010	ug/g	08-OCT-21	11-OCT-21	R5615364
Molybdenum (Mo)	0.47		0.10	ug/g	08-OCT-21	08-OCT-21	R5614725
Nickel (Ni)	11.4		0.50	ug/g	08-OCT-21	08-OCT-21	R5614725
Phosphorus (P)	1250		50	ug/g	08-OCT-21	08-OCT-21	R5614725
Potassium (K)	1670		100	ug/g	08-OCT-21	08-OCT-21	R5614725
Selenium (Se)	0.33		0.20	ug/g	08-OCT-21	08-OCT-21	R5614725
Silver (Ag)	<0.10		0.10	ug/g	08-OCT-21	08-OCT-21	R5614725
Sodium (Na)	290		50	ug/g	08-OCT-21	08-OCT-21	R5614725
Strontium (Sr)	96.8		0.50	ug/g	08-OCT-21	08-OCT-21	R5614725
Sulfur (S)	<1000		1000	ug/g	08-OCT-21	08-OCT-21	R5614725
Thallium (Tl)	0.108		0.050	ug/g	08-OCT-21	08-OCT-21	R5614725
Tin (Sn)	5.0		2.0	ug/g	08-OCT-21	08-OCT-21	R5614725
Titanium (Ti)	635		1.0	ug/g	08-OCT-21	08-OCT-21	R5614725
Tungsten (W)	<0.50		0.50	ug/g	08-OCT-21	08-OCT-21	R5614725
Uranium (U)	0.490		0.050	ug/g	08-OCT-21	08-OCT-21	R5614725
Vanadium (V)	27.9		0.20	ug/g	08-OCT-21	08-OCT-21	R5614725
Zinc (Zn)	82.5		2.0	ug/g	08-OCT-21	08-OCT-21	R5614725
Zirconium (Zr)	1.4		1.0	ug/g	08-OCT-21	08-OCT-21	R5614725
Polycyclic Aromatic Hydrocarbons							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646743-6 TC4-SG-013 Sampled By: CLIENT on 30-SEP-21 @ 14:30 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.070	DLHM	0.010	ug/g	07-OCT-21	08-OCT-21	R5614231
Acenaphthylene	0.072	DLHM	0.010	ug/g	07-OCT-21	08-OCT-21	R5614231
Acridine	0.039	AI	0.020	ug/g	07-OCT-21	08-OCT-21	R5614231
Anthracene	0.220	DLHM	0.0080	ug/g	07-OCT-21	08-OCT-21	R5614231
Benzo(a)anthracene	0.840	DLHM	0.020	ug/g	07-OCT-21	08-OCT-21	R5614231
Benzo(a)pyrene	0.736	DLHM	0.010	ug/g	07-OCT-21	08-OCT-21	R5614231
Benzo(b&j)fluoranthene	0.983	DLHM	0.020	ug/g	07-OCT-21	08-OCT-21	R5614231
Benzo(g,h,i)perylene	0.474	DLHM	0.020	ug/g	07-OCT-21	08-OCT-21	R5614231
Benzo(k)fluoranthene	0.352	DLHM	0.020	ug/g	07-OCT-21	08-OCT-21	R5614231
Chrysene	0.836	DLHM	0.020	ug/g	07-OCT-21	08-OCT-21	R5614231
Dibenz(a,h)anthracene	0.136	DLHM	0.010	ug/g	07-OCT-21	08-OCT-21	R5614231
Fluoroanthene	1.59	DLHM	0.010	ug/g	07-OCT-21	08-OCT-21	R5614231
Fluorene	0.106	DLHM	0.010	ug/g	07-OCT-21	08-OCT-21	R5614231
Indeno(1,2,3-cd)pyrene	0.426	DLHM	0.020	ug/g	07-OCT-21	08-OCT-21	R5614231
1-Methylnaphthalene	0.036	DLHM	0.010	ug/g	07-OCT-21	08-OCT-21	R5614231
2-Methylnaphthalene	0.038	DLHM	0.010	ug/g	07-OCT-21	08-OCT-21	R5614231
Naphthalene	0.041	DLHM	0.010	ug/g	07-OCT-21	08-OCT-21	R5614231
Phenanthrene	0.885	DLHM	0.010	ug/g	07-OCT-21	08-OCT-21	R5614231
Pyrene	1.31	DLHM	0.010	ug/g	07-OCT-21	08-OCT-21	R5614231
Quinoline	<0.010	DLHM	0.010	ug/g	07-OCT-21	08-OCT-21	R5614231
Surrogate: 2-Fluorobiphenyl	92.9		60-140	%	07-OCT-21	08-OCT-21	R5614231
Surrogate: d14-Terphenyl	88.0		60-140	%	07-OCT-21	08-OCT-21	R5614231
B(a)P Total Potency Equivalent	1.15		0.020	ug/g	07-OCT-21	08-OCT-21	R5614231
IACR (CCME)	14.1		0.20		07-OCT-21	08-OCT-21	R5614231
Polychlorinated Biphenyls							
Aroclor 1016	<0.030	RRR	0.030	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1221	<0.030	RRR	0.030	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1232	<0.030	RRR	0.030	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1242	<0.030	RRR	0.030	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1248	<0.030	RRR	0.030	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1254	0.0233	DLHM	0.0060	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1260	0.0196	DLHM	0.0060	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1262	<0.0060	DLHM	0.0060	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1268	<0.0060	DLHM	0.0060	mg/kg	13-OCT-21	13-OCT-21	R5616396
Total Polychlorinated Biphenyls	<0.070		0.070	mg/kg	13-OCT-21	13-OCT-21	R5616396
Surrogate: d14-Terphenyl	94.0		50-140	%	13-OCT-21	13-OCT-21	R5616396
Report Remarks : RRR: Due to sample matrix interferences, PCB recoveries could not be determined in the matrix spike unless spiked with 5X the normal concentration and therefore the detection limit has been raised accordingly.							
L2646743-7 TC4-SG-014 Sampled By: CLIENT on 30-SEP-21 @ 14:45 Matrix: SEDIMENT							
Physical Tests							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646743-7 TC4-SG-014 Sampled By: CLIENT on 30-SEP-21 @ 14:45 Matrix: SEDIMENT							
Physical Tests							
% Moisture	82.5		0.25	%	04-OCT-21	04-OCT-21	R5607680
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0795		0.0010	g/g	12-OCT-21	12-OCT-21	R5615928
Total Organic Carbon	7.95		0.10	%	12-OCT-21	12-OCT-21	R5615928
Metals							
Aluminum (Al)	17800		50	ug/g	08-OCT-21	08-OCT-21	R5614725
Antimony (Sb)	0.55		0.10	ug/g	08-OCT-21	08-OCT-21	R5614725
Arsenic (As)	5.32		0.10	ug/g	08-OCT-21	08-OCT-21	R5614725
Barium (Ba)	235		0.50	ug/g	08-OCT-21	08-OCT-21	R5614725
Beryllium (Be)	0.65		0.10	ug/g	08-OCT-21	08-OCT-21	R5614725
Bismuth (Bi)	0.31		0.20	ug/g	08-OCT-21	08-OCT-21	R5614725
Boron (B)	9.6		5.0	ug/g	08-OCT-21	08-OCT-21	R5614725
Cadmium (Cd)	0.590		0.020	ug/g	08-OCT-21	08-OCT-21	R5614725
Calcium (Ca)	77100		50	ug/g	08-OCT-21	08-OCT-21	R5614725
Chromium (Cr)	195		0.50	ug/g	08-OCT-21	08-OCT-21	R5614725
Cobalt (Co)	11.3		0.10	ug/g	08-OCT-21	08-OCT-21	R5614725
Copper (Cu)	37.8		0.50	ug/g	08-OCT-21	08-OCT-21	R5614725
Iron (Fe)	24300		50	ug/g	08-OCT-21	08-OCT-21	R5614725
Lead (Pb)	92.4		0.50	ug/g	08-OCT-21	08-OCT-21	R5614725
Lithium (Li)	13.5		2.0	ug/g	08-OCT-21	08-OCT-21	R5614725
Magnesium (Mg)	10600		20	ug/g	08-OCT-21	08-OCT-21	R5614725
Manganese (Mn)	829		1.0	ug/g	08-OCT-21	08-OCT-21	R5614725
Mercury (Hg)	0.201	DLM	0.010	ug/g	08-OCT-21	11-OCT-21	R5615364
Molybdenum (Mo)	0.88		0.10	ug/g	08-OCT-21	08-OCT-21	R5614725
Nickel (Ni)	25.0		0.50	ug/g	08-OCT-21	08-OCT-21	R5614725
Phosphorus (P)	996		50	ug/g	08-OCT-21	08-OCT-21	R5614725
Potassium (K)	3770		100	ug/g	08-OCT-21	08-OCT-21	R5614725
Selenium (Se)	1.27		0.20	ug/g	08-OCT-21	08-OCT-21	R5614725
Silver (Ag)	0.29		0.10	ug/g	08-OCT-21	08-OCT-21	R5614725
Sodium (Na)	674		50	ug/g	08-OCT-21	08-OCT-21	R5614725
Strontium (Sr)	349		0.50	ug/g	08-OCT-21	08-OCT-21	R5614725
Sulfur (S)	7300		1000	ug/g	08-OCT-21	08-OCT-21	R5614725
Thallium (Tl)	0.288		0.050	ug/g	08-OCT-21	08-OCT-21	R5614725
Tin (Sn)	3.3		2.0	ug/g	08-OCT-21	08-OCT-21	R5614725
Titanium (Ti)	1180		1.0	ug/g	08-OCT-21	08-OCT-21	R5614725
Tungsten (W)	<0.50		0.50	ug/g	08-OCT-21	08-OCT-21	R5614725
Uranium (U)	0.769		0.050	ug/g	08-OCT-21	08-OCT-21	R5614725
Vanadium (V)	40.5		0.20	ug/g	08-OCT-21	08-OCT-21	R5614725
Zinc (Zn)	134		2.0	ug/g	08-OCT-21	08-OCT-21	R5614725
Zirconium (Zr)	2.7		1.0	ug/g	08-OCT-21	08-OCT-21	R5614725
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.116	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646743-7 TC4-SG-014 Sampled By: CLIENT on 30-SEP-21 @ 14:45 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
Acenaphthylene	0.874	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Acridine	<0.060	DLM	0.060	ug/g	07-OCT-21	08-OCT-21	R5614231
Anthracene	0.469	DLHM	0.020	ug/g	07-OCT-21	08-OCT-21	R5614231
Benzo(a)anthracene	2.19	R	0.050	ug/g	07-OCT-21	08-OCT-21	R5614231
Benzo(a)pyrene	2.91	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Benzo(b&j)fluoranthene	2.32	DLHM	0.050	ug/g	07-OCT-21	08-OCT-21	R5614231
Benzo(g,h,i)perylene	1.62	DLHM	0.050	ug/g	07-OCT-21	08-OCT-21	R5614231
Benzo(k)fluoranthene	0.842	DLHM	0.050	ug/g	07-OCT-21	08-OCT-21	R5614231
Chrysene	2.04	DLHM	0.050	ug/g	07-OCT-21	08-OCT-21	R5614231
Dibenz(a,h)anthracene	0.420	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Fluoroanthene	1.75	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Fluorene	0.143	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Indeno(1,2,3-cd)pyrene	1.21	DLHM	0.050	ug/g	07-OCT-21	08-OCT-21	R5614231
1-Methylnaphthalene	0.052	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
2-Methylnaphthalene	0.064	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Naphthalene	0.078	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Phenanthrene	0.579	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Pyrene	2.70	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Quinoline	<0.025	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Surrogate: 2-Fluorobiphenyl	86.0		60-140	%	07-OCT-21	08-OCT-21	R5614231
Surrogate: d14-Terphenyl	81.1		60-140	%	07-OCT-21	08-OCT-21	R5614231
B(a)P Total Potency Equivalent	4.02		0.036	ug/g	07-OCT-21	08-OCT-21	R5614231
IACR (CCME)	37.8		0.50		07-OCT-21	08-OCT-21	R5614231
Polychlorinated Biphenyls							
Aroclor 1016	<0.075	RRR	0.075	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1221	<0.075	RRR	0.075	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1232	<0.075	RRR	0.075	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1242	<0.075	RRR	0.075	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1248	<0.075	RRR	0.075	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1254	0.152	DLHM	0.015	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1260	0.104	DLHM	0.015	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1262	<0.015	DLHM	0.015	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1268	<0.015	DLHM	0.015	mg/kg	13-OCT-21	13-OCT-21	R5616396
Total Polychlorinated Biphenyls	0.256		0.017	mg/kg	13-OCT-21	13-OCT-21	R5616396
Surrogate: d14-Terphenyl	84.8		50-140	%	13-OCT-21	13-OCT-21	R5616396
Report Remarks : RRR: Due to sample matrix interferences, PCB recoveries could not be determined in the matrix spike unless spiked with 5X the normal concentration and therefore the detection limit has been raised accordingly.							
L2646743-8 TC4-SG-013X Sampled By: CLIENT on 30-SEP-21 @ 15:00 Matrix: SEDIMENT							
Physical Tests							
% Moisture	83.8		0.25	%	04-OCT-21	04-OCT-21	R5607680

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646743-8 TC4-SG-013X Sampled By: CLIENT on 30-SEP-21 @ 15:00 Matrix: SEDIMENT							
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0883		0.0010	g/g	12-OCT-21	12-OCT-21	R5615928
Total Organic Carbon	8.83		0.10	%	12-OCT-21	12-OCT-21	R5615928
Metals							
Aluminum (Al)	18100	DLM	100	ug/g	08-OCT-21	12-OCT-21	R5616383
Antimony (Sb)	0.57	DLM	0.20	ug/g	08-OCT-21	12-OCT-21	R5616383
Arsenic (As)	6.60	DLM	0.20	ug/g	08-OCT-21	12-OCT-21	R5616383
Barium (Ba)	240	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Beryllium (Be)	0.69	DLM	0.20	ug/g	08-OCT-21	12-OCT-21	R5616383
Bismuth (Bi)	<0.40	DLM	0.40	ug/g	08-OCT-21	12-OCT-21	R5616383
Boron (B)	10	DLM	10	ug/g	08-OCT-21	12-OCT-21	R5616383
Cadmium (Cd)	0.653	DLM	0.040	ug/g	08-OCT-21	12-OCT-21	R5616383
Calcium (Ca)	63000	DLM	100	ug/g	08-OCT-21	12-OCT-21	R5616383
Chromium (Cr)	242	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Cobalt (Co)	12.5	DLM	0.20	ug/g	08-OCT-21	12-OCT-21	R5616383
Copper (Cu)	40.6	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Iron (Fe)	26200	DLM	100	ug/g	08-OCT-21	12-OCT-21	R5616383
Lead (Pb)	89.9	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Lithium (Li)	15.1	DLM	4.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Magnesium (Mg)	10500	DLM	40	ug/g	08-OCT-21	12-OCT-21	R5616383
Manganese (Mn)	847	DLM	2.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Mercury (Hg)	0.263	DLM	0.010	ug/g	08-OCT-21	11-OCT-21	R5615365
Molybdenum (Mo)	0.84	DLM	0.20	ug/g	08-OCT-21	12-OCT-21	R5616383
Nickel (Ni)	26.8	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Phosphorus (P)	950	DLM	100	ug/g	08-OCT-21	12-OCT-21	R5616383
Potassium (K)	3880	DLM	200	ug/g	08-OCT-21	12-OCT-21	R5616383
Selenium (Se)	1.33	DLM	0.40	ug/g	08-OCT-21	12-OCT-21	R5616383
Silver (Ag)	0.34	DLM	0.20	ug/g	08-OCT-21	12-OCT-21	R5616383
Sodium (Na)	570	DLM	100	ug/g	08-OCT-21	12-OCT-21	R5616383
Strontium (Sr)	291	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Sulfur (S)	7900	DLM	2000	ug/g	08-OCT-21	12-OCT-21	R5616383
Thallium (Tl)	0.34	DLM	0.10	ug/g	08-OCT-21	12-OCT-21	R5616383
Tin (Sn)	<4.0	DLM	4.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Titanium (Ti)	1170	DLM	2.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Tungsten (W)	<1.0	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Uranium (U)	0.90	DLM	0.10	ug/g	08-OCT-21	12-OCT-21	R5616383
Vanadium (V)	42.8	DLM	0.40	ug/g	08-OCT-21	12-OCT-21	R5616383
Zinc (Zn)	157	DLM	4.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Zirconium (Zr)	4.0	DLM	2.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.124	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Acenaphthylene	0.855	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646743-8 TC4-SG-013X Sampled By: CLIENT on 30-SEP-21 @ 15:00 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
Acridine	<0.070	DLM	0.070	ug/g	07-OCT-21	08-OCT-21	R5614231
Anthracene	0.803	DLHM	0.020	ug/g	07-OCT-21	08-OCT-21	R5614231
Benzo(a)anthracene	2.10	R	0.050	ug/g	07-OCT-21	08-OCT-21	R5614231
Benzo(a)pyrene	2.78	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Benzo(b&j)fluoranthene	2.21	DLHM	0.050	ug/g	07-OCT-21	08-OCT-21	R5614231
Benzo(g,h,i)perylene	1.55	DLHM	0.050	ug/g	07-OCT-21	08-OCT-21	R5614231
Benzo(k)fluoranthene	0.890	DLHM	0.050	ug/g	07-OCT-21	08-OCT-21	R5614231
Chrysene	2.17	DLHM	0.050	ug/g	07-OCT-21	08-OCT-21	R5614231
Dibenz(a,h)anthracene	0.402	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Fluoroanthene	1.78	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Fluorene	0.164	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Indeno(1,2,3-cd)pyrene	1.22	DLHM	0.050	ug/g	07-OCT-21	08-OCT-21	R5614231
1-Methylnaphthalene	0.048	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
2-Methylnaphthalene	0.063	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Naphthalene	0.072	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Phenanthrene	0.599	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Pyrene	2.78	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Quinoline	<0.025	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Surrogate: 2-Fluorobiphenyl	72.0		60-140	%	07-OCT-21	08-OCT-21	R5614231
Surrogate: d14-Terphenyl	68.3		60-140	%	07-OCT-21	08-OCT-21	R5614231
B(a)P Total Potency Equivalent	3.86		0.036	ug/g	07-OCT-21	08-OCT-21	R5614231
IACR (CCME)	36.7		0.50		07-OCT-21	08-OCT-21	R5614231
Polychlorinated Biphenyls							
Aroclor 1016	<0.075	RRR	0.075	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1221	<0.075	RRR	0.075	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1232	<0.075	RRR	0.075	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1242	<0.075	RRR	0.075	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1248	<0.075	RRR	0.075	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1254	0.214	DLHM	0.015	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1260	0.145	DLHM	0.015	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1262	<0.015	DLHM	0.015	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1268	<0.015	DLHM	0.015	mg/kg	13-OCT-21	13-OCT-21	R5616396
Total Polychlorinated Biphenyls	0.359		0.17	mg/kg	13-OCT-21	13-OCT-21	R5616396
Surrogate: d14-Terphenyl	85.3		50-140	%	13-OCT-21	13-OCT-21	R5616396
Report Remarks : RRR: Due to sample matrix interferences, PCB recoveries could not be determined in the matrix spike unless spiked with 5X the normal concentration and therefore the detection limit has been raised accordingly.							
L2646743-9 TC5-SG-004 Sampled By: CLIENT on 30-SEP-21 @ 15:25 Matrix: SEDIMENT							
Physical Tests							
% Moisture	86.2		0.25	%	04-OCT-21	04-OCT-21	R5607680
Organic / Inorganic Carbon							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646743-9 TC5-SG-004 Sampled By: CLIENT on 30-SEP-21 @ 15:25 Matrix: SEDIMENT							
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0935		0.0010	g/g	12-OCT-21	12-OCT-21	R5615928
Total Organic Carbon	9.35		0.10	%	12-OCT-21	12-OCT-21	R5615928
Metals							
Aluminum (Al)	22500	DLM	100	ug/g	08-OCT-21	12-OCT-21	R5616383
Antimony (Sb)	0.66	DLM	0.20	ug/g	08-OCT-21	12-OCT-21	R5616383
Arsenic (As)	6.08	DLM	0.20	ug/g	08-OCT-21	12-OCT-21	R5616383
Barium (Ba)	266	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Beryllium (Be)	0.82	DLM	0.20	ug/g	08-OCT-21	12-OCT-21	R5616383
Bismuth (Bi)	<0.40	DLM	0.40	ug/g	08-OCT-21	12-OCT-21	R5616383
Boron (B)	13	DLM	10	ug/g	08-OCT-21	12-OCT-21	R5616383
Cadmium (Cd)	0.757	DLM	0.040	ug/g	08-OCT-21	12-OCT-21	R5616383
Calcium (Ca)	26500	DLM	100	ug/g	08-OCT-21	12-OCT-21	R5616383
Chromium (Cr)	199	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Cobalt (Co)	13.2	DLM	0.20	ug/g	08-OCT-21	12-OCT-21	R5616383
Copper (Cu)	50.6	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Iron (Fe)	30100	DLM	100	ug/g	08-OCT-21	12-OCT-21	R5616383
Lead (Pb)	75.2	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Lithium (Li)	18.5	DLM	4.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Magnesium (Mg)	11700	DLM	40	ug/g	08-OCT-21	12-OCT-21	R5616383
Manganese (Mn)	1190	DLM	2.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Mercury (Hg)	0.215	DLM	0.010	ug/g	08-OCT-21	11-OCT-21	R5615365
Molybdenum (Mo)	1.04	DLM	0.20	ug/g	08-OCT-21	12-OCT-21	R5616383
Nickel (Ni)	31.4	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Phosphorus (P)	1070	DLM	100	ug/g	08-OCT-21	12-OCT-21	R5616383
Potassium (K)	4680	DLM	200	ug/g	08-OCT-21	12-OCT-21	R5616383
Selenium (Se)	1.47	DLM	0.40	ug/g	08-OCT-21	12-OCT-21	R5616383
Silver (Ag)	0.42	DLM	0.20	ug/g	08-OCT-21	12-OCT-21	R5616383
Sodium (Na)	630	DLM	100	ug/g	08-OCT-21	12-OCT-21	R5616383
Strontium (Sr)	132	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Sulfur (S)	6400	DLM	2000	ug/g	08-OCT-21	12-OCT-21	R5616383
Thallium (Tl)	0.32	DLM	0.10	ug/g	08-OCT-21	12-OCT-21	R5616383
Tin (Sn)	<4.0	DLM	4.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Titanium (Ti)	1410	DLM	2.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Tungsten (W)	<1.0	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Uranium (U)	1.00	DLM	0.10	ug/g	08-OCT-21	12-OCT-21	R5616383
Vanadium (V)	50.5	DLM	0.40	ug/g	08-OCT-21	12-OCT-21	R5616383
Zinc (Zn)	169	DLM	4.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Zirconium (Zr)	4.4	DLM	2.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.104	DLHM	0.038	ug/g	07-OCT-21	08-OCT-21	R5614231
Acenaphthylene	0.418	DLHM	0.038	ug/g	07-OCT-21	08-OCT-21	R5614231

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646743-9 TC5-SG-004 Sampled By: CLIENT on 30-SEP-21 @ 15:25 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
Acridine	<0.075	DLHM	0.075	ug/g	07-OCT-21	08-OCT-21	R5614231
Anthracene	0.510	DLHM	0.030	ug/g	07-OCT-21	08-OCT-21	R5614231
Benzo(a)anthracene	1.16	R	0.075	ug/g	07-OCT-21	08-OCT-21	R5614231
Benzo(a)pyrene	1.40	DLHM	0.038	ug/g	07-OCT-21	08-OCT-21	R5614231
Benzo(b&j)fluoranthene	1.20	DLHM	0.075	ug/g	07-OCT-21	08-OCT-21	R5614231
Benzo(g,h,i)perylene	0.787	DLHM	0.075	ug/g	07-OCT-21	08-OCT-21	R5614231
Benzo(k)fluoranthene	0.509	DLHM	0.075	ug/g	07-OCT-21	08-OCT-21	R5614231
Chrysene	1.25	DLHM	0.075	ug/g	07-OCT-21	08-OCT-21	R5614231
Dibenz(a,h)anthracene	0.198	DLHM	0.038	ug/g	07-OCT-21	08-OCT-21	R5614231
Fluoroanthene	1.29	DLHM	0.038	ug/g	07-OCT-21	08-OCT-21	R5614231
Fluorene	0.113	DLHM	0.038	ug/g	07-OCT-21	08-OCT-21	R5614231
Indeno(1,2,3-cd)pyrene	0.587	DLHM	0.075	ug/g	07-OCT-21	08-OCT-21	R5614231
1-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	07-OCT-21	08-OCT-21	R5614231
2-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	07-OCT-21	08-OCT-21	R5614231
Naphthalene	<0.038	DLHM	0.038	ug/g	07-OCT-21	08-OCT-21	R5614231
Phenanthrene	0.451	DLHM	0.038	ug/g	07-OCT-21	08-OCT-21	R5614231
Pyrene	1.83	DLHM	0.038	ug/g	07-OCT-21	08-OCT-21	R5614231
Quinoline	<0.038	DLHM	0.038	ug/g	07-OCT-21	08-OCT-21	R5614231
Surrogate: 2-Fluorobiphenyl	91.4		60-140	%	07-OCT-21	08-OCT-21	R5614231
Surrogate: d14-Terphenyl	88.0		60-140	%	07-OCT-21	08-OCT-21	R5614231
B(a)P Total Potency Equivalent	1.96		0.053	ug/g	07-OCT-21	08-OCT-21	R5614231
IACR (CCME)	19.7		0.75		07-OCT-21	08-OCT-21	R5614231
Polychlorinated Biphenyls							
Aroclor 1016	<0.115	RRR	0.12	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1221	<0.115	RRR	0.12	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1232	<0.115	RRR	0.12	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1242	<0.115	RRR	0.12	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1248	<0.115	RRR	0.12	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1254	0.096	DLHM	0.023	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1260	0.094	DLHM	0.023	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1262	<0.023	DLHM	0.023	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1268	<0.023	DLHM	0.023	mg/kg	13-OCT-21	13-OCT-21	R5616396
Total Polychlorinated Biphenyls	<0.261		0.26	mg/kg	13-OCT-21	13-OCT-21	R5616396
Surrogate: d14-Terphenyl	76.1		50-140	%	13-OCT-21	13-OCT-21	R5616396
Report Remarks : RRR: Due to sample matrix interferences, PCB recoveries could not be determined in the matrix spike unless spiked with 5X the normal concentration and therefore the detection limit has been raised accordingly.							
L2646743-10 TC5-SG-003 Sampled By: CLIENT on 30-SEP-21 @ 15:40 Matrix: SEDIMENT							
Physical Tests							
% Moisture	85.7		0.25	%	04-OCT-21	04-OCT-21	R5607680
Organic / Inorganic Carbon							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646743-10 TC5-SG-003 Sampled By: CLIENT on 30-SEP-21 @ 15:40 Matrix: SEDIMENT							
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.102		0.0010	g/g	12-OCT-21	12-OCT-21	R5615928
Total Organic Carbon	10.2		0.10	%	12-OCT-21	12-OCT-21	R5615928
Metals							
Aluminum (Al)	24700	DLM	100	ug/g	08-OCT-21	12-OCT-21	R5616383
Antimony (Sb)	0.56	DLM	0.20	ug/g	08-OCT-21	12-OCT-21	R5616383
Arsenic (As)	5.36	DLM	0.20	ug/g	08-OCT-21	12-OCT-21	R5616383
Barium (Ba)	293	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Beryllium (Be)	0.83	DLM	0.20	ug/g	08-OCT-21	12-OCT-21	R5616383
Bismuth (Bi)	<0.40	DLM	0.40	ug/g	08-OCT-21	12-OCT-21	R5616383
Boron (B)	13	DLM	10	ug/g	08-OCT-21	12-OCT-21	R5616383
Cadmium (Cd)	0.665	DLM	0.040	ug/g	08-OCT-21	12-OCT-21	R5616383
Calcium (Ca)	17700	DLM	100	ug/g	08-OCT-21	12-OCT-21	R5616383
Chromium (Cr)	144	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Cobalt (Co)	13.7	DLM	0.20	ug/g	08-OCT-21	12-OCT-21	R5616383
Copper (Cu)	43.2	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Iron (Fe)	32200	DLM	100	ug/g	08-OCT-21	12-OCT-21	R5616383
Lead (Pb)	55.4	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Lithium (Li)	19.8	DLM	4.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Magnesium (Mg)	12400	DLM	40	ug/g	08-OCT-21	12-OCT-21	R5616383
Manganese (Mn)	1460	DLM	2.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Mercury (Hg)	0.159	DLM	0.010	ug/g	08-OCT-21	11-OCT-21	R5615365
Molybdenum (Mo)	0.86	DLM	0.20	ug/g	08-OCT-21	12-OCT-21	R5616383
Nickel (Ni)	32.2	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Phosphorus (P)	1090	DLM	100	ug/g	08-OCT-21	12-OCT-21	R5616383
Potassium (K)	4890	DLM	200	ug/g	08-OCT-21	12-OCT-21	R5616383
Selenium (Se)	1.44	DLM	0.40	ug/g	08-OCT-21	12-OCT-21	R5616383
Silver (Ag)	0.31	DLM	0.20	ug/g	08-OCT-21	12-OCT-21	R5616383
Sodium (Na)	630	DLM	100	ug/g	08-OCT-21	12-OCT-21	R5616383
Strontium (Sr)	110	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Sulfur (S)	6300	DLM	2000	ug/g	08-OCT-21	12-OCT-21	R5616383
Thallium (Tl)	0.35	DLM	0.10	ug/g	08-OCT-21	12-OCT-21	R5616383
Tin (Sn)	<4.0	DLM	4.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Titanium (Ti)	1490	DLM	2.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Tungsten (W)	<1.0	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Uranium (U)	1.01	DLM	0.10	ug/g	08-OCT-21	12-OCT-21	R5616383
Vanadium (V)	53.2	DLM	0.40	ug/g	08-OCT-21	12-OCT-21	R5616383
Zinc (Zn)	150	DLM	4.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Zirconium (Zr)	4.9	DLM	2.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.111	DLHM	0.038	ug/g	07-OCT-21	08-OCT-21	R5614231
Acenaphthylene	0.471	DLHM	0.038	ug/g	07-OCT-21	08-OCT-21	R5614231

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646743-10 TC5-SG-003 Sampled By: CLIENT on 30-SEP-21 @ 15:40 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
Acridine	<0.075	DLHM	0.075	ug/g	07-OCT-21	08-OCT-21	R5614231
Anthracene	0.517	DLHM	0.030	ug/g	07-OCT-21	08-OCT-21	R5614231
Benzo(a)anthracene	1.24	R	0.075	ug/g	07-OCT-21	08-OCT-21	R5614231
Benzo(a)pyrene	1.43	DLHM	0.038	ug/g	07-OCT-21	08-OCT-21	R5614231
Benzo(b&j)fluoranthene	1.20	DLHM	0.075	ug/g	07-OCT-21	08-OCT-21	R5614231
Benzo(g,h,i)perylene	0.729	DLHM	0.075	ug/g	07-OCT-21	08-OCT-21	R5614231
Benzo(k)fluoranthene	0.449	DLHM	0.075	ug/g	07-OCT-21	08-OCT-21	R5614231
Chrysene	1.27	DLHM	0.075	ug/g	07-OCT-21	08-OCT-21	R5614231
Dibenz(a,h)anthracene	0.196	DLHM	0.038	ug/g	07-OCT-21	08-OCT-21	R5614231
Fluoroanthene	1.30	DLHM	0.038	ug/g	07-OCT-21	08-OCT-21	R5614231
Fluorene	0.108	DLHM	0.038	ug/g	07-OCT-21	08-OCT-21	R5614231
Indeno(1,2,3-cd)pyrene	0.545	DLHM	0.075	ug/g	07-OCT-21	08-OCT-21	R5614231
1-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	07-OCT-21	08-OCT-21	R5614231
2-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	07-OCT-21	08-OCT-21	R5614231
Naphthalene	<0.038	DLHM	0.038	ug/g	07-OCT-21	08-OCT-21	R5614231
Phenanthrene	0.445	DLHM	0.038	ug/g	07-OCT-21	08-OCT-21	R5614231
Pyrene	1.86	DLHM	0.038	ug/g	07-OCT-21	08-OCT-21	R5614231
Quinoline	<0.038	DLHM	0.038	ug/g	07-OCT-21	08-OCT-21	R5614231
Surrogate: 2-Fluorobiphenyl	87.2		60-140	%	07-OCT-21	08-OCT-21	R5614231
Surrogate: d14-Terphenyl	77.0		60-140	%	07-OCT-21	08-OCT-21	R5614231
B(a)P Total Potency Equivalent	1.99		0.053	ug/g	07-OCT-21	08-OCT-21	R5614231
IACR (CCME)	19.7		0.75		07-OCT-21	08-OCT-21	R5614231
Polychlorinated Biphenyls							
Aroclor 1016	<0.115	RRR	0.12	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1221	<0.115	RRR	0.12	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1232	<0.115	RRR	0.12	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1242	<0.115	RRR	0.12	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1248	<0.115	RRR	0.12	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1254	0.059	DLHM	0.023	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1260	0.057	DLHM	0.023	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1262	<0.023	DLHM	0.023	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1268	<0.023	DLHM	0.023	mg/kg	13-OCT-21	13-OCT-21	R5616396
Total Polychlorinated Biphenyls	<0.261		0.26	mg/kg	13-OCT-21	13-OCT-21	R5616396
Surrogate: d14-Terphenyl	97.1		50-140	%	13-OCT-21	13-OCT-21	R5616396
Report Remarks : RRR: Due to sample matrix interferences, PCB recoveries could not be determined in the matrix spike unless spiked with 5X the normal concentration and therefore the detection limit has been raised accordingly.							
L2646743-11 TC5-SG-002 Sampled By: CLIENT on 30-SEP-21 @ 16:00 Matrix: SEDIMENT							
Physical Tests							
% Moisture	85.0		0.25	%	04-OCT-21	04-OCT-21	R5607680
Particle Size							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646743-11 TC5-SG-002 Sampled By: CLIENT on 30-SEP-21 @ 16:00 Matrix: SEDIMENT							
Particle Size							
General Texture Class	Fine				13-OCT-21	13-OCT-21	R5617706
MUST PSA % > 75um	13.0		1.0	%	13-OCT-21	13-OCT-21	R5617706
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0920		0.0010	g/g	12-OCT-21	12-OCT-21	R5615928
Total Organic Carbon	9.20		0.10	%	12-OCT-21	12-OCT-21	R5615928
Metals							
Aluminum (Al)	22900		50	ug/g	08-OCT-21	08-OCT-21	R5614725
Antimony (Sb)	0.49		0.10	ug/g	08-OCT-21	08-OCT-21	R5614725
Arsenic (As)	4.69		0.10	ug/g	08-OCT-21	08-OCT-21	R5614725
Barium (Ba)	311		0.50	ug/g	08-OCT-21	08-OCT-21	R5614725
Beryllium (Be)	0.74		0.10	ug/g	08-OCT-21	08-OCT-21	R5614725
Bismuth (Bi)	0.24		0.20	ug/g	08-OCT-21	08-OCT-21	R5614725
Boron (B)	12.6		5.0	ug/g	08-OCT-21	08-OCT-21	R5614725
Cadmium (Cd)	0.613		0.020	ug/g	08-OCT-21	08-OCT-21	R5614725
Calcium (Ca)	56500		50	ug/g	08-OCT-21	08-OCT-21	R5614725
Chromium (Cr)	129		0.50	ug/g	08-OCT-21	08-OCT-21	R5614725
Cobalt (Co)	12.0		0.10	ug/g	08-OCT-21	08-OCT-21	R5614725
Copper (Cu)	41.0		0.50	ug/g	08-OCT-21	08-OCT-21	R5614725
Iron (Fe)	30800		50	ug/g	08-OCT-21	08-OCT-21	R5614725
Lead (Pb)	44.2		0.50	ug/g	08-OCT-21	08-OCT-21	R5614725
Lithium (Li)	18.1		2.0	ug/g	08-OCT-21	08-OCT-21	R5614725
Magnesium (Mg)	11400		20	ug/g	08-OCT-21	08-OCT-21	R5614725
Manganese (Mn)	1190		1.0	ug/g	08-OCT-21	08-OCT-21	R5614725
Mercury (Hg)	0.146	DLM	0.010	ug/g	08-OCT-21	11-OCT-21	R5615364
Molybdenum (Mo)	0.87		0.10	ug/g	08-OCT-21	08-OCT-21	R5614725
Nickel (Ni)	29.9		0.50	ug/g	08-OCT-21	08-OCT-21	R5614725
Phosphorus (P)	1080		50	ug/g	08-OCT-21	08-OCT-21	R5614725
Potassium (K)	4430		100	ug/g	08-OCT-21	08-OCT-21	R5614725
Selenium (Se)	1.34		0.20	ug/g	08-OCT-21	08-OCT-21	R5614725
Silver (Ag)	0.23		0.10	ug/g	08-OCT-21	08-OCT-21	R5614725
Sodium (Na)	750		50	ug/g	08-OCT-21	08-OCT-21	R5614725
Strontium (Sr)	240		0.50	ug/g	08-OCT-21	08-OCT-21	R5614725
Sulfur (S)	8000		1000	ug/g	08-OCT-21	08-OCT-21	R5614725
Thallium (Tl)	0.274		0.050	ug/g	08-OCT-21	08-OCT-21	R5614725
Tin (Sn)	2.7		2.0	ug/g	08-OCT-21	08-OCT-21	R5614725
Titanium (Ti)	1410		1.0	ug/g	08-OCT-21	08-OCT-21	R5614725
Tungsten (W)	<0.50		0.50	ug/g	08-OCT-21	08-OCT-21	R5614725
Uranium (U)	0.789		0.050	ug/g	08-OCT-21	08-OCT-21	R5614725
Vanadium (V)	46.5		0.20	ug/g	08-OCT-21	08-OCT-21	R5614725
Zinc (Zn)	136		2.0	ug/g	08-OCT-21	08-OCT-21	R5614725
Zirconium (Zr)	3.0		1.0	ug/g	08-OCT-21	08-OCT-21	R5614725
Polycyclic Aromatic Hydrocarbons							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646743-11 TC5-SG-002 Sampled By: CLIENT on 30-SEP-21 @ 16:00 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.099	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Acenaphthylene	0.371	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Acridine	<0.050	DLHM	0.050	ug/g	07-OCT-21	08-OCT-21	R5614231
Anthracene	0.387	DLHM	0.020	ug/g	07-OCT-21	08-OCT-21	R5614231
Benzo(a)anthracene	1.06	R	0.050	ug/g	07-OCT-21	08-OCT-21	R5614231
Benzo(a)pyrene	1.26	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Benzo(b&j)fluoranthene	1.03	DLHM	0.050	ug/g	07-OCT-21	08-OCT-21	R5614231
Benzo(g,h,i)perylene	0.674	DLHM	0.050	ug/g	07-OCT-21	08-OCT-21	R5614231
Benzo(k)fluoranthene	0.435	DLHM	0.050	ug/g	07-OCT-21	08-OCT-21	R5614231
Chrysene	1.11	DLHM	0.050	ug/g	07-OCT-21	08-OCT-21	R5614231
Dibenz(a,h)anthracene	0.175	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Fluoroanthene	1.13	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Fluorene	0.094	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Indeno(1,2,3-cd)pyrene	0.532	DLHM	0.050	ug/g	07-OCT-21	08-OCT-21	R5614231
1-Methylnaphthalene	<0.025	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
2-Methylnaphthalene	<0.025	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Naphthalene	0.028	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Phenanthrene	0.410	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Pyrene	1.62	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Quinoline	<0.025	DLHM	0.025	ug/g	07-OCT-21	08-OCT-21	R5614231
Surrogate: 2-Fluorobiphenyl	89.6		60-140	%	07-OCT-21	08-OCT-21	R5614231
Surrogate: d14-Terphenyl	80.4		60-140	%	07-OCT-21	08-OCT-21	R5614231
B(a)P Total Potency Equivalent	1.76		0.036	ug/g	07-OCT-21	08-OCT-21	R5614231
IACR (CCME)	17.4		0.50		07-OCT-21	08-OCT-21	R5614231
Polychlorinated Biphenyls							
Aroclor 1016	<0.115	RRR	0.12	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1221	<0.115	RRR	0.12	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1232	<0.115	RRR	0.12	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1242	<0.115	RRR	0.12	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1248	<0.115	RRR	0.12	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1254	0.084	DLHM	0.023	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1260	0.060	DLHM	0.023	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1262	<0.023	DLHM	0.023	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1268	<0.023	DLHM	0.023	mg/kg	13-OCT-21	13-OCT-21	R5616396
Total Polychlorinated Biphenyls	<0.261		0.26	mg/kg	13-OCT-21	13-OCT-21	R5616396
Surrogate: d14-Terphenyl	68.0		50-140	%	13-OCT-21	13-OCT-21	R5616396
Report Remarks : RRR: Due to sample matrix interferences, PCB recoveries could not be determined in the matrix spike unless spiked with 5X the normal concentration and therefore the detection limit has been raised accordingly.							
L2646743-13 DUP-203 Sampled By: CLIENT on 30-SEP-21 Matrix: SEDIMENT							
Physical Tests							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646743-13 DUP-203 Sampled By: CLIENT on 30-SEP-21 Matrix: SEDIMENT							
Physical Tests							
% Moisture	86.0		0.25	%	04-OCT-21	04-OCT-21	R5607680
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.101		0.0010	g/g	12-OCT-21	12-OCT-21	R5615928
Total Organic Carbon	10.1		0.10	%	12-OCT-21	12-OCT-21	R5615928
Metals							
Aluminum (Al)	21900	DLM	100	ug/g	08-OCT-21	12-OCT-21	R5616383
Antimony (Sb)	0.68	DLM	0.20	ug/g	08-OCT-21	12-OCT-21	R5616383
Arsenic (As)	5.86	DLM	0.20	ug/g	08-OCT-21	12-OCT-21	R5616383
Barium (Ba)	262	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Beryllium (Be)	0.71	DLM	0.20	ug/g	08-OCT-21	12-OCT-21	R5616383
Bismuth (Bi)	0.46	DLM	0.40	ug/g	08-OCT-21	12-OCT-21	R5616383
Boron (B)	11	DLM	10	ug/g	08-OCT-21	12-OCT-21	R5616383
Cadmium (Cd)	0.800	DLM	0.040	ug/g	08-OCT-21	12-OCT-21	R5616383
Calcium (Ca)	36100	DLM	100	ug/g	08-OCT-21	12-OCT-21	R5616383
Chromium (Cr)	298	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Cobalt (Co)	12.9	DLM	0.20	ug/g	08-OCT-21	12-OCT-21	R5616383
Copper (Cu)	58.9	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Iron (Fe)	29300	DLM	100	ug/g	08-OCT-21	12-OCT-21	R5616383
Lead (Pb)	86.7	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Lithium (Li)	15.6	DLM	4.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Magnesium (Mg)	11700	DLM	40	ug/g	08-OCT-21	12-OCT-21	R5616383
Manganese (Mn)	910	DLM	2.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Mercury (Hg)	0.312	DLM	0.010	ug/g	08-OCT-21	11-OCT-21	R5615365
Molybdenum (Mo)	0.94	DLM	0.20	ug/g	08-OCT-21	12-OCT-21	R5616383
Nickel (Ni)	29.5	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Phosphorus (P)	1020	DLM	100	ug/g	08-OCT-21	12-OCT-21	R5616383
Potassium (K)	4390	DLM	200	ug/g	08-OCT-21	12-OCT-21	R5616383
Selenium (Se)	1.43	DLM	0.40	ug/g	08-OCT-21	12-OCT-21	R5616383
Silver (Ag)	0.52	DLM	0.20	ug/g	08-OCT-21	12-OCT-21	R5616383
Sodium (Na)	590	DLM	100	ug/g	08-OCT-21	12-OCT-21	R5616383
Strontium (Sr)	194	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Sulfur (S)	7700	DLM	2000	ug/g	08-OCT-21	12-OCT-21	R5616383
Thallium (Tl)	0.36	DLM	0.10	ug/g	08-OCT-21	12-OCT-21	R5616383
Tin (Sn)	4.7	DLM	4.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Titanium (Ti)	1280	DLM	2.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Tungsten (W)	<1.0	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Uranium (U)	0.96	DLM	0.10	ug/g	08-OCT-21	12-OCT-21	R5616383
Vanadium (V)	47.9	DLM	0.40	ug/g	08-OCT-21	12-OCT-21	R5616383
Zinc (Zn)	173	DLM	4.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Zirconium (Zr)	4.3	DLM	2.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.065		0.038	ug/g	12-OCT-21	13-OCT-21	R5616947

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646743-13 DUP-203 Sampled By: CLIENT on 30-SEP-21 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
Acenaphthylene	0.306		0.038	ug/g	12-OCT-21	13-OCT-21	R5616947
Acridine	<0.075	DLHM	0.075	ug/g	12-OCT-21	13-OCT-21	R5616947
Anthracene	0.256		0.030	ug/g	12-OCT-21	13-OCT-21	R5616947
Benzo(a)anthracene	0.582	R	0.075	ug/g	12-OCT-21	13-OCT-21	R5616947
Benzo(a)pyrene	0.835		0.038	ug/g	12-OCT-21	13-OCT-21	R5616947
Benzo(b&j)fluoranthene	0.804		0.075	ug/g	12-OCT-21	13-OCT-21	R5616947
Benzo(g,h,i)perylene	0.608		0.075	ug/g	12-OCT-21	13-OCT-21	R5616947
Benzo(k)fluoranthene	0.324		0.075	ug/g	12-OCT-21	13-OCT-21	R5616947
Chrysene	0.680		0.075	ug/g	12-OCT-21	13-OCT-21	R5616947
Dibenz(a,h)anthracene	0.140		0.038	ug/g	12-OCT-21	13-OCT-21	R5616947
Fluoroanthene	0.741		0.038	ug/g	12-OCT-21	13-OCT-21	R5616947
Fluorene	0.088		0.038	ug/g	12-OCT-21	13-OCT-21	R5616947
Indeno(1,2,3-cd)pyrene	0.506		0.075	ug/g	12-OCT-21	13-OCT-21	R5616947
1-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	12-OCT-21	13-OCT-21	R5616947
2-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	12-OCT-21	13-OCT-21	R5616947
Naphthalene	0.040		0.038	ug/g	12-OCT-21	13-OCT-21	R5616947
Phenanthrene	0.290		0.038	ug/g	12-OCT-21	13-OCT-21	R5616947
Pyrene	0.943		0.038	ug/g	12-OCT-21	13-OCT-21	R5616947
Quinoline	<0.038	DLHM	0.038	ug/g	12-OCT-21	13-OCT-21	R5616947
Surrogate: 2-Fluorobiphenyl	91.6		60-140	%	12-OCT-21	13-OCT-21	R5616947
Surrogate: d14-Terphenyl	89.6		60-140	%	12-OCT-21	13-OCT-21	R5616947
B(a)P Total Potency Equivalent	1.21		0.053	ug/g	12-OCT-21	13-OCT-21	R5616947
IACR (CCME)	12.3		0.75		12-OCT-21	13-OCT-21	R5616947
Polychlorinated Biphenyls							
Aroclor 1016	<0.115	RRR	0.12	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1221	<0.115	RRR	0.12	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1232	<0.115	RRR	0.12	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1242	<0.115	RRR	0.12	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1248	<0.115	RRR	0.12	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1254	0.133	DLHM	0.023	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1260	0.130	DLHM	0.023	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1262	<0.023	DLHM	0.023	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1268	<0.023	DLHM	0.023	mg/kg	13-OCT-21	13-OCT-21	R5616396
Total Polychlorinated Biphenyls	0.263		0.26	mg/kg	13-OCT-21	13-OCT-21	R5616396
Surrogate: d14-Terphenyl	78.6		50-140	%	13-OCT-21	13-OCT-21	R5616396
Report Remarks : RRR: Due to sample matrix interferences, PCB recoveries could not be determined in the matrix spike unless spiked with 5X the normal concentration and therefore the detection limit has been raised accordingly.							
L2646743-14 TCRC-SC-004A Sampled By: CLIENT on 30-SEP-21 @ 14:30 Matrix: SEDIMENT							
Physical Tests							
% Moisture	42.7		0.25	%	04-OCT-21	04-OCT-21	R5607680

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646743-14 TCRC-SC-004A Sampled By: CLIENT on 30-SEP-21 @ 14:30 Matrix: SEDIMENT							
Physical Tests							
Liquid Limit (LL)	48		1	%	23-OCT-21	23-OCT-21	R5627486
Moisture at Plastic Limit	30		1	%	23-OCT-21	23-OCT-21	R5627486
Plasticity Index (PI)	18		1	%	23-OCT-21	23-OCT-21	R5627486
Specific Gravity	1.48		0.010	kg/L		01-NOV-21	R5634727
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0209		0.0010	g/g	12-OCT-21	12-OCT-21	R5615928
Total Organic Carbon	2.09		0.10	%	12-OCT-21	12-OCT-21	R5615928
Metals							
Aluminum (Al)	19500	DLM	100	ug/g	08-OCT-21	12-OCT-21	R5616383
Antimony (Sb)	1.38	DLM	0.20	ug/g	08-OCT-21	12-OCT-21	R5616383
Arsenic (As)	23.9	DLM	0.20	ug/g	08-OCT-21	12-OCT-21	R5616383
Barium (Ba)	249	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Beryllium (Be)	0.72	DLM	0.20	ug/g	08-OCT-21	12-OCT-21	R5616383
Bismuth (Bi)	<0.40	DLM	0.40	ug/g	08-OCT-21	12-OCT-21	R5616383
Boron (B)	<10	DLM	10	ug/g	08-OCT-21	12-OCT-21	R5616383
Cadmium (Cd)	0.330	DLM	0.040	ug/g	08-OCT-21	12-OCT-21	R5616383
Calcium (Ca)	47200	DLM	100	ug/g	08-OCT-21	12-OCT-21	R5616383
Chromium (Cr)	391	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Cobalt (Co)	45.0	DLM	0.20	ug/g	08-OCT-21	12-OCT-21	R5616383
Copper (Cu)	32.3	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Iron (Fe)	30900	DLM	100	ug/g	08-OCT-21	12-OCT-21	R5616383
Lead (Pb)	69.9	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Lithium (Li)	16.5	DLM	4.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Magnesium (Mg)	17000	DLM	40	ug/g	08-OCT-21	12-OCT-21	R5616383
Manganese (Mn)	709	DLM	2.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Mercury (Hg)	0.861	DLM	0.010	ug/g	08-OCT-21	11-OCT-21	R5615365
Molybdenum (Mo)	0.58	DLM	0.20	ug/g	08-OCT-21	12-OCT-21	R5616383
Nickel (Ni)	44.0	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Phosphorus (P)	930	DLM	100	ug/g	08-OCT-21	12-OCT-21	R5616383
Potassium (K)	5380	DLM	200	ug/g	08-OCT-21	12-OCT-21	R5616383
Selenium (Se)	<0.40	DLM	0.40	ug/g	08-OCT-21	12-OCT-21	R5616383
Silver (Ag)	0.54	DLM	0.20	ug/g	08-OCT-21	12-OCT-21	R5616383
Sodium (Na)	760	DLM	100	ug/g	08-OCT-21	12-OCT-21	R5616383
Strontium (Sr)	199	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Sulfur (S)	2100	DLM	2000	ug/g	08-OCT-21	12-OCT-21	R5616383
Thallium (Tl)	0.30	DLM	0.10	ug/g	08-OCT-21	12-OCT-21	R5616383
Tin (Sn)	6.4	DLM	4.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Titanium (Ti)	1670	DLM	2.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Tungsten (W)	<1.0	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Uranium (U)	0.68	DLM	0.10	ug/g	08-OCT-21	12-OCT-21	R5616383
Vanadium (V)	54.6	DLM	0.40	ug/g	08-OCT-21	12-OCT-21	R5616383

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646743-14 TCRC-SC-004A Sampled By: CLIENT on 30-SEP-21 @ 14:30 Matrix: SEDIMENT							
Metals							
Zinc (Zn)	130	DLM	4.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Zirconium (Zr)	8.1	DLM	2.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.0230		0.0050	ug/g	13-OCT-21	13-OCT-21	R5616732
Acenaphthylene	0.0803		0.0050	ug/g	13-OCT-21	13-OCT-21	R5616732
Acridine	0.024		0.010	ug/g	13-OCT-21	13-OCT-21	R5616732
Anthracene	0.0548		0.0040	ug/g	13-OCT-21	13-OCT-21	R5616732
Benzo(a)anthracene	0.127	R	0.010	ug/g	13-OCT-21	13-OCT-21	R5616732
Benzo(a)pyrene	0.167		0.0050	ug/g	13-OCT-21	13-OCT-21	R5616732
Benzo(b&j)fluoranthene	0.181		0.010	ug/g	13-OCT-21	13-OCT-21	R5616732
Benzo(g,h,i)perylene	0.115		0.010	ug/g	13-OCT-21	13-OCT-21	R5616732
Benzo(k)fluoranthene	0.072		0.010	ug/g	13-OCT-21	13-OCT-21	R5616732
Chrysene	0.143		0.010	ug/g	13-OCT-21	13-OCT-21	R5616732
Dibenz(a,h)anthracene	0.0287		0.0050	ug/g	13-OCT-21	13-OCT-21	R5616732
Fluoroanthene	0.201		0.0050	ug/g	13-OCT-21	13-OCT-21	R5616732
Fluorene	0.0284	R	0.0050	ug/g	13-OCT-21	13-OCT-21	R5616732
Indeno(1,2,3-cd)pyrene	0.099		0.010	ug/g	13-OCT-21	13-OCT-21	R5616732
1-Methylnaphthalene	0.0146		0.0050	ug/g	13-OCT-21	13-OCT-21	R5616732
2-Methylnaphthalene	0.0185		0.0050	ug/g	13-OCT-21	13-OCT-21	R5616732
Naphthalene	0.0313		0.0050	ug/g	13-OCT-21	13-OCT-21	R5616732
Phenanthrene	0.116		0.0050	ug/g	13-OCT-21	13-OCT-21	R5616732
Pyrene	0.253		0.0050	ug/g	13-OCT-21	13-OCT-21	R5616732
Quinoline	<0.0050		0.0050	ug/g	13-OCT-21	13-OCT-21	R5616732
Surrogate: 2-Fluorobiphenyl	87.6		60-140	%	13-OCT-21	13-OCT-21	R5616732
Surrogate: d14-Terphenyl	90.1		60-140	%	13-OCT-21	13-OCT-21	R5616732
B(a)P Total Potency Equivalent	0.246		0.020	ug/g	13-OCT-21	13-OCT-21	R5616732
IACR (CCME)	2.67		0.15		13-OCT-21	13-OCT-21	R5616732
Polychlorinated Biphenyls							
Aroclor 1016	<0.0150	RRR	0.015	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1221	<0.0150	RRR	0.015	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1232	<0.0150	RRR	0.015	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1242	<0.0150	RRR	0.015	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1248	<0.0150	RRR	0.015	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1254	0.0484	DLHM	0.0030	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1260	0.0988	DLHM	0.0030	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1262	<0.0030	DLHM	0.0030	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1268	<0.0030	DLHM	0.0030	mg/kg	13-OCT-21	13-OCT-21	R5616396
Total Polychlorinated Biphenyls	0.1472		0.035	mg/kg	13-OCT-21	13-OCT-21	R5616396
Surrogate: d14-Terphenyl	85.0		50-140	%	13-OCT-21	13-OCT-21	R5616396
Report Remarks : RRR: Due to sample matrix interferences, PCB recoveries could not be determined in the matrix spike unless spiked with 5X the normal concentration and therefore the detection limit has been raised accordingly.							
L2646743-15 TCRC-SG-004							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646743-15 TCRC-SG-004 Sampled By: CLIENT on 30-SEP-21 @ 15:40 Matrix: SEDIMENT							
Physical Tests							
% Moisture	62.8		0.25	%	04-OCT-21	04-OCT-21	R5607680
Liquid Limit (LL)	60		1	%	23-OCT-21	23-OCT-21	R5627486
Moisture at Plastic Limit	43		1	%	23-OCT-21	23-OCT-21	R5627486
Plasticity Index (PI)	18		1	%	23-OCT-21	23-OCT-21	R5627486
Specific Gravity	1.23		0.010	kg/L		01-NOV-21	R5634727
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0322		0.0010	g/g	12-OCT-21	12-OCT-21	R5615928
Total Organic Carbon	3.22		0.10	%	12-OCT-21	12-OCT-21	R5615928
Metals							
Aluminum (Al)	17200	DLM	100	ug/g	08-OCT-21	12-OCT-21	R5616383
Antimony (Sb)	2.82	DLM	0.20	ug/g	08-OCT-21	12-OCT-21	R5616383
Arsenic (As)	32.8	DLM	0.20	ug/g	08-OCT-21	12-OCT-21	R5616383
Barium (Ba)	242	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Beryllium (Be)	0.70	DLM	0.20	ug/g	08-OCT-21	12-OCT-21	R5616383
Bismuth (Bi)	<0.40	DLM	0.40	ug/g	08-OCT-21	12-OCT-21	R5616383
Boron (B)	<10	DLM	10	ug/g	08-OCT-21	12-OCT-21	R5616383
Cadmium (Cd)	0.398	DLM	0.040	ug/g	08-OCT-21	12-OCT-21	R5616383
Calcium (Ca)	57400	DLM	100	ug/g	08-OCT-21	12-OCT-21	R5616383
Chromium (Cr)	380	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Cobalt (Co)	64.7	DLM	0.20	ug/g	08-OCT-21	12-OCT-21	R5616383
Copper (Cu)	35.3	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Iron (Fe)	28500	DLM	100	ug/g	08-OCT-21	12-OCT-21	R5616383
Lead (Pb)	77.5	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Lithium (Li)	16.5	DLM	4.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Magnesium (Mg)	14400	DLM	40	ug/g	08-OCT-21	12-OCT-21	R5616383
Manganese (Mn)	649	DLM	2.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Mercury (Hg)	0.834	DLM	0.010	ug/g	08-OCT-21	11-OCT-21	R5615365
Molybdenum (Mo)	0.52	DLM	0.20	ug/g	08-OCT-21	12-OCT-21	R5616383
Nickel (Ni)	60.4	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Phosphorus (P)	1080	DLM	100	ug/g	08-OCT-21	12-OCT-21	R5616383
Potassium (K)	4880	DLM	200	ug/g	08-OCT-21	12-OCT-21	R5616383
Selenium (Se)	0.47	DLM	0.40	ug/g	08-OCT-21	12-OCT-21	R5616383
Silver (Ag)	0.83	DLM	0.20	ug/g	08-OCT-21	12-OCT-21	R5616383
Sodium (Na)	710	DLM	100	ug/g	08-OCT-21	12-OCT-21	R5616383
Strontium (Sr)	319	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Sulfur (S)	2700	DLM	2000	ug/g	08-OCT-21	12-OCT-21	R5616383
Thallium (Tl)	0.30	DLM	0.10	ug/g	08-OCT-21	12-OCT-21	R5616383
Tin (Sn)	8.7	DLM	4.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Titanium (Ti)	1450	DLM	2.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Tungsten (W)	<1.0	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Uranium (U)	0.59	DLM	0.10	ug/g	08-OCT-21	12-OCT-21	R5616383

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646743-15 TCRC-SG-004 Sampled By: CLIENT on 30-SEP-21 @ 15:40 Matrix: SEDIMENT							
Metals							
Vanadium (V)	47.0	DLM	0.40	ug/g	08-OCT-21	12-OCT-21	R5616383
Zinc (Zn)	150	DLM	4.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Zirconium (Zr)	5.6	DLM	2.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.035		0.010	ug/g	12-OCT-21	13-OCT-21	R5616947
Acenaphthylene	0.172		0.010	ug/g	12-OCT-21	13-OCT-21	R5616947
Acridine	0.038	AI	0.020	ug/g	12-OCT-21	13-OCT-21	R5616947
Anthracene	0.128		0.0080	ug/g	12-OCT-21	13-OCT-21	R5616947
Benzo(a)anthracene	0.532	R	0.020	ug/g	12-OCT-21	13-OCT-21	R5616947
Benzo(a)pyrene	0.626		0.010	ug/g	12-OCT-21	13-OCT-21	R5616947
Benzo(b&j)fluoranthene	0.696		0.020	ug/g	12-OCT-21	13-OCT-21	R5616947
Benzo(g,h,i)perylene	0.401		0.020	ug/g	12-OCT-21	13-OCT-21	R5616947
Benzo(k)fluoranthene	0.280		0.020	ug/g	12-OCT-21	13-OCT-21	R5616947
Chrysene	0.573		0.020	ug/g	12-OCT-21	13-OCT-21	R5616947
Dibenz(a,h)anthracene	0.101		0.010	ug/g	12-OCT-21	13-OCT-21	R5616947
Fluoroanthene	0.819		0.010	ug/g	12-OCT-21	13-OCT-21	R5616947
Fluorene	0.051	R	0.010	ug/g	12-OCT-21	13-OCT-21	R5616947
Indeno(1,2,3-cd)pyrene	0.393		0.020	ug/g	12-OCT-21	13-OCT-21	R5616947
1-Methylnaphthalene	0.013		0.010	ug/g	12-OCT-21	13-OCT-21	R5616947
2-Methylnaphthalene	0.019		0.010	ug/g	12-OCT-21	13-OCT-21	R5616947
Naphthalene	0.027		0.010	ug/g	12-OCT-21	13-OCT-21	R5616947
Phenanthrene	0.358		0.010	ug/g	12-OCT-21	13-OCT-21	R5616947
Pyrene	0.840		0.010	ug/g	12-OCT-21	13-OCT-21	R5616947
Quinoline	<0.010	DLHM	0.010	ug/g	12-OCT-21	13-OCT-21	R5616947
Surrogate: 2-Fluorobiphenyl	95.2		60-140	%	12-OCT-21	13-OCT-21	R5616947
Surrogate: d14-Terphenyl	93.0		60-140	%	12-OCT-21	13-OCT-21	R5616947
B(a)P Total Potency Equivalent	0.927		0.020	ug/g	12-OCT-21	13-OCT-21	R5616947
IACR (CCME)	10.3		0.20		12-OCT-21	13-OCT-21	R5616947
Polychlorinated Biphenyls							
Aroclor 1016	<0.030	RRR	0.030	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1221	<0.030	RRR	0.030	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1232	<0.030	RRR	0.030	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1242	<0.030	RRR	0.030	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1248	<0.030	RRR	0.030	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1254	0.0577	DLHM	0.0060	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1260	0.104	DLHM	0.0060	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1262	<0.0060	DLHM	0.0060	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1268	<0.0060	DLHM	0.0060	mg/kg	13-OCT-21	13-OCT-21	R5616396
Total Polychlorinated Biphenyls	0.162		0.070	mg/kg	13-OCT-21	13-OCT-21	R5616396
Surrogate: d14-Terphenyl	83.3		50-140	%	13-OCT-21	13-OCT-21	R5616396
Report Remarks : RRR: Due to sample matrix interferences, PCB recoveries could not be determined in the matrix spike unless spiked with 5X the normal concentration and therefore the detection limit has been raised accordingly.							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646743-16 WM-SG-002 Sampled By: CLIENT on 30-SEP-21 @ 16:25 Matrix: SEDIMENT							
Physical Tests							
% Moisture	84.2		0.25	%	04-OCT-21	04-OCT-21	R5607680
Particle Size							
General Texture Class	Fine				13-OCT-21	13-OCT-21	R5617706
MUST PSA % > 75um	18.4		1.0	%	13-OCT-21	13-OCT-21	R5617706
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0719		0.0010	g/g	12-OCT-21	12-OCT-21	R5615928
Total Organic Carbon	7.19		0.10	%	12-OCT-21	12-OCT-21	R5615928
Metals							
Aluminum (Al)	12900	DLM	100	ug/g	08-OCT-21	12-OCT-21	R5616383
Antimony (Sb)	0.76	DLM	0.20	ug/g	08-OCT-21	12-OCT-21	R5616383
Arsenic (As)	10.3	DLM	0.20	ug/g	08-OCT-21	12-OCT-21	R5616383
Barium (Ba)	197	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Beryllium (Be)	0.58	DLM	0.20	ug/g	08-OCT-21	12-OCT-21	R5616383
Bismuth (Bi)	<0.40	DLM	0.40	ug/g	08-OCT-21	12-OCT-21	R5616383
Boron (B)	11	DLM	10	ug/g	08-OCT-21	12-OCT-21	R5616383
Cadmium (Cd)	0.622	DLM	0.040	ug/g	08-OCT-21	12-OCT-21	R5616383
Calcium (Ca)	91800	DLM	100	ug/g	08-OCT-21	12-OCT-21	R5616383
Chromium (Cr)	488	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Cobalt (Co)	13.7	DLM	0.20	ug/g	08-OCT-21	12-OCT-21	R5616383
Copper (Cu)	37.6	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Iron (Fe)	23300	DLM	100	ug/g	08-OCT-21	12-OCT-21	R5616383
Lead (Pb)	94.9	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Lithium (Li)	12.4	DLM	4.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Magnesium (Mg)	11700	DLM	40	ug/g	08-OCT-21	12-OCT-21	R5616383
Manganese (Mn)	1010	DLM	2.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Mercury (Hg)	0.688	DLM	0.010	ug/g	08-OCT-21	11-OCT-21	R5615365
Molybdenum (Mo)	0.90	DLM	0.20	ug/g	08-OCT-21	12-OCT-21	R5616383
Nickel (Ni)	22.3	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Phosphorus (P)	1210	DLM	100	ug/g	08-OCT-21	12-OCT-21	R5616383
Potassium (K)	3290	DLM	200	ug/g	08-OCT-21	12-OCT-21	R5616383
Selenium (Se)	1.20	DLM	0.40	ug/g	08-OCT-21	12-OCT-21	R5616383
Silver (Ag)	0.48	DLM	0.20	ug/g	08-OCT-21	12-OCT-21	R5616383
Sodium (Na)	650	DLM	100	ug/g	08-OCT-21	12-OCT-21	R5616383
Strontium (Sr)	636	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Sulfur (S)	10700	DLM	2000	ug/g	08-OCT-21	12-OCT-21	R5616383
Thallium (Tl)	0.28	DLM	0.10	ug/g	08-OCT-21	12-OCT-21	R5616383
Tin (Sn)	8.0	DLM	4.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Titanium (Ti)	818	DLM	2.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Tungsten (W)	<1.0	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Uranium (U)	0.78	DLM	0.10	ug/g	08-OCT-21	12-OCT-21	R5616383
Vanadium (V)	35.3	DLM	0.40	ug/g	08-OCT-21	12-OCT-21	R5616383
Zinc (Zn)	140	DLM	4.0	ug/g	08-OCT-21	12-OCT-21	R5616383

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646743-16 WM-SG-002 Sampled By: CLIENT on 30-SEP-21 @ 16:25 Matrix: SEDIMENT							
Metals							
Zirconium (Zr)	2.7	DLM	2.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.054		0.025	ug/g	12-OCT-21	13-OCT-21	R5616947
Acenaphthylene	0.144		0.025	ug/g	12-OCT-21	13-OCT-21	R5616947
Acridine	<0.050	DLHM	0.050	ug/g	12-OCT-21	13-OCT-21	R5616947
Anthracene	0.113		0.020	ug/g	12-OCT-21	13-OCT-21	R5616947
Benzo(a)anthracene	0.365	R	0.050	ug/g	12-OCT-21	13-OCT-21	R5616947
Benzo(a)pyrene	0.490		0.025	ug/g	12-OCT-21	13-OCT-21	R5616947
Benzo(b&j)fluoranthene	0.612		0.050	ug/g	12-OCT-21	13-OCT-21	R5616947
Benzo(g,h,i)perylene	0.387		0.050	ug/g	12-OCT-21	13-OCT-21	R5616947
Benzo(k)fluoranthene	0.245		0.050	ug/g	12-OCT-21	13-OCT-21	R5616947
Chrysene	0.467		0.050	ug/g	12-OCT-21	13-OCT-21	R5616947
Dibenz(a,h)anthracene	0.094		0.025	ug/g	12-OCT-21	13-OCT-21	R5616947
Fluoroanthene	0.776		0.025	ug/g	12-OCT-21	13-OCT-21	R5616947
Fluorene	0.063		0.025	ug/g	12-OCT-21	13-OCT-21	R5616947
Indeno(1,2,3-cd)pyrene	0.359		0.050	ug/g	12-OCT-21	13-OCT-21	R5616947
1-Methylnaphthalene	0.028		0.025	ug/g	12-OCT-21	13-OCT-21	R5616947
2-Methylnaphthalene	0.035		0.025	ug/g	12-OCT-21	13-OCT-21	R5616947
Naphthalene	0.061		0.025	ug/g	12-OCT-21	13-OCT-21	R5616947
Phenanthrene	0.481		0.025	ug/g	12-OCT-21	13-OCT-21	R5616947
Pyrene	0.720		0.025	ug/g	12-OCT-21	13-OCT-21	R5616947
Quinoline	<0.025	DLHM	0.025	ug/g	12-OCT-21	13-OCT-21	R5616947
Surrogate: 2-Fluorobiphenyl	86.4		60-140	%	12-OCT-21	13-OCT-21	R5616947
Surrogate: d14-Terphenyl	86.6		60-140	%	12-OCT-21	13-OCT-21	R5616947
B(a)P Total Potency Equivalent	0.750		0.036	ug/g	12-OCT-21	13-OCT-21	R5616947
IACR (CCME)	8.60		0.50		12-OCT-21	13-OCT-21	R5616947
Polychlorinated Biphenyls							
Aroclor 1016	<0.023	DLHM	0.023	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1221	<0.023	DLHM	0.023	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1232	<0.023	DLHM	0.023	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1242	<0.023	DLHM	0.023	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1248	<0.023	DLHM	0.023	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1254	0.101	DLHM	0.023	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1260	0.163	DLHM	0.023	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1262	<0.023	DLHM	0.023	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1268	<0.023	DLHM	0.023	mg/kg	13-OCT-21	13-OCT-21	R5616907
Total Polychlorinated Biphenyls	0.264		0.068	mg/kg	13-OCT-21	13-OCT-21	R5616907
Surrogate: d14-Terphenyl	104.4		50-140	%	13-OCT-21	13-OCT-21	R5616907
L2646743-17 TC4-SC-010A Sampled By: CLIENT on 30-SEP-21 @ 09:08 Matrix: SEDIMENT							
Physical Tests							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646743-17 TC4-SC-010A Sampled By: CLIENT on 30-SEP-21 @ 09:08 Matrix: SEDIMENT							
Physical Tests							
% Moisture	71.6		0.25	%	06-OCT-21	07-OCT-21	R5612056
Liquid Limit (LL)	85		1	%	15-OCT-21	15-OCT-21	R5619861
Moisture at Plastic Limit	72		1	%	15-OCT-21	15-OCT-21	R5619861
Plasticity Index (PI)	14		1	%	15-OCT-21	15-OCT-21	R5619861
Specific Gravity	1.14		0.010	kg/L		01-NOV-21	R5634727
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0763		0.0010	g/g	12-OCT-21	12-OCT-21	R5615928
Total Organic Carbon	7.63		0.10	%	12-OCT-21	12-OCT-21	R5615928
Metals							
Aluminum (Al)	18500	DLM	100	ug/g	08-OCT-21	12-OCT-21	R5616383
Antimony (Sb)	0.93	DLM	0.20	ug/g	08-OCT-21	12-OCT-21	R5616383
Arsenic (As)	9.13	DLM	0.20	ug/g	08-OCT-21	12-OCT-21	R5616383
Barium (Ba)	249	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Beryllium (Be)	0.74	DLM	0.20	ug/g	08-OCT-21	12-OCT-21	R5616383
Bismuth (Bi)	0.76	DLM	0.40	ug/g	08-OCT-21	12-OCT-21	R5616383
Boron (B)	10	DLM	10	ug/g	08-OCT-21	12-OCT-21	R5616383
Cadmium (Cd)	0.903	DLM	0.040	ug/g	08-OCT-21	12-OCT-21	R5616383
Calcium (Ca)	48400	DLM	100	ug/g	08-OCT-21	12-OCT-21	R5616383
Chromium (Cr)	445	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Cobalt (Co)	13.1	DLM	0.20	ug/g	08-OCT-21	12-OCT-21	R5616383
Copper (Cu)	47.4	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Iron (Fe)	27000	DLM	100	ug/g	08-OCT-21	12-OCT-21	R5616383
Lead (Pb)	130	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Lithium (Li)	15.8	DLM	4.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Magnesium (Mg)	10900	DLM	40	ug/g	08-OCT-21	12-OCT-21	R5616383
Manganese (Mn)	631	DLM	2.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Mercury (Hg)	0.433	DLM	0.010	ug/g	08-OCT-21	11-OCT-21	R5615365
Molybdenum (Mo)	0.87	DLM	0.20	ug/g	08-OCT-21	12-OCT-21	R5616383
Nickel (Ni)	28.5	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Phosphorus (P)	1130	DLM	100	ug/g	08-OCT-21	12-OCT-21	R5616383
Potassium (K)	4060	DLM	200	ug/g	08-OCT-21	12-OCT-21	R5616383
Selenium (Se)	1.19	DLM	0.40	ug/g	08-OCT-21	12-OCT-21	R5616383
Silver (Ag)	0.70	DLM	0.20	ug/g	08-OCT-21	12-OCT-21	R5616383
Sodium (Na)	550	DLM	100	ug/g	08-OCT-21	12-OCT-21	R5616383
Strontium (Sr)	237	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Sulfur (S)	5900	DLM	2000	ug/g	08-OCT-21	12-OCT-21	R5616383
Thallium (Tl)	0.35	DLM	0.10	ug/g	08-OCT-21	12-OCT-21	R5616383
Tin (Sn)	8.7	DLM	4.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Titanium (Ti)	1230	DLM	2.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Tungsten (W)	<1.0	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Uranium (U)	0.83	DLM	0.10	ug/g	08-OCT-21	12-OCT-21	R5616383

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646743-17 TC4-SC-010A Sampled By: CLIENT on 30-SEP-21 @ 09:08 Matrix: SEDIMENT							
Metals							
Vanadium (V)	44.8	DLM	0.40	ug/g	08-OCT-21	12-OCT-21	R5616383
Zinc (Zn)	184	DLM	4.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Zirconium (Zr)	4.5	DLM	2.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.241		0.015	ug/g	12-OCT-21	13-OCT-21	R5616947
Acenaphthylene	1.26		0.015	ug/g	12-OCT-21	13-OCT-21	R5616947
Acridine	0.170	AI	0.030	ug/g	12-OCT-21	13-OCT-21	R5616947
Anthracene	0.634		0.012	ug/g	12-OCT-21	13-OCT-21	R5616947
Benzo(a)anthracene	2.33	R	0.030	ug/g	12-OCT-21	13-OCT-21	R5616947
Benzo(a)pyrene	3.40		0.015	ug/g	12-OCT-21	13-OCT-21	R5616947
Benzo(b&j)fluoranthene	2.60		0.030	ug/g	12-OCT-21	13-OCT-21	R5616947
Benzo(g,h,i)perylene	2.08		0.030	ug/g	12-OCT-21	13-OCT-21	R5616947
Benzo(k)fluoranthene	1.09		0.030	ug/g	12-OCT-21	13-OCT-21	R5616947
Chrysene	2.39		0.030	ug/g	12-OCT-21	13-OCT-21	R5616947
Dibenz(a,h)anthracene	0.499		0.015	ug/g	12-OCT-21	13-OCT-21	R5616947
Fluoroanthene	2.04		0.015	ug/g	12-OCT-21	13-OCT-21	R5616947
Fluorene	0.262	R	0.015	ug/g	12-OCT-21	13-OCT-21	R5616947
Indeno(1,2,3-cd)pyrene	1.69		0.030	ug/g	12-OCT-21	13-OCT-21	R5616947
1-Methylnaphthalene	0.108		0.015	ug/g	12-OCT-21	13-OCT-21	R5616947
2-Methylnaphthalene	0.163		0.015	ug/g	12-OCT-21	13-OCT-21	R5616947
Naphthalene	0.209		0.015	ug/g	12-OCT-21	13-OCT-21	R5616947
Phenanthrene	0.919		0.015	ug/g	12-OCT-21	13-OCT-21	R5616947
Pyrene	3.64		0.015	ug/g	12-OCT-21	13-OCT-21	R5616947
Quinoline	<0.015	DLHM	0.015	ug/g	12-OCT-21	13-OCT-21	R5616947
Surrogate: 2-Fluorobiphenyl	88.2		60-140	%	12-OCT-21	13-OCT-21	R5616947
Surrogate: d14-Terphenyl	92.1		60-140	%	12-OCT-21	13-OCT-21	R5616947
B(a)P Total Potency Equivalent	4.72		0.021	ug/g	12-OCT-21	13-OCT-21	R5616947
IACR (CCME)	43.6		0.30		12-OCT-21	13-OCT-21	R5616947
Polychlorinated Biphenyls							
Aroclor 1016	<0.075	RRR	0.075	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1221	<0.075	RRR	0.075	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1232	<0.075	RRR	0.075	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1242	<0.075	RRR	0.075	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1248	<0.075	RRR	0.075	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1254	0.824	DLHM	0.015	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1260	0.530	DLHM	0.015	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1262	<0.015	DLHM	0.015	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1268	<0.015	DLHM	0.015	mg/kg	13-OCT-21	13-OCT-21	R5616396
Total Polychlorinated Biphenyls	1.354		0.17	mg/kg	13-OCT-21	13-OCT-21	R5616396
Surrogate: d14-Terphenyl	94.0		50-140	%	13-OCT-21	13-OCT-21	R5616396
Report Remarks : RRR: Due to sample matrix interferences, PCB recoveries could not be determined in the matrix spike unless spiked with 5X the normal concentration and therefore the detection limit has been raised accordingly.							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646743-18 TC4-SG-010 Sampled By: CLIENT on 30-SEP-21 @ 10:00 Matrix: SEDIMENT							
Physical Tests							
% Moisture	85.1		0.25	%	06-OCT-21	07-OCT-21	R5612056
Liquid Limit (LL)	97		1	%	15-OCT-21	15-OCT-21	R5619861
Moisture at Plastic Limit	89		1	%	15-OCT-21	15-OCT-21	R5619861
Plasticity Index (PI)	9		1	%	15-OCT-21	15-OCT-21	R5619861
Specific Gravity	1.09		0.010	kg/L		01-NOV-21	R5634727
Particle Size							
General Texture Class	Fine				13-OCT-21	13-OCT-21	R5617706
MUST PSA % > 75um	5.6	PSAL	1.0	%	13-OCT-21	13-OCT-21	R5617706
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0897		0.0010	g/g	12-OCT-21	12-OCT-21	R5616041
Total Organic Carbon	8.97		0.10	%	12-OCT-21	12-OCT-21	R5616041
Metals							
Aluminum (Al)	20100		50	ug/g	08-OCT-21	08-OCT-21	R5614725
Antimony (Sb)	0.67		0.10	ug/g	08-OCT-21	08-OCT-21	R5614725
Arsenic (As)	5.06		0.10	ug/g	08-OCT-21	08-OCT-21	R5614725
Barium (Ba)	261		0.50	ug/g	08-OCT-21	08-OCT-21	R5614725
Beryllium (Be)	0.79		0.10	ug/g	08-OCT-21	08-OCT-21	R5614725
Bismuth (Bi)	0.33		0.20	ug/g	08-OCT-21	08-OCT-21	R5614725
Boron (B)	12.4		5.0	ug/g	08-OCT-21	08-OCT-21	R5614725
Cadmium (Cd)	0.578		0.020	ug/g	08-OCT-21	08-OCT-21	R5614725
Calcium (Ca)	66500		50	ug/g	08-OCT-21	08-OCT-21	R5614725
Chromium (Cr)	185		0.50	ug/g	08-OCT-21	08-OCT-21	R5614725
Cobalt (Co)	11.5		0.10	ug/g	08-OCT-21	08-OCT-21	R5614725
Copper (Cu)	45.6		0.50	ug/g	08-OCT-21	08-OCT-21	R5614725
Iron (Fe)	27700		50	ug/g	08-OCT-21	08-OCT-21	R5614725
Lead (Pb)	74.0		0.50	ug/g	08-OCT-21	08-OCT-21	R5614725
Lithium (Li)	17.7		2.0	ug/g	08-OCT-21	08-OCT-21	R5614725
Magnesium (Mg)	11100		20	ug/g	08-OCT-21	08-OCT-21	R5614725
Manganese (Mn)	917		1.0	ug/g	08-OCT-21	08-OCT-21	R5614725
Mercury (Hg)	0.174	DLM	0.010	ug/g	08-OCT-21	11-OCT-21	R5615364
Molybdenum (Mo)	1.05		0.10	ug/g	08-OCT-21	08-OCT-21	R5614725
Nickel (Ni)	27.1		0.50	ug/g	08-OCT-21	08-OCT-21	R5614725
Phosphorus (P)	976		50	ug/g	08-OCT-21	08-OCT-21	R5614725
Potassium (K)	4140		100	ug/g	08-OCT-21	08-OCT-21	R5614725
Selenium (Se)	1.38		0.20	ug/g	08-OCT-21	08-OCT-21	R5614725
Silver (Ag)	0.33		0.10	ug/g	08-OCT-21	08-OCT-21	R5614725
Sodium (Na)	654		50	ug/g	08-OCT-21	08-OCT-21	R5614725
Strontium (Sr)	334		0.50	ug/g	08-OCT-21	08-OCT-21	R5614725
Sulfur (S)	7700		1000	ug/g	08-OCT-21	08-OCT-21	R5614725
Thallium (Tl)	0.313		0.050	ug/g	08-OCT-21	08-OCT-21	R5614725
Tin (Sn)	4.1		2.0	ug/g	08-OCT-21	08-OCT-21	R5614725
Titanium (Ti)	1290		1.0	ug/g	08-OCT-21	08-OCT-21	R5614725

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646743-18 TC4-SG-010 Sampled By: CLIENT on 30-SEP-21 @ 10:00 Matrix: SEDIMENT							
Metals							
Tungsten (W)	<0.50		0.50	ug/g	08-OCT-21	08-OCT-21	R5614725
Uranium (U)	0.909		0.050	ug/g	08-OCT-21	08-OCT-21	R5614725
Vanadium (V)	44.2		0.20	ug/g	08-OCT-21	08-OCT-21	R5614725
Zinc (Zn)	135		2.0	ug/g	08-OCT-21	08-OCT-21	R5614725
Zirconium (Zr)	3.3		1.0	ug/g	08-OCT-21	08-OCT-21	R5614725
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.079		0.038	ug/g	13-OCT-21	13-OCT-21	R5616882
Acenaphthylene	0.440		0.038	ug/g	13-OCT-21	13-OCT-21	R5616882
Acridine	<0.075	DLHM	0.075	ug/g	13-OCT-21	13-OCT-21	R5616882
Anthracene	0.277		0.030	ug/g	13-OCT-21	13-OCT-21	R5616882
Benzo(a)anthracene	0.826	R	0.075	ug/g	13-OCT-21	13-OCT-21	R5616882
Benzo(a)pyrene	1.19		0.038	ug/g	13-OCT-21	13-OCT-21	R5616882
Benzo(b&j)fluoranthene	0.983		0.075	ug/g	13-OCT-21	13-OCT-21	R5616882
Benzo(g,h,i)perylene	0.735		0.075	ug/g	13-OCT-21	13-OCT-21	R5616882
Benzo(k)fluoranthene	0.415		0.075	ug/g	13-OCT-21	13-OCT-21	R5616882
Chrysene	0.870		0.075	ug/g	13-OCT-21	13-OCT-21	R5616882
Dibenz(a,h)anthracene	0.174		0.038	ug/g	13-OCT-21	13-OCT-21	R5616882
Fluoroanthene	0.851		0.038	ug/g	13-OCT-21	13-OCT-21	R5616882
Fluorene	0.093	R	0.038	ug/g	13-OCT-21	13-OCT-21	R5616882
Indeno(1,2,3-cd)pyrene	0.606		0.075	ug/g	13-OCT-21	13-OCT-21	R5616882
1-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	13-OCT-21	13-OCT-21	R5616882
2-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	13-OCT-21	13-OCT-21	R5616882
Naphthalene	<0.038	DLHM	0.038	ug/g	13-OCT-21	13-OCT-21	R5616882
Phenanthrene	0.336		0.038	ug/g	13-OCT-21	13-OCT-21	R5616882
Pyrene	1.22		0.038	ug/g	13-OCT-21	13-OCT-21	R5616882
Quinoline	<0.038	DLHM	0.038	ug/g	13-OCT-21	13-OCT-21	R5616882
Surrogate: 2-Fluorobiphenyl	94.3		60-140	%	13-OCT-21	13-OCT-21	R5616882
Surrogate: d14-Terphenyl	77.0		60-140	%	13-OCT-21	13-OCT-21	R5616882
B(a)P Total Potency Equivalent	1.67		0.053	ug/g	13-OCT-21	13-OCT-21	R5616882
IACR (CCME)	16.0		0.75		13-OCT-21	13-OCT-21	R5616882
Polychlorinated Biphenyls							
Aroclor 1016	<0.115	RRR	0.12	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1221	<0.115	RRR	0.12	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1232	<0.115	RRR	0.12	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1242	<0.115	RRR	0.12	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1248	<0.115	RRR	0.12	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1254	0.104	DLHM	0.023	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1260	0.079	DLHM	0.023	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1262	<0.023	DLHM	0.023	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1268	<0.023	DLHM	0.023	mg/kg	13-OCT-21	13-OCT-21	R5616396
Total Polychlorinated Biphenyls	<0.261		0.26	mg/kg	13-OCT-21	13-OCT-21	R5616396

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646743-18 TC4-SG-010 Sampled By: CLIENT on 30-SEP-21 @ 10:00 Matrix: SEDIMENT							
Polychlorinated Biphenyls							
Surrogate: d14-Terphenyl	83.7		50-140	%	13-OCT-21	13-OCT-21	R5616396
Report Remarks : RRR: Due to sample matrix interferences, PCB recoveries could not be determined in the matrix spike unless spiked with 5X the normal concentration and therefore the detection limit has been raised accordingly.							
L2646743-19 TC4-SG-003A Sampled By: CLIENT on 30-SEP-21 @ 10:50 Matrix: SEDIMENT							
Physical Tests							
% Moisture	70.8		0.25	%	06-OCT-21	07-OCT-21	R5612056
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0961		0.0010	g/g	12-OCT-21	12-OCT-21	R5616041
Total Organic Carbon	9.61		0.10	%	12-OCT-21	12-OCT-21	R5616041
Metals							
Aluminum (Al)	18400	DLM	100	ug/g	08-OCT-21	12-OCT-21	R5616383
Antimony (Sb)	3.68	DLM	0.20	ug/g	08-OCT-21	12-OCT-21	R5616383
Arsenic (As)	20.6	DLM	0.20	ug/g	08-OCT-21	12-OCT-21	R5616383
Barium (Ba)	332	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Beryllium (Be)	0.70	DLM	0.20	ug/g	08-OCT-21	12-OCT-21	R5616383
Bismuth (Bi)	6.32	DLM	0.40	ug/g	08-OCT-21	12-OCT-21	R5616383
Boron (B)	10	DLM	10	ug/g	08-OCT-21	12-OCT-21	R5616383
Cadmium (Cd)	2.41	DLM	0.040	ug/g	08-OCT-21	12-OCT-21	R5616383
Calcium (Ca)	28700	DLM	100	ug/g	08-OCT-21	12-OCT-21	R5616383
Chromium (Cr)	1230	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Cobalt (Co)	16.3	DLM	0.20	ug/g	08-OCT-21	12-OCT-21	R5616383
Copper (Cu)	111	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Iron (Fe)	26600	DLM	100	ug/g	08-OCT-21	12-OCT-21	R5616383
Lead (Pb)	399	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Lithium (Li)	15.2	DLM	4.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Magnesium (Mg)	12500	DLM	40	ug/g	08-OCT-21	12-OCT-21	R5616383
Manganese (Mn)	522	DLM	2.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Mercury (Hg)	2.39	DLM	0.10	ug/g	08-OCT-21	11-OCT-21	R5615365
Molybdenum (Mo)	1.07	DLM	0.20	ug/g	08-OCT-21	12-OCT-21	R5616383
Nickel (Ni)	32.9	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Phosphorus (P)	1410	DLM	100	ug/g	08-OCT-21	12-OCT-21	R5616383
Potassium (K)	4040	DLM	200	ug/g	08-OCT-21	12-OCT-21	R5616383
Selenium (Se)	1.57	DLM	0.40	ug/g	08-OCT-21	12-OCT-21	R5616383
Silver (Ag)	2.60	DLM	0.20	ug/g	08-OCT-21	12-OCT-21	R5616383
Sodium (Na)	500	DLM	100	ug/g	08-OCT-21	12-OCT-21	R5616383
Strontium (Sr)	139	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Sulfur (S)	5500	DLM	2000	ug/g	08-OCT-21	12-OCT-21	R5616383
Thallium (Tl)	0.46	DLM	0.10	ug/g	08-OCT-21	12-OCT-21	R5616383
Tin (Sn)	31.5	DLM	4.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Titanium (Ti)	1140	DLM	2.0	ug/g	08-OCT-21	12-OCT-21	R5616383

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646743-19 TC4-SG-003A Sampled By: CLIENT on 30-SEP-21 @ 10:50 Matrix: SEDIMENT							
Metals							
Tungsten (W)	<1.0	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Uranium (U)	0.85	DLM	0.10	ug/g	08-OCT-21	12-OCT-21	R5616383
Vanadium (V)	46.1	DLM	0.40	ug/g	08-OCT-21	12-OCT-21	R5616383
Zinc (Zn)	489	DLM	4.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Zirconium (Zr)	3.3	DLM	2.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.339		0.015	ug/g	12-OCT-21	13-OCT-21	R5616947
Acenaphthylene	0.899		0.015	ug/g	12-OCT-21	13-OCT-21	R5616947
Acridine	1.22	AI	0.030	ug/g	12-OCT-21	13-OCT-21	R5616947
Anthracene	0.733		0.012	ug/g	12-OCT-21	13-OCT-21	R5616947
Benzo(a)anthracene	2.19	R	0.030	ug/g	12-OCT-21	13-OCT-21	R5616947
Benzo(a)pyrene	2.58		0.015	ug/g	12-OCT-21	13-OCT-21	R5616947
Benzo(b&j)fluoranthene	2.62		0.030	ug/g	12-OCT-21	13-OCT-21	R5616947
Benzo(g,h,i)perylene	1.70		0.030	ug/g	12-OCT-21	13-OCT-21	R5616947
Benzo(k)fluoranthene	0.951		0.030	ug/g	12-OCT-21	13-OCT-21	R5616947
Chrysene	2.54		0.030	ug/g	12-OCT-21	13-OCT-21	R5616947
Dibenz(a,h)anthracene	0.422		0.015	ug/g	12-OCT-21	13-OCT-21	R5616947
Fluoroanthene	2.86		0.015	ug/g	12-OCT-21	13-OCT-21	R5616947
Fluorene	0.542	R	0.015	ug/g	12-OCT-21	13-OCT-21	R5616947
Indeno(1,2,3-cd)pyrene	1.50		0.030	ug/g	12-OCT-21	13-OCT-21	R5616947
1-Methylnaphthalene	<0.180	DLQ	0.18	ug/g	12-OCT-21	13-OCT-21	R5616947
2-Methylnaphthalene	0.176		0.015	ug/g	12-OCT-21	13-OCT-21	R5616947
Naphthalene	0.210	R	0.015	ug/g	12-OCT-21	13-OCT-21	R5616947
Phenanthrene	1.89		0.015	ug/g	12-OCT-21	13-OCT-21	R5616947
Pyrene	3.94		0.015	ug/g	12-OCT-21	13-OCT-21	R5616947
Quinoline	0.026	AI	0.015	ug/g	12-OCT-21	13-OCT-21	R5616947
Surrogate: 2-Fluorobiphenyl	82.8		60-140	%	12-OCT-21	13-OCT-21	R5616947
Surrogate: d14-Terphenyl	89.5		60-140	%	12-OCT-21	13-OCT-21	R5616947
B(a)P Total Potency Equivalent	3.77		0.021	ug/g	12-OCT-21	13-OCT-21	R5616947
IACR (CCME)	39.8		0.30		12-OCT-21	13-OCT-21	R5616947
Polychlorinated Biphenyls							
Aroclor 1016	<0.090	DLR	0.090	mg/kg	15-OCT-21	15-OCT-21	R5616396
Aroclor 1221	<0.090	DLR	0.090	mg/kg	15-OCT-21	15-OCT-21	R5616396
Aroclor 1232	<0.090	DLR	0.090	mg/kg	15-OCT-21	15-OCT-21	R5616396
Aroclor 1242	<0.160	DLR	0.16	mg/kg	15-OCT-21	15-OCT-21	R5616396
Aroclor 1248	<0.090	DLR	0.090	mg/kg	15-OCT-21	15-OCT-21	R5616396
Aroclor 1254	1.77	DLR	0.090	mg/kg	15-OCT-21	15-OCT-21	R5616396
Aroclor 1260	0.774	DLR	0.090	mg/kg	15-OCT-21	15-OCT-21	R5616396
Aroclor 1262	<0.090	DLR	0.090	mg/kg	15-OCT-21	15-OCT-21	R5616396
Aroclor 1268	<0.090	DLR	0.090	mg/kg	15-OCT-21	15-OCT-21	R5616396
Total Polychlorinated Biphenyls	2.544		0.27	mg/kg	15-OCT-21	15-OCT-21	R5616396

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646743-19 TC4-SG-003A Sampled By: CLIENT on 30-SEP-21 @ 10:50 Matrix: SEDIMENT							
Polychlorinated Biphenyls							
Surrogate: d14-Terphenyl	86.7		50-140	%	15-OCT-21	15-OCT-21	R5616396
L2646743-20 TC4-SG-003B Sampled By: CLIENT on 30-SEP-21 @ 10:50 Matrix: SEDIMENT							
Physical Tests							
% Moisture	74.6		0.25	%	06-OCT-21	07-OCT-21	R5612056
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.105		0.0010	g/g	12-OCT-21	12-OCT-21	R5616041
Total Organic Carbon	10.5		0.10	%	12-OCT-21	12-OCT-21	R5616041
Metals							
Aluminum (Al)	17800	DLM	100	ug/g	08-OCT-21	12-OCT-21	R5616383
Antimony (Sb)	3.44	DLM	0.20	ug/g	08-OCT-21	12-OCT-21	R5616383
Arsenic (As)	56.6	DLM	0.20	ug/g	08-OCT-21	12-OCT-21	R5616383
Barium (Ba)	320	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Beryllium (Be)	0.66	DLM	0.20	ug/g	08-OCT-21	12-OCT-21	R5616383
Bismuth (Bi)	5.22	DLM	0.40	ug/g	08-OCT-21	12-OCT-21	R5616383
Boron (B)	<10	DLM	10	ug/g	08-OCT-21	12-OCT-21	R5616383
Cadmium (Cd)	1.67	DLM	0.040	ug/g	08-OCT-21	12-OCT-21	R5616383
Calcium (Ca)	23400	DLM	100	ug/g	08-OCT-21	12-OCT-21	R5616383
Chromium (Cr)	815	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Cobalt (Co)	21.8	DLM	0.20	ug/g	08-OCT-21	12-OCT-21	R5616383
Copper (Cu)	104	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Iron (Fe)	27300	DLM	100	ug/g	08-OCT-21	12-OCT-21	R5616383
Lead (Pb)	366	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Lithium (Li)	13.9	DLM	4.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Magnesium (Mg)	11100	DLM	40	ug/g	08-OCT-21	12-OCT-21	R5616383
Manganese (Mn)	497	DLM	2.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Mercury (Hg)	3.09	DLM	0.10	ug/g	08-OCT-21	11-OCT-21	R5615365
Molybdenum (Mo)	1.09	DLM	0.20	ug/g	08-OCT-21	12-OCT-21	R5616383
Nickel (Ni)	36.0	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Phosphorus (P)	1270	DLM	100	ug/g	08-OCT-21	12-OCT-21	R5616383
Potassium (K)	3830	DLM	200	ug/g	08-OCT-21	12-OCT-21	R5616383
Selenium (Se)	1.50	DLM	0.40	ug/g	08-OCT-21	12-OCT-21	R5616383
Silver (Ag)	2.37	DLM	0.20	ug/g	08-OCT-21	12-OCT-21	R5616383
Sodium (Na)	450	DLM	100	ug/g	08-OCT-21	12-OCT-21	R5616383
Strontium (Sr)	115	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Sulfur (S)	6100	DLM	2000	ug/g	08-OCT-21	12-OCT-21	R5616383
Thallium (Tl)	0.41	DLM	0.10	ug/g	08-OCT-21	12-OCT-21	R5616383
Tin (Sn)	26.3	DLM	4.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Titanium (Ti)	1100	DLM	2.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Tungsten (W)	<1.0	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Uranium (U)	0.85	DLM	0.10	ug/g	08-OCT-21	12-OCT-21	R5616383

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646743-20 TC4-SG-003B Sampled By: CLIENT on 30-SEP-21 @ 10:50 Matrix: SEDIMENT							
Metals							
Vanadium (V)	42.3	DLM	0.40	ug/g	08-OCT-21	12-OCT-21	R5616383
Zinc (Zn)	441	DLM	4.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Zirconium (Zr)	3.4	DLM	2.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.511		0.015	ug/g	12-OCT-21	13-OCT-21	R5616947
Acenaphthylene	1.00		0.015	ug/g	12-OCT-21	13-OCT-21	R5616947
Acridine	2.01	AI	0.030	ug/g	12-OCT-21	13-OCT-21	R5616947
Anthracene	0.896		0.012	ug/g	12-OCT-21	13-OCT-21	R5616947
Benzo(a)anthracene	2.59	R	0.030	ug/g	12-OCT-21	13-OCT-21	R5616947
Benzo(a)pyrene	2.88		0.015	ug/g	12-OCT-21	13-OCT-21	R5616947
Benzo(b&j)fluoranthene	2.79		0.030	ug/g	12-OCT-21	13-OCT-21	R5616947
Benzo(g,h,i)perylene	1.83		0.030	ug/g	12-OCT-21	13-OCT-21	R5616947
Benzo(k)fluoranthene	1.28		0.030	ug/g	12-OCT-21	13-OCT-21	R5616947
Chrysene	3.16		0.030	ug/g	12-OCT-21	13-OCT-21	R5616947
Dibenz(a,h)anthracene	0.481		0.015	ug/g	12-OCT-21	13-OCT-21	R5616947
Fluoroanthene	3.91		0.015	ug/g	12-OCT-21	13-OCT-21	R5616947
Fluorene	0.614	R	0.015	ug/g	12-OCT-21	13-OCT-21	R5616947
Indeno(1,2,3-cd)pyrene	1.67		0.030	ug/g	12-OCT-21	13-OCT-21	R5616947
1-Methylnaphthalene	<0.310	DLQ	0.31	ug/g	12-OCT-21	13-OCT-21	R5616947
2-Methylnaphthalene	<0.260	DLQ	0.26	ug/g	12-OCT-21	13-OCT-21	R5616947
Naphthalene	0.318	R	0.015	ug/g	12-OCT-21	13-OCT-21	R5616947
Phenanthrene	2.64		0.015	ug/g	12-OCT-21	13-OCT-21	R5616947
Pyrene	5.24		0.015	ug/g	12-OCT-21	13-OCT-21	R5616947
Quinoline	0.057	AI	0.015	ug/g	12-OCT-21	13-OCT-21	R5616947
Surrogate: 2-Fluorobiphenyl	89.1		60-140	%	12-OCT-21	13-OCT-21	R5616947
Surrogate: d14-Terphenyl	92.9		60-140	%	12-OCT-21	13-OCT-21	R5616947
B(a)P Total Potency Equivalent	4.24		0.021	ug/g	12-OCT-21	13-OCT-21	R5616947
IACR (CCME)	45.5		0.30		12-OCT-21	13-OCT-21	R5616947
Polychlorinated Biphenyls							
Aroclor 1016	<0.090	DLR	0.090	mg/kg	15-OCT-21	15-OCT-21	R5616396
Aroclor 1221	<0.090	DLR	0.090	mg/kg	15-OCT-21	15-OCT-21	R5616396
Aroclor 1232	<0.090	DLR	0.090	mg/kg	15-OCT-21	15-OCT-21	R5616396
Aroclor 1242	<0.120	DLR	0.12	mg/kg	15-OCT-21	15-OCT-21	R5616396
Aroclor 1248	<0.090	DLR	0.090	mg/kg	15-OCT-21	15-OCT-21	R5616396
Aroclor 1254	1.93	DLR	0.090	mg/kg	15-OCT-21	15-OCT-21	R5616396
Aroclor 1260	0.647	DLR	0.090	mg/kg	15-OCT-21	15-OCT-21	R5616396
Aroclor 1262	<0.090	DLR	0.090	mg/kg	15-OCT-21	15-OCT-21	R5616396
Aroclor 1268	<0.090	DLR	0.090	mg/kg	15-OCT-21	15-OCT-21	R5616396
Total Polychlorinated Biphenyls	2.577		0.27	mg/kg	15-OCT-21	15-OCT-21	R5616396
Surrogate: d14-Terphenyl	110.3		50-140	%	15-OCT-21	15-OCT-21	R5616396
L2646743-21 TC4-SG-003 CLIENT on 30-SEP-21 @ 12:35							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646743-21 TC4-SG-003 Sampled By: CLIENT on 30-SEP-21 @ 12:35 Matrix: SEDIMENT							
Physical Tests							
% Moisture	83.0		0.25	%	06-OCT-21	07-OCT-21	R5612056
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0744		0.0010	g/g	12-OCT-21	12-OCT-21	R5616041
Total Organic Carbon	7.44		0.10	%	12-OCT-21	12-OCT-21	R5616041
Metals							
Aluminum (Al)	13000	DLM	100	ug/g	08-OCT-21	12-OCT-21	R5616383
Antimony (Sb)	0.88	DLM	0.20	ug/g	08-OCT-21	12-OCT-21	R5616383
Arsenic (As)	9.50	DLM	0.20	ug/g	08-OCT-21	12-OCT-21	R5616383
Barium (Ba)	231	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Beryllium (Be)	0.48	DLM	0.20	ug/g	08-OCT-21	12-OCT-21	R5616383
Bismuth (Bi)	1.20	DLM	0.40	ug/g	08-OCT-21	12-OCT-21	R5616383
Boron (B)	<10	DLM	10	ug/g	08-OCT-21	12-OCT-21	R5616383
Cadmium (Cd)	0.808	DLM	0.040	ug/g	08-OCT-21	12-OCT-21	R5616383
Calcium (Ca)	88700	DLM	100	ug/g	08-OCT-21	12-OCT-21	R5616383
Chromium (Cr)	421	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Cobalt (Co)	11.3	DLM	0.20	ug/g	08-OCT-21	12-OCT-21	R5616383
Copper (Cu)	50.8	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Iron (Fe)	20700	DLM	100	ug/g	08-OCT-21	12-OCT-21	R5616383
Lead (Pb)	142	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Lithium (Li)	10.5	DLM	4.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Magnesium (Mg)	10500	DLM	40	ug/g	08-OCT-21	12-OCT-21	R5616383
Manganese (Mn)	672	DLM	2.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Mercury (Hg)	0.653	DLM	0.010	ug/g	08-OCT-21	11-OCT-21	R5615365
Molybdenum (Mo)	0.74	DLM	0.20	ug/g	08-OCT-21	12-OCT-21	R5616383
Nickel (Ni)	22.1	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Phosphorus (P)	970	DLM	100	ug/g	08-OCT-21	12-OCT-21	R5616383
Potassium (K)	2990	DLM	200	ug/g	08-OCT-21	12-OCT-21	R5616383
Selenium (Se)	1.07	DLM	0.40	ug/g	08-OCT-21	12-OCT-21	R5616383
Silver (Ag)	0.75	DLM	0.20	ug/g	08-OCT-21	12-OCT-21	R5616383
Sodium (Na)	440	DLM	100	ug/g	08-OCT-21	12-OCT-21	R5616383
Strontium (Sr)	471	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Sulfur (S)	6000	DLM	2000	ug/g	08-OCT-21	12-OCT-21	R5616383
Thallium (Tl)	0.29	DLM	0.10	ug/g	08-OCT-21	12-OCT-21	R5616383
Tin (Sn)	9.1	DLM	4.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Titanium (Ti)	770	DLM	2.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Tungsten (W)	<1.0	DLM	1.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Uranium (U)	0.69	DLM	0.10	ug/g	08-OCT-21	12-OCT-21	R5616383
Vanadium (V)	32.6	DLM	0.40	ug/g	08-OCT-21	12-OCT-21	R5616383
Zinc (Zn)	195	DLM	4.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Zirconium (Zr)	2.5	DLM	2.0	ug/g	08-OCT-21	12-OCT-21	R5616383
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.099		0.025	ug/g	12-OCT-21	13-OCT-21	R5616947

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646743-21 TC4-SG-003 Sampled By: CLIENT on 30-SEP-21 @ 12:35 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
Acenaphthylene	0.609		0.025	ug/g	12-OCT-21	13-OCT-21	R5616947
Acridine	<0.110	DLM	0.11	ug/g	12-OCT-21	13-OCT-21	R5616947
Anthracene	0.341		0.020	ug/g	12-OCT-21	13-OCT-21	R5616947
Benzo(a)anthracene	1.12	R	0.050	ug/g	12-OCT-21	13-OCT-21	R5616947
Benzo(a)pyrene	1.63		0.025	ug/g	12-OCT-21	13-OCT-21	R5616947
Benzo(b&j)fluoranthene	1.60		0.050	ug/g	12-OCT-21	13-OCT-21	R5616947
Benzo(g,h,i)perylene	1.23		0.050	ug/g	12-OCT-21	13-OCT-21	R5616947
Benzo(k)fluoranthene	0.677		0.050	ug/g	12-OCT-21	13-OCT-21	R5616947
Chrysene	1.31		0.050	ug/g	12-OCT-21	13-OCT-21	R5616947
Dibenz(a,h)anthracene	0.298		0.025	ug/g	12-OCT-21	13-OCT-21	R5616947
Fluoroanthene	1.37		0.025	ug/g	12-OCT-21	13-OCT-21	R5616947
Fluorene	0.128	R	0.025	ug/g	12-OCT-21	13-OCT-21	R5616947
Indeno(1,2,3-cd)pyrene	1.07		0.050	ug/g	12-OCT-21	13-OCT-21	R5616947
1-Methylnaphthalene	0.061		0.025	ug/g	12-OCT-21	13-OCT-21	R5616947
2-Methylnaphthalene	0.090		0.025	ug/g	12-OCT-21	13-OCT-21	R5616947
Naphthalene	0.089	R	0.025	ug/g	12-OCT-21	13-OCT-21	R5616947
Phenanthrene	0.614		0.025	ug/g	12-OCT-21	13-OCT-21	R5616947
Pyrene	1.77		0.025	ug/g	12-OCT-21	13-OCT-21	R5616947
Quinoline	<0.025	DLHM	0.025	ug/g	12-OCT-21	13-OCT-21	R5616947
Surrogate: 2-Fluorobiphenyl	88.1		60-140	%	12-OCT-21	13-OCT-21	R5616947
Surrogate: d14-Terphenyl	89.5		60-140	%	12-OCT-21	13-OCT-21	R5616947
B(a)P Total Potency Equivalent	2.40		0.036	ug/g	12-OCT-21	13-OCT-21	R5616947
IACR (CCME)	24.5		0.50		12-OCT-21	13-OCT-21	R5616947
Polychlorinated Biphenyls							
Aroclor 1016	<0.075	RRR	0.075	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1221	<0.075	RRR	0.075	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1232	<0.075	RRR	0.075	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1242	<0.075	RRR	0.075	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1248	<0.075	RRR	0.075	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1254	0.556	DLHM	0.015	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1260	0.355	DLHM	0.015	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1262	<0.015	DLHM	0.015	mg/kg	13-OCT-21	13-OCT-21	R5616396
Aroclor 1268	<0.015	DLHM	0.015	mg/kg	13-OCT-21	13-OCT-21	R5616396
Total Polychlorinated Biphenyls	0.911		0.17	mg/kg	13-OCT-21	13-OCT-21	R5616396
Surrogate: d14-Terphenyl	104.7		50-140	%	13-OCT-21	13-OCT-21	R5616396
Report Remarks : RRR: Due to sample matrix interferences, PCB recoveries could not be determined in the matrix spike unless spiked with 5X the normal concentration and therefore the detection limit has been raised accordingly.							
L2646743-22 DUP-003 Sampled By: CLIENT on 30-SEP-21 Matrix: SEDIMENT							
Physical Tests							
% Moisture	73.6		0.25	%	06-OCT-21	07-OCT-21	R5612056

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646743-22 DUP-003 Sampled By: CLIENT on 30-SEP-21 Matrix: SEDIMENT							
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0990		0.0010	g/g	12-OCT-21	12-OCT-21	R5616041
Total Organic Carbon	9.90		0.10	%	12-OCT-21	12-OCT-21	R5616041
Metals							
Aluminum (Al)	23300		50	ug/g	08-OCT-21	08-OCT-21	R5614725
Antimony (Sb)	3.90		0.10	ug/g	08-OCT-21	08-OCT-21	R5614725
Arsenic (As)	29.4		0.10	ug/g	08-OCT-21	08-OCT-21	R5614725
Barium (Ba)	509		0.50	ug/g	08-OCT-21	08-OCT-21	R5614725
Beryllium (Be)	0.92		0.10	ug/g	08-OCT-21	08-OCT-21	R5614725
Bismuth (Bi)	7.66		0.20	ug/g	08-OCT-21	08-OCT-21	R5614725
Boron (B)	12.6		5.0	ug/g	08-OCT-21	08-OCT-21	R5614725
Cadmium (Cd)	2.68		0.020	ug/g	08-OCT-21	08-OCT-21	R5614725
Calcium (Ca)	32400		50	ug/g	08-OCT-21	08-OCT-21	R5614725
Chromium (Cr)	1230		0.50	ug/g	08-OCT-21	08-OCT-21	R5614725
Cobalt (Co)	20.8		0.10	ug/g	08-OCT-21	08-OCT-21	R5614725
Copper (Cu)	128		0.50	ug/g	08-OCT-21	08-OCT-21	R5614725
Iron (Fe)	32900		50	ug/g	08-OCT-21	08-OCT-21	R5614725
Lead (Pb)	1200		0.50	ug/g	08-OCT-21	08-OCT-21	R5614725
Lithium (Li)	20.3		2.0	ug/g	08-OCT-21	08-OCT-21	R5614725
Magnesium (Mg)	15600		20	ug/g	08-OCT-21	08-OCT-21	R5614725
Manganese (Mn)	613		1.0	ug/g	08-OCT-21	08-OCT-21	R5614725
Mercury (Hg)	2.31	DLM	0.10	ug/g	08-OCT-21	11-OCT-21	R5615364
Molybdenum (Mo)	1.17		0.10	ug/g	08-OCT-21	08-OCT-21	R5614725
Nickel (Ni)	42.5		0.50	ug/g	08-OCT-21	08-OCT-21	R5614725
Phosphorus (P)	1690		50	ug/g	08-OCT-21	08-OCT-21	R5614725
Potassium (K)	5100		100	ug/g	08-OCT-21	08-OCT-21	R5614725
Selenium (Se)	1.59		0.20	ug/g	08-OCT-21	08-OCT-21	R5614725
Silver (Ag)	2.60		0.10	ug/g	08-OCT-21	08-OCT-21	R5614725
Sodium (Na)	663		50	ug/g	08-OCT-21	08-OCT-21	R5614725
Strontium (Sr)	147		0.50	ug/g	08-OCT-21	08-OCT-21	R5614725
Sulfur (S)	6300		1000	ug/g	08-OCT-21	08-OCT-21	R5614725
Thallium (Tl)	0.540		0.050	ug/g	08-OCT-21	08-OCT-21	R5614725
Tin (Sn)	32.4		2.0	ug/g	08-OCT-21	08-OCT-21	R5614725
Titanium (Ti)	1520		1.0	ug/g	08-OCT-21	08-OCT-21	R5614725
Tungsten (W)	0.81		0.50	ug/g	08-OCT-21	08-OCT-21	R5614725
Uranium (U)	0.985		0.050	ug/g	08-OCT-21	08-OCT-21	R5614725
Vanadium (V)	56.5		0.20	ug/g	08-OCT-21	08-OCT-21	R5614725
Zinc (Zn)	559		2.0	ug/g	08-OCT-21	08-OCT-21	R5614725
Zirconium (Zr)	3.7		1.0	ug/g	08-OCT-21	08-OCT-21	R5614725
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.494		0.015	ug/g	12-OCT-21	13-OCT-21	R5616947
Acenaphthylene	0.973		0.015	ug/g	12-OCT-21	13-OCT-21	R5616947

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2646743-22 DUP-003 Sampled By: CLIENT on 30-SEP-21 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
Acridine	1.70	R	0.030	ug/g	12-OCT-21	13-OCT-21	R5616947
Anthracene	0.826		0.012	ug/g	12-OCT-21	13-OCT-21	R5616947
Benzo(a)anthracene	2.60	R	0.030	ug/g	12-OCT-21	13-OCT-21	R5616947
Benzo(a)pyrene	3.05		0.015	ug/g	12-OCT-21	13-OCT-21	R5616947
Benzo(b&j)fluoranthene	3.12		0.030	ug/g	12-OCT-21	13-OCT-21	R5616947
Benzo(g,h,i)perylene	2.03		0.030	ug/g	12-OCT-21	13-OCT-21	R5616947
Benzo(k)fluoranthene	1.25		0.030	ug/g	12-OCT-21	13-OCT-21	R5616947
Chrysene	3.11		0.030	ug/g	12-OCT-21	13-OCT-21	R5616947
Dibenz(a,h)anthracene	0.522		0.015	ug/g	12-OCT-21	13-OCT-21	R5616947
Fluoroanthene	3.62		0.015	ug/g	12-OCT-21	13-OCT-21	R5616947
Fluorene	0.618	R	0.015	ug/g	12-OCT-21	13-OCT-21	R5616947
Indeno(1,2,3-cd)pyrene	1.86		0.030	ug/g	12-OCT-21	13-OCT-21	R5616947
1-Methylnaphthalene	<0.240	DLQ	0.24	ug/g	12-OCT-21	13-OCT-21	R5616947
2-Methylnaphthalene	<0.220	DLQ	0.22	ug/g	12-OCT-21	13-OCT-21	R5616947
Naphthalene	0.287	R	0.015	ug/g	12-OCT-21	13-OCT-21	R5616947
Phenanthrene	2.35		0.015	ug/g	12-OCT-21	13-OCT-21	R5616947
Pyrene	4.91		0.015	ug/g	12-OCT-21	13-OCT-21	R5616947
Quinoline	0.039	AI	0.015	ug/g	12-OCT-21	13-OCT-21	R5616947
Surrogate: 2-Fluorobiphenyl	87.2		60-140	%	12-OCT-21	13-OCT-21	R5616947
Surrogate: d14-Terphenyl	93.5		60-140	%	12-OCT-21	13-OCT-21	R5616947
B(a)P Total Potency Equivalent	4.50		0.021	ug/g	12-OCT-21	13-OCT-21	R5616947
IACR (CCME)	48.2		0.30		12-OCT-21	13-OCT-21	R5616947
Polychlorinated Biphenyls							
Aroclor 1016	<0.014	DLHM	0.014	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1221	<0.014	DLHM	0.014	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1232	<0.014	DLHM	0.014	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1242	<0.220	DLM	0.22	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1248	<0.014	DLHM	0.014	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1254	3.18	DLHM	0.014	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1260	1.41	DLHM	0.014	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1262	<0.014	DLHM	0.014	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1268	<0.014	DLHM	0.014	mg/kg	13-OCT-21	13-OCT-21	R5616907
Total Polychlorinated Biphenyls	4.59		0.041	mg/kg	13-OCT-21	13-OCT-21	R5616907
Surrogate: d14-Terphenyl	110.8		50-140	%	13-OCT-21	13-OCT-21	R5616907

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Reference Information

QC Samples with Qualifiers & Comments:

QC Type Description	Parameter	Qualifier	Applies to Sample Number(s)
Duplicate	Antimony (Sb)	DUP-H	L2646743-1, -10, -13, -14, -15, -16, -17, -19, -2, -20, -21, -3, -8, -9
Duplicate	Benzo(a)pyrene	DUP-H	L2646743-14
Duplicate	Fluoroanthene	DUP-H	L2646743-14
Duplicate	Pyrene	DUP-H	L2646743-14
Duplicate	Aroclor 1254	DUP-H	L2646743-1, -10, -11, -13, -14, -15, -17, -18, -19, -2, -20, -21, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Benzo(a)pyrene	E	L2646743-1
Matrix Spike	Benzo(g,h,i)perylene	E	L2646743-1
Matrix Spike	Dibenz(a,h)anthracene	E	L2646743-1
Matrix Spike	Indeno(1,2,3-cd)pyrene	E	L2646743-1
Matrix Spike	Aroclor 1254	E	L2646743-1, -10, -11, -13, -14, -15, -17, -18, -19, -2, -20, -21, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Dibenz(a,h)anthracene	MES	L2646743-18
Matrix Spike	Aroclor 1254	MS-B	L2646743-16, -22
Matrix Spike	Aroclor 1260	MS-B	L2646743-16, -22

Sample Parameter Qualifier key listed:

Qualifier	Description
AI	Analytical interferences may be present. Result may be biased high.
DLHM	Detection Limit Adjusted: Sample has High Moisture Content
DLM	Detection Limit Adjusted due to sample matrix effects (e.g. chemical interference, colour, turbidity).
DLQ	Detection Limit raised due to co-eluting interference. GCMS qualifier ion ratio did not meet acceptance criteria.
DLR	Detection Limit Raised due to required dilution, limited sample amount, and/or high moisture content (soil samples)
DUP-H	Duplicate results outside ALS DQO, due to sample heterogeneity.
E	Matrix Spike recovery outside ALS DQO due to heterogeneous analyte background in sample.
MES	Data Quality Objective was marginally exceeded (by < 10% absolute) for < 10% of analytes in a Multi-Element Scan / Multi-Parameter Scan (considered acceptable as per OMOE & CCME).
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
PSAL	Limited sample was available for Particle Size Analysis (100g minimum is standard). Measurement Uncertainty for PSA results may be higher than usual.
R	The ion abundance ratio(s) did not meet the acceptance criteria. Value is an estimated maximum.
RRR	Refer to Report Remarks for issues regarding this analysis

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
ATTERBERG-SK	Soil	Atterberg limits	CARTER CSSS 58

The liquid limit (or upper plastic limit) is the point at which the soil becomes semifluid, like softened butter. In operational terms, the liquid limit is defined as the water content at which a trapezoidal groove cut in moist soil is closed after 25 taps on a hard rubber plate (ASTM D-18, 1958).

The plastic limit (or lower plastic limit) is defined as the water content at which soil begins to crumble on being rolled into a thread 1/8 inch (or 3 mm) in diameter. It represents the lowest water content at which soil can be deformed readily without cracking.

The plastic index (which is the difference between the liquid and plastic limits) gives an indication of the "clayeyness" or plasticity of a clay and is employed in engineering classification systems for soils.

This method is equivalent to ASTM D4318-10.

HG-200.2-CVAA-WT	Soil	Mercury in Soil by CVAAS	EPA 200.2/1631E (mod)

Soil samples are digested with nitric and hydrochloric acids, followed by analysis by CVAAS.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

MET-200.2-CCMS-WT	Soil	Metals in Soil by CRC ICPMS	EPA 200.2/6020B (mod)

Soil/sediment is dried, disaggregated, and sieved (2 mm). For tests intended to support Ontario regulations, the <2mm fraction is ground to pass through a 0.355 mm sieve. Strong Acid Leachable Metals in the <2mm fraction are solubilized by heated digestion with nitric and hydrochloric acids. Instrumental analysis is by Collision / Reaction Cell ICPMS.

Limitations: This method is intended to liberate environmentally available metals. Silicate minerals are not solubilized. Some metals may be only partially recovered (matrix dependent), including Al, Ba, Be, Cr, S, Sr, Ti, Tl, V, W, and Zr. Elemental Sulfur may be poorly recovered by this method.

Reference Information

Volatile forms of sulfur (e.g. sulfide, H2S) may be excluded if lost during sampling, storage, or digestion.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011), unless a subset of the Analytical Test Group (ATG) has been requested (the Protocol states that all analytes in an ATG must be reported).

MOISTURE-WT	Soil	% Moisture	CCME PHC in Soil - Tier 1 (mod)

PAH-CCME-SQGL-WT	Soil	PAHs in Sediment	SW846 8270

The procedure uses a mechanical shaking technique to extract a representative sub-sample with a mixture of methanol and toluene. The extract is analyzed by GC/MSD. Depending on the analytical GC/MS column used benzo(j)fluoranthene may chromatographically co-elute with benzo(b)fluoranthene or benzo(k)fluoranthene.

PCB9-LOW-WT	Soil	PCBs to meet CCME Sediment Criteria	SW846 8270

A representative sub-sample of a soil sample is mixed with methanol and extracted with toluene using a shaker technique. An aliquot of the separated toluene is analyzed by GC/MSD.

PSA-MUST-SK	Soil	% Particles > 75um (Coarse/Fine)	ASTM D6913

An air-dried sample is reduced to < 2 mm size and mixed with a dispersing agent (Calgon solution). The sample is washed through a 200 mesh (75 µm) sieve. The retained mass of sample is used to determine % sand fraction.

Reference: ASTM D422-63

SPECGRAV-CL	Soil	Specific Gravity	ASTM D 5057

A portion of sample is weighed in a container that is calibrated for volume. Specific Gravity is reported as the mass of sample per mass of an equal volume of pure water, where the density of pure water is taken to be 1.00 g/mL.

TOC-WT	Soil	TOC & FOC in Solids	CARTER 21.3.2

Soil is treated with excess acidic dichromate, which reacts with the organic carbon, oxidizing it to CO2. The residual dichromate is titrated with ferrous ammonium sulphate and TOC calculated by difference.

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
SK	ALS ENVIRONMENTAL - SASKATOON, SASKATCHEWAN, CANADA
WT	ALS ENVIRONMENTAL - WATERLOO, ONTARIO, CANADA
CL	ALS ENVIRONMENTAL - CALGARY, ALBERTA, CANADA

Chain of Custody Numbers:

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.
mg/kg - milligrams per kilogram based on dry weight of sample
mg/kg wwt - milligrams per kilogram based on wet weight of sample
mg/kg lwt - milligrams per kilogram based on lipid weight of sample
mg/L - unit of concentration based on volume, parts per million.
< - Less than.
D.L. - The reporting limit.
N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.
UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.
Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
ATTERBERG-SK	**Soil**							
Batch R5619861								
WG3634787-1 DUP		**L2648161-1**						
Liquid Limit (LL)		78	78		%	0.2	20	15-OCT-21
Moisture at Plastic Limit		55	56		%	1.7	20	15-OCT-21
Plasticity Index (PI)		23	23		%	3.4	20	15-OCT-21
WG3634787-2 IRM		**ATB-1_SOIL**						
Liquid Limit (LL)			107.5		%		80-120	15-OCT-21
Moisture at Plastic Limit			112.4		%		80-120	15-OCT-21
Plasticity Index (PI)			99.6		%		80-120	15-OCT-21
Batch R5627486								
WG3643060-1 DUP		**L2647638-19**						
Liquid Limit (LL)		50	50		%	0.4	20	23-OCT-21
Moisture at Plastic Limit		28	28		%	1.2	20	23-OCT-21
Plasticity Index (PI)		22	21		%	2.5	20	23-OCT-21
WG3643060-2 IRM		**ATB-1_SOIL**						
Liquid Limit (LL)			108.1		%		80-120	23-OCT-21
Moisture at Plastic Limit			113.2		%		80-120	23-OCT-21
Plasticity Index (PI)			99.9		%		80-120	23-OCT-21
HG-200.2-CVAA-WT	**Soil**							
Batch R5615364								
WG3634056-2 CRM		**WT-SS-2**						
Mercury (Hg)			107.0		%		70-130	11-OCT-21
WG3634056-6 DUP		**WG3634056-5**						
Mercury (Hg)		0.422	0.434		ug/g	2.7	40	11-OCT-21
WG3634056-3 LCS								
Mercury (Hg)			103.0		%		80-120	11-OCT-21
WG3634056-1 MB								
Mercury (Hg)			<0.0050		mg/kg		0.005	11-OCT-21
Batch R5615365								
WG3634373-2 CRM		**WT-SS-2**						
Mercury (Hg)			105.1		%		70-130	11-OCT-21
WG3634373-6 DUP		**WG3634373-5**						
Mercury (Hg)		0.861	0.691		ug/g	22	40	11-OCT-21
WG3634373-3 LCS								
Mercury (Hg)			105.5		%		80-120	11-OCT-21
WG3634373-1 MB								
Mercury (Hg)			<0.0050		mg/kg		0.005	11-OCT-21
	Soil							

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5614725								
WG3634056-2 CRM		**WT-SS-2**						
Aluminum (Al)			115.9		%		70-130	08-OCT-21
Antimony (Sb)			106.1		%		70-130	08-OCT-21
Arsenic (As)			117.3		%		70-130	08-OCT-21
Barium (Ba)			128.7		%		70-130	08-OCT-21
Beryllium (Be)			120.0		%		70-130	08-OCT-21
Bismuth (Bi)			0.14		mg/kg		0-0.34	08-OCT-21
Boron (B)			9.5		mg/kg		3.5-13.5	08-OCT-21
Cadmium (Cd)			111.6		%		70-130	08-OCT-21
Calcium (Ca)			120.9		%		70-130	08-OCT-21
Chromium (Cr)			112.6		%		70-130	08-OCT-21
Cobalt (Co)			115.1		%		70-130	08-OCT-21
Copper (Cu)			116.1		%		70-130	08-OCT-21
Iron (Fe)			119.2		%		70-130	08-OCT-21
Lead (Pb)			109.1		%		70-130	08-OCT-21
Lithium (Li)			116.8		%		70-130	08-OCT-21
Magnesium (Mg)			119.4		%		70-130	08-OCT-21
Manganese (Mn)			116.1		%		70-130	08-OCT-21
Molybdenum (Mo)			110.8		%		70-130	08-OCT-21
Nickel (Ni)			114.9		%		70-130	08-OCT-21
Phosphorus (P)			118.3		%		70-130	08-OCT-21
Potassium (K)			121.7		%		70-130	08-OCT-21
Selenium (Se)			0.15		mg/kg		0-0.34	08-OCT-21
Silver (Ag)			104.4		%		70-130	08-OCT-21
Sodium (Na)			122.1		%		70-130	08-OCT-21
Strontium (Sr)			116.9		%		70-130	08-OCT-21
Thallium (Tl)			0.083		mg/kg		0.029-0.129	08-OCT-21
Tin (Sn)			103.4		%		70-130	08-OCT-21
Titanium (Ti)			109.3		%		70-130	08-OCT-21
Uranium (U)			105.0		%		70-130	08-OCT-21
Vanadium (V)			115.6		%		70-130	08-OCT-21
Zinc (Zn)			108.3		%		70-130	08-OCT-21
Zirconium (Zr)			113.2		%		70-130	08-OCT-21
WG3634056-6 DUP		**WG3634056-5**						
Aluminum (Al)		19900	20300		ug/g	1.8	40	08-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5614725								
WG3634056-6 DUP		**WG3634056-5**						
Antimony (Sb)		0.90	0.85		ug/g	6.1	30	08-OCT-21
Arsenic (As)		8.17	8.11		ug/g	0.8	30	08-OCT-21
Barium (Ba)		308	314		ug/g	1.9	40	08-OCT-21
Beryllium (Be)		0.75	0.77		ug/g	2.2	30	08-OCT-21
Bismuth (Bi)		0.90	0.76		ug/g	17	30	08-OCT-21
Boron (B)		13.3	12.8		ug/g	3.9	30	08-OCT-21
Cadmium (Cd)		0.894	0.875		ug/g	2.2	30	08-OCT-21
Calcium (Ca)		106000	103000		ug/g	2.8	30	08-OCT-21
Chromium (Cr)		481	492		ug/g	2.2	30	08-OCT-21
Cobalt (Co)		13.1	13.4		ug/g	2.0	30	08-OCT-21
Copper (Cu)		53.0	53.3		ug/g	0.7	30	08-OCT-21
Iron (Fe)		29100	29300		ug/g	0.7	30	08-OCT-21
Lead (Pb)		114	113		ug/g	0.7	40	08-OCT-21
Lithium (Li)		17.8	17.8		ug/g	0.3	30	08-OCT-21
Magnesium (Mg)		12900	13100		ug/g	1.6	30	08-OCT-21
Manganese (Mn)		921	921		ug/g	0.1	30	08-OCT-21
Molybdenum (Mo)		1.23	1.19		ug/g	2.5	40	08-OCT-21
Nickel (Ni)		28.6	29.4		ug/g	2.8	30	08-OCT-21
Phosphorus (P)		1320	1280		ug/g	3.4	30	08-OCT-21
Potassium (K)		4310	4540		ug/g	5.3	40	08-OCT-21
Selenium (Se)		1.46	1.44		ug/g	1.7	30	08-OCT-21
Silver (Ag)		0.76	0.72		ug/g	6.5	40	08-OCT-21
Sodium (Na)		704	679		ug/g	3.5	40	08-OCT-21
Strontium (Sr)		496	486		ug/g	2.1	40	08-OCT-21
Sulfur (S)		10300	9900		ug/g	4.1	30	08-OCT-21
Thallium (Tl)		0.332	0.335		ug/g	0.7	30	08-OCT-21
Tin (Sn)		7.0	7.1		ug/g	1.0	40	08-OCT-21
Titanium (Ti)		1280	1280		ug/g	0.0	40	08-OCT-21
Tungsten (W)		<0.50	<0.50	RPD-NA	ug/g	N/A	30	08-OCT-21
Uranium (U)		0.974	0.978		ug/g	0.4	30	08-OCT-21
Vanadium (V)		48.1	48.2		ug/g	0.2	30	08-OCT-21
Zinc (Zn)		180	189		ug/g	4.9	30	08-OCT-21
Zirconium (Zr)		3.8	3.9		ug/g			08-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5614725								
WG3634056-6 DUP		**WG3634056-5**						
Zirconium (Zr)		3.8	3.9		ug/g	0.7	30	08-OCT-21
WG3634056-4 LCS								
Aluminum (Al)			102.8		%		80-120	08-OCT-21
Antimony (Sb)			102.7		%		80-120	08-OCT-21
Arsenic (As)			102.5		%		80-120	08-OCT-21
Barium (Ba)			103.5		%		80-120	08-OCT-21
Beryllium (Be)			98.4		%		80-120	08-OCT-21
Bismuth (Bi)			98.2		%		80-120	08-OCT-21
Boron (B)			94.2		%		80-120	08-OCT-21
Cadmium (Cd)			96.0		%		80-120	08-OCT-21
Calcium (Ca)			99.7		%		80-120	08-OCT-21
Chromium (Cr)			100.5		%		80-120	08-OCT-21
Cobalt (Co)			99.5		%		80-120	08-OCT-21
Copper (Cu)			97.8		%		80-120	08-OCT-21
Iron (Fe)			101.3		%		80-120	08-OCT-21
Lead (Pb)			92.8		%		80-120	08-OCT-21
Lithium (Li)			97.9		%		80-120	08-OCT-21
Magnesium (Mg)			105.7		%		80-120	08-OCT-21
Manganese (Mn)			100.9		%		80-120	08-OCT-21
Molybdenum (Mo)			100.2		%		80-120	08-OCT-21
Nickel (Ni)			98.4		%		80-120	08-OCT-21
Phosphorus (P)			105.2		%		80-120	08-OCT-21
Potassium (K)			102.7		%		80-120	08-OCT-21
Selenium (Se)			100.4		%		80-120	08-OCT-21
Silver (Ag)			86.9		%		80-120	08-OCT-21
Sodium (Na)			104.9		%		80-120	08-OCT-21
Strontium (Sr)			103.6		%		80-120	08-OCT-21
Sulfur (S)			99.6		%		80-120	08-OCT-21
Thallium (Tl)			97.3		%		80-120	08-OCT-21
Tin (Sn)			97.4		%		80-120	08-OCT-21
Titanium (Ti)			100.1		%		80-120	08-OCT-21
Tungsten (W)			88.1		%		80-120	08-OCT-21
Uranium (U)			91.3		%		80-120	08-OCT-21
Vanadium (V)			103.9		%		80-120	08-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5614725								
WG3634056-4 LCS								
Zinc (Zn)			92.9		%		80-120	08-OCT-21
Zirconium (Zr)			95.9		%		80-120	08-OCT-21
WG3634056-1 MB								
Aluminum (Al)			<50		mg/kg		50	08-OCT-21
Antimony (Sb)			<0.10		mg/kg		0.1	08-OCT-21
Arsenic (As)			<0.10		mg/kg		0.1	08-OCT-21
Barium (Ba)			<0.50		mg/kg		0.5	08-OCT-21
Beryllium (Be)			<0.10		mg/kg		0.1	08-OCT-21
Bismuth (Bi)			<0.20		mg/kg		0.2	08-OCT-21
Boron (B)			<5.0		mg/kg		5	08-OCT-21
Cadmium (Cd)			<0.020		mg/kg		0.02	08-OCT-21
Calcium (Ca)			<50		mg/kg		50	08-OCT-21
Chromium (Cr)			<0.50		mg/kg		0.5	08-OCT-21
Cobalt (Co)			<0.10		mg/kg		0.1	08-OCT-21
Copper (Cu)			<0.50		mg/kg		0.5	08-OCT-21
Iron (Fe)			<50		mg/kg		50	08-OCT-21
Lead (Pb)			<0.50		mg/kg		0.5	08-OCT-21
Lithium (Li)			<2.0		mg/kg		2	08-OCT-21
Magnesium (Mg)			<20		mg/kg		20	08-OCT-21
Manganese (Mn)			<1.0		mg/kg		1	08-OCT-21
Molybdenum (Mo)			<0.10		mg/kg		0.1	08-OCT-21
Nickel (Ni)			<0.50		mg/kg		0.5	08-OCT-21
Phosphorus (P)			<50		mg/kg		50	08-OCT-21
Potassium (K)			<100		mg/kg		100	08-OCT-21
Selenium (Se)			<0.20		mg/kg		0.2	08-OCT-21
Silver (Ag)			<0.10		mg/kg		0.1	08-OCT-21
Sodium (Na)			<50		mg/kg		50	08-OCT-21
Strontium (Sr)			<0.50		mg/kg		0.5	08-OCT-21
Sulfur (S)			<1000		mg/kg		1000	08-OCT-21
Thallium (Tl)			<0.050		mg/kg		0.05	08-OCT-21
Tin (Sn)			<2.0		mg/kg		2	08-OCT-21
Titanium (Ti)			<1.0		mg/kg		1	08-OCT-21
Tungsten (W)			<0.50		mg/kg		0.5	08-OCT-21
Uranium (U)			<0.050		mg/kg		0.05	08-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5614725								
WG3634056-1 MB								
Vanadium (V)			<0.20		mg/kg		0.2	08-OCT-21
Zinc (Zn)			<2.0		mg/kg		2	08-OCT-21
Zirconium (Zr)			<1.0		mg/kg		1	08-OCT-21
Batch R5616383								
WG3634373-2 CRM		**WT-SS-2**						
Aluminum (Al)			97.7		%		70-130	12-OCT-21
Antimony (Sb)			97.8		%		70-130	12-OCT-21
Arsenic (As)			105.5		%		70-130	12-OCT-21
Barium (Ba)			108.5		%		70-130	12-OCT-21
Beryllium (Be)			100.3		%		70-130	12-OCT-21
Bismuth (Bi)			0.13		mg/kg		0-0.34	12-OCT-21
Boron (B)			8.4		mg/kg		3.5-13.5	12-OCT-21
Cadmium (Cd)			99.7		%		70-130	12-OCT-21
Calcium (Ca)			99.8		%		70-130	12-OCT-21
Chromium (Cr)			100.9		%		70-130	12-OCT-21
Cobalt (Co)			104.4		%		70-130	12-OCT-21
Copper (Cu)			109.8		%		70-130	12-OCT-21
Iron (Fe)			103.1		%		70-130	12-OCT-21
Lead (Pb)			105.1		%		70-130	12-OCT-21
Lithium (Li)			91.8		%		70-130	12-OCT-21
Magnesium (Mg)			102.8		%		70-130	12-OCT-21
Manganese (Mn)			102.0		%		70-130	12-OCT-21
Molybdenum (Mo)			98.2		%		70-130	12-OCT-21
Nickel (Ni)			105.5		%		70-130	12-OCT-21
Phosphorus (P)			106.1		%		70-130	12-OCT-21
Potassium (K)			99.4		%		70-130	12-OCT-21
Selenium (Se)			0.15		mg/kg		0-0.34	12-OCT-21
Silver (Ag)			96.4		%		70-130	12-OCT-21
Sodium (Na)			99.0		%		70-130	12-OCT-21
Strontium (Sr)			102.5		%		70-130	12-OCT-21
Thallium (Tl)			0.076		mg/kg		0.029-0.129	12-OCT-21
Tin (Sn)			98.2		%		70-130	12-OCT-21
Titanium (Ti)			97.5		%		70-130	12-OCT-21
Uranium (U)			99.1		%		70-130	12-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5616383								
WG3634373-2 CRM		**WT-SS-2**						
Vanadium (V)			103.5		%		70-130	12-OCT-21
Zinc (Zn)			98.2		%		70-130	12-OCT-21
Zirconium (Zr)			94.7		%		70-130	12-OCT-21
WG3634373-6 DUP		**WG3634373-5**						
Aluminum (Al)		19500	18300		ug/g	6.3	40	12-OCT-21
Antimony (Sb)		1.38	1.89	DUP-H	ug/g	31	30	12-OCT-21
Arsenic (As)		23.9	28.6		ug/g	18	30	12-OCT-21
Barium (Ba)		249	254		ug/g	2.2	40	12-OCT-21
Beryllium (Be)		0.72	0.71		ug/g	1.5	30	12-OCT-21
Bismuth (Bi)		<0.40	<0.40	RPD-NA	ug/g	N/A	30	12-OCT-21
Boron (B)		<10	<10	RPD-NA	ug/g	N/A	30	12-OCT-21
Cadmium (Cd)		0.330	0.313		ug/g	5.5	30	12-OCT-21
Calcium (Ca)		47200	46200		ug/g	2.0	30	12-OCT-21
Chromium (Cr)		391	353		ug/g	10	30	12-OCT-21
Cobalt (Co)		45.0	49.0		ug/g	8.6	30	12-OCT-21
Copper (Cu)		32.3	33.9		ug/g	4.8	30	12-OCT-21
Iron (Fe)		30900	29900		ug/g	3.3	30	12-OCT-21
Lead (Pb)		69.9	71.9		ug/g	2.8	40	12-OCT-21
Lithium (Li)		16.5	14.9		ug/g	11	30	12-OCT-21
Magnesium (Mg)		17000	16100		ug/g	5.5	30	12-OCT-21
Manganese (Mn)		709	629		ug/g	12	30	12-OCT-21
Molybdenum (Mo)		0.58	0.62		ug/g	6.9	40	12-OCT-21
Nickel (Ni)		44.0	45.9		ug/g	4.2	30	12-OCT-21
Phosphorus (P)		930	1050		ug/g	12	30	12-OCT-21
Potassium (K)		5380	5310		ug/g	1.3	40	12-OCT-21
Selenium (Se)		<0.40	<0.40	RPD-NA	ug/g	N/A	30	12-OCT-21
Silver (Ag)		0.54	0.58		ug/g	7.7	40	12-OCT-21
Sodium (Na)		760	740		ug/g	2.5	40	12-OCT-21
Strontium (Sr)		199	193		ug/g	3.3	40	12-OCT-21
Sulfur (S)		2100	<2000	RPD-NA	ug/g	N/A	30	12-OCT-21
Thallium (Tl)		0.30	0.32		ug/g	6.9	30	12-OCT-21
Tin (Sn)		6.4	5.5		ug/g	14	40	12-OCT-21
Titanium (Ti)		1670	1640		ug/g	1.9	40	12-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5616383								
WG3634373-6 DUP		**WG3634373-5**						
Tungsten (W)		<1.0	<1.0	RPD-NA	ug/g	N/A	30	12-OCT-21
Uranium (U)		0.68	0.69		ug/g	1.8	30	12-OCT-21
Vanadium (V)		54.6	53.6		ug/g	1.8	30	12-OCT-21
Zinc (Zn)		130	128		ug/g	1.7	30	12-OCT-21
Zirconium (Zr)		8.1	7.7		ug/g	5.2	30	12-OCT-21
WG3634373-4 LCS								
Aluminum (Al)			100.1		%		80-120	12-OCT-21
Antimony (Sb)			106.2		%		80-120	12-OCT-21
Arsenic (As)			102.2		%		80-120	12-OCT-21
Barium (Ba)			96.6		%		80-120	12-OCT-21
Beryllium (Be)			97.2		%		80-120	12-OCT-21
Bismuth (Bi)			98.1		%		80-120	12-OCT-21
Boron (B)			92.9		%		80-120	12-OCT-21
Cadmium (Cd)			94.9		%		80-120	12-OCT-21
Calcium (Ca)			99.97		%		80-120	12-OCT-21
Chromium (Cr)			101.6		%		80-120	12-OCT-21
Cobalt (Co)			100.3		%		80-120	12-OCT-21
Copper (Cu)			98.6		%		80-120	12-OCT-21
Iron (Fe)			102.4		%		80-120	12-OCT-21
Lead (Pb)			100.6		%		80-120	12-OCT-21
Lithium (Li)			93.5		%		80-120	12-OCT-21
Magnesium (Mg)			105.4		%		80-120	12-OCT-21
Manganese (Mn)			99.5		%		80-120	12-OCT-21
Molybdenum (Mo)			102.7		%		80-120	12-OCT-21
Nickel (Ni)			98.4		%		80-120	12-OCT-21
Phosphorus (P)			101.0		%		80-120	12-OCT-21
Potassium (K)			107.5		%		80-120	12-OCT-21
Selenium (Se)			103.8		%		80-120	12-OCT-21
Silver (Ag)			90.6		%		80-120	12-OCT-21
Sodium (Na)			103.3		%		80-120	12-OCT-21
Strontium (Sr)			104.9		%		80-120	12-OCT-21
Sulfur (S)			98.0		%		80-120	12-OCT-21
Thallium (Tl)			99.4		%		80-120	12-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5616383								
WG3634373-4 LCS								
Tin (Sn)			96.0		%		80-120	12-OCT-21
Titanium (Ti)			100.4		%		80-120	12-OCT-21
Tungsten (W)			101.4		%		80-120	12-OCT-21
Uranium (U)			100.9		%		80-120	12-OCT-21
Vanadium (V)			103.6		%		80-120	12-OCT-21
Zinc (Zn)			95.4		%		80-120	12-OCT-21
Zirconium (Zr)			100.7		%		80-120	12-OCT-21
WG3634373-1 MB								
Aluminum (Al)			<50		mg/kg		50	12-OCT-21
Antimony (Sb)			<0.10		mg/kg		0.1	12-OCT-21
Arsenic (As)			<0.10		mg/kg		0.1	12-OCT-21
Barium (Ba)			<0.50		mg/kg		0.5	12-OCT-21
Beryllium (Be)			<0.10		mg/kg		0.1	12-OCT-21
Bismuth (Bi)			<0.20		mg/kg		0.2	12-OCT-21
Boron (B)			<5.0		mg/kg		5	12-OCT-21
Cadmium (Cd)			<0.020		mg/kg		0.02	12-OCT-21
Calcium (Ca)			<50		mg/kg		50	12-OCT-21
Chromium (Cr)			<0.50		mg/kg		0.5	12-OCT-21
Cobalt (Co)			<0.10		mg/kg		0.1	12-OCT-21
Copper (Cu)			<0.50		mg/kg		0.5	12-OCT-21
Iron (Fe)			<50		mg/kg		50	12-OCT-21
Lead (Pb)			<0.50		mg/kg		0.5	12-OCT-21
Lithium (Li)			<2.0		mg/kg		2	12-OCT-21
Magnesium (Mg)			<20		mg/kg		20	12-OCT-21
Manganese (Mn)			<1.0		mg/kg		1	12-OCT-21
Molybdenum (Mo)			<0.10		mg/kg		0.1	12-OCT-21
Nickel (Ni)			<0.50		mg/kg		0.5	12-OCT-21
Phosphorus (P)			<50		mg/kg		50	12-OCT-21
Potassium (K)			<100		mg/kg		100	12-OCT-21
Selenium (Se)			<0.20		mg/kg		0.2	12-OCT-21
Silver (Ag)			<0.10		mg/kg		0.1	12-OCT-21
Sodium (Na)			<50		mg/kg		50	12-OCT-21
Strontium (Sr)			<0.50		mg/kg		0.5	12-OCT-21
Sulfur (S)			<1000		mg/kg		1000	12-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5616383								
WG3634373-1 MB								
Thallium (Tl)			<0.050		mg/kg		0.05	12-OCT-21
Tin (Sn)			<2.0		mg/kg		2	12-OCT-21
Titanium (Ti)			<1.0		mg/kg		1	12-OCT-21
Tungsten (W)			<0.50		mg/kg		0.5	12-OCT-21
Uranium (U)			<0.050		mg/kg		0.05	12-OCT-21
Vanadium (V)			<0.20		mg/kg		0.2	12-OCT-21
Zinc (Zn)			<2.0		mg/kg		2	12-OCT-21
Zirconium (Zr)			<1.0		mg/kg		1	12-OCT-21
MOISTURE-WT	**Soil**							
Batch R5607680								
WG3631174-3 DUP		**L2646743-1**						
% Moisture		86.9	86.6		%	0.4	20	04-OCT-21
WG3631174-2 LCS								
% Moisture			99.6		%		90-110	04-OCT-21
WG3631174-1 MB								
% Moisture			<0.25		%		0.25	04-OCT-21
Batch R5612056								
WG3632337-3 DUP		**L2646559-4**						
% Moisture		6.64	6.39		%	3.7	20	07-OCT-21
WG3632337-2 LCS								
% Moisture			99.2		%		90-110	07-OCT-21
WG3632337-1 MB								
% Moisture			<0.25		%		0.25	07-OCT-21
PAH-CCME-SQGL-WT	**Soil**							
Batch R5614231								
WG3633110-3 DUP		**WG3633110-5**						
1-Methylnaphthalene		<0.025	<0.025	RPD-NA	ug/g	N/A	50	08-OCT-21
2-Methylnaphthalene		<0.025	<0.025	RPD-NA	ug/g	N/A	50	08-OCT-21
Acenaphthene		0.059	0.056		ug/g	6.4	50	08-OCT-21
Acenaphthylene		0.417	0.366		ug/g	13	50	08-OCT-21
Acridine		<0.050	<0.050	RPD-NA	ug/g	N/A	50	08-OCT-21
Anthracene		0.203	0.157		ug/g	26	50	08-OCT-21
Benzo(a)anthracene		1.04	0.679		ug/g	42	50	08-OCT-21
Benzo(a)pyrene		1.43	1.08		ug/g	28	50	08-OCT-21
Benzo(b&j)fluoranthene		1.37	0.947		ug/g			

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-CCME-SQGL-WT	**Soil**							
Batch R5614231								
WG3633110-3 DUP		**WG3633110-5**						
Benzo(b&j)fluoranthene		1.37	0.947		ug/g	36	50	08-OCT-21
Benzo(g,h,i)perylene		0.918	0.704		ug/g	26	50	08-OCT-21
Benzo(k)fluoranthene		0.522	0.365		ug/g	35	50	08-OCT-21
Chrysene		1.11	0.765		ug/g	37	50	08-OCT-21
Dibenz(a,h)anthracene		0.225	0.171		ug/g	28	50	08-OCT-21
Fluoroanthene		1.10	0.730		ug/g	40	50	08-OCT-21
Fluorene		0.083	0.071		ug/g	16	50	08-OCT-21
Indeno(1,2,3-cd)pyrene		0.716	0.525		ug/g	31	50	08-OCT-21
Naphthalene		<0.025	0.030	RPD-NA	ug/g	N/A	50	08-OCT-21
Phenanthrene		0.354	0.300		ug/g	17	50	08-OCT-21
Pyrene		1.40	0.993		ug/g	34	50	08-OCT-21
Quinoline		<0.025	<0.025	RPD-NA	ug/g	N/A	50	08-OCT-21
WG3633110-2 LCS								
1-Methylnaphthalene			92.8		%		50-140	08-OCT-21
2-Methylnaphthalene			88.7		%		50-140	08-OCT-21
Acenaphthene			87.0		%		50-140	08-OCT-21
Acenaphthylene			77.8		%		50-140	08-OCT-21
Acridine			77.8		%		50-140	08-OCT-21
Anthracene			75.6		%		50-140	08-OCT-21
Benzo(a)anthracene			83.4		%		50-140	08-OCT-21
Benzo(a)pyrene			73.2		%		50-140	08-OCT-21
Benzo(b&j)fluoranthene			82.3		%		50-150	08-OCT-21
Benzo(g,h,i)perylene			88.6		%		50-140	08-OCT-21
Benzo(k)fluoranthene			97.7		%		50-140	08-OCT-21
Chrysene			100.2		%		50-140	08-OCT-21
Dibenz(a,h)anthracene			89.2		%		50-140	08-OCT-21
Fluoroanthene			89.5		%		50-140	08-OCT-21
Fluorene			83.5		%		50-140	08-OCT-21
Indeno(1,2,3-cd)pyrene			76.3		%		50-140	08-OCT-21
Naphthalene			88.0		%		50-140	08-OCT-21
Phenanthrene			92.9		%		50-140	08-OCT-21
Pyrene			88.9		%		50-140	08-OCT-21
Quinoline			72.0		%		50-140	08-OCT-21
WG3633110-1 MB								

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-CCME-SQGL-WT	**Soil**							
Batch R5614231								
WG3633110-1 MB								
1-Methylnaphthalene			<0.0050		ug/g		0.005	08-OCT-21
2-Methylnaphthalene			<0.0050		ug/g		0.005	08-OCT-21
Acenaphthene			<0.0050		ug/g		0.005	08-OCT-21
Acenaphthylene			<0.0050		ug/g		0.005	08-OCT-21
Acridine			<0.010		ug/g		0.01	08-OCT-21
Anthracene			<0.0040		ug/g		0.004	08-OCT-21
Benzo(a)anthracene			<0.010		ug/g		0.01	08-OCT-21
Benzo(a)pyrene			<0.0050		ug/g		0.005	08-OCT-21
Benzo(b&j)fluoranthene			<0.010		ug/g		0.01	08-OCT-21
Benzo(g,h,i)perylene			<0.010		ug/g		0.01	08-OCT-21
Benzo(k)fluoranthene			<0.010		ug/g		0.01	08-OCT-21
Chrysene			<0.010		ug/g		0.01	08-OCT-21
Dibenz(a,h)anthracene			<0.0050		ug/g		0.005	08-OCT-21
Fluoroanthene			<0.0050		ug/g		0.005	08-OCT-21
Fluorene			<0.0050		ug/g		0.005	08-OCT-21
Indeno(1,2,3-cd)pyrene			<0.010		ug/g		0.01	08-OCT-21
Naphthalene			<0.0050		ug/g		0.005	08-OCT-21
Phenanthrene			<0.0050		ug/g		0.005	08-OCT-21
Pyrene			<0.0050		ug/g		0.005	08-OCT-21
Quinoline			<0.0050		ug/g		0.005	08-OCT-21
Surrogate: 2-Fluorobiphenyl			85.3		%		60-140	08-OCT-21
Surrogate: d14-Terphenyl			92.9		%		60-140	08-OCT-21
WG3633110-4 MS		**WG3633110-5**						
1-Methylnaphthalene			100.0		%		50-150	08-OCT-21
2-Methylnaphthalene			97.5		%		50-150	08-OCT-21
Acenaphthene			97.6		%		50-150	08-OCT-21
Acenaphthylene			56.6		%		50-150	08-OCT-21
Acridine			91.9		%		50-150	08-OCT-21
Anthracene			87.7		%		50-150	08-OCT-21
Benzo(a)anthracene			92.9		%		50-150	08-OCT-21
Benzo(a)pyrene			67.3		%		50-150	08-OCT-21
Benzo(b&j)fluoranthene			62.5		%		50-150	08-OCT-21
Benzo(g,h,i)perylene			64.7		%		50-150	08-OCT-21
Benzo(k)fluoranthene			80.6		%		50-150	08-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-CCME-SQGL-WT	**Soil**							
Batch R5614231								
WG3633110-4 MS		**WG3633110-5**						
Chrysene			85.1		%		50-150	08-OCT-21
Dibenz(a,h)anthracene			65.0		%		50-150	08-OCT-21
Fluoroanthene			86.0		%		50-150	08-OCT-21
Fluorene			100.9		%		50-150	08-OCT-21
Indeno(1,2,3-cd)pyrene			67.5		%		50-150	08-OCT-21
Naphthalene			93.7		%		50-150	08-OCT-21
Phenanthrene			95.7		%		50-150	08-OCT-21
Pyrene			85.9		%		50-150	08-OCT-21
Quinoline			91.2		%		50-150	08-OCT-21
Batch R5615834								
WG3635451-3 DUP		**WG3635451-5**						
1-Methylnaphthalene		<0.038	<0.038	RPD-NA	ug/g	N/A	50	12-OCT-21
2-Methylnaphthalene		<0.038	<0.038	RPD-NA	ug/g	N/A	50	12-OCT-21
Acenaphthene		0.066	0.057		ug/g	14	50	12-OCT-21
Acenaphthylene		0.466	0.380		ug/g	20	50	12-OCT-21
Acridine		<0.075	<0.075	RPD-NA	ug/g	N/A	50	12-OCT-21
Anthracene		0.179	0.162		ug/g	9.8	50	12-OCT-21
Benzo(a)anthracene		0.704	0.705		ug/g	0.1	50	12-OCT-21
Benzo(a)pyrene		1.12	1.03		ug/g	8.2	50	12-OCT-21
Benzo(b&j)fluoranthene		0.925	0.909		ug/g	1.7	50	12-OCT-21
Benzo(g,h,i)perylene		0.888	0.803		ug/g	10	50	12-OCT-21
Benzo(k)fluoranthene		0.344	0.336		ug/g	2.2	50	12-OCT-21
Chrysene		0.739	0.722		ug/g	2.3	50	12-OCT-21
Dibenz(a,h)anthracene		0.193	0.171		ug/g	12	50	12-OCT-21
Fluoroanthene		0.670	0.658		ug/g	1.7	50	12-OCT-21
Fluorene		0.086	0.072		ug/g	17	50	12-OCT-21
Indeno(1,2,3-cd)pyrene		0.674	0.635		ug/g	5.9	50	12-OCT-21
Naphthalene		<0.038	<0.038	RPD-NA	ug/g	N/A	50	12-OCT-21
Phenanthrene		0.257	0.251		ug/g	2.3	50	12-OCT-21
Pyrene		0.958	0.877		ug/g	8.9	50	12-OCT-21
Quinoline		<0.038	<0.038	RPD-NA	ug/g	N/A	50	12-OCT-21
WG3635451-2 LCS								
1-Methylnaphthalene			96.1		%		50-140	12-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-CCME-SQGL-WT	**Soil**							
Batch R5615834								
WG3635451-2 LCS								
2-Methylnaphthalene			93.6		%		50-140	12-OCT-21
Acenaphthene			92.1		%		50-140	12-OCT-21
Acenaphthylene			80.2		%		50-140	12-OCT-21
Acridine			81.8		%		50-140	12-OCT-21
Anthracene			78.8		%		50-140	12-OCT-21
Benzo(a)anthracene			91.2		%		50-140	12-OCT-21
Benzo(a)pyrene			77.9		%		50-140	12-OCT-21
Benzo(b&j)fluoranthene			90.2		%		50-150	12-OCT-21
Benzo(g,h,i)perylene			93.5		%		50-140	12-OCT-21
Benzo(k)fluoranthene			99.3		%		50-140	12-OCT-21
Chrysene			107.6		%		50-140	12-OCT-21
Dibenz(a,h)anthracene			95.5		%		50-140	12-OCT-21
Fluoroanthene			91.5		%		50-140	12-OCT-21
Fluorene			87.6		%		50-140	12-OCT-21
Indeno(1,2,3-cd)pyrene			83.5		%		50-140	12-OCT-21
Naphthalene			91.8		%		50-140	12-OCT-21
Phenanthrene			98.7		%		50-140	12-OCT-21
Pyrene			91.2		%		50-140	12-OCT-21
Quinoline			77.1		%		50-140	12-OCT-21
WG3635451-1 MB								
1-Methylnaphthalene			<0.0050		ug/g		0.005	12-OCT-21
2-Methylnaphthalene			<0.0050		ug/g		0.005	12-OCT-21
Acenaphthene			<0.0050		ug/g		0.005	12-OCT-21
Acenaphthylene			<0.0050		ug/g		0.005	12-OCT-21
Acridine			<0.010		ug/g		0.01	12-OCT-21
Anthracene			<0.0040		ug/g		0.004	12-OCT-21
Benzo(a)anthracene			<0.010		ug/g		0.01	12-OCT-21
Benzo(a)pyrene			<0.0050		ug/g		0.005	12-OCT-21
Benzo(b&j)fluoranthene			<0.010		ug/g		0.01	12-OCT-21
Benzo(g,h,i)perylene			<0.010		ug/g		0.01	12-OCT-21
Benzo(k)fluoranthene			<0.010		ug/g		0.01	12-OCT-21
Chrysene			<0.010		ug/g		0.01	12-OCT-21
Dibenz(a,h)anthracene			<0.0050		ug/g		0.005	12-OCT-21
Fluoroanthene			<0.0050		ug/g		0.005	12-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-CCME-SQGL-WT	**Soil**							
Batch R5615834								
WG3635451-1 MB								
Fluorene			<0.0050		ug/g		0.005	12-OCT-21
Indeno(1,2,3-cd)pyrene			<0.010		ug/g		0.01	12-OCT-21
Naphthalene			<0.0050		ug/g		0.005	12-OCT-21
Phenanthrene			<0.0050		ug/g		0.005	12-OCT-21
Pyrene			<0.0050		ug/g		0.005	12-OCT-21
Quinoline			<0.0050		ug/g		0.005	12-OCT-21
Surrogate: 2-Fluorobiphenyl			78.1		%		60-140	12-OCT-21
Surrogate: d14-Terphenyl			82.9		%		60-140	12-OCT-21
WG3635451-4 MS		**WG3635451-5**						
1-Methylnaphthalene			94.1		%		50-150	12-OCT-21
2-Methylnaphthalene			91.9		%		50-150	12-OCT-21
Acenaphthene			93.2		%		50-150	12-OCT-21
Acenaphthylene			54.4		%		50-150	12-OCT-21
Acridine			84.6		%		50-150	12-OCT-21
Anthracene			78.6		%		50-150	12-OCT-21
Benzo(a)anthracene			83.8		%		50-150	12-OCT-21
Benzo(a)pyrene			47.8	E	%		50-150	12-OCT-21
Benzo(b&j)fluoranthene			53.5		%		50-150	12-OCT-21
Benzo(g,h,i)perylene			44.2	E	%		50-150	12-OCT-21
Benzo(k)fluoranthene			53.9		%		50-150	12-OCT-21
Chrysene			76.8		%		50-150	12-OCT-21
Dibenz(a,h)anthracene			41.0	E	%		50-150	12-OCT-21
Fluoroanthene			92.0		%		50-150	12-OCT-21
Fluorene			97.1		%		50-150	12-OCT-21
Indeno(1,2,3-cd)pyrene			49.4	E	%		50-150	12-OCT-21
Naphthalene			86.7		%		50-150	12-OCT-21
Phenanthrene			91.2		%		50-150	12-OCT-21
Pyrene			87.4		%		50-150	12-OCT-21
Quinoline			87.6		%		50-150	12-OCT-21
Batch R5616732								
WG3636177-3 DUP		**WG3636177-5**						
1-Methylnaphthalene		<0.0050	<0.0050	RPD-NA	ug/g	N/A	50	13-OCT-21
2-Methylnaphthalene		<0.0050	<0.0050	RPD-NA	ug/g	N/A	50	13-OCT-21
Acenaphthene		<0.0050	<0.0050	RPD-NA	ug/g	N/A	50	13-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-CCME-SQGL-WT	**Soil**							
Batch R5616732								
WG3636177-3 DUP		**WG3636177-5**						
Acenaphthylene		<0.0050	<0.0050	RPD-NA	ug/g	N/A	50	13-OCT-21
Acridine		<0.010	<0.010	RPD-NA	ug/g	N/A	50	13-OCT-21
Anthracene		<0.0040	<0.0040	RPD-NA	ug/g	N/A	50	13-OCT-21
Benzo(a)anthracene		<0.010	<0.010	RPD-NA	ug/g	N/A	50	13-OCT-21
Benzo(a)pyrene		<0.0050	0.0117	DUP-H	ug/g	N/A	50	13-OCT-21
Benzo(b&j)fluoranthene		<0.010	0.015	RPD-NA	ug/g	N/A	50	13-OCT-21
Benzo(g,h,i)perylene		<0.010	<0.010	RPD-NA	ug/g	N/A	50	13-OCT-21
Benzo(k)fluoranthene		<0.010	<0.010	RPD-NA	ug/g	N/A	50	13-OCT-21
Chrysene		<0.010	0.012	RPD-NA	ug/g	N/A	50	13-OCT-21
Dibenz(a,h)anthracene		<0.0050	<0.0050	RPD-NA	ug/g	N/A	50	13-OCT-21
Fluoroanthene		<0.0050	0.0126	DUP-H	ug/g	N/A	50	13-OCT-21
Fluorene		<0.0050	<0.0050	RPD-NA	ug/g	N/A	50	13-OCT-21
Indeno(1,2,3-cd)pyrene		<0.010	<0.010	RPD-NA	ug/g	N/A	50	13-OCT-21
Naphthalene		<0.0050	<0.0050	RPD-NA	ug/g	N/A	50	13-OCT-21
Phenanthrene		<0.0050	<0.0050	RPD-NA	ug/g	N/A	50	13-OCT-21
Pyrene		<0.0050	0.0116	DUP-H	ug/g	N/A	50	13-OCT-21
Quinoline		<0.0050	<0.0050	RPD-NA	ug/g	N/A	50	13-OCT-21
WG3636177-2 LCS								
1-Methylnaphthalene			96.2		%		50-140	13-OCT-21
2-Methylnaphthalene			92.5		%		50-140	13-OCT-21
Acenaphthene			92.1		%		50-140	13-OCT-21
Acenaphthylene			89.8		%		50-140	13-OCT-21
Acridine			93.0		%		50-140	13-OCT-21
Anthracene			85.1		%		50-140	13-OCT-21
Benzo(a)anthracene			99.1		%		50-140	13-OCT-21
Benzo(a)pyrene			82.7		%		50-140	13-OCT-21
Benzo(b&j)fluoranthene			89.6		%		50-150	13-OCT-21
Benzo(g,h,i)perylene			93.6		%		50-140	13-OCT-21
Benzo(k)fluoranthene			93.3		%		50-140	13-OCT-21
Chrysene			99.4		%		50-140	13-OCT-21
Dibenz(a,h)anthracene			97.2		%		50-140	13-OCT-21
Fluoroanthene			95.9		%		50-140	13-OCT-21
Fluorene			91.5		%		50-140	13-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-CCME-SQGL-WT	**Soil**							
Batch R5616732								
WG3636177-2 LCS								
Indeno(1,2,3-cd)pyrene			94.8		%		50-140	13-OCT-21
Naphthalene			89.3		%		50-140	13-OCT-21
Phenanthrene			95.0		%		50-140	13-OCT-21
Pyrene			95.7		%		50-140	13-OCT-21
Quinoline			80.6		%		50-140	13-OCT-21
WG3636177-1 MB								
1-Methylnaphthalene			<0.0050		ug/g		0.005	13-OCT-21
2-Methylnaphthalene			<0.0050		ug/g		0.005	13-OCT-21
Acenaphthene			<0.0050		ug/g		0.005	13-OCT-21
Acenaphthylene			<0.0050		ug/g		0.005	13-OCT-21
Acridine			<0.010		ug/g		0.01	13-OCT-21
Anthracene			<0.0040		ug/g		0.004	13-OCT-21
Benzo(a)anthracene			<0.010		ug/g		0.01	13-OCT-21
Benzo(a)pyrene			<0.0050		ug/g		0.005	13-OCT-21
Benzo(b&j)fluoranthene			<0.010		ug/g		0.01	13-OCT-21
Benzo(g,h,i)perylene			<0.010		ug/g		0.01	13-OCT-21
Benzo(k)fluoranthene			<0.010		ug/g		0.01	13-OCT-21
Chrysene			<0.010		ug/g		0.01	13-OCT-21
Dibenz(a,h)anthracene			<0.0050		ug/g		0.005	13-OCT-21
Fluoroanthene			<0.0050		ug/g		0.005	13-OCT-21
Fluorene			<0.0050		ug/g		0.005	13-OCT-21
Indeno(1,2,3-cd)pyrene			<0.010		ug/g		0.01	13-OCT-21
Naphthalene			<0.0050		ug/g		0.005	13-OCT-21
Phenanthrene			<0.0050		ug/g		0.005	13-OCT-21
Pyrene			<0.0050		ug/g		0.005	13-OCT-21
Quinoline			<0.0050		ug/g		0.005	13-OCT-21
Surrogate: 2-Fluorobiphenyl			85.4		%		60-140	13-OCT-21
Surrogate: d14-Terphenyl			90.4		%		60-140	13-OCT-21
WG3636177-4 MS		**WG3636177-5**						
1-Methylnaphthalene			93.9		%		50-150	13-OCT-21
2-Methylnaphthalene			90.4		%		50-150	13-OCT-21
Acenaphthene			90.8		%		50-150	13-OCT-21
Acenaphthylene			85.9		%		50-150	13-OCT-21
Acridine			98.1		%		50-150	13-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-CCME-SQGL-WT	**Soil**							
Batch R5616732								
WG3636177-4 MS		**WG3636177-5**						
Anthracene			83.7		%		50-150	13-OCT-21
Benzo(a)anthracene			97.6		%		50-150	13-OCT-21
Benzo(a)pyrene			79.9		%		50-150	13-OCT-21
Benzo(b&j)fluoranthene			88.1		%		50-150	13-OCT-21
Benzo(g,h,i)perylene			89.5		%		50-150	13-OCT-21
Benzo(k)fluoranthene			89.7		%		50-150	13-OCT-21
Chrysene			95.5		%		50-150	13-OCT-21
Dibenz(a,h)anthracene			93.1		%		50-150	13-OCT-21
Fluoroanthene			94.1		%		50-150	13-OCT-21
Fluorene			91.8		%		50-150	13-OCT-21
Indeno(1,2,3-cd)pyrene			91.0		%		50-150	13-OCT-21
Naphthalene			86.9		%		50-150	13-OCT-21
Phenanthrene			92.5		%		50-150	13-OCT-21
Pyrene			92.4		%		50-150	13-OCT-21
Quinoline			89.6		%		50-150	13-OCT-21
Batch R5616882								
WG3636600-3 DUP		**WG3636600-5**						
1-Methylnaphthalene		<0.038	<0.038	RPD-NA	ug/g	N/A	50	13-OCT-21
2-Methylnaphthalene		<0.038	<0.038	RPD-NA	ug/g	N/A	50	13-OCT-21
Acenaphthene		<0.038	<0.038	RPD-NA	ug/g	N/A	50	13-OCT-21
Acenaphthylene		<0.038	<0.038	RPD-NA	ug/g	N/A	50	13-OCT-21
Acridine		<0.075	<0.075	RPD-NA	ug/g	N/A	50	13-OCT-21
Anthracene		<0.030	<0.030	RPD-NA	ug/g	N/A	50	13-OCT-21
Benzo(a)anthracene		<0.075	<0.075	RPD-NA	ug/g	N/A	50	13-OCT-21
Benzo(a)pyrene		<0.038	<0.038	RPD-NA	ug/g	N/A	50	13-OCT-21
Benzo(b&j)fluoranthene		<0.075	<0.075	RPD-NA	ug/g	N/A	50	13-OCT-21
Benzo(g,h,i)perylene		<0.075	<0.075	RPD-NA	ug/g	N/A	50	13-OCT-21
Benzo(k)fluoranthene		<0.075	<0.075	RPD-NA	ug/g	N/A	50	13-OCT-21
Chrysene		<0.075	<0.075	RPD-NA	ug/g	N/A	50	13-OCT-21
Dibenz(a,h)anthracene		<0.038	<0.038	RPD-NA	ug/g	N/A	50	13-OCT-21
Fluoroanthene		0.052	<0.038	RPD-NA	ug/g	N/A	50	13-OCT-21
Fluorene		<0.038	<0.038	RPD-NA	ug/g	N/A	50	13-OCT-21
Indeno(1,2,3-cd)pyrene		<0.075	<0.075	RPD-NA	ug/g	N/A	50	13-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-CCME-SQGL-WT	**Soil**							
Batch R5616882								
WG3636600-3 DUP		**WG3636600-5**						
Naphthalene		<0.038	<0.038	RPD-NA	ug/g	N/A	50	13-OCT-21
Phenanthrene		<0.038	<0.038	RPD-NA	ug/g	N/A	50	13-OCT-21
Pyrene		0.039	<0.038	RPD-NA	ug/g	N/A	50	13-OCT-21
Quinoline		<0.038	<0.038	RPD-NA	ug/g	N/A	50	13-OCT-21
WG3636600-2 LCS								
1-Methylnaphthalene			91.1		%		50-140	13-OCT-21
2-Methylnaphthalene			87.3		%		50-140	13-OCT-21
Acenaphthene			86.6		%		50-140	13-OCT-21
Acenaphthylene			84.1		%		50-140	13-OCT-21
Acridine			84.0		%		50-140	13-OCT-21
Anthracene			78.1		%		50-140	13-OCT-21
Benzo(a)anthracene			89.2		%		50-140	13-OCT-21
Benzo(a)pyrene			75.3		%		50-140	13-OCT-21
Benzo(b&j)fluoranthene			83.4		%		50-150	13-OCT-21
Benzo(g,h,i)perylene			82.2		%		50-140	13-OCT-21
Benzo(k)fluoranthene			84.3		%		50-140	13-OCT-21
Chrysene			89.9		%		50-140	13-OCT-21
Dibenz(a,h)anthracene			84.2		%		50-140	13-OCT-21
Fluoroanthene			87.5		%		50-140	13-OCT-21
Fluorene			84.9		%		50-140	13-OCT-21
Indeno(1,2,3-cd)pyrene			83.3		%		50-140	13-OCT-21
Naphthalene			84.5		%		50-140	13-OCT-21
Phenanthrene			86.8		%		50-140	13-OCT-21
Pyrene			86.1		%		50-140	13-OCT-21
Quinoline			74.8		%		50-140	13-OCT-21
WG3636600-1 MB								
1-Methylnaphthalene			<0.0050		ug/g		0.005	13-OCT-21
2-Methylnaphthalene			<0.0050		ug/g		0.005	13-OCT-21
Acenaphthene			<0.0050		ug/g		0.005	13-OCT-21
Acenaphthylene			<0.0050		ug/g		0.005	13-OCT-21
Acridine			<0.010		ug/g		0.01	13-OCT-21
Anthracene			<0.0040		ug/g		0.004	13-OCT-21
Benzo(a)anthracene			<0.010		ug/g		0.01	13-OCT-21
Benzo(a)pyrene			<0.0050		ug/g		0.005	13-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-CCME-SQGL-WT	**Soil**							
Batch R5616882								
WG3636600-1 MB								
Benzo(b&j)fluoranthene			<0.010		ug/g		0.01	13-OCT-21
Benzo(g,h,i)perylene			<0.010		ug/g		0.01	13-OCT-21
Benzo(k)fluoranthene			<0.010		ug/g		0.01	13-OCT-21
Chrysene			<0.010		ug/g		0.01	13-OCT-21
Dibenz(a,h)anthracene			<0.0050		ug/g		0.005	13-OCT-21
Fluoroanthene			<0.0050		ug/g		0.005	13-OCT-21
Fluorene			<0.0050		ug/g		0.005	13-OCT-21
Indeno(1,2,3-cd)pyrene			<0.010		ug/g		0.01	13-OCT-21
Naphthalene			<0.0050		ug/g		0.005	13-OCT-21
Phenanthrene			<0.0050		ug/g		0.005	13-OCT-21
Pyrene			<0.0050		ug/g		0.005	13-OCT-21
Quinoline			<0.0050		ug/g		0.005	13-OCT-21
Surrogate: 2-Fluorobiphenyl			86.8		%		60-140	13-OCT-21
Surrogate: d14-Terphenyl			91.6		%		60-140	13-OCT-21
WG3636600-4 MS		**WG3636600-5**						
1-Methylnaphthalene			101.6		%		50-150	13-OCT-21
2-Methylnaphthalene			98.5		%		50-150	13-OCT-21
Acenaphthene			95.1		%		50-150	13-OCT-21
Acenaphthylene			69.6		%		50-150	13-OCT-21
Acridine			79.9		%		50-150	13-OCT-21
Anthracene			80.9		%		50-150	13-OCT-21
Benzo(a)anthracene			77.3		%		50-150	13-OCT-21
Benzo(a)pyrene			55.3		%		50-150	13-OCT-21
Benzo(b&j)fluoranthene			60.9		%		50-150	13-OCT-21
Benzo(g,h,i)perylene			51.1		%		50-150	13-OCT-21
Benzo(k)fluoranthene			60.9		%		50-150	13-OCT-21
Chrysene			76.9		%		50-150	13-OCT-21
Dibenz(a,h)anthracene			48.5	MES	%		50-150	13-OCT-21
Fluoroanthene			87.9		%		50-150	13-OCT-21
Fluorene			95.2		%		50-150	13-OCT-21
Indeno(1,2,3-cd)pyrene			51.2		%		50-150	13-OCT-21
Naphthalene			95.6		%		50-150	13-OCT-21
Phenanthrene			92.3		%		50-150	13-OCT-21
Pyrene			86.3		%		50-150	13-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-CCME-SQGL-WT	**Soil**							
Batch R5616882								
WG3636600-4 MS		**WG3636600-5**						
Quinoline			93.2		%		50-150	13-OCT-21
Batch R5616947								
WG3635513-7 DUP		**WG3635513-6**						
1-Methylnaphthalene		0.035	0.037		ug/g	5.4	50	14-OCT-21
2-Methylnaphthalene		0.039	0.046		ug/g	16	50	14-OCT-21
Acenaphthene		0.081	0.083		ug/g	2.6	50	14-OCT-21
Acenaphthylene		0.253	0.306		ug/g	19	50	14-OCT-21
Acridine		<0.050	<0.050	RPD-NA	ug/g	N/A	50	14-OCT-21
Anthracene		0.242	0.246		ug/g	1.7	50	14-OCT-21
Benzo(a)anthracene		0.667	0.708		ug/g	6.0	50	14-OCT-21
Benzo(a)pyrene		0.926	0.997		ug/g	7.4	50	14-OCT-21
Benzo(b&j)fluoranthene		0.942	1.06		ug/g	12	50	14-OCT-21
Benzo(g,h,i)perylene		0.721	0.762		ug/g	5.6	50	14-OCT-21
Benzo(k)fluoranthene		0.386	0.414		ug/g	6.9	50	14-OCT-21
Chrysene		0.800	0.827		ug/g	3.3	50	14-OCT-21
Dibenz(a,h)anthracene		0.159	0.169		ug/g	5.9	50	14-OCT-21
Fluoroanthene		1.05	1.05		ug/g	0.1	50	14-OCT-21
Fluorene		0.082	0.090		ug/g	8.9	50	14-OCT-21
Indeno(1,2,3-cd)pyrene		0.599	0.636		ug/g	6.0	50	14-OCT-21
Naphthalene		0.040	0.041		ug/g	1.4	50	14-OCT-21
Phenanthrene		0.412	0.420		ug/g	2.0	50	14-OCT-21
Pyrene		1.31	1.31		ug/g	0.1	50	14-OCT-21
Quinoline		<0.025	<0.025	RPD-NA	ug/g	N/A	50	14-OCT-21
WG3635513-2 LCS								
1-Methylnaphthalene			94.4		%		50-140	13-OCT-21
2-Methylnaphthalene			90.7		%		50-140	13-OCT-21
Acenaphthene			89.5		%		50-140	13-OCT-21
Acenaphthylene			86.6		%		50-140	13-OCT-21
Acridine			89.7		%		50-140	13-OCT-21
Anthracene			82.2		%		50-140	13-OCT-21
Benzo(a)anthracene			94.1		%		50-140	13-OCT-21
Benzo(a)pyrene			80.0		%		50-140	13-OCT-21
Benzo(b&j)fluoranthene			88.0		%		50-150	

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-CCME-SQGL-WT	**Soil**							
Batch R5616947								
WG3635513-2 LCS								
Benzo(b&j)fluoranthene			88.0		%		50-150	13-OCT-21
Benzo(g,h,i)perylene			91.6		%		50-140	13-OCT-21
Benzo(k)fluoranthene			89.9		%		50-140	13-OCT-21
Chrysene			97.5		%		50-140	13-OCT-21
Dibenz(a,h)anthracene			95.3		%		50-140	13-OCT-21
Fluoroanthene			92.3		%		50-140	13-OCT-21
Fluorene			88.5		%		50-140	13-OCT-21
Indeno(1,2,3-cd)pyrene			92.3		%		50-140	13-OCT-21
Naphthalene			86.7		%		50-140	13-OCT-21
Phenanthrene			92.4		%		50-140	13-OCT-21
Pyrene			92.2		%		50-140	13-OCT-21
Quinoline			81.3		%		50-140	13-OCT-21
WG3635513-1 MB								
1-Methylnaphthalene			<0.0050		ug/g		0.005	13-OCT-21
2-Methylnaphthalene			<0.0050		ug/g		0.005	13-OCT-21
Acenaphthene			<0.0050		ug/g		0.005	13-OCT-21
Acenaphthylene			<0.0050		ug/g		0.005	13-OCT-21
Acridine			<0.010		ug/g		0.01	13-OCT-21
Anthracene			<0.0040		ug/g		0.004	13-OCT-21
Benzo(a)anthracene			<0.010		ug/g		0.01	13-OCT-21
Benzo(a)pyrene			<0.0050		ug/g		0.005	13-OCT-21
Benzo(b&j)fluoranthene			<0.010		ug/g		0.01	13-OCT-21
Benzo(g,h,i)perylene			<0.010		ug/g		0.01	13-OCT-21
Benzo(k)fluoranthene			<0.010		ug/g		0.01	13-OCT-21
Chrysene			<0.010		ug/g		0.01	13-OCT-21
Dibenz(a,h)anthracene			<0.0050		ug/g		0.005	13-OCT-21
Fluoroanthene			<0.0050		ug/g		0.005	13-OCT-21
Fluorene			<0.0050		ug/g		0.005	13-OCT-21
Indeno(1,2,3-cd)pyrene			<0.010		ug/g		0.01	13-OCT-21
Naphthalene			<0.0050		ug/g		0.005	13-OCT-21
Phenanthrene			<0.0050		ug/g		0.005	13-OCT-21
Pyrene			<0.0050		ug/g		0.005	13-OCT-21
Quinoline			<0.0050		ug/g		0.005	13-OCT-21
Surrogate: 2-Fluorobiphenyl			86.1		%		60-140	13-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-CCME-SQGL-WT	**Soil**							
Batch R5616947								
WG3635513-1 MB								
Surrogate: d14-Terphenyl			89.2		%		60-140	13-OCT-21
WG3635513-8 MS		**WG3635513-6**						
1-Methylnaphthalene			105.1		%		50-150	14-OCT-21
2-Methylnaphthalene			102.0		%		50-150	14-OCT-21
Acenaphthene			101.0		%		50-150	14-OCT-21
Acenaphthylene			88.0		%		50-150	14-OCT-21
Acridine			89.2		%		50-150	14-OCT-21
Anthracene			97.5		%		50-150	14-OCT-21
Benzo(a)anthracene			112.8		%		50-150	14-OCT-21
Benzo(a)pyrene			88.6		%		50-150	14-OCT-21
Benzo(b&j)fluoranthene			89.6		%		50-150	14-OCT-21
Benzo(g,h,i)perylene			87.4		%		50-150	14-OCT-21
Benzo(k)fluoranthene			94.8		%		50-150	14-OCT-21
Chrysene			105.6		%		50-150	14-OCT-21
Dibenz(a,h)anthracene			82.6		%		50-150	14-OCT-21
Fluoroanthene			104.5		%		50-150	14-OCT-21
Fluorene			103.9		%		50-150	14-OCT-21
Indeno(1,2,3-cd)pyrene			92.4		%		50-150	14-OCT-21
Naphthalene			97.1		%		50-150	14-OCT-21
Phenanthrene			102.1		%		50-150	14-OCT-21
Pyrene			107.6		%		50-150	14-OCT-21
Quinoline			94.7		%		50-150	14-OCT-21
PCB9-LOW-WT	**Soil**							
Batch R5616396								
WG3634959-10 DUP		**WG3634959-9**						
Aroclor 1016		<0.38	<0.38	RPD-NA	mg/kg	N/A	50	15-OCT-21
Aroclor 1221		<0.38	<0.38	RPD-NA	mg/kg	N/A	50	15-OCT-21
Aroclor 1232		<0.38	<0.38	RPD-NA	mg/kg	N/A	50	15-OCT-21
Aroclor 1242		<0.38	<0.38	RPD-NA	mg/kg	N/A	40	15-OCT-21
Aroclor 1248		<0.38	<0.38	RPD-NA	mg/kg	N/A	40	15-OCT-21
WG3634959-3 DUP		**WG3634959-5**						
Aroclor 1254		0.086	0.200	DUP-H	mg/kg	80	40	13-OCT-21
Aroclor 1260		0.094	0.123		mg/kg	26	40	13-OCT-21
Aroclor 1262		<0.015	<0.015	RPD-NA	mg/kg	N/A	50	13-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PCB9-LOW-WT	**Soil**							
Batch R5616396								
WG3634959-3 DUP		**WG3634959-5**						
Aroclor 1268		<0.015	<0.015	RPD-NA	mg/kg	N/A	50	13-OCT-21
WG3634959-2 LCS								
Aroclor 1242			69.6		%		60-140	13-OCT-21
Aroclor 1248			84.7		%		60-140	13-OCT-21
Aroclor 1254			85.2		%		60-140	13-OCT-21
Aroclor 1260			85.8		%		60-140	13-OCT-21
WG3634959-1 MB								
Aroclor 1016			<0.0030		mg/kg		0.003	13-OCT-21
Aroclor 1221			<0.0030		mg/kg		0.003	13-OCT-21
Aroclor 1232			<0.0030		mg/kg		0.003	13-OCT-21
Aroclor 1242			<0.0030		mg/kg		0.003	13-OCT-21
Aroclor 1248			<0.0030		mg/kg		0.003	13-OCT-21
Aroclor 1254			<0.0030		mg/kg		0.003	13-OCT-21
Aroclor 1260			<0.0030		mg/kg		0.003	13-OCT-21
Aroclor 1262			<0.0030		mg/kg		0.003	13-OCT-21
Aroclor 1268			<0.0030		mg/kg		0.003	13-OCT-21
Surrogate: d14-Terphenyl			113.8		%		50-140	13-OCT-21
WG3634959-11 MS		**WG3634959-9**						
Aroclor 1242			87.4		%		60-140	15-OCT-21
WG3634959-4 MS		**WG3634959-5**						
Aroclor 1254			156.4	E	%		60-140	13-OCT-21
Aroclor 1260			121.01		%		60-140	13-OCT-21
Batch R5616907								
WG3635528-3 DUP		**WG3635528-5**						
Aroclor 1016		<0.034	<0.034	RPD-NA	mg/kg	N/A	50	13-OCT-21
Aroclor 1221		<0.034	<0.034	RPD-NA	mg/kg	N/A	50	13-OCT-21
Aroclor 1232		<0.034	<0.034	RPD-NA	mg/kg	N/A	50	13-OCT-21
Aroclor 1242		<0.034	<0.034	RPD-NA	mg/kg	N/A	40	13-OCT-21
Aroclor 1248		<0.034	<0.034	RPD-NA	mg/kg	N/A	40	13-OCT-21
Aroclor 1254		0.196	0.202		mg/kg	3.0	40	13-OCT-21
Aroclor 1260		0.227	0.257		mg/kg	12	40	13-OCT-21
Aroclor 1262		<0.034	<0.034	RPD-NA	mg/kg	N/A	50	13-OCT-21
Aroclor 1268		<0.034	<0.034	RPD-NA	mg/kg	N/A	50	13-OCT-21
WG3635528-2 LCS								

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PCB9-LOW-WT	**Soil**							
Batch R5616907								
WG3635528-2 LCS								
Aroclor 1242			91.8		%		60-140	13-OCT-21
Aroclor 1248			83.0		%		60-140	13-OCT-21
Aroclor 1254			109.8		%		60-140	13-OCT-21
Aroclor 1260			109.1		%		60-140	13-OCT-21
WG3635528-1 MB								
Aroclor 1016			<0.0030		mg/kg		0.003	13-OCT-21
Aroclor 1221			<0.0030		mg/kg		0.003	13-OCT-21
Aroclor 1232			<0.0030		mg/kg		0.003	13-OCT-21
Aroclor 1242			<0.0030		mg/kg		0.003	13-OCT-21
Aroclor 1248			<0.0030		mg/kg		0.003	13-OCT-21
Aroclor 1254			<0.0030		mg/kg		0.003	13-OCT-21
Aroclor 1260			<0.0030		mg/kg		0.003	13-OCT-21
Aroclor 1262			<0.0030		mg/kg		0.003	13-OCT-21
Aroclor 1268			<0.0030		mg/kg		0.003	13-OCT-21
Surrogate: d14-Terphenyl			119.3		%		50-140	13-OCT-21
WG3635528-4 MS		**WG3635528-5**						
Aroclor 1242			106.5		%		60-140	13-OCT-21
Aroclor 1254			N/A	MS-B	%		-	13-OCT-21
Aroclor 1260			N/A	MS-B	%		-	13-OCT-21
PSA-MUST-SK	**Soil**							
Batch R5617706								
WG3634919-1 DUP		**L2647211-1**						
MUST PSA % > 75um		9.8	9.0	J	%	0.7	5	13-OCT-21
WG3634919-2 IRM		**2020-PSA_SOIL**						
MUST PSA % > 75um			43.0		%		37.9-47.9	13-OCT-21
SPECGRAV-CL	**Soil**							
Batch R5634727								
WG3651002-2 DUP		**L2646743-14**						
Specific Gravity		1.48	1.45		kg/L	2.0	20	01-NOV-21
WG3651002-1 IRM		**DI_H2O**						
Specific Gravity			100.0		%		90-110	01-NOV-21
TOC-WT	**Soil**							

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
TOC-WT	**Soil**							
Batch R5615928								
WG3635506-3 CRM		**WT-TOC-CRM**						
Total Organic Carbon			120.8		%		70-130	12-OCT-21
WG3635506-4 DUP		**L2646722-6**						
Total Organic Carbon		7.67	8.03		%	4.6	20	12-OCT-21
Fraction Organic Carbon		0.0767	0.0803		g/g	4.6	25	12-OCT-21
WG3635506-2 LCS								
Total Organic Carbon			91.7		%		80-120	12-OCT-21
WG3635506-1 MB								
Total Organic Carbon			<0.10		%		0.1	12-OCT-21
Fraction Organic Carbon			<0.0010		g/g		0.001	12-OCT-21
Batch R5616041								
WG3635508-3 CRM		**WT-TOC-CRM**						
Total Organic Carbon			108.3		%		70-130	12-OCT-21
WG3635508-4 DUP		**L2646743-18**						
Total Organic Carbon		8.97	8.78		%	2.2	20	12-OCT-21
Fraction Organic Carbon		0.0897	0.0878		g/g	2.2	25	12-OCT-21
WG3635508-2 LCS								
Total Organic Carbon			101.8		%		80-120	12-OCT-21
WG3635508-1 MB								
Total Organic Carbon			<0.10		%		0.1	12-OCT-21
Fraction Organic Carbon			<0.0010		g/g		0.001	12-OCT-21

Quality Control Report

Workorder: L2646743 Report Date: 03-NOV-21

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Legend:

Limit	ALS Control Limit (Data Quality Objectives)
DUP	Duplicate
RPD	Relative Percent Difference
N/A	Not Available
LCS	Laboratory Control Sample
SRM	Standard Reference Material
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ADE	Average Desorption Efficiency
MB	Method Blank
IRM	Internal Reference Material
CRM	Certified Reference Material
CCV	Continuing Calibration Verification
CVS	Calibration Verification Standard
LCSD	Laboratory Control Sample Duplicate

Sample Parameter Qualifier Definitions:

Qualifier	Description
DLHM	Detection Limit Adjusted: Sample has High Moisture Content
DLM	Detection Limit Adjusted due to sample matrix effects (e.g. chemical interference, colour, turbidity).
DUP-H	Duplicate results outside ALS DQO, due to sample heterogeneity.
E	Matrix Spike recovery outside ALS DQO due to heterogeneous analyte background in sample.
J	Duplicate results and limits are expressed in terms of absolute difference.
MES	Data Quality Objective was marginally exceeded (by < 10% absolute) for < 10% of analytes in a Multi-Element Scan / Multi-Parameter Scan (considered acceptable as per OMOE & CCME).
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Hold Time Exceedances:

All test results reported with this submission were conducted within ALS recommended hold times.

ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.

Chain of Custod

Cana

L2646743-COFC

COC Number: 20 - 007

Page 1 of 2

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Report To	Contact and company name below will appear on the final report
Company:	Golder Associates Ltd.
Contact:	Jill LaPorte
Phone:	905-723-2727
	Company address below will appear on the final report
Street:	100 Scotia Court
City/Province:	Whtby, Ontario
Postal Code:	L1N 8Y6
Invoice To	Same as Report To ☑ YES ☐ NO
	Copy of Invoice with Report ☑ YES ☐ NO
Company:	Golder Associates Ltd.
Contact:	Accounts Payables

Project Information

ALS Account # / Quote #:	15520 / Q86566
Job #:	1783886-8000-8006
PO / AFE:	
LSD:	RD
ALS Lab Work Order # (ALS use only):	L2646743

Re

Select Report Format: ☑ PDF ☑ EXCEL ☐ EDD (DIGITAL)

Merge QC/QCI Reports with COA ☑ YES ☐ NO ☐ N/A

☑ Compare Results to Criteria on Report - provide details below if box checked

Select Distribution: ☑ EMAIL ☐ MAIL ☐ FAX

Email 1 or Fax: Jill_LaPorte@golder.com

Email 2: shawn_seguin@golder.com

Email 3:

Invoice Recipients

Select Invoice Distribution: ☑ EMAIL ☐ MAIL ☐ FAX

Email 1 or Fax: Jill_LaPorte@golder.com

Email 2: canadaaccountspayableinvoices@golder.com

Oil and Gas Required Fields (client use)

AFE/Cost Center:	PO#
Major/Minor Code:	Routing Code:
Requisitioner:	
Location:	

ALS Contact: Amanda Overholster

Sampler:

Turnaround Time (TAT) Requested

☑ Routine [R] if received by 3pm M-F - no surcharges apply

☐ 4 day [P4] if received by 3pm M-F - 20% rush surcharge minimum

☐ 3 day [P3] if received by 3pm M-F - 25% rush surcharge minimum

☐ 2 day [P2] if received by 3pm M-F - 50% rush surcharge minimum

☐ 1 day [E] if received by 3pm M-F - 100% rush surcharge minimum

Same day [E2] if received by 10am M-S - 200% rush surcharge. Additional fees may apply to rush requests on weekends, statutory holidays and non-routine tests

AFFIX ALS BARCODE LABEL HERE (ALS use only)

Date and Time Required for all E&P TATs: dd-mmm-yy hh:mm am/pm

For all tests with rush TATs requested, please contact your AM to confirm availability.

Analysis Request

NUMBER OF CONTAINERS

Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below

ALS Sample # (ALS use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	HWS-Boron (B-HWS-R511-WT)	Cr3 (CR-CR3-WT)	Cr6 (CR-CR6-IC-WT)	Mercury (HG-200.2-CVAA-WT)	Metals (MET-200.2-CCMS-WT)	PAH (PAH-CCME-SQGL-WT)	MOISTURE-WT	TOC (TOC-WT)	PCB9 (PCB9-LOW-WT)		Specific Gravity (SPECGRAV-CL)	PSA (PSA-MUST-WT-SK)	Atterberg (ATTERBERG-SK)		SAMPLES ON HOLD	EXTENDED STORAGE REQUIRED	SUSPECTED HAZARD (see notes)
	TC4-SG-004	29-SEP-21	11:30	Sediment				✓	✓	✓	✓	✓	✓								
	TC4-SG-005		12:00	Sediment				✓	✓	✓	✓	✓	✓								
	TC4-SG-DUP		12:20	Sediment				✓	✓	✓	✓	✓	✓								
	TC4-SG-012		12:45	Sediment				✓	✓	✓	✓	✓	✓								
	TC4-SG-011		14:45	Sediment				✓	✓	✓	✓	✓	✓								
	TC4-SG-013		14:30	Sediment				✓	✓	✓	✓	✓	✓								
	TC4-SG-014		14:45	Sediment				✓	✓	✓	✓	✓	✓				✓				
	TC4-SG-013X		15:00	Sediment				✓	✓	✓	✓	✓	✓								
	TC5-SG-004		15:25	Sediment				✓	✓	✓	✓	✓	✓								
	TC5-SG-003		15:40	Sediment				✓	✓	✓	✓	✓	✓								
	TC5-SG-002		16:00	Sediment				✓	✓	✓	✓	✓	✓				✓				
	TC5-SG-001	30-SEP-21	16:20	Sediment				✓	✓	✓	✓	✓	✓								

Drinking Water (DW) Samples[1] (client use)

Are samples taken from a Regulated DW System? ☐ YES ☑ NO

Are samples for human consumption/ use? ☐ YES ☑ NO

Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only)

EQUIS CODE-230179134, EACH SAMPLE INCLUDE ONE LARGE BAG OF SAMPLE TO HOLD EXCEPT DUP-203 + DUP-003)

SAMPLE RECEIPT DETAILS (ALS use only)

Cooling Method: ☐ NONE ☐ ICE ☐ ICE PACKS ☐ FROZEN ☐ COOLING INITIATED

Submission Comments identified on Sample Receipt Notification: ☐ YES ☐ NO

Cooler Custody Seals Intact: ☐ YES ☐ N/A Sample Custody Seals Intact: ☐ YES ☐ N/A

INITIAL COOLER TEMPERATURES °C				FINAL COOLER TEMPERATURES °C			
				13.6			

SHIPMENT RELEASE (client use)

Released by:	Date:	Time:

INITIAL SHIPMENT RECEPTION (ALS use only)

Received by:	Date:	Time:

FINAL SHIPMENT RECEPTION (ALS use only)

Received by:	Date:	Time:
	04/10/21	1935

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

AUG 2020 FRONT

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

1. If any water samples are taken from a **Regulated Drinking Water (DW) System**, please submit using an **Authorized DW COC form.**

Chain of Custody (COC)

L2646743-COFC

COC Number: 20 - 008

Page 2 of 2

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Canada Toll Free

Report To	Contact and company name below will appear on the final report
Company:	Golder Associates Ltd.
Contact:	Jill LaPorte
Phone:	905-723-2727
	Company address below will appear on the final report
Street:	100 Scotia Court
City/Province:	Whtby, Ontario
Postal Code:	L1N 8Y6
Invoice To	Same as Report To ☑ YES ☐ NO
	Copy of Invoice with Report ☑ YES ☐ NO
Company:	Golder Associates Ltd.
Contact:	Accounts Payables

Reports / Recipients

Select Report Format: ☑ PDF ☑ EXCEL ☐ EDD (DIGITAL)

Merge QC/QCI Reports with COA ☑ YES ☐ NO ☐ N/A

☐ Compare Results to Criteria on Report - provide details below if box checked

Select Distribution: ☑ EMAIL ☐ MAIL ☐ FAX

Email 1 or Fax: Jill_LaPorte@golder.com

Email 2: shawn_seguin@golder.com

Email 3:

Invoice Recipients

Select Invoice Distribution: ☑ EMAIL ☐ MAIL ☐ FAX

Email 1 or Fax: Jill_LaPorte@golder.com

Email 2: canadaaccountspayableinvoices@golder.com

Turnaround Time (TAT) Requested

☑ Routine [R] if received by 3pm M-F - no surcharges apply

☐ 4 day [P4] if received by 3pm M-F - 20% rush surcharge minimum

☐ 3 day [P3] if received by 3pm M-F - 25% rush surcharge minimum

☐ 2 day [P2] if received by 3pm M-F - 50% rush surcharge minimum

☐ 1 day [E] if received by 3pm M-F - 100% rush surcharge minimum

☐ Same day [E2] if received by 10am M-S - 200% rush surcharge. Additional fees may apply to rush requests on weekends, statutory holidays and non-routine tests

Date and Time Required for all E&P TATs: dd-mmm-yy hh:mm am/pm

For all tests with rush TATs requested, please contact your AM to confirm availability.

AFFIX ALS BARCODE LABEL HERE (ALS use only)

Project Information

ALS Account # / Quote #:	15520 / Q86566
Job #:	1783886-8000-8006
PO / AFE:	
LSD:	

Oil and Gas Required Fields (client use)

AFE/Cost Center:	PO#
Major/Minor Code:	Routing Code:
Requisitioner:	
Location:	

ALS Lab Work Order # (ALS use only): L2646743

ALS Contact: Amanda Overholster

Sampler:

Analysis Request

Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below

ALS Sample # (ALS use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	NUMBER OF CONTAINERS	HWS-Boron (B-HWS-R511-WT)	Cr3 (CR-CR3-WT)	Cr6 (CR-CR6-IC-WT)	Mercury (HG-200.2-CVAA-WT)	Metals (MET-200.2-CCMS-WT)	PAH (PAH-CCME-SQGL-WT)	MOISTURE-WT	TOC (TOC-WT)	PCB9 (PCB9-LOW-WT)		Specific Gravity (SPECGRAV-CL)	PSA (PSA-MUST-WT-SK)	Atterberg (ATTERBERG-SK)		SAMPLES ON HOLD	EXTENDED STORAGE REQUIRED	SUSPECTED HAZARD (see notes)
	DUP-003	30-SEP-21		Sediment					✓	✓	✓	✓	✓	✓								
	TCRC-SC-004A		14:30	Sediment					✓	✓	✓	✓	✓	✓		✓		✓				
	TCRC-SG-004		15:10	Sediment					✓	✓	✓	✓	✓	✓		✓		✓				
	WM-SG-001		11:25	Sediment					✓	✓	✓	✓	✓	✓			✓					
	TC4-SC-010A		08:08	Sediment					✓	✓	✓	✓	✓	✓		✓		✓				
	TC4-SC-010		1000	Sediment					✓	✓	✓	✓	✓	✓		✓	✓	✓				
	TC4-SC-008A		10:50	Sediment					✓	✓	✓	✓	✓	✓								
	TC4-SC-008B		10:45	Sediment					✓	✓	✓	✓	✓	✓								
	TC4-SG-003	30-SEP-21	12:35	Sediment					✓	✓	✓	✓	✓	✓								
	DUP-003			Sediment					✓	✓	✓	✓	✓	✓								
				Sediment																		
				Sediment																		

Drinking Water (DW) Samples[1] (client use)

Are samples taken from a Regulated DW System? ☐ YES ☑ NO

Are samples for human consumption/ use? ☐ YES ☑ NO

Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only)

EQUIS CODE - 2 SOIL FILTER, EACH SAMPLE INCLUDES ONE LARGE BAG OF MATERIAL TO HOLD EXCEPT DUP-003 & DUP-003

SAMPLE RECEIPT DETAILS (ALS use only)

Cooling Method: ☐ NONE ☐ ICE ☐ ICE PACKS ☐ FROZEN ☐ COOLING INITIATED

Submission Comments identified on Sample Receipt Notification: ☐ YES ☐ NO

Cooler Custody Seals Intact: ☐ YES ☐ N/A Sample Custody Seals Intact: ☐ YES ☐ N/A

INITIAL COOLER TEMPERATURES °C				FINAL COOLER TEMPERATURES °C			
				13.0			

SHIPMENT RELEASE (client use)

Released by:	Date:	Time:

INITIAL SHIPMENT RECEPTION (ALS use only)

Received by:	Date:	Time:

FINAL SHIPMENT RECEPTION (ALS use only)

Received by:	Date:	Time:
	04/10/21	4:35

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

AUG 2020 FRONT

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

1. If any water samples are taken from a **Regulated Drinking Water (DW) System**, please submit using an **Authorized DW COC form.**

GOLDER ASSOCIATES LTD (Whitby)
ATTN: Jill LaPorte
100 Scotia Court
Whitby ON L1N 8Y6

Date Received: 05-OCT-21
Report Date: 08-NOV-21 14:53 (MT)
Version: FINAL

Client Phone: 905-723-2727

Certificate of Analysis

Lab Work Order #: L2647638

Project P.O. #: NOT SUBMITTED
Job Reference: 1783886-8000-8006
C of C Numbers:
Legal Site Desc:

Amanda Overholster
Account Manager

[This report shall not be reproduced except in full without the written authority of the Laboratory.]

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647638-1 TCAB-SG-017 Sampled By: CLIENT on 01-OCT-21 @ 10:45 Matrix: SEDIMENT							
Physical Tests							
% Moisture	82.6		0.25	%	07-OCT-21	08-OCT-21	R5614014
Particle Size							
General Texture Class	Fine				13-OCT-21	13-OCT-21	R5617706
MUST PSA % > 75um	8.5	PSAL	1.0	%	13-OCT-21	13-OCT-21	R5617706
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0723		0.0010	g/g	20-OCT-21	20-OCT-21	R5625292
Total Organic Carbon	7.23		0.10	%	20-OCT-21	20-OCT-21	R5625292
Metals							
Aluminum (Al)	25900		50	ug/g	12-OCT-21	12-OCT-21	R5616476
Antimony (Sb)	1.46		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Arsenic (As)	10.2		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Barium (Ba)	314		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Beryllium (Be)	0.84		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Bismuth (Bi)	1.04		0.20	ug/g	12-OCT-21	12-OCT-21	R5616476
Boron (B)	12.7		5.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Cadmium (Cd)	1.13		0.020	ug/g	12-OCT-21	12-OCT-21	R5616476
Calcium (Ca)	51200		50	ug/g	12-OCT-21	12-OCT-21	R5616476
Chromium (Cr)	184		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Cobalt (Co)	14.5		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Copper (Cu)	838		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Iron (Fe)	39900		50	ug/g	12-OCT-21	12-OCT-21	R5616476
Lead (Pb)	229		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Lithium (Li)	20.7		2.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Magnesium (Mg)	16000		20	ug/g	12-OCT-21	12-OCT-21	R5616476
Manganese (Mn)	1110		1.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Mercury (Hg)	0.261		0.0050	ug/g	12-OCT-21	13-OCT-21	R5616441
Molybdenum (Mo)	2.13		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Nickel (Ni)	35.4		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Phosphorus (P)	1540		50	ug/g	12-OCT-21	12-OCT-21	R5616476
Potassium (K)	4770		100	ug/g	12-OCT-21	12-OCT-21	R5616476
Selenium (Se)	1.44		0.20	ug/g	12-OCT-21	12-OCT-21	R5616476
Silver (Ag)	0.58		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Sodium (Na)	1950		50	ug/g	12-OCT-21	12-OCT-21	R5616476
Strontium (Sr)	179		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Sulfur (S)	6500		1000	ug/g	12-OCT-21	12-OCT-21	R5616476
Thallium (Tl)	0.391		0.050	ug/g	12-OCT-21	12-OCT-21	R5616476
Tin (Sn)	13.1		2.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Titanium (Ti)	1150		1.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Tungsten (W)	0.74		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Uranium (U)	0.865		0.050	ug/g	12-OCT-21	12-OCT-21	R5616476
Vanadium (V)	53.6		0.20	ug/g	12-OCT-21	12-OCT-21	R5616476
Zinc (Zn)	457		2.0	ug/g	12-OCT-21	12-OCT-21	R5616476

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647638-1 TCAB-SG-017 Sampled By: CLIENT on 01-OCT-21 @ 10:45 Matrix: SEDIMENT							
Metals							
Zirconium (Zr)	4.3		1.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.208		0.025	ug/g	12-OCT-21	13-OCT-21	R5616947
Acenaphthylene	0.492		0.025	ug/g	12-OCT-21	13-OCT-21	R5616947
Acridine	0.081	AI	0.050	ug/g	12-OCT-21	13-OCT-21	R5616947
Anthracene	0.470		0.020	ug/g	12-OCT-21	13-OCT-21	R5616947
Benzo(a)anthracene	1.43	R	0.050	ug/g	12-OCT-21	13-OCT-21	R5616947
Benzo(a)pyrene	2.01		0.025	ug/g	12-OCT-21	13-OCT-21	R5616947
Benzo(b&j)fluoranthene	1.92		0.050	ug/g	12-OCT-21	13-OCT-21	R5616947
Benzo(g,h,i)perylene	1.44		0.050	ug/g	12-OCT-21	13-OCT-21	R5616947
Benzo(k)fluoranthene	0.737		0.050	ug/g	12-OCT-21	13-OCT-21	R5616947
Chrysene	1.58		0.050	ug/g	12-OCT-21	13-OCT-21	R5616947
Dibenz(a,h)anthracene	0.335		0.025	ug/g	12-OCT-21	13-OCT-21	R5616947
Fluoroanthene	1.73		0.025	ug/g	12-OCT-21	13-OCT-21	R5616947
Fluorene	0.191	R	0.025	ug/g	12-OCT-21	13-OCT-21	R5616947
Indeno(1,2,3-cd)pyrene	1.22		0.050	ug/g	12-OCT-21	13-OCT-21	R5616947
1-Methylnaphthalene	0.157		0.025	ug/g	12-OCT-21	13-OCT-21	R5616947
2-Methylnaphthalene	0.222		0.025	ug/g	12-OCT-21	13-OCT-21	R5616947
Naphthalene	0.310		0.025	ug/g	12-OCT-21	13-OCT-21	R5616947
Phenanthrene	0.838		0.025	ug/g	12-OCT-21	13-OCT-21	R5616947
Pyrene	2.17		0.025	ug/g	12-OCT-21	13-OCT-21	R5616947
Quinoline	<0.025	DLHM	0.025	ug/g	12-OCT-21	13-OCT-21	R5616947
Surrogate: 2-Fluorobiphenyl	89.3		60-140	%	12-OCT-21	13-OCT-21	R5616947
Surrogate: d14-Terphenyl	89.9		60-140	%	12-OCT-21	13-OCT-21	R5616947
B(a)P Total Potency Equivalent	2.91		0.036	ug/g	12-OCT-21	13-OCT-21	R5616947
IACR (CCME)	29.3		0.50		12-OCT-21	13-OCT-21	R5616947
Polychlorinated Biphenyls							
Aroclor 1016	<0.046	DLHM	0.046	mg/kg	14-OCT-21	14-OCT-21	R5617747
Aroclor 1221	<0.046	DLHM	0.046	mg/kg	14-OCT-21	14-OCT-21	R5617747
Aroclor 1232	<0.046	DLHM	0.046	mg/kg	14-OCT-21	14-OCT-21	R5617747
Aroclor 1242	<0.046	DLHM	0.046	mg/kg	14-OCT-21	14-OCT-21	R5617747
Aroclor 1248	<0.046	DLHM	0.046	mg/kg	14-OCT-21	14-OCT-21	R5617747
Aroclor 1254	0.147	DLHM	0.023	mg/kg	14-OCT-21	14-OCT-21	R5617747
Aroclor 1260	0.108	DLHM	0.023	mg/kg	14-OCT-21	14-OCT-21	R5617747
Aroclor 1262	<0.023	DLHM	0.023	mg/kg	14-OCT-21	14-OCT-21	R5617747
Aroclor 1268	<0.023	DLHM	0.023	mg/kg	14-OCT-21	14-OCT-21	R5617747
Total Polychlorinated Biphenyls	0.255	DLHM	0.068	mg/kg	14-OCT-21	14-OCT-21	R5617747
Surrogate: d14-Terphenyl	77.6	DLHM	50-140	%	14-OCT-21	14-OCT-21	R5617747
L2647638-2 TCAB-SG-016 Sampled By: CLIENT on 01-OCT-21 @ 11:00 Matrix: SEDIMENT							
Physical Tests							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647638-2 TCAB-SG-016 Sampled By: CLIENT on 01-OCT-21 @ 11:00 Matrix: SEDIMENT							
Physical Tests							
% Moisture	83.3		0.25	%	07-OCT-21	08-OCT-21	R5614014
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0722		0.0010	g/g	15-OCT-21	15-OCT-21	R5619419
Total Organic Carbon	7.22		0.10	%	15-OCT-21	15-OCT-21	R5619419
Metals							
Aluminum (Al)	25500		50	ug/g	12-OCT-21	12-OCT-21	R5616476
Antimony (Sb)	1.44		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Arsenic (As)	10.6		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Barium (Ba)	322		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Beryllium (Be)	0.87		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Bismuth (Bi)	0.58		0.20	ug/g	12-OCT-21	12-OCT-21	R5616476
Boron (B)	16.0		5.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Cadmium (Cd)	0.988		0.020	ug/g	12-OCT-21	12-OCT-21	R5616476
Calcium (Ca)	54300		50	ug/g	12-OCT-21	12-OCT-21	R5616476
Chromium (Cr)	149		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Cobalt (Co)	14.1		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Copper (Cu)	634		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Iron (Fe)	41900		50	ug/g	12-OCT-21	12-OCT-21	R5616476
Lead (Pb)	162		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Lithium (Li)	21.8		2.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Magnesium (Mg)	16500		20	ug/g	12-OCT-21	12-OCT-21	R5616476
Manganese (Mn)	1260		1.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Mercury (Hg)	0.222		0.0050	ug/g	12-OCT-21	13-OCT-21	R5616441
Molybdenum (Mo)	2.14		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Nickel (Ni)	36.0		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Phosphorus (P)	1790		50	ug/g	12-OCT-21	12-OCT-21	R5616476
Potassium (K)	4670		100	ug/g	12-OCT-21	12-OCT-21	R5616476
Selenium (Se)	1.46		0.20	ug/g	12-OCT-21	12-OCT-21	R5616476
Silver (Ag)	0.41		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Sodium (Na)	941		50	ug/g	12-OCT-21	12-OCT-21	R5616476
Strontium (Sr)	168		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Sulfur (S)	6700		1000	ug/g	12-OCT-21	12-OCT-21	R5616476
Thallium (Tl)	0.388		0.050	ug/g	12-OCT-21	12-OCT-21	R5616476
Tin (Sn)	15.0		2.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Titanium (Ti)	1220		1.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Tungsten (W)	0.83		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Uranium (U)	1.02		0.050	ug/g	12-OCT-21	12-OCT-21	R5616476
Vanadium (V)	57.4		0.20	ug/g	12-OCT-21	12-OCT-21	R5616476
Zinc (Zn)	400		2.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Zirconium (Zr)	3.9		1.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.193		0.025	ug/g	12-OCT-21	13-OCT-21	R5616947

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647638-2 TCAB-SG-016 Sampled By: CLIENT on 01-OCT-21 @ 11:00 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
Acenaphthylene	0.411		0.025	ug/g	12-OCT-21	13-OCT-21	R5616947
Acridine	0.085	AI	0.050	ug/g	12-OCT-21	13-OCT-21	R5616947
Anthracene	0.354		0.020	ug/g	12-OCT-21	13-OCT-21	R5616947
Benzo(a)anthracene	0.981	R	0.050	ug/g	12-OCT-21	13-OCT-21	R5616947
Benzo(a)pyrene	1.37		0.025	ug/g	12-OCT-21	13-OCT-21	R5616947
Benzo(b&j)fluoranthene	1.34		0.050	ug/g	12-OCT-21	13-OCT-21	R5616947
Benzo(g,h,i)perylene	1.17		0.050	ug/g	12-OCT-21	13-OCT-21	R5616947
Benzo(k)fluoranthene	0.511		0.050	ug/g	12-OCT-21	13-OCT-21	R5616947
Chrysene	1.13		0.050	ug/g	12-OCT-21	13-OCT-21	R5616947
Dibenz(a,h)anthracene	0.251		0.025	ug/g	12-OCT-21	13-OCT-21	R5616947
Fluoroanthene	1.35		0.025	ug/g	12-OCT-21	13-OCT-21	R5616947
Fluorene	0.165	R	0.025	ug/g	12-OCT-21	13-OCT-21	R5616947
Indeno(1,2,3-cd)pyrene	0.936		0.050	ug/g	12-OCT-21	13-OCT-21	R5616947
1-Methylnaphthalene	0.231		0.025	ug/g	12-OCT-21	13-OCT-21	R5616947
2-Methylnaphthalene	0.356		0.025	ug/g	12-OCT-21	13-OCT-21	R5616947
Naphthalene	0.369		0.025	ug/g	12-OCT-21	13-OCT-21	R5616947
Phenanthrene	0.736		0.025	ug/g	12-OCT-21	13-OCT-21	R5616947
Pyrene	1.72		0.025	ug/g	12-OCT-21	13-OCT-21	R5616947
Quinoline	<0.025	DLHM	0.025	ug/g	12-OCT-21	13-OCT-21	R5616947
Surrogate: 2-Fluorobiphenyl	88.6		60-140	%	12-OCT-21	13-OCT-21	R5616947
Surrogate: d14-Terphenyl	88.8		60-140	%	12-OCT-21	13-OCT-21	R5616947
B(a)P Total Potency Equivalent	2.02		0.036	ug/g	12-OCT-21	13-OCT-21	R5616947
IACR (CCME)	20.4		0.50		12-OCT-21	13-OCT-21	R5616947
Polychlorinated Biphenyls							
Aroclor 1016	<0.023	DLHM	0.023	mg/kg	14-OCT-21	14-OCT-21	R5617747
Aroclor 1221	<0.023	DLHM	0.023	mg/kg	14-OCT-21	14-OCT-21	R5617747
Aroclor 1232	<0.023	DLHM	0.023	mg/kg	14-OCT-21	14-OCT-21	R5617747
Aroclor 1242	<0.023	DLHM	0.023	mg/kg	14-OCT-21	14-OCT-21	R5617747
Aroclor 1248	<0.023	DLHM	0.023	mg/kg	14-OCT-21	14-OCT-21	R5617747
Aroclor 1254	0.103	DLHM	0.023	mg/kg	14-OCT-21	14-OCT-21	R5617747
Aroclor 1260	0.103	DLHM	0.023	mg/kg	14-OCT-21	14-OCT-21	R5617747
Aroclor 1262	<0.023	DLHM	0.023	mg/kg	14-OCT-21	14-OCT-21	R5617747
Aroclor 1268	<0.023	DLHM	0.023	mg/kg	14-OCT-21	14-OCT-21	R5617747
Total Polychlorinated Biphenyls	0.206	DLHM	0.068	mg/kg	14-OCT-21	14-OCT-21	R5617747
Surrogate: d14-Terphenyl	83.9	DLHM	50-140	%	14-OCT-21	14-OCT-21	R5617747
L2647638-3 TCAB-SG-009 Sampled By: CLIENT on 01-OCT-21 @ 11:55 Matrix: SEDIMENT							
Physical Tests							
% Moisture	86.3		0.25	%	07-OCT-21	08-OCT-21	R5614014
Particle Size							
General Texture Class	Fine				13-OCT-21	13-OCT-21	R5617706

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647638-3 TCAB-SG-009 Sampled By: CLIENT on 01-OCT-21 @ 11:55 Matrix: SEDIMENT							
Particle Size							
MUST PSA % > 75um	1.5	PSAL	1.0	%	13-OCT-21	13-OCT-21	R5617706
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0927		0.0010	g/g	15-OCT-21	15-OCT-21	R5619419
Total Organic Carbon	9.27		0.10	%	15-OCT-21	15-OCT-21	R5619419
Metals							
Aluminum (Al)	25200		50	ug/g	12-OCT-21	12-OCT-21	R5616476
Antimony (Sb)	1.00		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Arsenic (As)	8.37		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Barium (Ba)	303		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Beryllium (Be)	0.89		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Bismuth (Bi)	0.60		0.20	ug/g	12-OCT-21	12-OCT-21	R5616476
Boron (B)	14.8		5.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Boron (B), Hot Water Ext.	1.17	FR4	0.10	ug/g	13-OCT-21	14-OCT-21	R5617414
Cadmium (Cd)	0.905		0.020	ug/g	12-OCT-21	12-OCT-21	R5616476
Calcium (Ca)	33300		50	ug/g	12-OCT-21	12-OCT-21	R5616476
Chromium (Cr)	268		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Cobalt (Co)	14.8		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Copper (Cu)	80.2		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Iron (Fe)	34100		50	ug/g	12-OCT-21	12-OCT-21	R5616476
Lead (Pb)	106		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Lithium (Li)	22.2		2.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Magnesium (Mg)	14700		20	ug/g	12-OCT-21	12-OCT-21	R5616476
Manganese (Mn)	1160		1.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Mercury (Hg)	0.370		0.0050	ug/g	12-OCT-21	13-OCT-21	R5616441
Molybdenum (Mo)	1.24		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Nickel (Ni)	33.5		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Phosphorus (P)	1250		50	ug/g	12-OCT-21	12-OCT-21	R5616476
Potassium (K)	4710		100	ug/g	12-OCT-21	12-OCT-21	R5616476
Selenium (Se)	1.61		0.20	ug/g	12-OCT-21	12-OCT-21	R5616476
Silver (Ag)	0.58		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Sodium (Na)	659		50	ug/g	12-OCT-21	12-OCT-21	R5616476
Strontium (Sr)	152		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Sulfur (S)	8800		1000	ug/g	12-OCT-21	12-OCT-21	R5616476
Thallium (Tl)	0.379		0.050	ug/g	12-OCT-21	12-OCT-21	R5616476
Tin (Sn)	6.4		2.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Titanium (Ti)	1330		1.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Tungsten (W)	0.97		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Uranium (U)	1.03		0.050	ug/g	12-OCT-21	12-OCT-21	R5616476
Vanadium (V)	54.2		0.20	ug/g	12-OCT-21	12-OCT-21	R5616476
Zinc (Zn)	230		2.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Zirconium (Zr)	5.4		1.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Speciated Metals							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647638-3 TCAB-SG-009 Sampled By: CLIENT on 01-OCT-21 @ 11:55 Matrix: SEDIMENT							
Speciated Metals							
Chromium, Trivalent	266		10	ug/g		14-OCT-21	
Chromium, Hexavalent	1.5	DLHM	1.0	ug/g	09-OCT-21	13-OCT-21	R5617146
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.065		0.038	ug/g	12-OCT-21	13-OCT-21	R5616947
Acenaphthylene	0.221		0.038	ug/g	12-OCT-21	13-OCT-21	R5616947
Acridine	<0.075	DLHM	0.075	ug/g	12-OCT-21	13-OCT-21	R5616947
Anthracene	0.254		0.030	ug/g	12-OCT-21	13-OCT-21	R5616947
Benzo(a)anthracene	0.571	R	0.075	ug/g	12-OCT-21	13-OCT-21	R5616947
Benzo(a)pyrene	0.745		0.038	ug/g	12-OCT-21	13-OCT-21	R5616947
Benzo(b&j)fluoranthene	0.811		0.075	ug/g	12-OCT-21	13-OCT-21	R5616947
Benzo(g,h,i)perylene	0.555		0.075	ug/g	12-OCT-21	13-OCT-21	R5616947
Benzo(k)fluoranthene	0.305		0.075	ug/g	12-OCT-21	13-OCT-21	R5616947
Chrysene	0.716		0.075	ug/g	12-OCT-21	13-OCT-21	R5616947
Dibenz(a,h)anthracene	0.145		0.038	ug/g	12-OCT-21	13-OCT-21	R5616947
Fluoroanthene	0.835		0.038	ug/g	12-OCT-21	13-OCT-21	R5616947
Fluorene	0.083		0.038	ug/g	12-OCT-21	13-OCT-21	R5616947
Indeno(1,2,3-cd)pyrene	0.477		0.075	ug/g	12-OCT-21	13-OCT-21	R5616947
1-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	12-OCT-21	13-OCT-21	R5616947
2-Methylnaphthalene	0.041		0.038	ug/g	12-OCT-21	13-OCT-21	R5616947
Naphthalene	0.040		0.038	ug/g	12-OCT-21	13-OCT-21	R5616947
Phenanthrene	0.351		0.038	ug/g	12-OCT-21	13-OCT-21	R5616947
Pyrene	0.963		0.038	ug/g	12-OCT-21	13-OCT-21	R5616947
Quinoline	<0.038	DLHM	0.038	ug/g	12-OCT-21	13-OCT-21	R5616947
Surrogate: 2-Fluorobiphenyl	88.5		60-140	%	12-OCT-21	13-OCT-21	R5616947
Surrogate: d14-Terphenyl	87.0		60-140	%	12-OCT-21	13-OCT-21	R5616947
B(a)P Total Potency Equivalent	1.12		0.053	ug/g	12-OCT-21	13-OCT-21	R5616947
IACR (CCME)	11.9		0.75		12-OCT-21	13-OCT-21	R5616947
Polychlorinated Biphenyls							
Aroclor 1016	<0.061	DLHM	0.061	mg/kg	14-OCT-21	14-OCT-21	R5617747
Aroclor 1221	<0.061	DLHM	0.061	mg/kg	14-OCT-21	14-OCT-21	R5617747
Aroclor 1232	<0.061	DLHM	0.061	mg/kg	14-OCT-21	14-OCT-21	R5617747
Aroclor 1242	<0.061	DLHM	0.061	mg/kg	14-OCT-21	14-OCT-21	R5617747
Aroclor 1248	<0.061	DLHM	0.061	mg/kg	14-OCT-21	14-OCT-21	R5617747
Aroclor 1254	0.135	DLHM	0.034	mg/kg	14-OCT-21	14-OCT-21	R5617747
Aroclor 1260	0.135	DLHM	0.034	mg/kg	14-OCT-21	14-OCT-21	R5617747
Aroclor 1262	<0.034	DLHM	0.034	mg/kg	14-OCT-21	14-OCT-21	R5617747
Aroclor 1268	<0.034	DLHM	0.034	mg/kg	14-OCT-21	14-OCT-21	R5617747
Total Polychlorinated Biphenyls	0.270	DLHM	0.10	mg/kg	14-OCT-21	14-OCT-21	R5617747
Surrogate: d14-Terphenyl	82.1	DLHM	50-140	%	14-OCT-21	14-OCT-21	R5617747
L2647638-4 TCAB-SG-010 Sampled By: CLIENT on 01-OCT-21 @ 12:15 Matrix: SEDIMENT							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647638-4 TCAB-SG-010 Sampled By: CLIENT on 01-OCT-21 @ 12:15 Matrix: SEDIMENT							
Physical Tests							
% Moisture	88.7		0.25	%	07-OCT-21	08-OCT-21	R5614014
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.101		0.0010	g/g	15-OCT-21	15-OCT-21	R5619419
Total Organic Carbon	10.1		0.10	%	15-OCT-21	15-OCT-21	R5619419
Metals							
Aluminum (Al)	25500		50	ug/g	12-OCT-21	12-OCT-21	R5616476
Antimony (Sb)	0.88		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Arsenic (As)	7.86		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Barium (Ba)	307		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Beryllium (Be)	0.99		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Bismuth (Bi)	0.54		0.20	ug/g	12-OCT-21	12-OCT-21	R5616476
Boron (B)	16.3		5.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Cadmium (Cd)	0.900		0.020	ug/g	12-OCT-21	12-OCT-21	R5616476
Calcium (Ca)	31400		50	ug/g	12-OCT-21	12-OCT-21	R5616476
Chromium (Cr)	283		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Cobalt (Co)	14.8		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Copper (Cu)	63.6		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Iron (Fe)	34000		50	ug/g	12-OCT-21	12-OCT-21	R5616476
Lead (Pb)	97.5		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Lithium (Li)	24.0		2.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Magnesium (Mg)	13900		20	ug/g	12-OCT-21	12-OCT-21	R5616476
Manganese (Mn)	1290		1.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Mercury (Hg)	0.305		0.0050	ug/g	12-OCT-21	13-OCT-21	R5616441
Molybdenum (Mo)	1.19		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Nickel (Ni)	33.8		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Phosphorus (P)	1290		50	ug/g	12-OCT-21	12-OCT-21	R5616476
Potassium (K)	4890		100	ug/g	12-OCT-21	12-OCT-21	R5616476
Selenium (Se)	1.65		0.20	ug/g	12-OCT-21	12-OCT-21	R5616476
Silver (Ag)	0.60		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Sodium (Na)	650		50	ug/g	12-OCT-21	12-OCT-21	R5616476
Strontium (Sr)	160		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Sulfur (S)	9200		1000	ug/g	12-OCT-21	12-OCT-21	R5616476
Thallium (Tl)	0.374		0.050	ug/g	12-OCT-21	12-OCT-21	R5616476
Tin (Sn)	6.3		2.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Titanium (Ti)	1370		1.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Tungsten (W)	0.70		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Uranium (U)	1.09		0.050	ug/g	12-OCT-21	12-OCT-21	R5616476
Vanadium (V)	54.2		0.20	ug/g	12-OCT-21	12-OCT-21	R5616476
Zinc (Zn)	204		2.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Zirconium (Zr)	5.7		1.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.108		0.038	ug/g	12-OCT-21	13-OCT-21	R5616947

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647638-4 TCAB-SG-010 Sampled By: CLIENT on 01-OCT-21 @ 12:15 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
Acenaphthylene	0.346		0.038	ug/g	12-OCT-21	13-OCT-21	R5616947
Acridine	<0.075	DLHM	0.075	ug/g	12-OCT-21	13-OCT-21	R5616947
Anthracene	0.523		0.030	ug/g	12-OCT-21	13-OCT-21	R5616947
Benzo(a)anthracene	0.892	R	0.075	ug/g	12-OCT-21	13-OCT-21	R5616947
Benzo(a)pyrene	1.10		0.038	ug/g	12-OCT-21	13-OCT-21	R5616947
Benzo(b&j)fluoranthene	1.08		0.075	ug/g	12-OCT-21	13-OCT-21	R5616947
Benzo(g,h,i)perylene	0.717		0.075	ug/g	12-OCT-21	13-OCT-21	R5616947
Benzo(k)fluoranthene	0.422		0.075	ug/g	12-OCT-21	13-OCT-21	R5616947
Chrysene	1.08		0.075	ug/g	12-OCT-21	13-OCT-21	R5616947
Dibenz(a,h)anthracene	0.180		0.038	ug/g	12-OCT-21	13-OCT-21	R5616947
Fluoroanthene	1.16		0.038	ug/g	12-OCT-21	13-OCT-21	R5616947
Fluorene	0.122	R	0.038	ug/g	12-OCT-21	13-OCT-21	R5616947
Indeno(1,2,3-cd)pyrene	0.636		0.075	ug/g	12-OCT-21	13-OCT-21	R5616947
1-Methylnaphthalene	0.038		0.038	ug/g	12-OCT-21	13-OCT-21	R5616947
2-Methylnaphthalene	0.052		0.038	ug/g	12-OCT-21	13-OCT-21	R5616947
Naphthalene	0.049		0.038	ug/g	12-OCT-21	13-OCT-21	R5616947
Phenanthrene	0.473		0.038	ug/g	12-OCT-21	13-OCT-21	R5616947
Pyrene	1.51		0.038	ug/g	12-OCT-21	13-OCT-21	R5616947
Quinoline	<0.038	DLHM	0.038	ug/g	12-OCT-21	13-OCT-21	R5616947
Surrogate: 2-Fluorobiphenyl	86.6		60-140	%	12-OCT-21	13-OCT-21	R5616947
Surrogate: d14-Terphenyl	84.8		60-140	%	12-OCT-21	13-OCT-21	R5616947
B(a)P Total Potency Equivalent	1.61		0.053	ug/g	12-OCT-21	13-OCT-21	R5616947
IACR (CCME)	16.7		0.75		12-OCT-21	13-OCT-21	R5616947
Polychlorinated Biphenyls							
Aroclor 1016	<0.034	DLHM	0.034	mg/kg	14-OCT-21	14-OCT-21	R5617747
Aroclor 1221	<0.034	DLHM	0.034	mg/kg	14-OCT-21	14-OCT-21	R5617747
Aroclor 1232	<0.034	DLHM	0.034	mg/kg	14-OCT-21	14-OCT-21	R5617747
Aroclor 1242	<0.034	DLHM	0.034	mg/kg	14-OCT-21	14-OCT-21	R5617747
Aroclor 1248	<0.034	DLHM	0.034	mg/kg	14-OCT-21	14-OCT-21	R5617747
Aroclor 1254	0.143	DLHM	0.034	mg/kg	14-OCT-21	14-OCT-21	R5617747
Aroclor 1260	0.178	DLHM	0.034	mg/kg	14-OCT-21	14-OCT-21	R5617747
Aroclor 1262	<0.034	DLHM	0.034	mg/kg	14-OCT-21	14-OCT-21	R5617747
Aroclor 1268	<0.034	DLHM	0.034	mg/kg	14-OCT-21	14-OCT-21	R5617747
Total Polychlorinated Biphenyls	0.321	DLHM	0.10	mg/kg	14-OCT-21	14-OCT-21	R5617747
Surrogate: d14-Terphenyl	78.9	DLHM	50-140	%	14-OCT-21	14-OCT-21	R5617747
L2647638-5 TCAB-SG-014 Sampled By: CLIENT on 01-OCT-21 @ 11:15 Matrix: SEDIMENT							
Physical Tests							
% Moisture	84.2		0.25	%	07-OCT-21	08-OCT-21	R5614014
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0817		0.0010	g/g	15-OCT-21	15-OCT-21	R5619419

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647638-5 TCAB-SG-014 Sampled By: CLIENT on 01-OCT-21 @ 11:15 Matrix: SEDIMENT							
Organic / Inorganic Carbon							
Total Organic Carbon	8.17		0.10	%	15-OCT-21	15-OCT-21	R5619419
Metals							
Aluminum (Al)	26400		50	ug/g	12-OCT-21	12-OCT-21	R5616476
Antimony (Sb)	1.40		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Arsenic (As)	8.48		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Barium (Ba)	333		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Beryllium (Be)	0.95		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Bismuth (Bi)	0.59		0.20	ug/g	12-OCT-21	12-OCT-21	R5616476
Boron (B)	15.7		5.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Cadmium (Cd)	1.04		0.020	ug/g	12-OCT-21	12-OCT-21	R5616476
Calcium (Ca)	38600		50	ug/g	12-OCT-21	12-OCT-21	R5616476
Chromium (Cr)	212		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Cobalt (Co)	15.2		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Copper (Cu)	271		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Iron (Fe)	37300		50	ug/g	12-OCT-21	12-OCT-21	R5616476
Lead (Pb)	113		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Lithium (Li)	24.4		2.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Magnesium (Mg)	17700		20	ug/g	12-OCT-21	12-OCT-21	R5616476
Manganese (Mn)	1250		1.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Mercury (Hg)	0.244		0.0050	ug/g	12-OCT-21	13-OCT-21	R5616441
Molybdenum (Mo)	1.61		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Nickel (Ni)	36.4		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Phosphorus (P)	1360		50	ug/g	12-OCT-21	12-OCT-21	R5616476
Potassium (K)	5000		100	ug/g	12-OCT-21	12-OCT-21	R5616476
Selenium (Se)	1.35		0.20	ug/g	12-OCT-21	12-OCT-21	R5616476
Silver (Ag)	0.57		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Sodium (Na)	720		50	ug/g	12-OCT-21	12-OCT-21	R5616476
Strontium (Sr)	138		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Sulfur (S)	5700		1000	ug/g	12-OCT-21	12-OCT-21	R5616476
Thallium (Tl)	0.385		0.050	ug/g	12-OCT-21	12-OCT-21	R5616476
Tin (Sn)	7.3		2.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Titanium (Ti)	1410		1.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Tungsten (W)	1.15		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Uranium (U)	1.07		0.050	ug/g	12-OCT-21	12-OCT-21	R5616476
Vanadium (V)	60.6		0.20	ug/g	12-OCT-21	12-OCT-21	R5616476
Zinc (Zn)	311		2.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Zirconium (Zr)	5.1		1.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.081		0.025	ug/g	12-OCT-21	14-OCT-21	R5616947
Acenaphthylene	0.253		0.025	ug/g	12-OCT-21	14-OCT-21	R5616947
Acridine	<0.050	DLHM	0.050	ug/g	12-OCT-21	14-OCT-21	R5616947

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647638-5 TCAB-SG-014 Sampled By: CLIENT on 01-OCT-21 @ 11:15 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
Anthracene	0.242		0.020	ug/g	12-OCT-21	14-OCT-21	R5616947
Benzo(a)anthracene	0.667	R	0.050	ug/g	12-OCT-21	14-OCT-21	R5616947
Benzo(a)pyrene	0.926		0.025	ug/g	12-OCT-21	14-OCT-21	R5616947
Benzo(b&j)fluoranthene	0.942		0.050	ug/g	12-OCT-21	14-OCT-21	R5616947
Benzo(g,h,i)perylene	0.721		0.050	ug/g	12-OCT-21	14-OCT-21	R5616947
Benzo(k)fluoranthene	0.386		0.050	ug/g	12-OCT-21	14-OCT-21	R5616947
Chrysene	0.800		0.050	ug/g	12-OCT-21	14-OCT-21	R5616947
Dibenz(a,h)anthracene	0.159		0.025	ug/g	12-OCT-21	14-OCT-21	R5616947
Fluoroanthene	1.05		0.025	ug/g	12-OCT-21	14-OCT-21	R5616947
Fluorene	0.082	R	0.025	ug/g	12-OCT-21	14-OCT-21	R5616947
Indeno(1,2,3-cd)pyrene	0.599		0.050	ug/g	12-OCT-21	14-OCT-21	R5616947
1-Methylnaphthalene	0.035		0.025	ug/g	12-OCT-21	14-OCT-21	R5616947
2-Methylnaphthalene	0.039		0.025	ug/g	12-OCT-21	14-OCT-21	R5616947
Naphthalene	0.040		0.025	ug/g	12-OCT-21	14-OCT-21	R5616947
Phenanthrene	0.412		0.025	ug/g	12-OCT-21	14-OCT-21	R5616947
Pyrene	1.31		0.025	ug/g	12-OCT-21	14-OCT-21	R5616947
Quinoline	<0.025	DLHM	0.025	ug/g	12-OCT-21	14-OCT-21	R5616947
Surrogate: 2-Fluorobiphenyl	96.2		60-140	%	12-OCT-21	14-OCT-21	R5616947
Surrogate: d14-Terphenyl	90.4		60-140	%	12-OCT-21	14-OCT-21	R5616947
B(a)P Total Potency Equivalent	1.36		0.036	ug/g	12-OCT-21	14-OCT-21	R5616947
IACR (CCME)	14.2		0.50		12-OCT-21	14-OCT-21	R5616947
Polychlorinated Biphenyls							
Aroclor 1016	<0.034	DLHM	0.034	mg/kg	14-OCT-21	14-OCT-21	R5617747
Aroclor 1221	<0.034	DLHM	0.034	mg/kg	14-OCT-21	14-OCT-21	R5617747
Aroclor 1232	<0.034	DLHM	0.034	mg/kg	14-OCT-21	14-OCT-21	R5617747
Aroclor 1242	<0.034	DLHM	0.034	mg/kg	14-OCT-21	14-OCT-21	R5617747
Aroclor 1248	<0.034	DLHM	0.034	mg/kg	14-OCT-21	14-OCT-21	R5617747
Aroclor 1254	0.124	DLHM	0.023	mg/kg	14-OCT-21	14-OCT-21	R5617747
Aroclor 1260	0.097	DLHM	0.023	mg/kg	14-OCT-21	14-OCT-21	R5617747
Aroclor 1262	<0.023	DLHM	0.023	mg/kg	14-OCT-21	14-OCT-21	R5617747
Aroclor 1268	<0.023	DLHM	0.023	mg/kg	14-OCT-21	14-OCT-21	R5617747
Total Polychlorinated Biphenyls	0.221	DLHM	0.068	mg/kg	14-OCT-21	14-OCT-21	R5617747
Surrogate: d14-Terphenyl	88.7	DLHM	50-140	%	14-OCT-21	14-OCT-21	R5617747
L2647638-6 TCAB-SG-013 Sampled By: CLIENT on 01-OCT-21 @ 11:30 Matrix: SEDIMENT							
Physical Tests							
% Moisture	70.5		0.25	%	07-OCT-21	08-OCT-21	R5614014
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0553		0.0010	g/g	15-OCT-21	15-OCT-21	R5619419
Total Organic Carbon	5.53		0.10	%	15-OCT-21	15-OCT-21	R5619419
Metals							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647638-6 TCAB-SG-013 Sampled By: CLIENT on 01-OCT-21 @ 11:30 Matrix: SEDIMENT							
Metals							
Aluminum (Al)	8970		50	ug/g	12-OCT-21	12-OCT-21	R5616476
Antimony (Sb)	1.50		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Arsenic (As)	4.43		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Barium (Ba)	112		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Beryllium (Be)	0.43		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Bismuth (Bi)	0.43		0.20	ug/g	12-OCT-21	12-OCT-21	R5616476
Boron (B)	9.8		5.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Cadmium (Cd)	0.406		0.020	ug/g	12-OCT-21	12-OCT-21	R5616476
Calcium (Ca)	118000		50	ug/g	12-OCT-21	12-OCT-21	R5616476
Chromium (Cr)	62.1		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Cobalt (Co)	7.40		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Copper (Cu)	77.4		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Iron (Fe)	17700		50	ug/g	12-OCT-21	12-OCT-21	R5616476
Lead (Pb)	57.9		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Lithium (Li)	11.2		2.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Magnesium (Mg)	19500		20	ug/g	12-OCT-21	12-OCT-21	R5616476
Manganese (Mn)	547		1.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Mercury (Hg)	0.104		0.0050	ug/g	12-OCT-21	13-OCT-21	R5616441
Molybdenum (Mo)	1.38		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Nickel (Ni)	18.0		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Phosphorus (P)	1090		50	ug/g	12-OCT-21	12-OCT-21	R5616476
Potassium (K)	1790		100	ug/g	12-OCT-21	12-OCT-21	R5616476
Selenium (Se)	0.42		0.20	ug/g	12-OCT-21	12-OCT-21	R5616476
Silver (Ag)	0.26		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Sodium (Na)	307		50	ug/g	12-OCT-21	12-OCT-21	R5616476
Strontium (Sr)	188		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Sulfur (S)	2900		1000	ug/g	12-OCT-21	12-OCT-21	R5616476
Thallium (Tl)	0.182		0.050	ug/g	12-OCT-21	12-OCT-21	R5616476
Tin (Sn)	5.3		2.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Titanium (Ti)	489		1.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Tungsten (W)	4.15		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Uranium (U)	0.559		0.050	ug/g	12-OCT-21	12-OCT-21	R5616476
Vanadium (V)	28.7		0.20	ug/g	12-OCT-21	12-OCT-21	R5616476
Zinc (Zn)	256		2.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Zirconium (Zr)	1.8		1.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.122		0.060	ug/g	12-OCT-21	13-OCT-21	R5616947
Acenaphthylene	0.117		0.060	ug/g	12-OCT-21	13-OCT-21	R5616947
Acridine	<0.12	DLM	0.12	ug/g	12-OCT-21	13-OCT-21	R5616947
Anthracene	0.344		0.060	ug/g	12-OCT-21	13-OCT-21	R5616947
Benzo(a)anthracene	0.93		0.12	ug/g	12-OCT-21	13-OCT-21	R5616947

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647638-6 TCAB-SG-013 Sampled By: CLIENT on 01-OCT-21 @ 11:30 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
Benzo(a)pyrene	0.951		0.060	ug/g	12-OCT-21	13-OCT-21	R5616947
Benzo(b&j)fluoranthene	1.29		0.12	ug/g	12-OCT-21	13-OCT-21	R5616947
Benzo(g,h,i)perylene	0.79		0.12	ug/g	12-OCT-21	13-OCT-21	R5616947
Benzo(k)fluoranthene	0.50		0.12	ug/g	12-OCT-21	13-OCT-21	R5616947
Chrysene	1.20		0.12	ug/g	12-OCT-21	13-OCT-21	R5616947
Dibenz(a,h)anthracene	0.186	R	0.060	ug/g	12-OCT-21	13-OCT-21	R5616947
Fluoroanthene	2.27		0.060	ug/g	12-OCT-21	13-OCT-21	R5616947
Fluorene	0.129		0.060	ug/g	12-OCT-21	13-OCT-21	R5616947
Indeno(1,2,3-cd)pyrene	0.69		0.12	ug/g	12-OCT-21	13-OCT-21	R5616947
1-Methylnaphthalene	<0.060	DLM	0.060	ug/g	12-OCT-21	13-OCT-21	R5616947
2-Methylnaphthalene	0.067		0.060	ug/g	12-OCT-21	13-OCT-21	R5616947
Naphthalene	0.068		0.060	ug/g	12-OCT-21	13-OCT-21	R5616947
Phenanthrene	1.23		0.060	ug/g	12-OCT-21	13-OCT-21	R5616947
Pyrene	2.03		0.060	ug/g	12-OCT-21	13-OCT-21	R5616947
Quinoline	<0.060	DLM	0.060	ug/g	12-OCT-21	13-OCT-21	R5616947
Surrogate: 2-Fluorobiphenyl	82.5		60-140	%	12-OCT-21	13-OCT-21	R5616947
Surrogate: d14-Terphenyl	83.8		60-140	%	12-OCT-21	13-OCT-21	R5616947
B(a)P Total Potency Equivalent	1.50		0.085	ug/g	12-OCT-21	13-OCT-21	R5616947
IACR (CCME)	18.3		1.2		12-OCT-21	13-OCT-21	R5616947
Polychlorinated Biphenyls							
Aroclor 1016	<0.0160	DLHM	0.016	mg/kg	14-OCT-21	14-OCT-21	R5617747
Aroclor 1221	<0.0160	DLHM	0.016	mg/kg	14-OCT-21	14-OCT-21	R5617747
Aroclor 1232	<0.0160	DLHM	0.016	mg/kg	14-OCT-21	14-OCT-21	R5617747
Aroclor 1242	<0.0160	DLHM	0.016	mg/kg	14-OCT-21	14-OCT-21	R5617747
Aroclor 1248	<0.0160	DLHM	0.016	mg/kg	14-OCT-21	14-OCT-21	R5617747
Aroclor 1254	0.0504	DLHM	0.0090	mg/kg	14-OCT-21	14-OCT-21	R5617747
Aroclor 1260	0.0247	DLHM	0.0090	mg/kg	14-OCT-21	14-OCT-21	R5617747
Aroclor 1262	<0.0090	DLHM	0.0090	mg/kg	14-OCT-21	14-OCT-21	R5617747
Aroclor 1268	<0.0090	DLHM	0.0090	mg/kg	14-OCT-21	14-OCT-21	R5617747
Total Polychlorinated Biphenyls	0.0751	DLHM	0.027	mg/kg	14-OCT-21	14-OCT-21	R5617747
Surrogate: d14-Terphenyl	84.5	DLHM	50-140	%	14-OCT-21	14-OCT-21	R5617747
L2647638-7 TCAB-SG-011 Sampled By: CLIENT on 01-OCT-21 @ 14:15 Matrix: SEDIMENT							
Physical Tests							
% Moisture	84.0		0.25	%	07-OCT-21	08-OCT-21	R5614014
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0784		0.0010	g/g	15-OCT-21	15-OCT-21	R5619419
Total Organic Carbon	7.84		0.10	%	15-OCT-21	15-OCT-21	R5619419
Metals							
Aluminum (Al)	25700		50	ug/g	12-OCT-21	12-OCT-21	R5616476
Antimony (Sb)	0.93		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647638-7 TCAB-SG-011 Sampled By: CLIENT on 01-OCT-21 @ 14:15 Matrix: SEDIMENT							
Metals							
Arsenic (As)	7.44		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Barium (Ba)	360		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Beryllium (Be)	0.90		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Bismuth (Bi)	0.45		0.20	ug/g	12-OCT-21	12-OCT-21	R5616476
Boron (B)	12.9		5.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Cadmium (Cd)	0.849		0.020	ug/g	12-OCT-21	12-OCT-21	R5616476
Calcium (Ca)	48300		50	ug/g	12-OCT-21	12-OCT-21	R5616476
Chromium (Cr)	180		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Cobalt (Co)	15.1		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Copper (Cu)	99.8		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Iron (Fe)	38200		50	ug/g	12-OCT-21	12-OCT-21	R5616476
Lead (Pb)	96.9		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Lithium (Li)	22.3		2.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Magnesium (Mg)	16000		20	ug/g	12-OCT-21	12-OCT-21	R5616476
Manganese (Mn)	1450		1.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Mercury (Hg)	0.187		0.0050	ug/g	12-OCT-21	13-OCT-21	R5616441
Molybdenum (Mo)	1.19		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Nickel (Ni)	36.2		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Phosphorus (P)	1480		50	ug/g	12-OCT-21	12-OCT-21	R5616476
Potassium (K)	4730		100	ug/g	12-OCT-21	12-OCT-21	R5616476
Selenium (Se)	1.48		0.20	ug/g	12-OCT-21	12-OCT-21	R5616476
Silver (Ag)	0.41		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Sodium (Na)	711		50	ug/g	12-OCT-21	12-OCT-21	R5616476
Strontium (Sr)	177		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Sulfur (S)	6500		1000	ug/g	12-OCT-21	12-OCT-21	R5616476
Thallium (Tl)	0.369		0.050	ug/g	12-OCT-21	12-OCT-21	R5616476
Tin (Sn)	5.4		2.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Titanium (Ti)	1400		1.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Tungsten (W)	0.78		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Uranium (U)	0.934		0.050	ug/g	12-OCT-21	12-OCT-21	R5616476
Vanadium (V)	58.4		0.20	ug/g	12-OCT-21	12-OCT-21	R5616476
Zinc (Zn)	239		2.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Zirconium (Zr)	5.6		1.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.066		0.025	ug/g	12-OCT-21	13-OCT-21	R5616947
Acenaphthylene	0.167		0.025	ug/g	12-OCT-21	13-OCT-21	R5616947
Acridine	<0.050	DLHM	0.050	ug/g	12-OCT-21	13-OCT-21	R5616947
Anthracene	0.264		0.020	ug/g	12-OCT-21	13-OCT-21	R5616947
Benzo(a)anthracene	0.630	R	0.050	ug/g	12-OCT-21	13-OCT-21	R5616947
Benzo(a)pyrene	0.630		0.025	ug/g	12-OCT-21	13-OCT-21	R5616947
Benzo(b&j)fluoranthene	0.724		0.050	ug/g	12-OCT-21	13-OCT-21	R5616947

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647638-7 TCAB-SG-011 Sampled By: CLIENT on 01-OCT-21 @ 14:15 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
Benzo(g,h,i)perylene	0.482		0.050	ug/g	12-OCT-21	13-OCT-21	R5616947
Benzo(k)fluoranthene	0.283		0.050	ug/g	12-OCT-21	13-OCT-21	R5616947
Chrysene	0.689		0.050	ug/g	12-OCT-21	13-OCT-21	R5616947
Dibenz(a,h)anthracene	0.111		0.025	ug/g	12-OCT-21	13-OCT-21	R5616947
Fluoroanthene	1.33		0.025	ug/g	12-OCT-21	13-OCT-21	R5616947
Fluorene	0.079		0.025	ug/g	12-OCT-21	13-OCT-21	R5616947
Indeno(1,2,3-cd)pyrene	0.414		0.050	ug/g	12-OCT-21	13-OCT-21	R5616947
1-Methylnaphthalene	0.053		0.025	ug/g	12-OCT-21	13-OCT-21	R5616947
2-Methylnaphthalene	0.082		0.025	ug/g	12-OCT-21	13-OCT-21	R5616947
Naphthalene	0.059		0.025	ug/g	12-OCT-21	13-OCT-21	R5616947
Phenanthrene	0.458		0.025	ug/g	12-OCT-21	13-OCT-21	R5616947
Pyrene	1.37		0.025	ug/g	12-OCT-21	13-OCT-21	R5616947
Quinoline	<0.025	DLHM	0.025	ug/g	12-OCT-21	13-OCT-21	R5616947
Surrogate: 2-Fluorobiphenyl	86.6		60-140	%	12-OCT-21	13-OCT-21	R5616947
Surrogate: d14-Terphenyl	85.8		60-140	%	12-OCT-21	13-OCT-21	R5616947
B(a)P Total Potency Equivalent	0.958		0.036	ug/g	12-OCT-21	13-OCT-21	R5616947
IACR (CCME)	10.9		0.50		12-OCT-21	13-OCT-21	R5616947
Polychlorinated Biphenyls							
Aroclor 1016	<0.023	DLHM	0.023	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1221	<0.023	DLHM	0.023	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1232	<0.023	DLHM	0.023	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1242	<0.040	DLM	0.040	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1248	<0.023	DLHM	0.023	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1254	<0.150	DLM	0.15	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1260	<0.0770	DLM	0.077	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1262	<0.023	DLHM	0.023	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1268	<0.023	DLHM	0.023	mg/kg	13-OCT-21	13-OCT-21	R5616907
Total Polychlorinated Biphenyls	<0.20		0.20	mg/kg	13-OCT-21	13-OCT-21	R5616907
Surrogate: d14-Terphenyl	109.3		50-140	%	13-OCT-21	13-OCT-21	R5616907
L2647638-8 TCAB-SG-006 Sampled By: CLIENT on 01-OCT-21 @ 14:40 Matrix: SEDIMENT							
Physical Tests							
% Moisture	88.1		0.25	%	07-OCT-21	08-OCT-21	R5614014
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0922		0.0010	g/g	15-OCT-21	15-OCT-21	R5619419
Total Organic Carbon	9.22		0.10	%	15-OCT-21	15-OCT-21	R5619419
Metals							
Aluminum (Al)	24400		50	ug/g	12-OCT-21	12-OCT-21	R5616476
Antimony (Sb)	0.84		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Arsenic (As)	9.40		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Barium (Ba)	324		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647638-8 TCAB-SG-006 Sampled By: CLIENT on 01-OCT-21 @ 14:40 Matrix: SEDIMENT							
Metals							
Beryllium (Be)	0.83		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Bismuth (Bi)	0.70		0.20	ug/g	12-OCT-21	12-OCT-21	R5616476
Boron (B)	13.7		5.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Cadmium (Cd)	1.04		0.020	ug/g	12-OCT-21	12-OCT-21	R5616476
Calcium (Ca)	52800		50	ug/g	12-OCT-21	12-OCT-21	R5616476
Chromium (Cr)	339		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Cobalt (Co)	15.2		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Copper (Cu)	73.7		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Iron (Fe)	33900		50	ug/g	12-OCT-21	12-OCT-21	R5616476
Lead (Pb)	112		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Lithium (Li)	20.8		2.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Magnesium (Mg)	14300		20	ug/g	12-OCT-21	12-OCT-21	R5616476
Manganese (Mn)	1280		1.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Mercury (Hg)	0.424		0.0050	ug/g	12-OCT-21	13-OCT-21	R5616441
Molybdenum (Mo)	1.11		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Nickel (Ni)	33.4		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Phosphorus (P)	1590		50	ug/g	12-OCT-21	12-OCT-21	R5616476
Potassium (K)	4720		100	ug/g	12-OCT-21	12-OCT-21	R5616476
Selenium (Se)	1.72		0.20	ug/g	12-OCT-21	12-OCT-21	R5616476
Silver (Ag)	0.71		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Sodium (Na)	687		50	ug/g	12-OCT-21	12-OCT-21	R5616476
Strontium (Sr)	237		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Sulfur (S)	9200		1000	ug/g	12-OCT-21	12-OCT-21	R5616476
Thallium (Tl)	0.374		0.050	ug/g	12-OCT-21	12-OCT-21	R5616476
Tin (Sn)	6.7		2.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Titanium (Ti)	1300		1.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Tungsten (W)	0.71		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Uranium (U)	0.970		0.050	ug/g	12-OCT-21	12-OCT-21	R5616476
Vanadium (V)	53.4		0.20	ug/g	12-OCT-21	12-OCT-21	R5616476
Zinc (Zn)	229		2.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Zirconium (Zr)	5.3		1.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.065		0.038	ug/g	13-OCT-21	13-OCT-21	R5616882
Acenaphthylene	0.282		0.038	ug/g	13-OCT-21	13-OCT-21	R5616882
Acridine	<0.075	DLHM	0.075	ug/g	13-OCT-21	13-OCT-21	R5616882
Anthracene	0.226		0.030	ug/g	13-OCT-21	13-OCT-21	R5616882
Benzo(a)anthracene	0.667	R	0.075	ug/g	13-OCT-21	13-OCT-21	R5616882
Benzo(a)pyrene	0.870		0.038	ug/g	13-OCT-21	13-OCT-21	R5616882
Benzo(b&j)fluoranthene	0.866		0.075	ug/g	13-OCT-21	13-OCT-21	R5616882
Benzo(g,h,i)perylene	0.568		0.075	ug/g	13-OCT-21	13-OCT-21	R5616882
Benzo(k)fluoranthene	0.345		0.075	ug/g	13-OCT-21	13-OCT-21	R5616882

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647638-8 TCAB-SG-006 Sampled By: CLIENT on 01-OCT-21 @ 14:40 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
Chrysene	0.779		0.075	ug/g	13-OCT-21	13-OCT-21	R5616882
Dibenz(a,h)anthracene	0.136		0.038	ug/g	13-OCT-21	13-OCT-21	R5616882
Fluoroanthene	0.903		0.038	ug/g	13-OCT-21	13-OCT-21	R5616882
Fluorene	0.080	R	0.038	ug/g	13-OCT-21	13-OCT-21	R5616882
Indeno(1,2,3-cd)pyrene	0.466		0.075	ug/g	13-OCT-21	13-OCT-21	R5616882
1-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	13-OCT-21	13-OCT-21	R5616882
2-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	13-OCT-21	13-OCT-21	R5616882
Naphthalene	<0.038	DLHM	0.038	ug/g	13-OCT-21	13-OCT-21	R5616882
Phenanthrene	0.330		0.038	ug/g	13-OCT-21	13-OCT-21	R5616882
Pyrene	1.13		0.038	ug/g	13-OCT-21	13-OCT-21	R5616882
Quinoline	<0.038	DLHM	0.038	ug/g	13-OCT-21	13-OCT-21	R5616882
Surrogate: 2-Fluorobiphenyl	92.8		60-140	%	13-OCT-21	13-OCT-21	R5616882
Surrogate: d14-Terphenyl	74.1		60-140	%	13-OCT-21	13-OCT-21	R5616882
B(a)P Total Potency Equivalent	1.25		0.053	ug/g	13-OCT-21	13-OCT-21	R5616882
IACR (CCME)	13.2		0.75		13-OCT-21	13-OCT-21	R5616882
Polychlorinated Biphenyls							
Aroclor 1016	<0.034	DLHM	0.034	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1221	<0.034	DLHM	0.034	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1232	<0.034	DLHM	0.034	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1242	<0.0650	DLM	0.065	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1248	<0.034	DLHM	0.034	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1254	0.186	PRAR	0.034	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1260	<0.140	DLM	0.14	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1262	<0.034	DLHM	0.034	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1268	<0.034	DLHM	0.034	mg/kg	13-OCT-21	13-OCT-21	R5616907
Total Polychlorinated Biphenyls	0.186		0.10	mg/kg	13-OCT-21	13-OCT-21	R5616907
Surrogate: d14-Terphenyl	100.1		50-140	%	13-OCT-21	13-OCT-21	R5616907
L2647638-9 TCAB-SG-007 Sampled By: CLIENT on 01-OCT-21 @ 15:25 Matrix: SEDIMENT							
Physical Tests							
% Moisture	85.6		0.25	%	07-OCT-21	08-OCT-21	R5614014
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0743		0.0010	g/g	20-OCT-21	20-OCT-21	R5625292
Total Organic Carbon	7.43		0.10	%	20-OCT-21	20-OCT-21	R5625292
Metals							
Aluminum (Al)	25500		50	ug/g	12-OCT-21	12-OCT-21	R5616476
Antimony (Sb)	0.42		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Arsenic (As)	4.97		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Barium (Ba)	314		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Beryllium (Be)	0.85		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Bismuth (Bi)	0.25		0.20	ug/g	12-OCT-21	12-OCT-21	R5616476

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647638-9 TCAB-SG-007 Sampled By: CLIENT on 01-OCT-21 @ 15:25 Matrix: SEDIMENT							
Metals							
Boron (B)	11.1		5.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Cadmium (Cd)	0.619		0.020	ug/g	12-OCT-21	12-OCT-21	R5616476
Calcium (Ca)	66300		50	ug/g	12-OCT-21	12-OCT-21	R5616476
Chromium (Cr)	145		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Cobalt (Co)	13.5		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Copper (Cu)	63.4		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Iron (Fe)	32200		50	ug/g	12-OCT-21	12-OCT-21	R5616476
Lead (Pb)	51.0		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Lithium (Li)	19.6		2.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Magnesium (Mg)	11400		20	ug/g	12-OCT-21	12-OCT-21	R5616476
Manganese (Mn)	1320		1.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Mercury (Hg)	0.126		0.0050	ug/g	12-OCT-21	13-OCT-21	R5616441
Molybdenum (Mo)	0.74		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Nickel (Ni)	30.9		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Phosphorus (P)	1190		50	ug/g	12-OCT-21	12-OCT-21	R5616476
Potassium (K)	4480		100	ug/g	12-OCT-21	12-OCT-21	R5616476
Selenium (Se)	1.11		0.20	ug/g	12-OCT-21	12-OCT-21	R5616476
Silver (Ag)	0.27		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Sodium (Na)	706		50	ug/g	12-OCT-21	12-OCT-21	R5616476
Strontium (Sr)	263		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Sulfur (S)	6100		1000	ug/g	12-OCT-21	12-OCT-21	R5616476
Thallium (Tl)	0.319		0.050	ug/g	12-OCT-21	12-OCT-21	R5616476
Tin (Sn)	3.0		2.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Titanium (Ti)	1410		1.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Tungsten (W)	<0.50		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Uranium (U)	0.853		0.050	ug/g	12-OCT-21	12-OCT-21	R5616476
Vanadium (V)	52.6		0.20	ug/g	12-OCT-21	12-OCT-21	R5616476
Zinc (Zn)	137		2.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Zirconium (Zr)	5.2		1.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.131		0.038	ug/g	13-OCT-21	13-OCT-21	R5616882
Acenaphthylene	0.512		0.038	ug/g	13-OCT-21	13-OCT-21	R5616882
Acridine	<0.075	DLHM	0.075	ug/g	13-OCT-21	13-OCT-21	R5616882
Anthracene	0.558		0.030	ug/g	13-OCT-21	13-OCT-21	R5616882
Benzo(a)anthracene	1.31	R	0.075	ug/g	13-OCT-21	13-OCT-21	R5616882
Benzo(a)pyrene	1.59		0.038	ug/g	13-OCT-21	13-OCT-21	R5616882
Benzo(b&j)fluoranthene	1.29		0.075	ug/g	13-OCT-21	13-OCT-21	R5616882
Benzo(g,h,i)perylene	0.868		0.075	ug/g	13-OCT-21	13-OCT-21	R5616882
Benzo(k)fluoranthene	0.560		0.075	ug/g	13-OCT-21	13-OCT-21	R5616882
Chrysene	1.37		0.075	ug/g	13-OCT-21	13-OCT-21	R5616882
Dibenz(a,h)anthracene	0.216		0.038	ug/g	13-OCT-21	13-OCT-21	R5616882

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647638-9 TCAB-SG-007 Sampled By: CLIENT on 01-OCT-21 @ 15:25 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
Fluoroanthene	1.36		0.038	ug/g	13-OCT-21	13-OCT-21	R5616882
Fluorene	0.126	R	0.038	ug/g	13-OCT-21	13-OCT-21	R5616882
Indeno(1,2,3-cd)pyrene	0.704		0.075	ug/g	13-OCT-21	13-OCT-21	R5616882
1-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	13-OCT-21	13-OCT-21	R5616882
2-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	13-OCT-21	13-OCT-21	R5616882
Naphthalene	<0.038	DLHM	0.038	ug/g	13-OCT-21	13-OCT-21	R5616882
Phenanthrene	0.523		0.038	ug/g	13-OCT-21	13-OCT-21	R5616882
Pyrene	2.00		0.038	ug/g	13-OCT-21	13-OCT-21	R5616882
Quinoline	<0.038	DLHM	0.038	ug/g	13-OCT-21	13-OCT-21	R5616882
Surrogate: 2-Fluorobiphenyl	90.6		60-140	%	13-OCT-21	13-OCT-21	R5616882
Surrogate: d14-Terphenyl	78.6		60-140	%	13-OCT-21	13-OCT-21	R5616882
B(a)P Total Potency Equivalent	2.21		0.053	ug/g	13-OCT-21	13-OCT-21	R5616882
IACR (CCME)	21.8		0.75		13-OCT-21	13-OCT-21	R5616882
Polychlorinated Biphenyls							
Aroclor 1016	<0.034	DLHM	0.034	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1221	<0.034	DLHM	0.034	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1232	<0.034	DLHM	0.034	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1242	<0.034	DLHM	0.034	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1248	<0.034	DLHM	0.034	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1254	<0.045	DLM	0.045	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1260	<0.034	DLHM	0.034	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1262	<0.034	DLHM	0.034	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1268	<0.034	DLHM	0.034	mg/kg	13-OCT-21	13-OCT-21	R5616907
Total Polychlorinated Biphenyls	<0.110		0.11	mg/kg	13-OCT-21	13-OCT-21	R5616907
Surrogate: d14-Terphenyl	89.1		50-140	%	13-OCT-21	13-OCT-21	R5616907
L2647638-10 TCAB-SG-008 Sampled By: CLIENT on 01-OCT-21 @ 15:40 Matrix: SEDIMENT							
Physical Tests							
% Moisture	87.9		0.25	%	07-OCT-21	08-OCT-21	R5614014
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0932		0.0010	g/g	20-OCT-21	20-OCT-21	R5625292
Total Organic Carbon	9.32		0.10	%	20-OCT-21	20-OCT-21	R5625292
Metals							
Aluminum (Al)	147		50	ug/g	12-OCT-21	12-OCT-21	R5616476
Antimony (Sb)	<0.10		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Arsenic (As)	<0.10		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Barium (Ba)	1.52		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Beryllium (Be)	<0.10		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Bismuth (Bi)	<0.20		0.20	ug/g	12-OCT-21	12-OCT-21	R5616476
Boron (B)	<5.0		5.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Cadmium (Cd)	<0.020		0.020	ug/g	12-OCT-21	12-OCT-21	R5616476

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647638-10 TCAB-SG-008 Sampled By: CLIENT on 01-OCT-21 @ 15:40 Matrix: SEDIMENT							
Metals							
Calcium (Ca)	114		50	ug/g	12-OCT-21	12-OCT-21	R5616476
Chromium (Cr)	0.93		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Cobalt (Co)	<0.10		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Copper (Cu)	<0.50		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Iron (Fe)	84		50	ug/g	12-OCT-21	12-OCT-21	R5616476
Lead (Pb)	<0.50		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Lithium (Li)	<2.0		2.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Magnesium (Mg)	79		20	ug/g	12-OCT-21	12-OCT-21	R5616476
Manganese (Mn)	6.5		1.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Mercury (Hg)	0.156		0.0050	ug/g	12-OCT-21	13-OCT-21	R5616441
Molybdenum (Mo)	<0.10		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Nickel (Ni)	<0.50		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Phosphorus (P)	<50		50	ug/g	12-OCT-21	12-OCT-21	R5616476
Potassium (K)	<100		100	ug/g	12-OCT-21	12-OCT-21	R5616476
Selenium (Se)	<0.20		0.20	ug/g	12-OCT-21	12-OCT-21	R5616476
Silver (Ag)	<0.10		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Sodium (Na)	<50		50	ug/g	12-OCT-21	12-OCT-21	R5616476
Strontium (Sr)	<0.50		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Sulfur (S)	<1000		1000	ug/g	12-OCT-21	12-OCT-21	R5616476
Thallium (Tl)	<0.050		0.050	ug/g	12-OCT-21	12-OCT-21	R5616476
Tin (Sn)	<2.0		2.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Titanium (Ti)	7.7		1.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Tungsten (W)	<0.50		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Uranium (U)	<0.050		0.050	ug/g	12-OCT-21	12-OCT-21	R5616476
Vanadium (V)	0.26		0.20	ug/g	12-OCT-21	12-OCT-21	R5616476
Zinc (Zn)	7.7		2.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Zirconium (Zr)	<1.0		1.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.147	DLHM	0.038	ug/g	12-OCT-21	13-OCT-21	R5616306
Acenaphthylene	0.856	DUPH	0.038	ug/g	12-OCT-21	13-OCT-21	R5616306
Acridine	<0.075	DLHM	0.075	ug/g	12-OCT-21	13-OCT-21	R5616306
Anthracene	0.784	DLHM	0.030	ug/g	12-OCT-21	13-OCT-21	R5616306
Benzo(a)anthracene	1.76	DUPH	0.075	ug/g	12-OCT-21	13-OCT-21	R5616306
Benzo(a)pyrene	2.52	DUPH	0.038	ug/g	12-OCT-21	13-OCT-21	R5616306
Benzo(b&j)fluoranthene	1.92	DUPH	0.075	ug/g	12-OCT-21	13-OCT-21	R5616306
Benzo(g,h,i)perylene	1.42	DUPH	0.075	ug/g	12-OCT-21	13-OCT-21	R5616306
Benzo(k)fluoranthene	0.724	DUPH	0.075	ug/g	12-OCT-21	13-OCT-21	R5616306
Chrysene	2.19	DUPH	0.075	ug/g	12-OCT-21	13-OCT-21	R5616306
Dibenz(a,h)anthracene	0.348	DUPH	0.038	ug/g	12-OCT-21	13-OCT-21	R5616306
Fluoroanthene	1.39	DLHM	0.038	ug/g	12-OCT-21	13-OCT-21	R5616306
Fluorene	0.160	DLHM	0.038	ug/g	12-OCT-21	13-OCT-21	R5616306

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647638-10 TCAB-SG-008 Sampled By: CLIENT on 01-OCT-21 @ 15:40 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
Indeno(1,2,3-cd)pyrene	1.02	DUPH	0.075	ug/g	12-OCT-21	13-OCT-21	R5616306
1-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	12-OCT-21	13-OCT-21	R5616306
2-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	12-OCT-21	13-OCT-21	R5616306
Naphthalene	<0.038	DLHM	0.038	ug/g	12-OCT-21	13-OCT-21	R5616306
Phenanthrene	0.465	DLHM	0.038	ug/g	12-OCT-21	13-OCT-21	R5616306
Pyrene	2.05	DLHM	0.038	ug/g	12-OCT-21	13-OCT-21	R5616306
Quinoline	<0.038	DLHM	0.038	ug/g	12-OCT-21	13-OCT-21	R5616306
Surrogate: 2-Fluorobiphenyl	92.8		60-140	%	12-OCT-21	13-OCT-21	R5616306
Surrogate: d14-Terphenyl	85.4		60-140	%	12-OCT-21	13-OCT-21	R5616306
B(a)P Total Potency Equivalent	3.45		0.053	ug/g	12-OCT-21	13-OCT-21	R5616306
IACR (CCME)	31.8		0.75		12-OCT-21	13-OCT-21	R5616306
Polychlorinated Biphenyls							
Aroclor 1016	<0.170	RRR	0.17	mg/kg	25-OCT-21	25-OCT-21	R5627782
Aroclor 1221	<0.170	RRR	0.17	mg/kg	25-OCT-21	25-OCT-21	R5627782
Aroclor 1232	<0.170	RRR	0.17	mg/kg	25-OCT-21	25-OCT-21	R5627782
Aroclor 1242	<0.170	RRR	0.17	mg/kg	25-OCT-21	25-OCT-21	R5627782
Aroclor 1248	<0.170	RRR	0.17	mg/kg	25-OCT-21	25-OCT-21	R5627782
Aroclor 1254	0.048	DLR	0.034	mg/kg	25-OCT-21	25-OCT-21	R5627782
Aroclor 1260	0.085	DLR	0.034	mg/kg	25-OCT-21	25-OCT-21	R5627782
Aroclor 1262	<0.034	DLR	0.034	mg/kg	25-OCT-21	25-OCT-21	R5627782
Aroclor 1268	<0.034	DLR	0.034	mg/kg	25-OCT-21	25-OCT-21	R5627782
Total Polychlorinated Biphenyls	<0.40		0.40	mg/kg	25-OCT-21	25-OCT-21	R5627782
Surrogate: d14-Terphenyl	89.1		50-140	%	25-OCT-21	25-OCT-21	R5627782
Report Remarks : RRR: Due to sample matrix interferences, PCB recoveries could not be determined in the matrix spike unless spiked with 5X the normal concentration and therefore the detection limit has been raised accordingly.							
L2647638-11 TCAB-SG-003 Sampled By: CLIENT on 01-OCT-21 @ 16:00 Matrix: SEDIMENT							
Physical Tests							
% Moisture	87.4		0.25	%	07-OCT-21	08-OCT-21	R5614014
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0858		0.0010	g/g	15-OCT-21	15-OCT-21	R5619419
Total Organic Carbon	8.58		0.10	%	15-OCT-21	15-OCT-21	R5619419
Metals							
Aluminum (Al)	24800		50	ug/g	12-OCT-21	12-OCT-21	R5616476
Antimony (Sb)	0.75		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Arsenic (As)	8.19		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Barium (Ba)	312		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Beryllium (Be)	0.88		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Bismuth (Bi)	0.58		0.20	ug/g	12-OCT-21	12-OCT-21	R5616476
Boron (B)	13.8		5.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Cadmium (Cd)	1.01		0.020	ug/g	12-OCT-21	12-OCT-21	R5616476
Calcium (Ca)	50200		50	ug/g	12-OCT-21	12-OCT-21	R5616476

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647638-11 TCAB-SG-003 Sampled By: CLIENT on 01-OCT-21 @ 16:00 Matrix: SEDIMENT							
Metals							
Chromium (Cr)	332		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Cobalt (Co)	14.5		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Copper (Cu)	133		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Iron (Fe)	33600		50	ug/g	12-OCT-21	12-OCT-21	R5616476
Lead (Pb)	99.7		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Lithium (Li)	21.5		2.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Magnesium (Mg)	13200		20	ug/g	12-OCT-21	12-OCT-21	R5616476
Manganese (Mn)	1250		1.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Mercury (Hg)	0.314		0.0050	ug/g	12-OCT-21	13-OCT-21	R5616441
Molybdenum (Mo)	0.94		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Nickel (Ni)	33.1		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Phosphorus (P)	1330		50	ug/g	12-OCT-21	12-OCT-21	R5616476
Potassium (K)	4740		100	ug/g	12-OCT-21	12-OCT-21	R5616476
Selenium (Se)	1.64		0.20	ug/g	12-OCT-21	12-OCT-21	R5616476
Silver (Ag)	0.58		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Sodium (Na)	712		50	ug/g	12-OCT-21	12-OCT-21	R5616476
Strontium (Sr)	232		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Sulfur (S)	8200		1000	ug/g	12-OCT-21	12-OCT-21	R5616476
Thallium (Tl)	0.367		0.050	ug/g	12-OCT-21	12-OCT-21	R5616476
Tin (Sn)	5.9		2.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Titanium (Ti)	1400		1.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Tungsten (W)	<0.50		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Uranium (U)	0.931		0.050	ug/g	12-OCT-21	12-OCT-21	R5616476
Vanadium (V)	53.9		0.20	ug/g	12-OCT-21	12-OCT-21	R5616476
Zinc (Zn)	212		2.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Zirconium (Zr)	5.1		1.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.079	DLHM	0.038	ug/g	12-OCT-21	13-OCT-21	R5616306
Acenaphthylene	0.359	DLHM	0.038	ug/g	12-OCT-21	13-OCT-21	R5616306
Acridine	<0.075	DLHM	0.075	ug/g	12-OCT-21	13-OCT-21	R5616306
Anthracene	0.262	DLHM	0.030	ug/g	12-OCT-21	13-OCT-21	R5616306
Benzo(a)anthracene	0.832	R	0.075	ug/g	12-OCT-21	13-OCT-21	R5616306
Benzo(a)pyrene	1.08	DLHM	0.038	ug/g	12-OCT-21	13-OCT-21	R5616306
Benzo(b&j)fluoranthene	1.05	DLHM	0.075	ug/g	12-OCT-21	13-OCT-21	R5616306
Benzo(g,h,i)perylene	0.728	DLHM	0.075	ug/g	12-OCT-21	13-OCT-21	R5616306
Benzo(k)fluoranthene	0.406	DLHM	0.075	ug/g	12-OCT-21	13-OCT-21	R5616306
Chrysene	0.952	DLHM	0.075	ug/g	12-OCT-21	13-OCT-21	R5616306
Dibenz(a,h)anthracene	0.173	DLHM	0.038	ug/g	12-OCT-21	13-OCT-21	R5616306
Fluoroanthene	1.08	DLHM	0.038	ug/g	12-OCT-21	13-OCT-21	R5616306
Fluorene	0.095	DLHM	0.038	ug/g	12-OCT-21	13-OCT-21	R5616306
Indeno(1,2,3-cd)pyrene	0.541	DLHM	0.075	ug/g	12-OCT-21	13-OCT-21	R5616306

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647638-11 TCAB-SG-003 Sampled By: CLIENT on 01-OCT-21 @ 16:00 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
1-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	12-OCT-21	13-OCT-21	R5616306
2-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	12-OCT-21	13-OCT-21	R5616306
Naphthalene	<0.038	DLHM	0.038	ug/g	12-OCT-21	13-OCT-21	R5616306
Phenanthrene	0.427	DLHM	0.038	ug/g	12-OCT-21	13-OCT-21	R5616306
Pyrene	1.38	DLHM	0.038	ug/g	12-OCT-21	13-OCT-21	R5616306
Quinoline	<0.038	DLHM	0.038	ug/g	12-OCT-21	13-OCT-21	R5616306
Surrogate: 2-Fluorobiphenyl	94.0		60-140	%	12-OCT-21	13-OCT-21	R5616306
Surrogate: d14-Terphenyl	86.3		60-140	%	12-OCT-21	13-OCT-21	R5616306
B(a)P Total Potency Equivalent	1.56		0.053	ug/g	12-OCT-21	13-OCT-21	R5616306
IACR (CCME)	16.0		0.75		12-OCT-21	13-OCT-21	R5616306
Polychlorinated Biphenyls							
Aroclor 1016	<0.170	RRR	0.17	mg/kg	25-OCT-21	25-OCT-21	R5627782
Aroclor 1221	<0.170	RRR	0.17	mg/kg	25-OCT-21	25-OCT-21	R5627782
Aroclor 1232	<0.170	RRR	0.17	mg/kg	25-OCT-21	25-OCT-21	R5627782
Aroclor 1242	<0.170	RRR	0.17	mg/kg	25-OCT-21	25-OCT-21	R5627782
Aroclor 1248	<0.170	RRR	0.17	mg/kg	25-OCT-21	25-OCT-21	R5627782
Aroclor 1254	0.148	DLR	0.034	mg/kg	25-OCT-21	25-OCT-21	R5627782
Aroclor 1260	0.125	DLR	0.034	mg/kg	25-OCT-21	25-OCT-21	R5627782
Aroclor 1262	<0.034	DLR	0.034	mg/kg	25-OCT-21	25-OCT-21	R5627782
Aroclor 1268	<0.034	DLR	0.034	mg/kg	25-OCT-21	25-OCT-21	R5627782
Total Polychlorinated Biphenyls	<0.40		0.40	mg/kg	25-OCT-21	25-OCT-21	R5627782
Surrogate: d14-Terphenyl	91.5		50-140	%	25-OCT-21	25-OCT-21	R5627782
Report Remarks : RRR: Due to sample matrix interferences, PCB recoveries could not be determined in the matrix spike unless spiked with 5X the normal concentration and therefore the detection limit has been raised accordingly.							
L2647638-12 TCAB-SG-004 Sampled By: CLIENT on 01-OCT-21 @ 16:20 Matrix: SEDIMENT							
Physical Tests							
% Moisture	80.8		0.25	%	07-OCT-21	08-OCT-21	R5614014
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0727		0.0010	g/g	15-OCT-21	15-OCT-21	R5619419
Total Organic Carbon	7.27		0.10	%	15-OCT-21	15-OCT-21	R5619419
Metals							
Aluminum (Al)	19800		50	ug/g	12-OCT-21	12-OCT-21	R5616476
Antimony (Sb)	0.60		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Arsenic (As)	7.55		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Barium (Ba)	287		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Beryllium (Be)	0.70		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Bismuth (Bi)	0.38		0.20	ug/g	12-OCT-21	12-OCT-21	R5616476
Boron (B)	9.4		5.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Cadmium (Cd)	0.795		0.020	ug/g	12-OCT-21	12-OCT-21	R5616476
Calcium (Ca)	71700		50	ug/g	12-OCT-21	12-OCT-21	R5616476
Chromium (Cr)	246		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647638-12 TCAB-SG-004 Sampled By: CLIENT on 01-OCT-21 @ 16:20 Matrix: SEDIMENT							
Metals							
Cobalt (Co)	11.9		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Copper (Cu)	50.2		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Iron (Fe)	29200		50	ug/g	12-OCT-21	12-OCT-21	R5616476
Lead (Pb)	180		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Lithium (Li)	15.8		2.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Magnesium (Mg)	10800		20	ug/g	12-OCT-21	12-OCT-21	R5616476
Manganese (Mn)	907		1.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Mercury (Hg)	0.275		0.0050	ug/g	12-OCT-21	13-OCT-21	R5616441
Molybdenum (Mo)	0.93		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Nickel (Ni)	26.9		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Phosphorus (P)	1100		50	ug/g	12-OCT-21	12-OCT-21	R5616476
Potassium (K)	3770		100	ug/g	12-OCT-21	12-OCT-21	R5616476
Selenium (Se)	1.20		0.20	ug/g	12-OCT-21	12-OCT-21	R5616476
Silver (Ag)	0.45		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Sodium (Na)	662		50	ug/g	12-OCT-21	12-OCT-21	R5616476
Strontium (Sr)	327		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Sulfur (S)	7300		1000	ug/g	12-OCT-21	12-OCT-21	R5616476
Thallium (Tl)	0.304		0.050	ug/g	12-OCT-21	12-OCT-21	R5616476
Tin (Sn)	4.7		2.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Titanium (Ti)	1130		1.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Tungsten (W)	<0.50		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Uranium (U)	0.819		0.050	ug/g	12-OCT-21	12-OCT-21	R5616476
Vanadium (V)	43.6		0.20	ug/g	12-OCT-21	12-OCT-21	R5616476
Zinc (Zn)	156		2.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Zirconium (Zr)	4.4		1.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.177	DLHM	0.025	ug/g	12-OCT-21	13-OCT-21	R5616306
Acenaphthylene	0.735	DLHM	0.025	ug/g	12-OCT-21	13-OCT-21	R5616306
Acridine	0.058	AI	0.050	ug/g	12-OCT-21	13-OCT-21	R5616306
Anthracene	0.499	DLHM	0.020	ug/g	12-OCT-21	13-OCT-21	R5616306
Benzo(a)anthracene	1.81	R	0.050	ug/g	12-OCT-21	13-OCT-21	R5616306
Benzo(a)pyrene	2.33	DLHM	0.025	ug/g	12-OCT-21	13-OCT-21	R5616306
Benzo(b&j)fluoranthene	1.92	DLHM	0.050	ug/g	12-OCT-21	13-OCT-21	R5616306
Benzo(g,h,i)perylene	1.40	DLHM	0.050	ug/g	12-OCT-21	13-OCT-21	R5616306
Benzo(k)fluoranthene	0.745	DLHM	0.050	ug/g	12-OCT-21	13-OCT-21	R5616306
Chrysene	1.76	DLHM	0.050	ug/g	12-OCT-21	13-OCT-21	R5616306
Dibenz(a,h)anthracene	0.336	DLHM	0.025	ug/g	12-OCT-21	13-OCT-21	R5616306
Fluoroanthene	1.86	DLHM	0.025	ug/g	12-OCT-21	13-OCT-21	R5616306
Fluorene	0.165	DLHM	0.025	ug/g	12-OCT-21	13-OCT-21	R5616306
Indeno(1,2,3-cd)pyrene	1.05	DLHM	0.050	ug/g	12-OCT-21	13-OCT-21	R5616306
1-Methylnaphthalene	0.052	DLHM	0.025	ug/g	12-OCT-21	13-OCT-21	R5616306

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647638-12 TCAB-SG-004 Sampled By: CLIENT on 01-OCT-21 @ 16:20 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
2-Methylnaphthalene	0.050	DLHM	0.025	ug/g	12-OCT-21	13-OCT-21	R5616306
Naphthalene	0.075	DLHM	0.025	ug/g	12-OCT-21	13-OCT-21	R5616306
Phenanthrene	0.729	DLHM	0.025	ug/g	12-OCT-21	13-OCT-21	R5616306
Pyrene	2.69	DLHM	0.025	ug/g	12-OCT-21	13-OCT-21	R5616306
Quinoline	<0.025	DLHM	0.025	ug/g	12-OCT-21	13-OCT-21	R5616306
Surrogate: 2-Fluorobiphenyl	90.3		60-140	%	12-OCT-21	13-OCT-21	R5616306
Surrogate: d14-Terphenyl	87.5		60-140	%	12-OCT-21	13-OCT-21	R5616306
B(a)P Total Potency Equivalent	3.25		0.036	ug/g	12-OCT-21	13-OCT-21	R5616306
IACR (CCME)	31.3		0.50		12-OCT-21	13-OCT-21	R5616306
Polychlorinated Biphenyls							
Aroclor 1016	<0.023	DLHM	0.023	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1221	<0.023	DLHM	0.023	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1232	<0.023	DLHM	0.023	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1242	<0.0270	DLM	0.027	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1248	<0.023	DLHM	0.023	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1254	0.222	DLHM	0.023	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1260	0.198	DLHM	0.023	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1262	<0.023	DLHM	0.023	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1268	<0.023	DLHM	0.023	mg/kg	13-OCT-21	13-OCT-21	R5616907
Total Polychlorinated Biphenyls	0.42		0.068	mg/kg	13-OCT-21	13-OCT-21	R5616907
Surrogate: d14-Terphenyl	106.3		50-140	%	13-OCT-21	13-OCT-21	R5616907
L2647638-13 TCRC-SG-010 Sampled By: CLIENT on 01-OCT-21 @ 12:00 Matrix: SEDIMENT							
Physical Tests							
% Moisture	70.9		0.25	%	07-OCT-21	08-OCT-21	R5614014
Liquid Limit (LL)	55		1	%	15-OCT-21	15-OCT-21	R5619861
Moisture at Plastic Limit	51		1	%	15-OCT-21	15-OCT-21	R5619861
Plasticity Index (PI)	4		1	%	15-OCT-21	15-OCT-21	R5619861
Specific Gravity	1.19		0.010	kg/L		01-NOV-21	R5634727
Particle Size							
General Texture Class	Fine				13-OCT-21	13-OCT-21	R5617706
MUST PSA % > 75um	29.4	PSAL	1.0	%	13-OCT-21	13-OCT-21	R5617706
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0425		0.0010	g/g	15-OCT-21	15-OCT-21	R5619419
Total Organic Carbon	4.25		0.10	%	15-OCT-21	15-OCT-21	R5619419
Metals							
Aluminum (Al)	16300		50	ug/g	12-OCT-21	12-OCT-21	R5616476
Antimony (Sb)	3.57		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Arsenic (As)	67.6		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Barium (Ba)	269		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Beryllium (Be)	0.61		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647638-13 TCRC-SG-010 Sampled By: CLIENT on 01-OCT-21 @ 12:00 Matrix: SEDIMENT							
Metals							
Bismuth (Bi)	0.49		0.20	ug/g	12-OCT-21	12-OCT-21	R5616476
Boron (B)	7.9		5.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Boron (B), Hot Water Ext.	0.43		0.10	ug/g	12-OCT-21	12-OCT-21	R5615837
Cadmium (Cd)	1.06		0.020	ug/g	12-OCT-21	12-OCT-21	R5616476
Calcium (Ca)	63000		50	ug/g	12-OCT-21	12-OCT-21	R5616476
Chromium (Cr)	259		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Cobalt (Co)	38.1		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Copper (Cu)	58.2		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Iron (Fe)	31200		50	ug/g	12-OCT-21	12-OCT-21	R5616476
Lead (Pb)	222		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Lithium (Li)	14.3		2.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Magnesium (Mg)	12800		20	ug/g	12-OCT-21	12-OCT-21	R5616476
Manganese (Mn)	618		1.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Mercury (Hg)	1.22	DLHC	0.050	ug/g	12-OCT-21	13-OCT-21	R5616441
Molybdenum (Mo)	0.86		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Nickel (Ni)	37.1		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Phosphorus (P)	1130		50	ug/g	12-OCT-21	12-OCT-21	R5616476
Potassium (K)	3710		100	ug/g	12-OCT-21	12-OCT-21	R5616476
Selenium (Se)	0.55		0.20	ug/g	12-OCT-21	12-OCT-21	R5616476
Silver (Ag)	0.59		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Sodium (Na)	558		50	ug/g	12-OCT-21	12-OCT-21	R5616476
Strontium (Sr)	327		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Sulfur (S)	5300		1000	ug/g	12-OCT-21	12-OCT-21	R5616476
Thallium (Tl)	0.277		0.050	ug/g	12-OCT-21	12-OCT-21	R5616476
Tin (Sn)	55.9		2.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Titanium (Ti)	1070		1.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Tungsten (W)	<0.50		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Uranium (U)	0.634		0.050	ug/g	12-OCT-21	12-OCT-21	R5616476
Vanadium (V)	41.9		0.20	ug/g	12-OCT-21	12-OCT-21	R5616476
Zinc (Zn)	421		2.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Zirconium (Zr)	4.1		1.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Speciated Metals							
Chromium, Trivalent	258		10	ug/g		13-OCT-21	
Chromium, Hexavalent	1.02	DLHM	0.40	ug/g	12-OCT-21	13-OCT-21	R5616569
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.198	DLHM	0.015	ug/g	12-OCT-21	13-OCT-21	R5616306
Acenaphthylene	1.48	DLHM	0.015	ug/g	12-OCT-21	13-OCT-21	R5616306
Acridine	0.394	DLHM	0.030	ug/g	12-OCT-21	13-OCT-21	R5616306
Anthracene	2.68	DLHM	0.012	ug/g	12-OCT-21	13-OCT-21	R5616306
Benzo(a)anthracene	15.4	DLHM	0.030	ug/g	12-OCT-21	13-OCT-21	R5616306
Benzo(a)pyrene	12.5	DLHM	0.015	ug/g	12-OCT-21	13-OCT-21	R5616306

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647638-13 TCRC-SG-010 Sampled By: CLIENT on 01-OCT-21 @ 12:00 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
Benzo(b&j)fluoranthene	16.9	DLHM	0.030	ug/g	12-OCT-21	13-OCT-21	R5616306
Benzo(g,h,i)perylene	6.98	DLHM	0.030	ug/g	12-OCT-21	13-OCT-21	R5616306
Benzo(k)fluoranthene	4.83	DLHM	0.030	ug/g	12-OCT-21	13-OCT-21	R5616306
Chrysene	15.3	DLHM	0.030	ug/g	12-OCT-21	13-OCT-21	R5616306
Dibenz(a,h)anthracene	2.09	DLHM	0.015	ug/g	12-OCT-21	13-OCT-21	R5616306
Fluoroanthene	26.2	DLHC	0.15	ug/g	12-OCT-21	13-OCT-21	R5616306
Fluorene	0.390	DLHM	0.015	ug/g	12-OCT-21	13-OCT-21	R5616306
Indeno(1,2,3-cd)pyrene	7.11	DLHM	0.030	ug/g	12-OCT-21	13-OCT-21	R5616306
1-Methylnaphthalene	0.044	DLHM	0.015	ug/g	12-OCT-21	13-OCT-21	R5616306
2-Methylnaphthalene	0.044	DLHM	0.015	ug/g	12-OCT-21	13-OCT-21	R5616306
Naphthalene	0.072	DLHM	0.015	ug/g	12-OCT-21	13-OCT-21	R5616306
Phenanthrene	6.11	DLHM	0.015	ug/g	12-OCT-21	13-OCT-21	R5616306
Pyrene	21.2	DLHC	0.15	ug/g	12-OCT-21	13-OCT-21	R5616306
Quinoline	<0.015	DLHM	0.015	ug/g	12-OCT-21	13-OCT-21	R5616306
Surrogate: 2-Fluorobiphenyl	90.5		60-140	%	12-OCT-21	13-OCT-21	R5616306
Surrogate: d14-Terphenyl	94.7		60-140	%	12-OCT-21	13-OCT-21	R5616306
B(a)P Total Potency Equivalent	19.2		0.021	ug/g	12-OCT-21	13-OCT-21	R5616306
IACR (CCME)	236		0.30		12-OCT-21	13-OCT-21	R5616306
Polychlorinated Biphenyls							
Aroclor 1016	<0.014	DLHM	0.014	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1221	<0.014	DLHM	0.014	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1232	<0.014	DLHM	0.014	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1242	<0.023	DLM	0.023	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1248	<0.014	DLHM	0.014	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1254	0.090	DLHM	0.014	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1260	0.076	DLHM	0.014	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1262	<0.014	DLHM	0.014	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1268	<0.014	DLHM	0.014	mg/kg	13-OCT-21	13-OCT-21	R5616907
Total Polychlorinated Biphenyls	0.166		0.041	mg/kg	13-OCT-21	13-OCT-21	R5616907
Surrogate: d14-Terphenyl	101.4		50-140	%	13-OCT-21	13-OCT-21	R5616907
L2647638-14 TCRC-SC-010A Sampled By: CLIENT on 01-OCT-21 @ 10:25 Matrix: SEDIMENT							
Physical Tests							
% Moisture	37.4		0.25	%	07-OCT-21	08-OCT-21	R5614014
Liquid Limit (LL)	49		1	%	15-OCT-21	15-OCT-21	R5619861
Moisture at Plastic Limit	30		1	%	15-OCT-21	15-OCT-21	R5619861
Plasticity Index (PI)	18		1	%	15-OCT-21	15-OCT-21	R5619861
Specific Gravity	1.32		0.010	kg/L		01-NOV-21	R5634727
Particle Size							
General Texture Class	Fine				13-OCT-21	13-OCT-21	R5617706
MUST PSA % > 75um	18.4	PSAL	1.0	%	13-OCT-21	13-OCT-21	R5617706

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647638-14 TCRC-SC-010A Sampled By: CLIENT on 01-OCT-21 @ 10:25 Matrix: SEDIMENT							
Particle Size							
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0170		0.0010	g/g	15-OCT-21	15-OCT-21	R5619419
Total Organic Carbon	1.70		0.10	%	15-OCT-21	15-OCT-21	R5619419
Metals							
Aluminum (Al)	20600		50	ug/g	12-OCT-21	12-OCT-21	R5616476
Antimony (Sb)	1.91		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Arsenic (As)	41.2		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Barium (Ba)	299		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Beryllium (Be)	0.76		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Bismuth (Bi)	0.25		0.20	ug/g	12-OCT-21	12-OCT-21	R5616476
Boron (B)	8.7		5.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Boron (B), Hot Water Ext.	0.42		0.10	ug/g	12-OCT-21	12-OCT-21	R5615837
Cadmium (Cd)	0.493		0.020	ug/g	12-OCT-21	12-OCT-21	R5616476
Calcium (Ca)	44900		50	ug/g	12-OCT-21	12-OCT-21	R5616476
Chromium (Cr)	127		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Cobalt (Co)	26.0		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Copper (Cu)	37.4		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Iron (Fe)	35300		50	ug/g	12-OCT-21	12-OCT-21	R5616476
Lead (Pb)	99.9		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Lithium (Li)	18.2		2.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Magnesium (Mg)	18200		20	ug/g	12-OCT-21	12-OCT-21	R5616476
Manganese (Mn)	745		1.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Mercury (Hg)	0.697		0.0050	ug/g	12-OCT-21	13-OCT-21	R5616441
Molybdenum (Mo)	0.96		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Nickel (Ni)	33.5		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Phosphorus (P)	1110		50	ug/g	12-OCT-21	12-OCT-21	R5616476
Potassium (K)	5190		100	ug/g	12-OCT-21	12-OCT-21	R5616476
Selenium (Se)	0.22		0.20	ug/g	12-OCT-21	12-OCT-21	R5616476
Silver (Ag)	0.69		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Sodium (Na)	743		50	ug/g	12-OCT-21	12-OCT-21	R5616476
Strontium (Sr)	227		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Sulfur (S)	3300		1000	ug/g	12-OCT-21	12-OCT-21	R5616476
Thallium (Tl)	0.269		0.050	ug/g	12-OCT-21	12-OCT-21	R5616476
Tin (Sn)	55.4		2.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Titanium (Ti)	1540		1.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Tungsten (W)	<0.50		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Uranium (U)	0.788		0.050	ug/g	12-OCT-21	12-OCT-21	R5616476
Vanadium (V)	57.8		0.20	ug/g	12-OCT-21	12-OCT-21	R5616476
Zinc (Zn)	220		2.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Zirconium (Zr)	7.5		1.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Speciated Metals							
Chromium, Trivalent	127		10	ug/g		13-OCT-21	

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647638-14 TCRC-SC-010A Sampled By: CLIENT on 01-OCT-21 @ 10:25 Matrix: SEDIMENT							
Speciated Metals							
Chromium, Hexavalent	0.36		0.20	ug/g	12-OCT-21	13-OCT-21	R5616569
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.0308		0.0050	ug/g	12-OCT-21	13-OCT-21	R5616306
Acenaphthylene	0.0507		0.0050	ug/g	12-OCT-21	13-OCT-21	R5616306
Acridine	0.022		0.010	ug/g	12-OCT-21	13-OCT-21	R5616306
Anthracene	0.0907		0.0040	ug/g	12-OCT-21	13-OCT-21	R5616306
Benzo(a)anthracene	0.381		0.010	ug/g	12-OCT-21	13-OCT-21	R5616306
Benzo(a)pyrene	0.356		0.0050	ug/g	12-OCT-21	13-OCT-21	R5616306
Benzo(b&j)fluoranthene	0.425		0.010	ug/g	12-OCT-21	13-OCT-21	R5616306
Benzo(g,h,i)perylene	0.210		0.010	ug/g	12-OCT-21	13-OCT-21	R5616306
Benzo(k)fluoranthene	0.163		0.010	ug/g	12-OCT-21	13-OCT-21	R5616306
Chrysene	0.365		0.010	ug/g	12-OCT-21	13-OCT-21	R5616306
Dibenz(a,h)anthracene	0.0610		0.0050	ug/g	12-OCT-21	13-OCT-21	R5616306
Fluoroanthene	0.630		0.0050	ug/g	12-OCT-21	13-OCT-21	R5616306
Fluorene	0.0292		0.0050	ug/g	12-OCT-21	13-OCT-21	R5616306
Indeno(1,2,3-cd)pyrene	0.200		0.010	ug/g	12-OCT-21	13-OCT-21	R5616306
1-Methylnaphthalene	0.0059		0.0050	ug/g	12-OCT-21	13-OCT-21	R5616306
2-Methylnaphthalene	0.0065		0.0050	ug/g	12-OCT-21	13-OCT-21	R5616306
Naphthalene	0.0103		0.0050	ug/g	12-OCT-21	13-OCT-21	R5616306
Phenanthrene	0.260		0.0050	ug/g	12-OCT-21	13-OCT-21	R5616306
Pyrene	0.554		0.0050	ug/g	12-OCT-21	13-OCT-21	R5616306
Quinoline	<0.0050		0.0050	ug/g	12-OCT-21	13-OCT-21	R5616306
Surrogate: 2-Fluorobiphenyl	88.3		60-140	%	12-OCT-21	13-OCT-21	R5616306
Surrogate: d14-Terphenyl	85.7		60-140	%	12-OCT-21	13-OCT-21	R5616306
B(a)P Total Potency Equivalent	0.539		0.020	ug/g	12-OCT-21	13-OCT-21	R5616306
IACR (CCME)	6.33		0.15		12-OCT-21	13-OCT-21	R5616306
Polychlorinated Biphenyls							
Aroclor 1016	<0.0030		0.0030	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1221	<0.0030		0.0030	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1232	<0.0030		0.0030	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1242	<0.0080	DLM	0.0080	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1248	<0.0030		0.0030	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1254	0.0267		0.0030	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1260	0.0292		0.0030	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1262	<0.0030		0.0030	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1268	<0.0030		0.0030	mg/kg	13-OCT-21	13-OCT-21	R5616907
Total Polychlorinated Biphenyls	0.0559		0.0090	mg/kg	13-OCT-21	13-OCT-21	R5616907
Surrogate: d14-Terphenyl	58.0		50-140	%	13-OCT-21	13-OCT-21	R5616907
L2647638-15 TCRC-SC-010B Sampled By: CLIENT on 01-OCT-21 @ 10:25 Matrix: SEDIMENT							
Physical Tests							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647638-15 TCRC-SC-010B Sampled By: CLIENT on 01-OCT-21 @ 10:25 Matrix: SEDIMENT							
Physical Tests							
% Moisture	32.4		0.25	%	07-OCT-21	08-OCT-21	R5614014
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0072		0.0010	g/g	15-OCT-21	15-OCT-21	R5619419
Total Organic Carbon	0.72		0.10	%	15-OCT-21	15-OCT-21	R5619419
Metals							
Aluminum (Al)	19800		50	ug/g	12-OCT-21	12-OCT-21	R5616476
Antimony (Sb)	0.24		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Arsenic (As)	7.19		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Barium (Ba)	272		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Beryllium (Be)	0.91		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Bismuth (Bi)	<0.20		0.20	ug/g	12-OCT-21	12-OCT-21	R5616476
Boron (B)	10.6		5.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Cadmium (Cd)	0.145		0.020	ug/g	12-OCT-21	12-OCT-21	R5616476
Calcium (Ca)	72000		50	ug/g	12-OCT-21	12-OCT-21	R5616476
Chromium (Cr)	45.0		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Cobalt (Co)	13.9		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Copper (Cu)	26.8		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Iron (Fe)	31500		50	ug/g	12-OCT-21	12-OCT-21	R5616476
Lead (Pb)	16.4		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Lithium (Li)	21.5		2.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Magnesium (Mg)	23900		20	ug/g	12-OCT-21	12-OCT-21	R5616476
Manganese (Mn)	869		1.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Mercury (Hg)	0.0530		0.0050	ug/g	12-OCT-21	13-OCT-21	R5616441
Molybdenum (Mo)	1.04		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Nickel (Ni)	27.1		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Phosphorus (P)	1100		50	ug/g	12-OCT-21	12-OCT-21	R5616476
Potassium (K)	5160		100	ug/g	12-OCT-21	12-OCT-21	R5616476
Selenium (Se)	<0.20		0.20	ug/g	12-OCT-21	12-OCT-21	R5616476
Silver (Ag)	<0.10		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Sodium (Na)	909		50	ug/g	12-OCT-21	12-OCT-21	R5616476
Strontium (Sr)	229		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Sulfur (S)	2100		1000	ug/g	12-OCT-21	12-OCT-21	R5616476
Thallium (Tl)	0.286		0.050	ug/g	12-OCT-21	12-OCT-21	R5616476
Tin (Sn)	<2.0		2.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Titanium (Ti)	1570		1.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Tungsten (W)	<0.50		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Uranium (U)	1.76		0.050	ug/g	12-OCT-21	12-OCT-21	R5616476
Vanadium (V)	61.0		0.20	ug/g	12-OCT-21	12-OCT-21	R5616476
Zinc (Zn)	77.6		2.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Zirconium (Zr)	12.3		1.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	<0.0050		0.0050	ug/g	12-OCT-21	13-OCT-21	R5616306

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647638-15 TCRC-SC-010B Sampled By: CLIENT on 01-OCT-21 @ 10:25 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
Acenaphthylene	0.0217		0.0050	ug/g	12-OCT-21	13-OCT-21	R5616306
Acridine	<0.010		0.010	ug/g	12-OCT-21	13-OCT-21	R5616306
Anthracene	0.0198		0.0040	ug/g	12-OCT-21	13-OCT-21	R5616306
Benzo(a)anthracene	0.056		0.010	ug/g	12-OCT-21	13-OCT-21	R5616306
Benzo(a)pyrene	0.0712		0.0050	ug/g	12-OCT-21	13-OCT-21	R5616306
Benzo(b&j)fluoranthene	0.124		0.010	ug/g	12-OCT-21	13-OCT-21	R5616306
Benzo(g,h,i)perylene	0.047		0.010	ug/g	12-OCT-21	13-OCT-21	R5616306
Benzo(k)fluoranthene	0.050		0.010	ug/g	12-OCT-21	13-OCT-21	R5616306
Chrysene	0.120		0.010	ug/g	12-OCT-21	13-OCT-21	R5616306
Dibenz(a,h)anthracene	0.0145		0.0050	ug/g	12-OCT-21	13-OCT-21	R5616306
Fluoroanthene	0.231		0.0050	ug/g	12-OCT-21	13-OCT-21	R5616306
Fluorene	0.0088		0.0050	ug/g	12-OCT-21	13-OCT-21	R5616306
Indeno(1,2,3-cd)pyrene	0.047		0.010	ug/g	12-OCT-21	13-OCT-21	R5616306
1-Methylnaphthalene	<0.0050		0.0050	ug/g	12-OCT-21	13-OCT-21	R5616306
2-Methylnaphthalene	<0.0050		0.0050	ug/g	12-OCT-21	13-OCT-21	R5616306
Naphthalene	<0.0050		0.0050	ug/g	12-OCT-21	13-OCT-21	R5616306
Phenanthrene	0.124		0.0050	ug/g	12-OCT-21	13-OCT-21	R5616306
Pyrene	0.167		0.0050	ug/g	12-OCT-21	13-OCT-21	R5616306
Quinoline	<0.0050		0.0050	ug/g	12-OCT-21	13-OCT-21	R5616306
Surrogate: 2-Fluorobiphenyl	89.1		60-140	%	12-OCT-21	13-OCT-21	R5616306
Surrogate: d14-Terphenyl	91.6		60-140	%	12-OCT-21	13-OCT-21	R5616306
B(a)P Total Potency Equivalent	0.115		0.020	ug/g	12-OCT-21	13-OCT-21	R5616306
IACR (CCME)	1.59		0.15		12-OCT-21	13-OCT-21	R5616306
Polychlorinated Biphenyls							
Aroclor 1016	<0.0030		0.0030	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1221	<0.0030		0.0030	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1232	<0.0030		0.0030	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1242	<0.0030		0.0030	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1248	<0.0030		0.0030	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1254	0.0038		0.0030	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1260	0.0038		0.0030	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1262	<0.0030		0.0030	mg/kg	13-OCT-21	13-OCT-21	R5616907
Aroclor 1268	<0.0030		0.0030	mg/kg	13-OCT-21	13-OCT-21	R5616907
Total Polychlorinated Biphenyls	<0.0090		0.0090	mg/kg	13-OCT-21	13-OCT-21	R5616907
Surrogate: d14-Terphenyl	120.6		50-140	%	13-OCT-21	13-OCT-21	R5616907
L2647638-16 TCOM-SG-006 Sampled By: CLIENT on 01-OCT-21 @ 15:15 Matrix: SEDIMENT							
Physical Tests							
% Moisture	86.8		0.25	%	07-OCT-21	08-OCT-21	R5614014
Liquid Limit (LL)	190		1	%	23-OCT-21	23-OCT-21	R5627486
Moisture at Plastic Limit	86		1	%	23-OCT-21	23-OCT-21	R5627486

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647638-16 TCOM-SG-006 Sampled By: CLIENT on 01-OCT-21 @ 15:15 Matrix: SEDIMENT							
Physical Tests							
Plasticity Index (PI)	104		1	%	23-OCT-21	23-OCT-21	R5627486
Specific Gravity	1.08		0.010	kg/L		01-NOV-21	R5634727
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0751		0.0010	g/g	13-OCT-21	13-OCT-21	R5616839
Total Organic Carbon	7.51		0.10	%	13-OCT-21	13-OCT-21	R5616839
Metals							
Aluminum (Al)	14700	DLM	100	ug/g	12-OCT-21	12-OCT-21	R5616476
Antimony (Sb)	1.30	DLM	0.20	ug/g	12-OCT-21	12-OCT-21	R5616476
Arsenic (As)	9.62	DLM	0.20	ug/g	12-OCT-21	12-OCT-21	R5616476
Barium (Ba)	324	DLM	1.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Beryllium (Be)	0.65	DLM	0.20	ug/g	12-OCT-21	12-OCT-21	R5616476
Bismuth (Bi)	<0.40	DLM	0.40	ug/g	12-OCT-21	12-OCT-21	R5616476
Boron (B)	14	DLM	10	ug/g	12-OCT-21	12-OCT-21	R5616476
Cadmium (Cd)	0.794	DLM	0.040	ug/g	12-OCT-21	12-OCT-21	R5616476
Calcium (Ca)	146000	DLM	100	ug/g	12-OCT-21	12-OCT-21	R5616476
Chromium (Cr)	749	DLM	1.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Cobalt (Co)	12.3	DLM	0.20	ug/g	12-OCT-21	12-OCT-21	R5616476
Copper (Cu)	44.6	DLM	1.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Iron (Fe)	25400	DLM	100	ug/g	12-OCT-21	12-OCT-21	R5616476
Lead (Pb)	104	DLM	1.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Lithium (Li)	15.5	DLM	4.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Magnesium (Mg)	13900	DLM	40	ug/g	12-OCT-21	12-OCT-21	R5616476
Manganese (Mn)	854	DLM	2.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Mercury (Hg)	0.271	DLM	0.010	ug/g	12-OCT-21	13-OCT-21	R5616441
Molybdenum (Mo)	1.25	DLM	0.20	ug/g	12-OCT-21	12-OCT-21	R5616476
Nickel (Ni)	24.4	DLM	1.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Phosphorus (P)	1250	DLM	100	ug/g	12-OCT-21	12-OCT-21	R5616476
Potassium (K)	3420	DLM	200	ug/g	12-OCT-21	12-OCT-21	R5616476
Selenium (Se)	1.13	DLM	0.40	ug/g	12-OCT-21	12-OCT-21	R5616476
Silver (Ag)	0.42	DLM	0.20	ug/g	12-OCT-21	12-OCT-21	R5616476
Sodium (Na)	680	DLM	100	ug/g	12-OCT-21	12-OCT-21	R5616476
Strontium (Sr)	938	DLM	1.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Sulfur (S)	8200	DLM	2000	ug/g	12-OCT-21	12-OCT-21	R5616476
Thallium (Tl)	0.24	DLM	0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Tin (Sn)	5.5	DLM	4.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Titanium (Ti)	947	DLM	2.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Tungsten (W)	<1.0	DLM	1.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Uranium (U)	0.74	DLM	0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Vanadium (V)	44.5	DLM	0.40	ug/g	12-OCT-21	12-OCT-21	R5616476
Zinc (Zn)	172	DLM	4.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Zirconium (Zr)	3.9	DLM	2.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Polycyclic Aromatic Hydrocarbons							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647638-16 TCOM-SG-006 Sampled By: CLIENT on 01-OCT-21 @ 15:15 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.061	DLHM	0.038	ug/g	12-OCT-21	13-OCT-21	R5616306
Acenaphthylene	0.214	DLHM	0.038	ug/g	12-OCT-21	13-OCT-21	R5616306
Acridine	<0.075	DLHM	0.075	ug/g	12-OCT-21	13-OCT-21	R5616306
Anthracene	0.096	DLHM	0.030	ug/g	12-OCT-21	13-OCT-21	R5616306
Benzo(a)anthracene	0.356	R	0.075	ug/g	12-OCT-21	13-OCT-21	R5616306
Benzo(a)pyrene	0.534	DLHM	0.038	ug/g	12-OCT-21	13-OCT-21	R5616306
Benzo(b&j)fluoranthene	0.669	DLHM	0.075	ug/g	12-OCT-21	13-OCT-21	R5616306
Benzo(g,h,i)perylene	0.481	DLHM	0.075	ug/g	12-OCT-21	13-OCT-21	R5616306
Benzo(k)fluoranthene	0.243	DLHM	0.075	ug/g	12-OCT-21	13-OCT-21	R5616306
Chrysene	0.465	DLHM	0.075	ug/g	12-OCT-21	13-OCT-21	R5616306
Dibenz(a,h)anthracene	0.106	DLHM	0.038	ug/g	12-OCT-21	13-OCT-21	R5616306
Fluoroanthene	0.550	DLHM	0.038	ug/g	12-OCT-21	13-OCT-21	R5616306
Fluorene	0.060	DLHM	0.038	ug/g	12-OCT-21	13-OCT-21	R5616306
Indeno(1,2,3-cd)pyrene	0.351	DLHM	0.075	ug/g	12-OCT-21	13-OCT-21	R5616306
1-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	12-OCT-21	13-OCT-21	R5616306
2-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	12-OCT-21	13-OCT-21	R5616306
Naphthalene	<0.038	DLHM	0.038	ug/g	12-OCT-21	13-OCT-21	R5616306
Phenanthrene	0.234	DLHM	0.038	ug/g	12-OCT-21	13-OCT-21	R5616306
Pyrene	0.683	DLHM	0.038	ug/g	12-OCT-21	13-OCT-21	R5616306
Quinoline	<0.038	DLHM	0.038	ug/g	12-OCT-21	13-OCT-21	R5616306
Surrogate: 2-Fluorobiphenyl	90.2		60-140	%	12-OCT-21	13-OCT-21	R5616306
Surrogate: d14-Terphenyl	88.8		60-140	%	12-OCT-21	13-OCT-21	R5616306
B(a)P Total Potency Equivalent	0.811		0.053	ug/g	12-OCT-21	13-OCT-21	R5616306
IACR (CCME)	9.10		0.75		12-OCT-21	13-OCT-21	R5616306
Polychlorinated Biphenyls							
Aroclor 1016	<0.034	DLHM	0.034	mg/kg	14-OCT-21	14-OCT-21	R5617747
Aroclor 1221	<0.034	DLHM	0.034	mg/kg	14-OCT-21	14-OCT-21	R5617747
Aroclor 1232	<0.034	DLHM	0.034	mg/kg	14-OCT-21	14-OCT-21	R5617747
Aroclor 1242	<0.034	DLHM	0.034	mg/kg	14-OCT-21	14-OCT-21	R5617747
Aroclor 1248	<0.034	DLHM	0.034	mg/kg	14-OCT-21	14-OCT-21	R5617747
Aroclor 1254	0.149	DLHM	0.034	mg/kg	14-OCT-21	14-OCT-21	R5617747
Aroclor 1260	0.179	DLHM	0.034	mg/kg	14-OCT-21	14-OCT-21	R5617747
Aroclor 1262	<0.034	DLHM	0.034	mg/kg	14-OCT-21	14-OCT-21	R5617747
Aroclor 1268	<0.034	DLHM	0.034	mg/kg	14-OCT-21	14-OCT-21	R5617747
Total Polychlorinated Biphenyls	0.328	DLHM	0.10	mg/kg	14-OCT-21	14-OCT-21	R5617747
Surrogate: d14-Terphenyl	95.8	DLHM	50-140	%	14-OCT-21	14-OCT-21	R5617747
L2647638-17 TCOM-SC-006A Sampled By: CLIENT on 01-OCT-21 @ 14:15 Matrix: SEDIMENT							
Physical Tests							
% Moisture	73.8		0.25	%	07-OCT-21	08-OCT-21	R5614014
Liquid Limit (LL)	81		1	%	01-NOV-21	01-NOV-21	R5633918

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647638-17 TCOM-SC-006A Sampled By: CLIENT on 01-OCT-21 @ 14:15 Matrix: SEDIMENT							
Physical Tests							
Moisture at Plastic Limit	62		1	%	01-NOV-21	01-NOV-21	R5633918
Plasticity Index (PI)	19		1	%	01-NOV-21	01-NOV-21	R5633918
Specific Gravity	1.19		0.010	kg/L		01-NOV-21	R5634727
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0748		0.0010	g/g	13-OCT-21	13-OCT-21	R5616839
Total Organic Carbon	7.48		0.10	%	13-OCT-21	13-OCT-21	R5616839
Metals							
Aluminum (Al)	24100		50	ug/g	12-OCT-21	12-OCT-21	R5616476
Antimony (Sb)	1.98		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Arsenic (As)	18.0		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Barium (Ba)	347		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Beryllium (Be)	1.00		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Bismuth (Bi)	0.65		0.20	ug/g	12-OCT-21	12-OCT-21	R5616476
Boron (B)	12.6		5.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Cadmium (Cd)	1.33		0.020	ug/g	12-OCT-21	12-OCT-21	R5616476
Calcium (Ca)	55400		50	ug/g	12-OCT-21	12-OCT-21	R5616476
Chromium (Cr)	2350		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Cobalt (Co)	21.5		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Copper (Cu)	58.5		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Iron (Fe)	35600		50	ug/g	12-OCT-21	12-OCT-21	R5616476
Lead (Pb)	234		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Lithium (Li)	22.7		2.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Magnesium (Mg)	18400		20	ug/g	12-OCT-21	12-OCT-21	R5616476
Manganese (Mn)	826		1.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Mercury (Hg)	0.593		0.0050	ug/g	12-OCT-21	13-OCT-21	R5616441
Molybdenum (Mo)	1.39		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Nickel (Ni)	38.8		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Phosphorus (P)	1540		50	ug/g	12-OCT-21	12-OCT-21	R5616476
Potassium (K)	5430		100	ug/g	12-OCT-21	12-OCT-21	R5616476
Selenium (Se)	1.17		0.20	ug/g	12-OCT-21	12-OCT-21	R5616476
Silver (Ag)	0.86		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Sodium (Na)	762		50	ug/g	12-OCT-21	12-OCT-21	R5616476
Strontium (Sr)	330		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Sulfur (S)	6900		1000	ug/g	12-OCT-21	12-OCT-21	R5616476
Thallium (Tl)	0.396		0.050	ug/g	12-OCT-21	12-OCT-21	R5616476
Tin (Sn)	9.6		2.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Titanium (Ti)	1610		1.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Tungsten (W)	<0.50		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Uranium (U)	0.917		0.050	ug/g	12-OCT-21	12-OCT-21	R5616476
Vanadium (V)	68.8		0.20	ug/g	12-OCT-21	12-OCT-21	R5616476
Zinc (Zn)	246		2.0	ug/g	12-OCT-21	12-OCT-21	R5616476

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647638-17 TCOM-SC-006A Sampled By: CLIENT on 01-OCT-21 @ 14:15 Matrix: SEDIMENT							
Metals							
Zirconium (Zr)	9.0		1.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.070	DLHM	0.015	ug/g	12-OCT-21	13-OCT-21	R5616306
Acenaphthylene	0.521	DLHM	0.015	ug/g	12-OCT-21	13-OCT-21	R5616306
Acridine	<0.030	DLHM	0.030	ug/g	12-OCT-21	13-OCT-21	R5616306
Anthracene	0.180	DLHM	0.012	ug/g	12-OCT-21	13-OCT-21	R5616306
Benzo(a)anthracene	0.614	R	0.030	ug/g	12-OCT-21	13-OCT-21	R5616306
Benzo(a)pyrene	0.949	DLHM	0.015	ug/g	12-OCT-21	13-OCT-21	R5616306
Benzo(b&j)fluoranthene	1.01	DLHM	0.030	ug/g	12-OCT-21	13-OCT-21	R5616306
Benzo(g,h,i)perylene	0.665	DLHM	0.030	ug/g	12-OCT-21	13-OCT-21	R5616306
Benzo(k)fluoranthene	0.236	DLHM	0.030	ug/g	12-OCT-21	13-OCT-21	R5616306
Chrysene	0.687	DLHM	0.030	ug/g	12-OCT-21	13-OCT-21	R5616306
Dibenz(a,h)anthracene	0.148	DLHM	0.015	ug/g	12-OCT-21	13-OCT-21	R5616306
Fluoroanthene	0.711	DLHM	0.015	ug/g	12-OCT-21	13-OCT-21	R5616306
Fluorene	0.100	DLHM	0.015	ug/g	12-OCT-21	13-OCT-21	R5616306
Indeno(1,2,3-cd)pyrene	0.493	DLHM	0.030	ug/g	12-OCT-21	13-OCT-21	R5616306
1-Methylnaphthalene	0.030	DLHM	0.015	ug/g	12-OCT-21	13-OCT-21	R5616306
2-Methylnaphthalene	0.035	DLHM	0.015	ug/g	12-OCT-21	13-OCT-21	R5616306
Naphthalene	0.033	DLHM	0.015	ug/g	12-OCT-21	13-OCT-21	R5616306
Phenanthrene	0.296	DLHM	0.015	ug/g	12-OCT-21	13-OCT-21	R5616306
Pyrene	1.13	DLHM	0.015	ug/g	12-OCT-21	13-OCT-21	R5616306
Quinoline	<0.015	DLHM	0.015	ug/g	12-OCT-21	13-OCT-21	R5616306
Surrogate: 2-Fluorobiphenyl	89.8		60-140	%	12-OCT-21	13-OCT-21	R5616306
Surrogate: d14-Terphenyl	90.2		60-140	%	12-OCT-21	13-OCT-21	R5616306
B(a)P Total Potency Equivalent	1.35		0.021	ug/g	12-OCT-21	13-OCT-21	R5616306
IACR (CCME)	13.5		0.30		12-OCT-21	13-OCT-21	R5616306
Polychlorinated Biphenyls							
Aroclor 1016	<0.014	DLHM	0.014	mg/kg	14-OCT-21	14-OCT-21	R5617747
Aroclor 1221	<0.014	DLHM	0.014	mg/kg	14-OCT-21	14-OCT-21	R5617747
Aroclor 1232	<0.014	DLHM	0.014	mg/kg	14-OCT-21	14-OCT-21	R5617747
Aroclor 1242	<0.014	DLHM	0.014	mg/kg	14-OCT-21	14-OCT-21	R5617747
Aroclor 1248	<0.014	DLHM	0.014	mg/kg	14-OCT-21	14-OCT-21	R5617747
Aroclor 1254	0.302	DLHM	0.014	mg/kg	14-OCT-21	14-OCT-21	R5617747
Aroclor 1260	0.529	DLHM	0.014	mg/kg	14-OCT-21	14-OCT-21	R5617747
Aroclor 1262	<0.014	DLHM	0.014	mg/kg	14-OCT-21	14-OCT-21	R5617747
Aroclor 1268	<0.014	DLHM	0.014	mg/kg	14-OCT-21	14-OCT-21	R5617747
Total Polychlorinated Biphenyls	0.832	DLHM	0.041	mg/kg	14-OCT-21	14-OCT-21	R5617747
Surrogate: d14-Terphenyl	89.6	DLHM	50-140	%	14-OCT-21	14-OCT-21	R5617747
L2647638-18 TCOM-SG-007 Sampled By: CLIENT on 01-OCT-21 @ 17:30 Matrix: SEDIMENT							
Physical Tests							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647638-18 TCOM-SG-007 Sampled By: CLIENT on 01-OCT-21 @ 17:30 Matrix: SEDIMENT							
Physical Tests							
% Moisture	78.1		0.25	%	07-OCT-21	08-OCT-21	R5614014
Liquid Limit (LL)	N/A	ICC	1	%	01-NOV-21	01-NOV-21	R5633918
Moisture at Plastic Limit	N/A	ICC	1	%	01-NOV-21	01-NOV-21	R5633918
Plasticity Index (PI)	N/A	ICC	1	%	01-NOV-21	01-NOV-21	R5633918
Specific Gravity	1.16		0.010	kg/L		01-NOV-21	R5634727
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0403		0.0010	g/g	21-OCT-21	21-OCT-21	R5626138
Total Organic Carbon	4.03		0.10	%	21-OCT-21	21-OCT-21	R5626138
Metals							
Aluminum (Al)	11000		50	ug/g	12-OCT-21	12-OCT-21	R5616476
Antimony (Sb)	2.28		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Arsenic (As)	7.96		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Barium (Ba)	188		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Beryllium (Be)	0.53		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Bismuth (Bi)	0.22		0.20	ug/g	12-OCT-21	12-OCT-21	R5616476
Boron (B)	9.2		5.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Cadmium (Cd)	0.402		0.020	ug/g	12-OCT-21	12-OCT-21	R5616476
Calcium (Ca)	25700		50	ug/g	12-OCT-21	12-OCT-21	R5616476
Chromium (Cr)	351		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Cobalt (Co)	13.8		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Copper (Cu)	79.7		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Iron (Fe)	20600		50	ug/g	12-OCT-21	12-OCT-21	R5616476
Lead (Pb)	106		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Lithium (Li)	10.0		2.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Magnesium (Mg)	8020		20	ug/g	12-OCT-21	12-OCT-21	R5616476
Manganese (Mn)	314		1.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Mercury (Hg)	0.227		0.0050	ug/g	12-OCT-21	13-OCT-21	R5616441
Molybdenum (Mo)	0.82		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Nickel (Ni)	18.3		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Phosphorus (P)	1380		50	ug/g	12-OCT-21	12-OCT-21	R5616476
Potassium (K)	2090		100	ug/g	12-OCT-21	12-OCT-21	R5616476
Selenium (Se)	0.36		0.20	ug/g	12-OCT-21	12-OCT-21	R5616476
Silver (Ag)	0.12		0.10	ug/g	12-OCT-21	12-OCT-21	R5616476
Sodium (Na)	480		50	ug/g	12-OCT-21	12-OCT-21	R5616476
Strontium (Sr)	215		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Sulfur (S)	4700		1000	ug/g	12-OCT-21	12-OCT-21	R5616476
Thallium (Tl)	0.199		0.050	ug/g	12-OCT-21	12-OCT-21	R5616476
Tin (Sn)	94.4		2.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Titanium (Ti)	828		1.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Tungsten (W)	<0.50		0.50	ug/g	12-OCT-21	12-OCT-21	R5616476
Uranium (U)	0.754		0.050	ug/g	12-OCT-21	12-OCT-21	R5616476

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647638-18 TCOM-SG-007 Sampled By: CLIENT on 01-OCT-21 @ 17:30 Matrix: SEDIMENT							
Metals							
Vanadium (V)	27.9		0.20	ug/g	12-OCT-21	12-OCT-21	R5616476
Zinc (Zn)	147		2.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Zirconium (Zr)	3.2		1.0	ug/g	12-OCT-21	12-OCT-21	R5616476
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	1.55	DLHM	0.015	ug/g	12-OCT-21	13-OCT-21	R5616306
Acenaphthylene	2.05	DLHM	0.015	ug/g	12-OCT-21	13-OCT-21	R5616306
Acridine	0.478	DLHM	0.030	ug/g	12-OCT-21	13-OCT-21	R5616306
Anthracene	5.44	DLHM	0.012	ug/g	12-OCT-21	13-OCT-21	R5616306
Benzo(a)anthracene	13.7	DLHM	0.030	ug/g	12-OCT-21	13-OCT-21	R5616306
Benzo(a)pyrene	12.1	DLHM	0.015	ug/g	12-OCT-21	13-OCT-21	R5616306
Benzo(b&j)fluoranthene	13.5	DLHM	0.030	ug/g	12-OCT-21	13-OCT-21	R5616306
Benzo(g,h,i)perylene	7.22	DLHM	0.030	ug/g	12-OCT-21	13-OCT-21	R5616306
Benzo(k)fluoranthene	5.11	DLHM	0.030	ug/g	12-OCT-21	13-OCT-21	R5616306
Chrysene	13.8	DLHM	0.030	ug/g	12-OCT-21	13-OCT-21	R5616306
Dibenz(a,h)anthracene	2.14	DLHM	0.015	ug/g	12-OCT-21	13-OCT-21	R5616306
Fluoroanthene	25.9	DLHC	0.15	ug/g	12-OCT-21	13-OCT-21	R5616306
Fluorene	2.61	DLHM	0.015	ug/g	12-OCT-21	13-OCT-21	R5616306
Indeno(1,2,3-cd)pyrene	6.11	DLHM	0.030	ug/g	12-OCT-21	13-OCT-21	R5616306
1-Methylnaphthalene	0.685	DLHM	0.015	ug/g	12-OCT-21	13-OCT-21	R5616306
2-Methylnaphthalene	0.527	DLHM	0.015	ug/g	12-OCT-21	13-OCT-21	R5616306
Naphthalene	0.548	DLHM	0.015	ug/g	12-OCT-21	13-OCT-21	R5616306
Phenanthrene	19.6	DLHM	0.015	ug/g	12-OCT-21	13-OCT-21	R5616306
Pyrene	23.5	DLHC	0.15	ug/g	12-OCT-21	13-OCT-21	R5616306
Quinoline	0.022	DLHM	0.015	ug/g	12-OCT-21	13-OCT-21	R5616306
Surrogate: 2-Fluorobiphenyl	82.5		60-140	%	12-OCT-21	13-OCT-21	R5616306
Surrogate: d14-Terphenyl	68.1		60-140	%	12-OCT-21	13-OCT-21	R5616306
B(a)P Total Potency Equivalent	18.3		0.021	ug/g	12-OCT-21	13-OCT-21	R5616306
IACR (CCME)	210		0.30		12-OCT-21	13-OCT-21	R5616306
Polychlorinated Biphenyls							
Aroclor 1016	<0.014	DLHM	0.014	mg/kg	14-OCT-21	14-OCT-21	R5617747
Aroclor 1221	<0.014	DLHM	0.014	mg/kg	14-OCT-21	14-OCT-21	R5617747
Aroclor 1232	<0.014	DLHM	0.014	mg/kg	14-OCT-21	14-OCT-21	R5617747
Aroclor 1242	<0.014	DLHM	0.014	mg/kg	14-OCT-21	14-OCT-21	R5617747
Aroclor 1248	<0.014	DLHM	0.014	mg/kg	14-OCT-21	14-OCT-21	R5617747
Aroclor 1254	0.097	DLHM	0.014	mg/kg	14-OCT-21	14-OCT-21	R5617747
Aroclor 1260	0.095	DLHM	0.014	mg/kg	14-OCT-21	14-OCT-21	R5617747
Aroclor 1262	<0.014	DLHM	0.014	mg/kg	14-OCT-21	14-OCT-21	R5617747
Aroclor 1268	<0.014	DLHM	0.014	mg/kg	14-OCT-21	14-OCT-21	R5617747
Total Polychlorinated Biphenyls	0.192	DLHM	0.041	mg/kg	14-OCT-21	14-OCT-21	R5617747
Surrogate: d14-Terphenyl	81.2	DLHM	50-140	%	14-OCT-21	14-OCT-21	R5617747
L2647638-19 TCOM-SC-007A CLIENT on 01-OCT-21 @ 16:00							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647638-19 TCOM-SC-007A Sampled By: CLIENT on 01-OCT-21 @ 16:00 Matrix: SEDIMENT							
Physical Tests							
% Moisture	36.6		0.25	%	07-OCT-21	08-OCT-21	R5614014
Liquid Limit (LL)	50		1	%	23-OCT-21	23-OCT-21	R5627486
Moisture at Plastic Limit	28		1	%	23-OCT-21	23-OCT-21	R5627486
Plasticity Index (PI)	22		1	%	23-OCT-21	23-OCT-21	R5627486
Specific Gravity	1.45		0.010	kg/L		07-NOV-21	R5637237
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0148		0.0010	g/g	13-OCT-21	13-OCT-21	R5616839
Total Organic Carbon	1.48		0.10	%	13-OCT-21	13-OCT-21	R5616839
Metals							
Aluminum (Al)	25000		50	ug/g	09-OCT-21	12-OCT-21	R5616337
Antimony (Sb)	0.34		0.10	ug/g	09-OCT-21	12-OCT-21	R5616337
Arsenic (As)	4.30		0.10	ug/g	09-OCT-21	12-OCT-21	R5616337
Barium (Ba)	375		0.50	ug/g	09-OCT-21	12-OCT-21	R5616337
Beryllium (Be)	0.84		0.10	ug/g	09-OCT-21	12-OCT-21	R5616337
Bismuth (Bi)	<0.20		0.20	ug/g	09-OCT-21	12-OCT-21	R5616337
Boron (B)	9.2		5.0	ug/g	09-OCT-21	12-OCT-21	R5616337
Cadmium (Cd)	0.117		0.020	ug/g	09-OCT-21	12-OCT-21	R5616337
Calcium (Ca)	37600		50	ug/g	09-OCT-21	12-OCT-21	R5616337
Chromium (Cr)	73.3		0.50	ug/g	09-OCT-21	12-OCT-21	R5616337
Cobalt (Co)	18.2		0.10	ug/g	09-OCT-21	12-OCT-21	R5616337
Copper (Cu)	31.3		0.50	ug/g	09-OCT-21	12-OCT-21	R5616337
Iron (Fe)	33100		50	ug/g	09-OCT-21	12-OCT-21	R5616337
Lead (Pb)	37.7		0.50	ug/g	09-OCT-21	12-OCT-21	R5616337
Lithium (Li)	21.0		2.0	ug/g	09-OCT-21	12-OCT-21	R5616337
Magnesium (Mg)	16800		20	ug/g	09-OCT-21	12-OCT-21	R5616337
Manganese (Mn)	457		1.0	ug/g	09-OCT-21	12-OCT-21	R5616337
Mercury (Hg)	0.0742		0.0050	ug/g	09-OCT-21	11-OCT-21	R5615382
Molybdenum (Mo)	1.11		0.10	ug/g	09-OCT-21	12-OCT-21	R5616337
Nickel (Ni)	31.9		0.50	ug/g	09-OCT-21	12-OCT-21	R5616337
Phosphorus (P)	1130		50	ug/g	09-OCT-21	12-OCT-21	R5616337
Potassium (K)	5790		100	ug/g	09-OCT-21	12-OCT-21	R5616337
Selenium (Se)	0.33		0.20	ug/g	09-OCT-21	12-OCT-21	R5616337
Silver (Ag)	<0.10		0.10	ug/g	09-OCT-21	12-OCT-21	R5616337
Sodium (Na)	895		50	ug/g	09-OCT-21	12-OCT-21	R5616337
Strontium (Sr)	331		0.50	ug/g	09-OCT-21	12-OCT-21	R5616337
Sulfur (S)	2200		1000	ug/g	09-OCT-21	12-OCT-21	R5616337
Thallium (Tl)	0.256		0.050	ug/g	09-OCT-21	12-OCT-21	R5616337
Tin (Sn)	11.1		2.0	ug/g	09-OCT-21	12-OCT-21	R5616337
Titanium (Ti)	1750		1.0	ug/g	09-OCT-21	12-OCT-21	R5616337
Tungsten (W)	<0.50		0.50	ug/g	09-OCT-21	12-OCT-21	R5616337
Uranium (U)	1.37		0.050	ug/g	09-OCT-21	12-OCT-21	R5616337

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647638-19 TCOM-SC-007A Sampled By: CLIENT on 01-OCT-21 @ 16:00 Matrix: SEDIMENT							
Metals							
Vanadium (V)	63.0		0.20	ug/g	09-OCT-21	12-OCT-21	R5616337
Zinc (Zn)	89.8		2.0	ug/g	09-OCT-21	12-OCT-21	R5616337
Zirconium (Zr)	8.4		1.0	ug/g	09-OCT-21	12-OCT-21	R5616337
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.0517		0.0050	ug/g	12-OCT-21	13-OCT-21	R5616306
Acenaphthylene	0.0603		0.0050	ug/g	12-OCT-21	13-OCT-21	R5616306
Acridine	0.021		0.010	ug/g	12-OCT-21	13-OCT-21	R5616306
Anthracene	0.157		0.0040	ug/g	12-OCT-21	13-OCT-21	R5616306
Benzo(a)anthracene	0.691		0.010	ug/g	12-OCT-21	13-OCT-21	R5616306
Benzo(a)pyrene	0.641		0.0050	ug/g	12-OCT-21	13-OCT-21	R5616306
Benzo(b&j)fluoranthene	0.742		0.010	ug/g	12-OCT-21	13-OCT-21	R5616306
Benzo(g,h,i)perylene	0.317		0.010	ug/g	12-OCT-21	13-OCT-21	R5616306
Benzo(k)fluoranthene	0.306		0.010	ug/g	12-OCT-21	13-OCT-21	R5616306
Chrysene	0.682		0.010	ug/g	12-OCT-21	13-OCT-21	R5616306
Dibenz(a,h)anthracene	0.0977		0.0050	ug/g	12-OCT-21	13-OCT-21	R5616306
Fluoroanthene	1.38		0.0050	ug/g	12-OCT-21	13-OCT-21	R5616306
Fluorene	0.0530		0.0050	ug/g	12-OCT-21	13-OCT-21	R5616306
Indeno(1,2,3-cd)pyrene	0.327		0.010	ug/g	12-OCT-21	13-OCT-21	R5616306
1-Methylnaphthalene	0.0139		0.0050	ug/g	12-OCT-21	13-OCT-21	R5616306
2-Methylnaphthalene	0.0126		0.0050	ug/g	12-OCT-21	13-OCT-21	R5616306
Naphthalene	0.0241		0.0050	ug/g	12-OCT-21	13-OCT-21	R5616306
Phenanthrene	0.485		0.0050	ug/g	12-OCT-21	13-OCT-21	R5616306
Pyrene	1.22		0.0050	ug/g	12-OCT-21	13-OCT-21	R5616306
Quinoline	<0.0050		0.0050	ug/g	12-OCT-21	13-OCT-21	R5616306
Surrogate: 2-Fluorobiphenyl	87.2		60-140	%	12-OCT-21	13-OCT-21	R5616306
Surrogate: d14-Terphenyl	76.2		60-140	%	12-OCT-21	13-OCT-21	R5616306
B(a)P Total Potency Equivalent	0.956		0.020	ug/g	12-OCT-21	13-OCT-21	R5616306
IACR (CCME)	11.3		0.15		12-OCT-21	13-OCT-21	R5616306
Polychlorinated Biphenyls							
Aroclor 1016	<0.0045	DLM	0.0045	mg/kg	14-OCT-21	14-OCT-21	R5617747
Aroclor 1221	<0.0045	DLM	0.0045	mg/kg	14-OCT-21	14-OCT-21	R5617747
Aroclor 1232	<0.0045	DLM	0.0045	mg/kg	14-OCT-21	14-OCT-21	R5617747
Aroclor 1242	<0.0045	DLM	0.0045	mg/kg	14-OCT-21	14-OCT-21	R5617747
Aroclor 1248	<0.0045	DLM	0.0045	mg/kg	14-OCT-21	14-OCT-21	R5617747
Aroclor 1254	<0.0045	DLM	0.0045	mg/kg	14-OCT-21	14-OCT-21	R5617747
Aroclor 1260	<0.0045	DLM	0.0045	mg/kg	14-OCT-21	14-OCT-21	R5617747
Aroclor 1262	<0.0045	DLM	0.0045	mg/kg	14-OCT-21	14-OCT-21	R5617747
Aroclor 1268	<0.0045	DLM	0.0045	mg/kg	14-OCT-21	14-OCT-21	R5617747
Total Polychlorinated Biphenyls	<0.014	DLM	0.014	mg/kg	14-OCT-21	14-OCT-21	R5617747
Surrogate: d14-Terphenyl	77.4	DLHM	50-140	%	14-OCT-21	14-OCT-21	R5617747

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Reference Information

QC Samples with Qualifiers & Comments:

QC Type Description	Parameter	Qualifier	Applies to Sample Number(s)
Duplicate	Acenaphthylene	DUP-H	L2647638-10, -11, -12, -13, -14, -15, -16, -17, -18, -19
Duplicate	Benzo(a)anthracene	DUP-H	L2647638-10, -11, -12, -13, -14, -15, -16, -17, -18, -19
Duplicate	Benzo(a)pyrene	DUP-H	L2647638-10, -11, -12, -13, -14, -15, -16, -17, -18, -19
Duplicate	Benzo(b&j)fluoranthene	DUP-H	L2647638-10, -11, -12, -13, -14, -15, -16, -17, -18, -19
Duplicate	Benzo(g,h,i)perylene	DUP-H	L2647638-10, -11, -12, -13, -14, -15, -16, -17, -18, -19
Duplicate	Benzo(k)fluoranthene	DUP-H	L2647638-10, -11, -12, -13, -14, -15, -16, -17, -18, -19
Duplicate	Chrysene	DUP-H	L2647638-10, -11, -12, -13, -14, -15, -16, -17, -18, -19
Duplicate	Dibenz(a,h)anthracene	DUP-H	L2647638-10, -11, -12, -13, -14, -15, -16, -17, -18, -19
Duplicate	Indeno(1,2,3-cd)pyrene	DUP-H	L2647638-10, -11, -12, -13, -14, -15, -16, -17, -18, -19
Matrix Spike	Acenaphthylene	E	L2647638-10, -11, -12, -13, -14, -15, -16, -17, -18, -19
Matrix Spike	Benzo(a)pyrene	E	L2647638-10, -11, -12, -13, -14, -15, -16, -17, -18, -19
Matrix Spike	Dibenz(a,h)anthracene	MES	L2647638-8, -9
Matrix Spike	Aroclor 1254	MS-B	L2647638-12, -13, -14, -15, -7, -8, -9
Matrix Spike	Aroclor 1260	MS-B	L2647638-12, -13, -14, -15, -7, -8, -9

Sample Parameter Qualifier key listed:

Qualifier	Description
AI	Analytical interferences may be present. Result may be biased high.
DLHC	Detection Limit Raised: Dilution required due to high concentration of test analyte(s).
DLHM	Detection Limit Adjusted: Sample has High Moisture Content
DLM	Detection Limit Adjusted due to sample matrix effects (e.g. chemical interference, colour, turbidity).
DLR	Detection Limit Raised due to required dilution, limited sample amount, and/or high moisture content (soil samples)
DUP-H	Duplicate results outside ALS DQO, due to sample heterogeneity.
DUPH	Duplicate results outside ALS DQO, due to sample heterogeneity.
E	Matrix Spike recovery outside ALS DQO due to heterogeneous analyte background in sample.
FR4	As per applicable reference method(s), soil:water ratio for Fixed Ratio Leach was modified to 1:4 due to high soil organic content.
ICC	Insufficient Clay Content for determination of Plastic Limit or Plasticity Index. Soil is non-plastic.
MES	Data Quality Objective was marginally exceeded (by < 10% absolute) for < 10% of analytes in a Multi-Element Scan / Multi-Parameter Scan (considered acceptable as per OMOE & CCME).
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
PRAR	PCB Pattern Most Closely Resembles Aroclor Reported
PSAL	Limited sample was available for Particle Size Analysis (100g minimum is standard). Measurement Uncertainty for PSA results may be higher than usual.
R	The ion abundance ratio(s) did not meet the acceptance criteria. Value is an estimated maximum.
RRR	Refer to Report Remarks for issues regarding this analysis

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
ATTERBERG-SK	Soil	Atterberg limits	CARTER CSSS 58

The liquid limit (or upper plastic limit) is the point at which the soil becomes semifluid, like softened butter. In operational terms, the liquid limit is defined as the water content at which a trapezoidal groove cut in moist soil is closed after 25 taps on a hard rubber plate (ASTM D-18, 1958).

The plastic limit (or lower plastic limit) is defined as the water content at which soil begins to crumble on being rolled into a thread 1/8 inch (or 3 mm) in diameter. It represents the lowest water content at which soil can be deformed readily without cracking.

The plastic index (which is the difference between the liquid and plastic limits) gives an indication of the "clayeyness" or plasticity of a clay and is employed in engineering classification systems for soils.

This method is equivalent to ASTM D4318-10.

B-HWS-R511-WT	Soil	Boron-HWE-O.Reg 153/04 (July 2011)	HW EXTR, EPA 6010B

A dried solid sample is extracted with calcium chloride, the sample undergoes a heating process. After cooling the sample is filtered and analyzed by ICP/OES.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011 and as of November 30, 2020), unless a subset of the Analytical Test Group (ATG) has been requested (the Protocol states that all analytes in an ATG must be reported).

		Trivalent Chromium in Soil	BC WLAP LAB MANUAL / EPA 3060A & 7196A

Reference Information

CR-CR3-WT	Soil	Calculation	

This analysis is carried out using the method "Trivalent Chromium in Solids", as published in the BC WLAP Laboratory Methods Manual (2003). Chromium (III) is determined by subtraction of chromium (VI) from total chromium. Chromium (VI) is determined by the alkaline leach method, and total chromium is determined using CSR Analytical Method 8 "Strong Acid Leachable Metals (SALM) in Soil", BC Ministry of Environment, Lands and Parks, 26 June 2001. All results are reported as milligrams per dry kilogram of sediment/soil.

CR-CR6-IC-WT	Soil	Hexavalent Chromium in Soil	SW846 3060A/7199

This analysis is carried out using procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846, Method 7199, published by the United States Environmental Protection Agency (EPA). The procedure involves analysis for chromium (VI) by ion chromatography using diphenylcarbazide in a sulphuric acid solution.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

HG-200.2-CVAA-WT	Soil	Mercury in Soil by CVAAS	EPA 200.2/1631E (mod)

Soil samples are digested with nitric and hydrochloric acids, followed by analysis by CVAAS.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

MET-200.2-CCMS-WT	Soil	Metals in Soil by CRC ICPMS	EPA 200.2/6020B (mod)

Soil/sediment is dried, disaggregated, and sieved (2 mm). For tests intended to support Ontario regulations, the <2mm fraction is ground to pass through a 0.355 mm sieve. Strong Acid Leachable Metals in the <2mm fraction are solubilized by heated digestion with nitric and hydrochloric acids. Instrumental analysis is by Collision / Reaction Cell ICPMS.

Limitations: This method is intended to liberate environmentally available metals. Silicate minerals are not solubilized. Some metals may be only partially recovered (matrix dependent), including Al, Ba, Be, Cr, S, Sr, Ti, Tl, V, W, and Zr. Elemental Sulfur may be poorly recovered by this method. Volatile forms of sulfur (e.g. sulfide, H2S) may be excluded if lost during sampling, storage, or digestion.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011), unless a subset of the Analytical Test Group (ATG) has been requested (the Protocol states that all analytes in an ATG must be reported).

MOISTURE-WT	Soil	% Moisture	CCME PHC in Soil - Tier 1 (mod)

PAH-CCME-SQGL-WT	Soil	PAHs in Sediment	SW846 8270

The procedure uses a mechanical shaking technique to extract a representative sub-sample with a mixture of methanol and toluene. The extract is analyzed by GC/MSD. Depending on the analytical GC/MS column used benzo(j)fluoranthene may chromatographically co-elute with benzo(b)fluoranthene or benzo(k)fluoranthene.

PCB9-LOW-WT	Soil	PCBs to meet CCME Sediment Criteria	SW846 8270

A representative sub-sample of a soil sample is mixed with methanol and extracted with toluene using a shaker technique. An aliquot of the separated toluene is analyzed by GC/MSD.

PSA-MUST-SK	Soil	% Particles > 75um (Coarse/Fine)	ASTM D6913

An air-dried sample is reduced to < 2 mm size and mixed with a dispersing agent (Calgon solution). The sample is washed through a 200 mesh (75 µm) sieve. The retained mass of sample is used to determine % sand fraction.

Reference: ASTM D422-63

SPECGRAV-CL	Soil	Specific Gravity	ASTM D 5057

A portion of sample is weighed in a container that is calibrated for volume. Specific Gravity is reported as the mass of sample per mass of an equal volume of pure water, where the density of pure water is taken to be 1.00 g/mL.

TOC-WT	Soil	TOC & FOC in Solids	CARTER 21.3.2

Soil is treated with excess acidic dichromate, which reacts with the organic carbon, oxidizing it to CO2. The residual dichromate is titrated with ferrous ammonium sulphate and TOC calculated by difference.

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location

Reference Information

SK	ALS ENVIRONMENTAL - SASKATOON, SASKATCHEWAN, CANADA
WT	ALS ENVIRONMENTAL - WATERLOO, ONTARIO, CANADA
CL	ALS ENVIRONMENTAL - CALGARY, ALBERTA, CANADA

Chain of Custody Numbers:

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.
mg/kg - milligrams per kilogram based on dry weight of sample
mg/kg wwt - milligrams per kilogram based on wet weight of sample
mg/kg lwt - milligrams per kilogram based on lipid weight of sample
mg/L - unit of concentration based on volume, parts per million.
< - Less than.
D.L. - The reporting limit.
N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.
UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.
Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.

Quality Control Report

Workorder: L2647638 Report Date: 08-NOV-21

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
ATTERBERG-SK	**Soil**							
Batch R5619861								
WG3634787-1 DUP		**L2648161-1**						
Liquid Limit (LL)		78	78		%	0.2	20	15-OCT-21
Moisture at Plastic Limit		55	56		%	1.7	20	15-OCT-21
Plasticity Index (PI)		23	23		%	3.4	20	15-OCT-21
WG3634787-2 IRM		**ATB-1_SOIL**						
Liquid Limit (LL)			107.5		%		80-120	15-OCT-21
Moisture at Plastic Limit			112.4		%		80-120	15-OCT-21
Plasticity Index (PI)			99.6		%		80-120	15-OCT-21
Batch R5627486								
WG3643060-1 DUP		**L2647638-19**						
Liquid Limit (LL)		50	50		%	0.4	20	23-OCT-21
Moisture at Plastic Limit		28	28		%	1.2	20	23-OCT-21
Plasticity Index (PI)		22	21		%	2.5	20	23-OCT-21
WG3643060-2 IRM		**ATB-1_SOIL**						
Liquid Limit (LL)			108.1		%		80-120	23-OCT-21
Moisture at Plastic Limit			113.2		%		80-120	23-OCT-21
Plasticity Index (PI)			99.9		%		80-120	23-OCT-21
Batch R5633918								
WG3647924-1 DUP		**L2647638-17**						
Liquid Limit (LL)		81	85		%	4.5	20	01-NOV-21
Moisture at Plastic Limit		62	62		%	0.1	20	01-NOV-21
Plasticity Index (PI)		19	23		%	18	20	01-NOV-21
WG3647924-2 IRM		**ATB-1_SOIL**						
Liquid Limit (LL)			105.0		%		80-120	01-NOV-21
Moisture at Plastic Limit			111.2		%		80-120	01-NOV-21
Plasticity Index (PI)			95.2		%		80-120	01-NOV-21
B-HWS-R511-WT	**Soil**							
Batch R5615837								
WG3635624-4 DUP		**L2647638-14**						
Boron (B), Hot Water Ext.		0.42	0.45		ug/g	5.0	30	12-OCT-21
WG3635624-2 IRM		**WT SAR4**						
Boron (B), Hot Water Ext.			122.3		%		70-130	12-OCT-21
WG3635624-3 LCS								
Boron (B), Hot Water Ext.			106.0		%		70-130	12-OCT-21
WG3635624-1 MB								
Boron (B), Hot Water Ext.			<0.10		ug/g		0.1	12-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
B-HWS-R511-WT	**Soil**							
Batch R5617414								
WG3637143-4 DUP		**L2650349-1**						
Boron (B), Hot Water Ext.		0.19	0.18		ug/g	2.3	30	14-OCT-21
WG3637143-2 IRM		**WT SAR4**						
Boron (B), Hot Water Ext.			98.1		%		70-130	14-OCT-21
WG3637143-3 LCS								
Boron (B), Hot Water Ext.			105.0		%		70-130	14-OCT-21
WG3637143-1 MB								
Boron (B), Hot Water Ext.			<0.10		ug/g		0.1	14-OCT-21
CR-CR6-IC-WT	**Soil**							
Batch R5616569								
WG3635403-4 CRM		**WT-SQC012**						
Chromium, Hexavalent			84.3		%		70-130	13-OCT-21
WG3635403-3 DUP		**L2648860-3**						
Chromium, Hexavalent		<0.20	<0.20	RPD-NA	ug/g	N/A	35	13-OCT-21
WG3635403-2 LCS								
Chromium, Hexavalent			93.5		%		80-120	13-OCT-21
WG3635403-1 MB								
Chromium, Hexavalent			<0.20		ug/g		0.2	13-OCT-21
Batch R5617146								
WG3635108-4 CRM		**WT-SQC012**						
Chromium, Hexavalent			75.1		%		70-130	13-OCT-21
WG3635108-3 DUP		**L2649286-2**						
Chromium, Hexavalent		<0.20	<0.20	RPD-NA	ug/g	N/A	35	13-OCT-21
WG3635108-2 LCS								
Chromium, Hexavalent			99.7		%		80-120	13-OCT-21
WG3635108-1 MB								
Chromium, Hexavalent			<0.20		ug/g		0.2	13-OCT-21
HG-200.2-CVAA-WT	**Soil**							
Batch R5615382								
WG3634832-9 CRM		**WT-SS-2**						
Mercury (Hg)			102.0		%		70-130	11-OCT-21
WG3634832-13 DUP		**WG3634832-12**						
Mercury (Hg)		0.0129	0.0126		ug/g	2.5	40	11-OCT-21
WG3634832-10 LCS								
Mercury (Hg)			99.5		%		80-120	11-OCT-21
WG3634832-8 MB								
Mercury (Hg)			<0.0050		mg/kg		0.005	11-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
HG-200.2-CVAA-WT	**Soil**							
Batch R5616441								
WG3635564-2 CRM		**WT-SS-2**						
Mercury (Hg)			104.9		%		70-130	13-OCT-21
WG3635564-6 DUP		**WG3635564-5**						
Mercury (Hg)		0.275	0.272		ug/g	0.7	40	13-OCT-21
WG3635564-3 LCS								
Mercury (Hg)			103.5		%		80-120	13-OCT-21
WG3635564-1 MB								
Mercury (Hg)			<0.0050		mg/kg		0.005	13-OCT-21
MET-200.2-CCMS-WT	**Soil**							
Batch R5616337								
WG3634832-9 CRM		**WT-SS-2**						
Aluminum (Al)			106.6		%		70-130	12-OCT-21
Antimony (Sb)			91.2		%		70-130	12-OCT-21
Arsenic (As)			100.5		%		70-130	12-OCT-21
Barium (Ba)			109.4		%		70-130	12-OCT-21
Beryllium (Be)			93.9		%		70-130	12-OCT-21
Bismuth (Bi)			0.13		mg/kg		0-0.34	12-OCT-21
Boron (B)			7.8		mg/kg		3.5-13.5	12-OCT-21
Cadmium (Cd)			94.8		%		70-130	12-OCT-21
Calcium (Ca)			92.1		%		70-130	12-OCT-21
Chromium (Cr)			101.0		%		70-130	12-OCT-21
Cobalt (Co)			97.8		%		70-130	12-OCT-21
Copper (Cu)			96.9		%		70-130	12-OCT-21
Iron (Fe)			98.3		%		70-130	12-OCT-21
Lead (Pb)			90.0		%		70-130	12-OCT-21
Lithium (Li)			84.9		%		70-130	12-OCT-21
Magnesium (Mg)			102.2		%		70-130	12-OCT-21
Manganese (Mn)			106.3		%		70-130	12-OCT-21
Molybdenum (Mo)			93.3		%		70-130	12-OCT-21
Nickel (Ni)			97.6		%		70-130	12-OCT-21
Phosphorus (P)			101.0		%		70-130	12-OCT-21
Potassium (K)			95.6		%		70-130	12-OCT-21
Selenium (Se)			0.15		mg/kg		0-0.34	12-OCT-21
Silver (Ag)			86.0		%		70-130	12-OCT-21
Sodium (Na)			97.4		%		70-130	12-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5616337								
WG3634832-9 CRM		**WT-SS-2**						
Strontium (Sr)			91.1		%		70-130	12-OCT-21
Thallium (Tl)			0.072		mg/kg		0.029-0.129	12-OCT-21
Tin (Sn)			91.7		%		70-130	12-OCT-21
Titanium (Ti)			96.1		%		70-130	12-OCT-21
Uranium (U)			93.7		%		70-130	12-OCT-21
Vanadium (V)			97.5		%		70-130	12-OCT-21
Zinc (Zn)			92.9		%		70-130	12-OCT-21
Zirconium (Zr)			91.1		%		70-130	12-OCT-21
WG3634832-13 DUP		**WG3634832-12**						
Aluminum (Al)		12600	13000		ug/g	3.4	40	12-OCT-21
Antimony (Sb)		0.37	0.43		ug/g	15	30	12-OCT-21
Arsenic (As)		7.80	7.82		ug/g	0.3	30	12-OCT-21
Barium (Ba)		89.3	92.2		ug/g	3.2	40	12-OCT-21
Beryllium (Be)		0.55	0.59		ug/g	7.5	30	12-OCT-21
Bismuth (Bi)		<0.20	<0.20	RPD-NA	ug/g	N/A	30	12-OCT-21
Boron (B)		11.0	12.1		ug/g	9.6	30	12-OCT-21
Cadmium (Cd)		0.234	0.244		ug/g	4.0	30	12-OCT-21
Calcium (Ca)		72500	77200		ug/g	6.2	30	12-OCT-21
Chromium (Cr)		21.5	21.9		ug/g	1.7	30	12-OCT-21
Cobalt (Co)		9.23	9.50		ug/g	2.8	30	12-OCT-21
Copper (Cu)		17.3	17.5		ug/g	1.1	30	12-OCT-21
Iron (Fe)		20900	21100		ug/g	1.2	30	12-OCT-21
Lead (Pb)		10.1	11.0		ug/g	8.6	40	12-OCT-21
Lithium (Li)		18.2	19.8		ug/g	8.4	30	12-OCT-21
Magnesium (Mg)		22300	22600		ug/g	1.5	30	12-OCT-21
Manganese (Mn)		428	426		ug/g	0.5	30	12-OCT-21
Molybdenum (Mo)		2.73	2.98		ug/g	8.6	40	12-OCT-21
Nickel (Ni)		24.2	24.4		ug/g	0.5	30	12-OCT-21
Phosphorus (P)		375	352		ug/g	6.5	30	12-OCT-21
Potassium (K)		2130	2150		ug/g	1.0	40	12-OCT-21
Selenium (Se)		<0.20	<0.20	RPD-NA	ug/g	N/A	30	12-OCT-21
Silver (Ag)		<0.10	<0.10	RPD-NA	ug/g	N/A	40	12-OCT-21
Sodium (Na)		441	440		ug/g	0.3	40	12-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5616337								
WG3634832-13 DUP		**WG3634832-12**						
Strontium (Sr)		90.6	95.2		ug/g	5.0	40	12-OCT-21
Sulfur (S)		<1000	<1000	RPD-NA	ug/g	N/A	30	12-OCT-21
Thallium (Tl)		0.223	0.237		ug/g	5.9	30	12-OCT-21
Tin (Sn)		<2.0	<2.0	RPD-NA	ug/g	N/A	40	12-OCT-21
Titanium (Ti)		190	200		ug/g	4.8	40	12-OCT-21
Tungsten (W)		<0.50	<0.50	RPD-NA	ug/g	N/A	30	12-OCT-21
Uranium (U)		1.08	1.23		ug/g	14	30	12-OCT-21
Vanadium (V)		31.6	31.9		ug/g	1.0	30	12-OCT-21
Zinc (Zn)		49.6	50.1		ug/g	1.0	30	12-OCT-21
Zirconium (Zr)		9.6	10.2		ug/g	6.5	30	12-OCT-21
WG3634832-11 LCS								
Aluminum (Al)			100.8		%		80-120	12-OCT-21
Antimony (Sb)			90.7		%		80-120	12-OCT-21
Arsenic (As)			100.2		%		80-120	12-OCT-21
Barium (Ba)			99.8		%		80-120	12-OCT-21
Beryllium (Be)			89.9		%		80-120	12-OCT-21
Bismuth (Bi)			89.8		%		80-120	12-OCT-21
Boron (B)			85.2		%		80-120	12-OCT-21
Cadmium (Cd)			92.8		%		80-120	12-OCT-21
Calcium (Ca)			91.3		%		80-120	12-OCT-21
Chromium (Cr)			96.4		%		80-120	12-OCT-21
Cobalt (Co)			97.1		%		80-120	12-OCT-21
Copper (Cu)			94.6		%		80-120	12-OCT-21
Iron (Fe)			100.5		%		80-120	12-OCT-21
Lead (Pb)			88.3		%		80-120	12-OCT-21
Lithium (Li)			81.4		%		80-120	12-OCT-21
Magnesium (Mg)			109.2		%		80-120	12-OCT-21
Manganese (Mn)			98.1		%		80-120	12-OCT-21
Molybdenum (Mo)			92.6		%		80-120	12-OCT-21
Nickel (Ni)			95.2		%		80-120	12-OCT-21
Phosphorus (P)			106.1		%		80-120	12-OCT-21
Potassium (K)			107.1		%		80-120	12-OCT-21
Selenium (Se)			95.6		%		80-120	12-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5616337								
WG3634832-11 LCS								
Silver (Ag)			81.7		%		80-120	12-OCT-21
Sodium (Na)			99.4		%		80-120	12-OCT-21
Strontium (Sr)			94.2		%		80-120	12-OCT-21
Sulfur (S)			94.5		%		80-120	12-OCT-21
Thallium (Tl)			87.7		%		80-120	12-OCT-21
Tin (Sn)			90.9		%		80-120	12-OCT-21
Titanium (Ti)			98.5		%		80-120	12-OCT-21
Tungsten (W)			87.9		%		80-120	12-OCT-21
Uranium (U)			90.3		%		80-120	12-OCT-21
Vanadium (V)			99.3		%		80-120	12-OCT-21
Zinc (Zn)			91.6		%		80-120	12-OCT-21
Zirconium (Zr)			89.0		%		80-120	12-OCT-21
WG3634832-8 MB								
Aluminum (Al)			<50		mg/kg		50	12-OCT-21
Antimony (Sb)			<0.10		mg/kg		0.1	12-OCT-21
Arsenic (As)			<0.10		mg/kg		0.1	12-OCT-21
Barium (Ba)			<0.50		mg/kg		0.5	12-OCT-21
Beryllium (Be)			<0.10		mg/kg		0.1	12-OCT-21
Bismuth (Bi)			<0.20		mg/kg		0.2	12-OCT-21
Boron (B)			<5.0		mg/kg		5	12-OCT-21
Cadmium (Cd)			<0.020		mg/kg		0.02	12-OCT-21
Calcium (Ca)			<50		mg/kg		50	12-OCT-21
Chromium (Cr)			<0.50		mg/kg		0.5	12-OCT-21
Cobalt (Co)			<0.10		mg/kg		0.1	12-OCT-21
Copper (Cu)			<0.50		mg/kg		0.5	12-OCT-21
Iron (Fe)			<50		mg/kg		50	12-OCT-21
Lead (Pb)			<0.50		mg/kg		0.5	12-OCT-21
Lithium (Li)			<2.0		mg/kg		2	12-OCT-21
Magnesium (Mg)			<20		mg/kg		20	12-OCT-21
Manganese (Mn)			<1.0		mg/kg		1	12-OCT-21
Molybdenum (Mo)			<0.10		mg/kg		0.1	12-OCT-21
Nickel (Ni)			<0.50		mg/kg		0.5	12-OCT-21
Phosphorus (P)			<50		mg/kg		50	12-OCT-21
Potassium (K)			<100		mg/kg		100	12-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5616337								
WG3634832-8 MB								
Selenium (Se)			<0.20		mg/kg		0.2	12-OCT-21
Silver (Ag)			<0.10		mg/kg		0.1	12-OCT-21
Sodium (Na)			<50		mg/kg		50	12-OCT-21
Strontium (Sr)			<0.50		mg/kg		0.5	12-OCT-21
Sulfur (S)			<1000		mg/kg		1000	12-OCT-21
Thallium (Tl)			<0.050		mg/kg		0.05	12-OCT-21
Tin (Sn)			<2.0		mg/kg		2	12-OCT-21
Titanium (Ti)			<1.0		mg/kg		1	12-OCT-21
Tungsten (W)			<0.50		mg/kg		0.5	12-OCT-21
Uranium (U)			<0.050		mg/kg		0.05	12-OCT-21
Vanadium (V)			<0.20		mg/kg		0.2	12-OCT-21
Zinc (Zn)			<2.0		mg/kg		2	12-OCT-21
Zirconium (Zr)			<1.0		mg/kg		1	12-OCT-21
Batch R5616476								
WG3635564-2 CRM		**WT-SS-2**						
Aluminum (Al)			107.3		%		70-130	12-OCT-21
Antimony (Sb)			94.7		%		70-130	12-OCT-21
Arsenic (As)			101.6		%		70-130	12-OCT-21
Barium (Ba)			110.7		%		70-130	12-OCT-21
Beryllium (Be)			106.7		%		70-130	12-OCT-21
Bismuth (Bi)			0.15		mg/kg		0-0.34	12-OCT-21
Boron (B)			9.1		mg/kg		3.5-13.5	12-OCT-21
Cadmium (Cd)			100.5		%		70-130	12-OCT-21
Calcium (Ca)			106.2		%		70-130	12-OCT-21
Chromium (Cr)			102.0		%		70-130	12-OCT-21
Cobalt (Co)			103.8		%		70-130	12-OCT-21
Copper (Cu)			108.5		%		70-130	12-OCT-21
Iron (Fe)			103.2		%		70-130	12-OCT-21
Lead (Pb)			109.2		%		70-130	12-OCT-21
Lithium (Li)			99.5		%		70-130	12-OCT-21
Magnesium (Mg)			107.7		%		70-130	12-OCT-21
Manganese (Mn)			104.7		%		70-130	12-OCT-21
Molybdenum (Mo)			102.0		%		70-130	12-OCT-21
Nickel (Ni)			104.5		%		70-130	12-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5616476								
WG3635564-2 CRM		**WT-SS-2**						
Phosphorus (P)			103.9		%		70-130	12-OCT-21
Potassium (K)			100.3		%		70-130	12-OCT-21
Selenium (Se)			0.14		mg/kg		0-0.34	12-OCT-21
Silver (Ag)			92.3		%		70-130	12-OCT-21
Sodium (Na)			102.1		%		70-130	12-OCT-21
Strontium (Sr)			107.5		%		70-130	12-OCT-21
Thallium (Tl)			0.079		mg/kg		0.029-0.129	12-OCT-21
Tin (Sn)			103.7		%		70-130	12-OCT-21
Titanium (Ti)			102.6		%		70-130	12-OCT-21
Uranium (U)			99.0		%		70-130	12-OCT-21
Vanadium (V)			105.3		%		70-130	12-OCT-21
Zinc (Zn)			99.3		%		70-130	12-OCT-21
Zirconium (Zr)			104.2		%		70-130	12-OCT-21
WG3635564-6 DUP		**WG3635564-5**						
Aluminum (Al)		19800	20300		ug/g	2.3	40	12-OCT-21
Antimony (Sb)		0.60	0.63		ug/g	5.2	30	12-OCT-21
Arsenic (As)		7.55	8.19		ug/g	8.2	30	12-OCT-21
Barium (Ba)		287	309		ug/g	7.4	40	12-OCT-21
Beryllium (Be)		0.70	0.72		ug/g	3.2	30	12-OCT-21
Bismuth (Bi)		0.38	0.38		ug/g	0.4	30	12-OCT-21
Boron (B)		9.4	9.9		ug/g	4.7	30	12-OCT-21
Cadmium (Cd)		0.795	0.896		ug/g	12	30	12-OCT-21
Calcium (Ca)		71700	74200		ug/g	3.5	30	12-OCT-21
Chromium (Cr)		246	255		ug/g	3.7	30	12-OCT-21
Cobalt (Co)		11.9	12.9		ug/g	7.9	30	12-OCT-21
Copper (Cu)		50.2	53.6		ug/g	6.5	30	12-OCT-21
Iron (Fe)		29200	31100		ug/g	6.6	30	12-OCT-21
Lead (Pb)		180	182		ug/g	1.1	40	12-OCT-21
Lithium (Li)		15.8	17.2		ug/g	8.6	30	12-OCT-21
Magnesium (Mg)		10800	11400		ug/g	5.7	30	12-OCT-21
Manganese (Mn)		907	969		ug/g	6.5	30	12-OCT-21
Molybdenum (Mo)		0.93	1.02		ug/g	8.8	40	12-OCT-21
Nickel (Ni)		26.9	29.3		ug/g	8.3	30	12-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5616476								
WG3635564-6 DUP		**WG3635564-5**						
Phosphorus (P)		1100	1220		ug/g	10	30	12-OCT-21
Potassium (K)		3770	3950		ug/g	4.8	40	12-OCT-21
Selenium (Se)		1.20	1.24		ug/g	3.2	30	12-OCT-21
Silver (Ag)		0.45	0.50		ug/g	12	40	12-OCT-21
Sodium (Na)		662	677		ug/g	2.2	40	12-OCT-21
Strontium (Sr)		327	345		ug/g	5.4	40	12-OCT-21
Sulfur (S)		7300	7700		ug/g	5.3	30	12-OCT-21
Thallium (Tl)		0.304	0.317		ug/g	4.2	30	12-OCT-21
Tin (Sn)		4.7	4.6		ug/g	2.1	40	12-OCT-21
Titanium (Ti)		1130	1160		ug/g	2.4	40	12-OCT-21
Tungsten (W)		<0.50	<0.50	RPD-NA	ug/g	N/A	30	12-OCT-21
Uranium (U)		0.819	0.827		ug/g	1.1	30	12-OCT-21
Vanadium (V)		43.6	45.9		ug/g	5.1	30	12-OCT-21
Zinc (Zn)		156	171		ug/g	8.9	30	12-OCT-21
Zirconium (Zr)		4.4	5.2		ug/g	17	30	12-OCT-21
WG3635564-4 LCS								
Aluminum (Al)			108.8		%		80-120	12-OCT-21
Antimony (Sb)			106.4		%		80-120	12-OCT-21
Arsenic (As)			112.1		%		80-120	12-OCT-21
Barium (Ba)			113.0		%		80-120	12-OCT-21
Beryllium (Be)			101.2		%		80-120	12-OCT-21
Bismuth (Bi)			101.9		%		80-120	12-OCT-21
Boron (B)			96.9		%		80-120	12-OCT-21
Cadmium (Cd)			102.7		%		80-120	12-OCT-21
Calcium (Ca)			104.4		%		80-120	12-OCT-21
Chromium (Cr)			107.8		%		80-120	12-OCT-21
Cobalt (Co)			107.4		%		80-120	12-OCT-21
Copper (Cu)			105.8		%		80-120	12-OCT-21
Iron (Fe)			110.0		%		80-120	12-OCT-21
Lead (Pb)			102.6		%		80-120	12-OCT-21
Lithium (Li)			97.7		%		80-120	12-OCT-21
Magnesium (Mg)			116.5		%		80-120	12-OCT-21
Manganese (Mn)			107.0		%		80-120	12-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5616476								
WG3635564-4 LCS								
Molybdenum (Mo)			106.2		%		80-120	12-OCT-21
Nickel (Ni)			105.3		%		80-120	12-OCT-21
Phosphorus (P)			112.9		%		80-120	12-OCT-21
Potassium (K)			111.0		%		80-120	12-OCT-21
Selenium (Se)			107.3		%		80-120	12-OCT-21
Silver (Ag)			96.1		%		80-120	12-OCT-21
Sodium (Na)			109.8		%		80-120	12-OCT-21
Strontium (Sr)			107.6		%		80-120	12-OCT-21
Sulfur (S)			106.3		%		80-120	12-OCT-21
Thallium (Tl)			103.5		%		80-120	12-OCT-21
Tin (Sn)			104.6		%		80-120	12-OCT-21
Titanium (Ti)			105.7		%		80-120	12-OCT-21
Tungsten (W)			103.7		%		80-120	12-OCT-21
Uranium (U)			102.9		%		80-120	12-OCT-21
Vanadium (V)			109.8		%		80-120	12-OCT-21
Zinc (Zn)			102.2		%		80-120	12-OCT-21
Zirconium (Zr)			101.8		%		80-120	12-OCT-21
WG3635564-1 MB								
Aluminum (Al)			<50		mg/kg		50	12-OCT-21
Antimony (Sb)			<0.10		mg/kg		0.1	12-OCT-21
Arsenic (As)			<0.10		mg/kg		0.1	12-OCT-21
Barium (Ba)			<0.50		mg/kg		0.5	12-OCT-21
Beryllium (Be)			<0.10		mg/kg		0.1	12-OCT-21
Bismuth (Bi)			<0.20		mg/kg		0.2	12-OCT-21
Boron (B)			<5.0		mg/kg		5	12-OCT-21
Cadmium (Cd)			<0.020		mg/kg		0.02	12-OCT-21
Calcium (Ca)			<50		mg/kg		50	12-OCT-21
Chromium (Cr)			<0.50		mg/kg		0.5	12-OCT-21
Cobalt (Co)			<0.10		mg/kg		0.1	12-OCT-21
Copper (Cu)			<0.50		mg/kg		0.5	12-OCT-21
Iron (Fe)			<50		mg/kg		50	12-OCT-21
Lead (Pb)			<0.50		mg/kg		0.5	12-OCT-21
Lithium (Li)			<2.0		mg/kg		2	12-OCT-21
Magnesium (Mg)			<20		mg/kg		20	12-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5616476								
WG3635564-1 MB								
Manganese (Mn)			<1.0		mg/kg		1	12-OCT-21
Molybdenum (Mo)			<0.10		mg/kg		0.1	12-OCT-21
Nickel (Ni)			<0.50		mg/kg		0.5	12-OCT-21
Phosphorus (P)			<50		mg/kg		50	12-OCT-21
Potassium (K)			<100		mg/kg		100	12-OCT-21
Selenium (Se)			<0.20		mg/kg		0.2	12-OCT-21
Silver (Ag)			<0.10		mg/kg		0.1	12-OCT-21
Sodium (Na)			<50		mg/kg		50	12-OCT-21
Strontium (Sr)			<0.50		mg/kg		0.5	12-OCT-21
Sulfur (S)			<1000		mg/kg		1000	12-OCT-21
Thallium (Tl)			<0.050		mg/kg		0.05	12-OCT-21
Tin (Sn)			<2.0		mg/kg		2	12-OCT-21
Titanium (Ti)			<1.0		mg/kg		1	12-OCT-21
Tungsten (W)			<0.50		mg/kg		0.5	12-OCT-21
Uranium (U)			<0.050		mg/kg		0.05	12-OCT-21
Vanadium (V)			<0.20		mg/kg		0.2	12-OCT-21
Zinc (Zn)			<2.0		mg/kg		2	12-OCT-21
Zirconium (Zr)			<1.0		mg/kg		1	12-OCT-21
MOISTURE-WT	**Soil**							
Batch R5614014								
WG3633054-3 DUP		**L2647328-5**						
% Moisture		32.1	31.7		%	1.1	20	08-OCT-21
WG3633054-2 LCS								
% Moisture			99.1		%		90-110	08-OCT-21
WG3633054-1 MB								
% Moisture			<0.25		%		0.25	08-OCT-21
PAH-CCME-SQGL-WT	**Soil**							
Batch R5616306								
WG3635448-3 DUP		**WG3635448-5**						
1-Methylnaphthalene		<0.038	<0.038	RPD-NA	ug/g	N/A	50	13-OCT-21
2-Methylnaphthalene		<0.038	<0.038	RPD-NA	ug/g	N/A	50	13-OCT-21
Acenaphthene		0.147	0.127		ug/g	15	50	13-OCT-21
Acenaphthylene		0.856	0.397	DUP-H	ug/g	73	50	13-OCT-21
Acridine		<0.075	<0.075	RPD-NA	ug/g	N/A	50	13-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-CCME-SQGL-WT	**Soil**							
Batch R5616306								
WG3635448-3 DUP		**WG3635448-5**						
Anthracene		0.784	0.501		ug/g	44	50	13-OCT-21
Benzo(a)anthracene		1.76	0.994	DUP-H	ug/g	56	50	13-OCT-21
Benzo(a)pyrene		2.52	1.24	DUP-H	ug/g	68	50	13-OCT-21
Benzo(b&j)fluoranthene		1.92	1.09	DUP-H	ug/g	55	50	13-OCT-21
Benzo(g,h,i)perylene		1.42	0.716	DUP-H	ug/g	66	50	13-OCT-21
Benzo(k)fluoranthene		0.724	0.426	DUP-H	ug/g	52	50	13-OCT-21
Chrysene		2.19	1.13	DUP-H	ug/g	64	50	13-OCT-21
Dibenz(a,h)anthracene		0.348	0.175	DUP-H	ug/g	66	50	13-OCT-21
Fluoroanthene		1.39	1.18		ug/g	17	50	13-OCT-21
Fluorene		0.160	0.112		ug/g	35	50	13-OCT-21
Indeno(1,2,3-cd)pyrene		1.02	0.524	DUP-H	ug/g	65	50	13-OCT-21
Naphthalene		<0.038	<0.038	RPD-NA	ug/g	N/A	50	13-OCT-21
Phenanthrene		0.465	0.453		ug/g	2.5	50	13-OCT-21
Pyrene		2.05	1.66		ug/g	21	50	13-OCT-21
Quinoline		<0.038	<0.038	RPD-NA	ug/g	N/A	50	13-OCT-21
WG3635448-2 LCS								
1-Methylnaphthalene			97.7		%		50-140	13-OCT-21
2-Methylnaphthalene			93.5		%		50-140	13-OCT-21
Acenaphthene			92.1		%		50-140	13-OCT-21
Acenaphthylene			87.3		%		50-140	13-OCT-21
Acridine			84.3		%		50-140	13-OCT-21
Anthracene			83.5		%		50-140	13-OCT-21
Benzo(a)anthracene			94.8		%		50-140	13-OCT-21
Benzo(a)pyrene			83.2		%		50-140	13-OCT-21
Benzo(b&j)fluoranthene			90.0		%		50-150	13-OCT-21
Benzo(g,h,i)perylene			93.8		%		50-140	13-OCT-21
Benzo(k)fluoranthene			94.5		%		50-140	13-OCT-21
Chrysene			101.8		%		50-140	13-OCT-21
Dibenz(a,h)anthracene			95.8		%		50-140	13-OCT-21
Fluoroanthene			94.2		%		50-140	13-OCT-21
Fluorene			89.5		%		50-140	13-OCT-21
Indeno(1,2,3-cd)pyrene			93.9		%		50-140	13-OCT-21
Naphthalene			89.5		%		50-140	13-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-CCME-SQGL-WT	**Soil**							
Batch R5616306								
WG3635448-2 LCS								
Phenanthrene			95.9		%		50-140	13-OCT-21
Pyrene			94.0		%		50-140	13-OCT-21
Quinoline			76.2		%		50-140	13-OCT-21
WG3635448-1 MB								
1-Methylnaphthalene			<0.0050		ug/g		0.005	13-OCT-21
2-Methylnaphthalene			<0.0050		ug/g		0.005	13-OCT-21
Acenaphthene			<0.0050		ug/g		0.005	13-OCT-21
Acenaphthylene			<0.0050		ug/g		0.005	13-OCT-21
Acridine			<0.010		ug/g		0.01	13-OCT-21
Anthracene			<0.0040		ug/g		0.004	13-OCT-21
Benzo(a)anthracene			<0.010		ug/g		0.01	13-OCT-21
Benzo(a)pyrene			<0.0050		ug/g		0.005	13-OCT-21
Benzo(b&j)fluoranthene			<0.010		ug/g		0.01	13-OCT-21
Benzo(g,h,i)perylene			<0.010		ug/g		0.01	13-OCT-21
Benzo(k)fluoranthene			<0.010		ug/g		0.01	13-OCT-21
Chrysene			<0.010		ug/g		0.01	13-OCT-21
Dibenz(a,h)anthracene			<0.0050		ug/g		0.005	13-OCT-21
Fluoroanthene			<0.0050		ug/g		0.005	13-OCT-21
Fluorene			<0.0050		ug/g		0.005	13-OCT-21
Indeno(1,2,3-cd)pyrene			<0.010		ug/g		0.01	13-OCT-21
Naphthalene			<0.0050		ug/g		0.005	13-OCT-21
Phenanthrene			<0.0050		ug/g		0.005	13-OCT-21
Pyrene			<0.0050		ug/g		0.005	13-OCT-21
Quinoline			<0.0050		ug/g		0.005	13-OCT-21
Surrogate: 2-Fluorobiphenyl			90.9		%		60-140	13-OCT-21
Surrogate: d14-Terphenyl			93.7		%		60-140	13-OCT-21
WG3635448-4 MS		**WG3635448-5**						
1-Methylnaphthalene			97.6		%		50-150	13-OCT-21
2-Methylnaphthalene			94.3		%		50-150	13-OCT-21
Acenaphthene			92.5		%		50-150	13-OCT-21
Acenaphthylene			45.5	E	%		50-150	13-OCT-21
Acridine			71.9		%		50-150	13-OCT-21
Anthracene			73.2		%		50-150	13-OCT-21
Benzo(a)anthracene			74.2		%		50-150	13-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-CCME-SQGL-WT	**Soil**							
Batch R5616306								
WG3635448-4 MS		**WG3635448-5**						
Benzo(a)pyrene			36.0	E	%		50-150	13-OCT-21
Benzo(b&j)fluoranthene			51.6		%		50-150	13-OCT-21
Benzo(g,h,i)perylene			59.5		%		50-150	13-OCT-21
Benzo(k)fluoranthene			77.4		%		50-150	13-OCT-21
Chrysene			59.5		%		50-150	13-OCT-21
Dibenz(a,h)anthracene			79.0		%		50-150	13-OCT-21
Fluoroanthene			84.1		%		50-150	13-OCT-21
Fluorene			94.2		%		50-150	13-OCT-21
Indeno(1,2,3-cd)pyrene			74.9		%		50-150	13-OCT-21
Naphthalene			89.1		%		50-150	13-OCT-21
Phenanthrene			91.3		%		50-150	13-OCT-21
Pyrene			76.9		%		50-150	13-OCT-21
Quinoline			88.1		%		50-150	13-OCT-21
Batch R5616882								
WG3636600-3 DUP		**WG3636600-5**						
1-Methylnaphthalene		<0.038	<0.038	RPD-NA	ug/g	N/A	50	13-OCT-21
2-Methylnaphthalene		<0.038	<0.038	RPD-NA	ug/g	N/A	50	13-OCT-21
Acenaphthene		<0.038	<0.038	RPD-NA	ug/g	N/A	50	13-OCT-21
Acenaphthylene		<0.038	<0.038	RPD-NA	ug/g	N/A	50	13-OCT-21
Acridine		<0.075	<0.075	RPD-NA	ug/g	N/A	50	13-OCT-21
Anthracene		<0.030	<0.030	RPD-NA	ug/g	N/A	50	13-OCT-21
Benzo(a)anthracene		<0.075	<0.075	RPD-NA	ug/g	N/A	50	13-OCT-21
Benzo(a)pyrene		<0.038	<0.038	RPD-NA	ug/g	N/A	50	13-OCT-21
Benzo(b&j)fluoranthene		<0.075	<0.075	RPD-NA	ug/g	N/A	50	13-OCT-21
Benzo(g,h,i)perylene		<0.075	<0.075	RPD-NA	ug/g	N/A	50	13-OCT-21
Benzo(k)fluoranthene		<0.075	<0.075	RPD-NA	ug/g	N/A	50	13-OCT-21
Chrysene		<0.075	<0.075	RPD-NA	ug/g	N/A	50	13-OCT-21
Dibenz(a,h)anthracene		<0.038	<0.038	RPD-NA	ug/g	N/A	50	13-OCT-21
Fluoroanthene		0.052	<0.038	RPD-NA	ug/g	N/A	50	13-OCT-21
Fluorene		<0.038	<0.038	RPD-NA	ug/g	N/A	50	13-OCT-21
Indeno(1,2,3-cd)pyrene		<0.075	<0.075	RPD-NA	ug/g	N/A	50	13-OCT-21
Naphthalene		<0.038	<0.038	RPD-NA	ug/g	N/A	50	13-OCT-21
Phenanthrene		<0.038	<0.038	RPD-NA	ug/g	N/A	50	13-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-CCME-SQGL-WT	**Soil**							
Batch R5616882								
WG3636600-3 DUP		**WG3636600-5**						
Pyrene		0.039	<0.038	RPD-NA	ug/g	N/A	50	13-OCT-21
Quinoline		<0.038	<0.038	RPD-NA	ug/g	N/A	50	13-OCT-21
WG3636600-2 LCS								
1-Methylnaphthalene			91.1		%		50-140	13-OCT-21
2-Methylnaphthalene			87.3		%		50-140	13-OCT-21
Acenaphthene			86.6		%		50-140	13-OCT-21
Acenaphthylene			84.1		%		50-140	13-OCT-21
Acridine			84.0		%		50-140	13-OCT-21
Anthracene			78.1		%		50-140	13-OCT-21
Benzo(a)anthracene			89.2		%		50-140	13-OCT-21
Benzo(a)pyrene			75.3		%		50-140	13-OCT-21
Benzo(b&j)fluoranthene			83.4		%		50-150	13-OCT-21
Benzo(g,h,i)perylene			82.2		%		50-140	13-OCT-21
Benzo(k)fluoranthene			84.3		%		50-140	13-OCT-21
Chrysene			89.9		%		50-140	13-OCT-21
Dibenz(a,h)anthracene			84.2		%		50-140	13-OCT-21
Fluoroanthene			87.5		%		50-140	13-OCT-21
Fluorene			84.9		%		50-140	13-OCT-21
Indeno(1,2,3-cd)pyrene			83.3		%		50-140	13-OCT-21
Naphthalene			84.5		%		50-140	13-OCT-21
Phenanthrene			86.8		%		50-140	13-OCT-21
Pyrene			86.1		%		50-140	13-OCT-21
Quinoline			74.8		%		50-140	13-OCT-21
WG3636600-1 MB								
1-Methylnaphthalene			<0.0050		ug/g		0.005	13-OCT-21
2-Methylnaphthalene			<0.0050		ug/g		0.005	13-OCT-21
Acenaphthene			<0.0050		ug/g		0.005	13-OCT-21
Acenaphthylene			<0.0050		ug/g		0.005	13-OCT-21
Acridine			<0.010		ug/g		0.01	13-OCT-21
Anthracene			<0.0040		ug/g		0.004	13-OCT-21
Benzo(a)anthracene			<0.010		ug/g		0.01	13-OCT-21
Benzo(a)pyrene			<0.0050		ug/g		0.005	13-OCT-21
Benzo(b&j)fluoranthene			<0.010		ug/g		0.01	13-OCT-21
Benzo(g,h,i)perylene			<0.010		ug/g		0.01	13-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-CCME-SQGL-WT	**Soil**							
Batch R5616882								
WG3636600-1 MB								
Benzo(k)fluoranthene			<0.010		ug/g		0.01	13-OCT-21
Chrysene			<0.010		ug/g		0.01	13-OCT-21
Dibenz(a,h)anthracene			<0.0050		ug/g		0.005	13-OCT-21
Fluoroanthene			<0.0050		ug/g		0.005	13-OCT-21
Fluorene			<0.0050		ug/g		0.005	13-OCT-21
Indeno(1,2,3-cd)pyrene			<0.010		ug/g		0.01	13-OCT-21
Naphthalene			<0.0050		ug/g		0.005	13-OCT-21
Phenanthrene			<0.0050		ug/g		0.005	13-OCT-21
Pyrene			<0.0050		ug/g		0.005	13-OCT-21
Quinoline			<0.0050		ug/g		0.005	13-OCT-21
Surrogate: 2-Fluorobiphenyl			86.8		%		60-140	13-OCT-21
Surrogate: d14-Terphenyl			91.6		%		60-140	13-OCT-21
WG3636600-4 MS		**WG3636600-5**						
1-Methylnaphthalene			101.6		%		50-150	13-OCT-21
2-Methylnaphthalene			98.5		%		50-150	13-OCT-21
Acenaphthene			95.1		%		50-150	13-OCT-21
Acenaphthylene			69.6		%		50-150	13-OCT-21
Acridine			79.9		%		50-150	13-OCT-21
Anthracene			80.9		%		50-150	13-OCT-21
Benzo(a)anthracene			77.3		%		50-150	13-OCT-21
Benzo(a)pyrene			55.3		%		50-150	13-OCT-21
Benzo(b&j)fluoranthene			60.9		%		50-150	13-OCT-21
Benzo(g,h,i)perylene			51.1		%		50-150	13-OCT-21
Benzo(k)fluoranthene			60.9		%		50-150	13-OCT-21
Chrysene			76.9		%		50-150	13-OCT-21
Dibenz(a,h)anthracene			48.5	MES	%		50-150	13-OCT-21
Fluoroanthene			87.9		%		50-150	13-OCT-21
Fluorene			95.2		%		50-150	13-OCT-21
Indeno(1,2,3-cd)pyrene			51.2		%		50-150	13-OCT-21
Naphthalene			95.6		%		50-150	13-OCT-21
Phenanthrene			92.3		%		50-150	13-OCT-21
Pyrene			86.3		%		50-150	13-OCT-21
Quinoline			93.2		%		50-150	13-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-CCME-SQGL-WT	**Soil**							
Batch R5616947								
WG3635513-7 DUP		**WG3635513-6**						
1-Methylnaphthalene		0.035	0.037		ug/g	5.4	50	14-OCT-21
2-Methylnaphthalene		0.039	0.046		ug/g	16	50	14-OCT-21
Acenaphthene		0.081	0.083		ug/g	2.6	50	14-OCT-21
Acenaphthylene		0.253	0.306		ug/g	19	50	14-OCT-21
Acridine		<0.050	<0.050	RPD-NA	ug/g	N/A	50	14-OCT-21
Anthracene		0.242	0.246		ug/g	1.7	50	14-OCT-21
Benzo(a)anthracene		0.667	0.708		ug/g	6.0	50	14-OCT-21
Benzo(a)pyrene		0.926	0.997		ug/g	7.4	50	14-OCT-21
Benzo(b&j)fluoranthene		0.942	1.06		ug/g	12	50	14-OCT-21
Benzo(g,h,i)perylene		0.721	0.762		ug/g	5.6	50	14-OCT-21
Benzo(k)fluoranthene		0.386	0.414		ug/g	6.9	50	14-OCT-21
Chrysene		0.800	0.827		ug/g	3.3	50	14-OCT-21
Dibenz(a,h)anthracene		0.159	0.169		ug/g	5.9	50	14-OCT-21
Fluoroanthene		1.05	1.05		ug/g	0.1	50	14-OCT-21
Fluorene		0.082	0.090		ug/g	8.9	50	14-OCT-21
Indeno(1,2,3-cd)pyrene		0.599	0.636		ug/g	6.0	50	14-OCT-21
Naphthalene		0.040	0.041		ug/g	1.4	50	14-OCT-21
Phenanthrene		0.412	0.420		ug/g	2.0	50	14-OCT-21
Pyrene		1.31	1.31		ug/g	0.1	50	14-OCT-21
Quinoline		<0.025	<0.025	RPD-NA	ug/g	N/A	50	14-OCT-21
WG3635513-2 LCS								
1-Methylnaphthalene			94.4		%		50-140	13-OCT-21
2-Methylnaphthalene			90.7		%		50-140	13-OCT-21
Acenaphthene			89.5		%		50-140	13-OCT-21
Acenaphthylene			86.6		%		50-140	13-OCT-21
Acridine			89.7		%		50-140	13-OCT-21
Anthracene			82.2		%		50-140	13-OCT-21
Benzo(a)anthracene			94.1		%		50-140	13-OCT-21
Benzo(a)pyrene			80.0		%		50-140	13-OCT-21
Benzo(b&j)fluoranthene			88.0		%		50-150	13-OCT-21
Benzo(g,h,i)perylene			91.6		%		50-140	13-OCT-21
Benzo(k)fluoranthene			89.9		%		50-140	13-OCT-21
Chrysene			97.5		%		50-140	13-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-CCME-SQGL-WT	**Soil**							
Batch R5616947								
WG3635513-2 LCS								
Dibenz(a,h)anthracene			95.3		%		50-140	13-OCT-21
Fluoroanthene			92.3		%		50-140	13-OCT-21
Fluorene			88.5		%		50-140	13-OCT-21
Indeno(1,2,3-cd)pyrene			92.3		%		50-140	13-OCT-21
Naphthalene			86.7		%		50-140	13-OCT-21
Phenanthrene			92.4		%		50-140	13-OCT-21
Pyrene			92.2		%		50-140	13-OCT-21
Quinoline			81.3		%		50-140	13-OCT-21
WG3635513-1 MB								
1-Methylnaphthalene			<0.0050		ug/g		0.005	13-OCT-21
2-Methylnaphthalene			<0.0050		ug/g		0.005	13-OCT-21
Acenaphthene			<0.0050		ug/g		0.005	13-OCT-21
Acenaphthylene			<0.0050		ug/g		0.005	13-OCT-21
Acridine			<0.010		ug/g		0.01	13-OCT-21
Anthracene			<0.0040		ug/g		0.004	13-OCT-21
Benzo(a)anthracene			<0.010		ug/g		0.01	13-OCT-21
Benzo(a)pyrene			<0.0050		ug/g		0.005	13-OCT-21
Benzo(b&j)fluoranthene			<0.010		ug/g		0.01	13-OCT-21
Benzo(g,h,i)perylene			<0.010		ug/g		0.01	13-OCT-21
Benzo(k)fluoranthene			<0.010		ug/g		0.01	13-OCT-21
Chrysene			<0.010		ug/g		0.01	13-OCT-21
Dibenz(a,h)anthracene			<0.0050		ug/g		0.005	13-OCT-21
Fluoroanthene			<0.0050		ug/g		0.005	13-OCT-21
Fluorene			<0.0050		ug/g		0.005	13-OCT-21
Indeno(1,2,3-cd)pyrene			<0.010		ug/g		0.01	13-OCT-21
Naphthalene			<0.0050		ug/g		0.005	13-OCT-21
Phenanthrene			<0.0050		ug/g		0.005	13-OCT-21
Pyrene			<0.0050		ug/g		0.005	13-OCT-21
Quinoline			<0.0050		ug/g		0.005	13-OCT-21
Surrogate: 2-Fluorobiphenyl			86.1		%		60-140	13-OCT-21
Surrogate: d14-Terphenyl			89.2		%		60-140	13-OCT-21
WG3635513-8 MS		**WG3635513-6**						
1-Methylnaphthalene			105.1		%		50-150	14-OCT-21
2-Methylnaphthalene			102.0		%		50-150	14-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-CCME-SQGL-WT	**Soil**							
Batch R5616947								
WG3635513-8 MS		**WG3635513-6**						
Acenaphthene			101.0		%		50-150	14-OCT-21
Acenaphthylene			88.0		%		50-150	14-OCT-21
Acridine			89.2		%		50-150	14-OCT-21
Anthracene			97.5		%		50-150	14-OCT-21
Benzo(a)anthracene			112.8		%		50-150	14-OCT-21
Benzo(a)pyrene			88.6		%		50-150	14-OCT-21
Benzo(b&j)fluoranthene			89.6		%		50-150	14-OCT-21
Benzo(g,h,i)perylene			87.4		%		50-150	14-OCT-21
Benzo(k)fluoranthene			94.8		%		50-150	14-OCT-21
Chrysene			105.6		%		50-150	14-OCT-21
Dibenz(a,h)anthracene			82.6		%		50-150	14-OCT-21
Fluoroanthene			104.5		%		50-150	14-OCT-21
Fluorene			103.9		%		50-150	14-OCT-21
Indeno(1,2,3-cd)pyrene			92.4		%		50-150	14-OCT-21
Naphthalene			97.1		%		50-150	14-OCT-21
Phenanthrene			102.1		%		50-150	14-OCT-21
Pyrene			107.6		%		50-150	14-OCT-21
Quinoline			94.7		%		50-150	14-OCT-21
PCB9-LOW-WT	**Soil**							
Batch R5616907								
WG3635528-3 DUP		**WG3635528-5**						
Aroclor 1016		<0.034	<0.034	RPD-NA	mg/kg	N/A	50	13-OCT-21
Aroclor 1221		<0.034	<0.034	RPD-NA	mg/kg	N/A	50	13-OCT-21
Aroclor 1232		<0.034	<0.034	RPD-NA	mg/kg	N/A	50	13-OCT-21
Aroclor 1242		<0.034	<0.034	RPD-NA	mg/kg	N/A	40	13-OCT-21
Aroclor 1248		<0.034	<0.034	RPD-NA	mg/kg	N/A	40	13-OCT-21
Aroclor 1254		0.196	0.202		mg/kg	3.0	40	13-OCT-21
Aroclor 1260		0.227	0.257		mg/kg	12	40	13-OCT-21
Aroclor 1262		<0.034	<0.034	RPD-NA	mg/kg	N/A	50	13-OCT-21
Aroclor 1268		<0.034	<0.034	RPD-NA	mg/kg	N/A	50	13-OCT-21
WG3635528-2 LCS								
Aroclor 1242			91.8		%		60-140	13-OCT-21
Aroclor 1248			83.0		%		60-140	13-OCT-21
Aroclor 1254			109.8				60-140	

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PCB9-LOW-WT	**Soil**							
Batch R5616907								
WG3635528-2 LCS								
Aroclor 1254			109.8		%		60-140	13-OCT-21
Aroclor 1260			109.1		%		60-140	13-OCT-21
WG3635528-1 MB								
Aroclor 1016			<0.0030		mg/kg		0.003	13-OCT-21
Aroclor 1221			<0.0030		mg/kg		0.003	13-OCT-21
Aroclor 1232			<0.0030		mg/kg		0.003	13-OCT-21
Aroclor 1242			<0.0030		mg/kg		0.003	13-OCT-21
Aroclor 1248			<0.0030		mg/kg		0.003	13-OCT-21
Aroclor 1254			<0.0030		mg/kg		0.003	13-OCT-21
Aroclor 1260			<0.0030		mg/kg		0.003	13-OCT-21
Aroclor 1262			<0.0030		mg/kg		0.003	13-OCT-21
Aroclor 1268			<0.0030		mg/kg		0.003	13-OCT-21
Surrogate: d14-Terphenyl			119.3		%		50-140	13-OCT-21
WG3635528-4 MS		**WG3635528-5**						
Aroclor 1242			106.5		%		60-140	13-OCT-21
Aroclor 1254			N/A	MS-B	%		-	13-OCT-21
Aroclor 1260			N/A	MS-B	%		-	13-OCT-21
Batch R5617747								
WG3636172-3 DUP		**WG3636172-5**						
Aroclor 1016		<0.0045	<0.0045	RPD-NA	mg/kg	N/A	50	14-OCT-21
Aroclor 1221		<0.0045	<0.0045	RPD-NA	mg/kg	N/A	50	14-OCT-21
Aroclor 1232		<0.0045	<0.0045	RPD-NA	mg/kg	N/A	50	14-OCT-21
Aroclor 1242		<0.0045	<0.0045	RPD-NA	mg/kg	N/A	40	14-OCT-21
Aroclor 1248		<0.0045	<0.0045	RPD-NA	mg/kg	N/A	40	14-OCT-21
Aroclor 1254		<0.0045	<0.0045	RPD-NA	mg/kg	N/A	40	14-OCT-21
Aroclor 1260		<0.0045	<0.0045	RPD-NA	mg/kg	N/A	40	14-OCT-21
Aroclor 1262		<0.0045	<0.0045	RPD-NA	mg/kg	N/A	50	14-OCT-21
Aroclor 1268		<0.0045	<0.0045	RPD-NA	mg/kg	N/A	50	14-OCT-21
WG3636172-2 LCS								
Aroclor 1242			111.1		%		60-140	14-OCT-21
Aroclor 1248			117.9		%		60-140	14-OCT-21
Aroclor 1254			132.5		%		60-140	14-OCT-21
Aroclor 1260			123.3		%		60-140	14-OCT-21
WG3636172-1 MB								

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PCB9-LOW-WT	**Soil**							
Batch R5617747								
WG3636172-1 MB								
Aroclor 1016			<0.0030		mg/kg		0.003	14-OCT-21
Aroclor 1221			<0.0030		mg/kg		0.003	14-OCT-21
Aroclor 1232			<0.0030		mg/kg		0.003	14-OCT-21
Aroclor 1242			<0.0030		mg/kg		0.003	14-OCT-21
Aroclor 1248			<0.0030		mg/kg		0.003	14-OCT-21
Aroclor 1254			<0.0030		mg/kg		0.003	14-OCT-21
Aroclor 1260			<0.0030		mg/kg		0.003	14-OCT-21
Aroclor 1262			<0.0030		mg/kg		0.003	14-OCT-21
Aroclor 1268			<0.0030		mg/kg		0.003	14-OCT-21
Surrogate: d14-Terphenyl			108.7		%		50-140	14-OCT-21
WG3636172-4 MS		**WG3636172-5**						
Aroclor 1242			70.3		%		60-140	14-OCT-21
Aroclor 1254			94.3		%		60-140	14-OCT-21
Aroclor 1260			95.1		%		60-140	14-OCT-21
Batch R5627782								
WG3640367-3 DUP		**WG3640367-5**						
Aroclor 1254		0.0061	0.0060		mg/kg	2.3	40	25-OCT-21
Aroclor 1260		0.0219	0.0210		mg/kg	4.3	40	25-OCT-21
Aroclor 1262		<0.0030	<0.0030	RPD-NA	mg/kg	N/A	50	25-OCT-21
Aroclor 1268		<0.0030	<0.0030	RPD-NA	mg/kg	N/A	50	25-OCT-21
WG3640367-7 DUP		**WG3640367-6**						
Aroclor 1016		<0.015	<0.015	RPD-NA	mg/kg	N/A	50	25-OCT-21
Aroclor 1221		<0.015	<0.015	RPD-NA	mg/kg	N/A	50	25-OCT-21
Aroclor 1232		<0.015	<0.015	RPD-NA	mg/kg	N/A	50	25-OCT-21
Aroclor 1242		<0.015	<0.015	RPD-NA	mg/kg	N/A	40	25-OCT-21
Aroclor 1248		<0.015	<0.015	RPD-NA	mg/kg	N/A	40	25-OCT-21
WG3640367-2 LCS								
Aroclor 1242			99.6		%		60-140	25-OCT-21
Aroclor 1248			92.46		%		-	25-OCT-21
Aroclor 1254			97.7		%		60-140	25-OCT-21
Aroclor 1260			95.1		%		60-140	25-OCT-21
WG3640367-1 MB								
Aroclor 1016			<0.0030		mg/kg		0.003	25-OCT-21
Aroclor 1221			<0.0030		mg/kg		0.003	25-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PCB9-LOW-WT	**Soil**							
Batch R5627782								
WG3640367-1 MB								
Aroclor 1232			<0.0030		mg/kg		0.003	25-OCT-21
Aroclor 1242			<0.0030		mg/kg		0.003	25-OCT-21
Aroclor 1248			<0.0030		mg/kg		0.003	25-OCT-21
Aroclor 1254			<0.0030		mg/kg		0.003	25-OCT-21
Aroclor 1260			<0.0030		mg/kg		0.003	25-OCT-21
Aroclor 1262			<0.0030		mg/kg		0.003	25-OCT-21
Aroclor 1268			<0.0030		mg/kg		0.003	25-OCT-21
Surrogate: d14-Terphenyl			100.3		%		50-140	25-OCT-21
WG3640367-4 MS		**WG3640367-5**						
Aroclor 1254			98.0		%		60-140	25-OCT-21
Aroclor 1260			98.9		%		60-140	25-OCT-21
WG3640367-8 MS		**WG3640367-6**						
Aroclor 1242			88.6		%		60-140	25-OCT-21
PSA-MUST-SK	**Soil**							
Batch R5617706								
WG3634919-1 DUP		**L2647211-1**						
MUST PSA % > 75um		9.8	9.0	J	%	0.7	5	13-OCT-21
WG3634919-2 IRM		**2020-PSA_SOIL**						
MUST PSA % > 75um			43.0		%		37.9-47.9	13-OCT-21
SPECGRAV-CL	**Soil**							
Batch R5634727								
WG3651002-2 DUP		**L2646743-14**						
Specific Gravity		1.48	1.45		kg/L	2.0	20	01-NOV-21
WG3651002-1 IRM		**DI_H2O**						
Specific Gravity			100.0		%		90-110	01-NOV-21
Batch R5637237								
WG3653838-2 DUP		**L2648161-4**						
Specific Gravity		1.21	1.22		kg/L	0.8	20	07-NOV-21
WG3653838-1 IRM		**DI_H2O**						
Specific Gravity			101.0		%		90-110	07-NOV-21
TOC-WT	**Soil**							
Batch R5616839								
WG3636338-3 CRM		**WT-TOC-CRM**						
Total Organic Carbon			120.3		%		70-130	13-OCT-21
WG3636338-4 DUP		**L2646527-6**						

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
TOC-WT	**Soil**							
Batch R5616839								
WG3636338-4 DUP		**L2646527-6**						
Total Organic Carbon		6.19	6.26		%	1.1	20	13-OCT-21
Fraction Organic Carbon		0.0619	0.0626		g/g	1.1	25	13-OCT-21
WG3636338-2 LCS								
Total Organic Carbon			99.9		%		80-120	13-OCT-21
WG3636338-1 MB								
Total Organic Carbon			<0.10		%		0.1	13-OCT-21
Fraction Organic Carbon			<0.0010		g/g		0.001	13-OCT-21
Batch R5619419								
WG3638222-3 CRM		**WT-TOC-CRM**						
Total Organic Carbon			109.5		%		70-130	15-OCT-21
WG3638222-4 DUP		**L2646527-14**						
Total Organic Carbon		12.8	12.8		%	0.1	20	15-OCT-21
Fraction Organic Carbon		0.128	0.128		g/g	0.1	25	15-OCT-21
WG3638222-2 LCS								
Total Organic Carbon			98.7		%		80-120	15-OCT-21
WG3638222-1 MB								
Total Organic Carbon			<0.10		%		0.1	15-OCT-21
Fraction Organic Carbon			<0.0010		g/g		0.001	15-OCT-21
Batch R5625292								
WG3641334-3 CRM		**WT-TOC-CRM**						
Total Organic Carbon			95.1		%		70-130	20-OCT-21
WG3641334-4 DUP		**L2646527-23**						
Total Organic Carbon		8.94	8.76		%	2.0	20	20-OCT-21
Fraction Organic Carbon		0.0894	0.0876		g/g	2.0	25	20-OCT-21
WG3641334-2 LCS								
Total Organic Carbon			98.3		%		80-120	20-OCT-21
WG3641334-1 MB								
Total Organic Carbon			<0.10		%		0.1	20-OCT-21
Fraction Organic Carbon			<0.0010		g/g		0.001	20-OCT-21
Batch R5626138								
WG3642289-3 CRM		**WT-TOC-CRM**						
Total Organic Carbon			92.1		%		70-130	21-OCT-21
WG3642289-4 DUP		**L2643154-49**						
Total Organic Carbon		1.57	1.54		%	1.9	20	21-OCT-21
Fraction Organic Carbon		0.0157	0.0154		g/g	1.9	25	21-OCT-21
WG3642289-2 LCS								

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
TOC-WT	**Soil**							
Batch R5626138								
WG3642289-2 LCS								
Total Organic Carbon			99.3		%		80-120	21-OCT-21
WG3642289-1 MB								
Total Organic Carbon			<0.10		%		0.1	21-OCT-21
Fraction Organic Carbon			<0.0010		g/g		0.001	21-OCT-21

Quality Control Report

Workorder: L2647638 Report Date: 08-NOV-21

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Legend:

Limit	ALS Control Limit (Data Quality Objectives)
DUP	Duplicate
RPD	Relative Percent Difference
N/A	Not Available
LCS	Laboratory Control Sample
SRM	Standard Reference Material
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ADE	Average Desorption Efficiency
MB	Method Blank
IRM	Internal Reference Material
CRM	Certified Reference Material
CCV	Continuing Calibration Verification
CVS	Calibration Verification Standard
LCSD	Laboratory Control Sample Duplicate

Sample Parameter Qualifier Definitions:

Qualifier	Description
DLHM	Detection Limit Adjusted: Sample has High Moisture Content
DUP-H	Duplicate results outside ALS DQO, due to sample heterogeneity.
E	Matrix Spike recovery outside ALS DQO due to heterogeneous analyte background in sample.
J	Duplicate results and limits are expressed in terms of absolute difference.
MES	Data Quality Objective was marginally exceeded (by < 10% absolute) for < 10% of analytes in a Multi-Element Scan / Multi-Parameter Scan (considered acceptable as per OMOE & CCME).
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Hold Time Exceedances:

All test results reported with this submission were conducted within ALS recommended hold times.

ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.

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L2647638-COFC

Form COC Number: 20 - 009

Page 1 of 2

Report To	Contact and company name below will appear on the final report
Company:	Golder Associates Ltd.
Contact:	Jill LaPorte
Phone:	905-723-2727
	Company address below will appear on the final report
Street:	100 Scotia Court
City/Province:	Whitby, Ontario
Postal Code:	L1N 8Y6
Invoice To	Same as Report To ☑ YES ☐ NO
	Copy of Invoice with Report ☑ YES ☐ NO
Company:	Golder Associates Ltd.
Contact:	Accounts Payables

Project Information

ALS Account # / Quote #:	15520 / Q86566
Job #:	1783886-8000-8006
PO / AFE:	
LSD:	
ALS Lab Work Order # (ALS use only):	L2647638

Merge QC/QCI Reports with COA ☑ YES ☐ NO ☐ N/A

☐ Compare Results to Criteria on Report - provide details below if box checked

Select Distribution: ☑ EMAIL ☐ MAIL ☐ FAX

Email 1 or Fax: Jill_LaPorte@golder.com

Email 2: shawn_seguin@golder.com

Email 3:

Invoice Recipients

Select Invoice Distribution: ☑ EMAIL ☐ MAIL ☐ FAX

Email 1 or Fax: Jill_LaPorte@golder.com

Email 2: canadaaccountspayableinvoices@golder.com

Oil and Gas Required Fields (client use)

AFE/Cost Center:	PO#
Major/Minor Code:	Routing Code:
Requisitioner:	
Location:	
ALS Contact: Amanda Overholster	Sampler:

Turnaround Time (TAT) Requested

☑ Routine [R] if received by 3pm M-F - no surcharges apply
☐ 4 day [P4] if received by 3pm M-F - 20% rush surcharge minimum
☐ 3 day [P3] if received by 3pm M-F - 25% rush surcharge minimum
☐ 2 day [P2] if received by 3pm M-F - 50% rush surcharge minimum
☐ 1 day [E] if received by 3pm M-F - 100% rush surcharge. Additional fees may apply to rush requests on weekends, statutory holidays and non-routine tests
☐ Same day [E2] if received by 10am M-S - 200% rush surcharge. Additional fees may apply to rush requests on weekends, statutory holidays and non-routine tests

Date and Time Required for all E&P TATs:

For all tests with rush TATs requested, please contact your AM to confirm availability

AFFIX ALS BARCODE LABEL HERE (ALS use only)

Analysis Request

Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below

ALS Sample # (ALS use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	NUMBER OF CONTAINERS	HWS-Boron (B-HWS-R511-WT)	Cr3 (CR-CR3-WT)	Cr6 (CR-CR6-IC-WT)	Mercury (HG-200.2-CVAA-WT)	Metals (MET-200.2-CCMS-WT)	PAH (PAH-CCME-SGGL-WT)	MOISTURE-WT	TOC (TOC-WT)	PCB9 (PCB9-LOW-WT)		Specific Gravity (SPECGRAV-CL)	PSA (PSA-MUST-WT-SK)	Atterberg (ATTERBERG-SK)			SAMPLES ON HOLD	EXTENDED STORAGE REQUIRED	SUSPECTED HAZARD (see notes)
	TCAB-SG-017	01-OCT-21	1045	Sediment	3				✓	✓	✓	✓	✓	✓			✓						
	TCAB-SG-016		1100	Sediment	3				✓	✓	✓	✓	✓	✓									
	TCAB-SG-009		11:55	Sediment	5	✓	✓	✓	✓	✓	✓	✓	✓	✓			✓						
	TCAB-SG-010		12:15	Sediment	3				✓	✓	✓	✓	✓	✓									
	TCAB-SG-014		11:15	Sediment	3				/	/	/	/	/	/									
	TCAB-SG-013		1130	Sediment	3				/	/	/	/	/	/									
	TCAB-SG-011		1415	Sediment	3				/	/	/	/	/	/									
	TCAB-SG-006		1440	Sediment	3				/	/	/	/	/	/									
	TCAB-SG-007		1525	Sediment	3				/	/	/	/	/	/									
	TCAB-SG-008		1540	Sediment	3				/	/	/	/	/	/									
	TCAB-SG-003		1600	Sediment	3				/	/	/	/	/	/									
	TCAB-SG-004	01-OCT-21	1620	Sediment	3				/	/	/	/	/	/									

Drinking Water (DW) Samples[1] (client use)

Are samples taken from a Regulated DW System?
☐ YES ☑ NO

Are samples for human consumption/ use?
☐ YES ☑ NO

Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only)

SAMPLE RECEIPT DETAILS (ALS use only)

Cooling Method: ☐ NONE ☑ ICE ☐ ICE PACKS ☐ FROZEN ☐ COOLING INITIATED

Submission Comments Identified on Sample Receipt Notification: ☐ YES ☐ NO

Cooler Custody Seals Intact: ☐ YES ☐ N/A Sample Custody Seals Intact: ☐ YES ☐ N/A

INITIAL COOLER TEMPERATURES °C	FINAL COOLER TEMPERATURES °C
	9.2

SHIPMENT RELEASE (client use)			INITIAL SHIPMENT RECEPTION (ALS use only)			FINAL SHIPMENT RECEPTION (ALS use only)		
Released by:	Date: 04-OCT-21	Time:	Received by:	Date:	Time:	Received by: WR	Date: 10/05/21	Time: 17:17

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

AUG 20 /5 FRONT

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

1. If any water samples are taken from a Regulated Drinking Water (DW) System, please submit using an Authorized DW COC form.

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COC Number: 20 - 010

Page 2 of 2

SJT

Report To	Contact and company name below will appear on the final report	Reports / Recipients	
Company:	Golder Associates Ltd.	Select Report Format: ☑ PDF ☑ EXCEL ☐ EDD (DIGITAL)	
Contact:	Jill LaPorte	Merge QC/QCI Reports with COA ☑ YES ☐ NO ☐ N/A	
Phone:	905-723-2727	☐ Compare Results to Criteria on Report - provide details below if box checked	
	Company address below will appear on the final report	Select Distribution: ☑ EMAIL ☐ MAIL ☐ FAX	
Street:	100 Scotia Court	Email 1 or Fax	Jill_LaPorte@golder.com
City/Province:	Whitby, Ontario	Email 2	shawn_seguin@golder.com
Postal Code:	L1N 8Y6	Email 3	
Invoice To	Same as Report To ☐ YES ☐ NO	**Invoice Recipients**	
	Copy of Invoice with Report ☐ YES ☐ NO	Select Invoice Distribution: ☑ EMAIL ☐ MAIL ☐ FAX	
Company:	Golder Associates Ltd.	Email 1 or Fax	Jill_LaPorte@golder.com
Contact:	Accounts Payables	Email 2	canadaaccountspayableinvoices@golder.com

Project Information		Oil and Gas Required Fields (client use)	
ALS Account # / Quote #:	15520 / Q86566	AFE/Cost Center:	PO#
Job #:	1783886-8000-8006	Major/Minor Code:	Routing Code:
PO / AFE:		Requisitioner:	
LSD:		Location:	
ALS Lab Work Order # (ALS use only):	L2647638	ALS Contact: Amanda Overholster	Sampler:

Turnaround Time (TAT) Requested

☑ Routine [R] if received by 3pm M-F - no surcharges apply
☐ 4 day [P4] if received by 3pm M-F - 20% rush surcharge minimum
☐ 3 day [P3] if received by 3pm M-F - 25% rush surcharge minimum
☐ 2 day [P2] if received by 3pm M-F - 50% rush surcharge minimum
☐ 1 day [E] if received by 3pm M-F - 100% rush surcharge minimum
☐ Same day [E2] if received by 10am M-S - 200% rush surcharge. Additional fees may apply to rush requests on weekends, statutory holidays and non-routine tests

AFFIX ALS BARCODE LABEL HERE (ALS use only)

Date and Time Required for all E&P TATs:

For all tests with rush TATs requested, please contact your AM to confirm availability.

Analysis Request

Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below

ALS Sample # (ALS use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	NUMBER OF CONTAINERS	HWS-Boron (B-HWS-R511-WT)	Cr3 (CR-CR3-WT)	Cr6 (CR-CR6-IC-WT)	Mercury (HG-200.2-CVAA-WT)	Metals (MET-200.2-CCMS-WT)	PAH (PAH-CCME-SOGI-WT)	MOISTURE-WT	TOC (TOC-WT)	PCB9 (PCB9-LOW-WT)		Specific Gravity (SPECGRAV-CL)	PSA (PSA-MUST-WT-SK)	Atterberg (ATTERBERG-SK)		SAMPLES ON HOLD	EXTENDED STORAGE REQUIRED	SUSPECTED HAZARD (see notes)
	TCRC-SG-010	01-Oct-21	12:00	Sediment	9	/	/	/	/	/	/	/	/	/		/	/	/				
	TCRC-SC-010A		10:25	Sediment	9	/	/	/	/	/	/	/	/	/		/	/	/				
	TCRC-SC-010B		1025	Sediment	3				/	/	/	/	/	/								
	TCOM-SG-006		1515	Sediment	3				/	/	/	/	/	/		/		/				
	TCOM-SC-006A		14:15	Sediment	4				/	/	/	/	/	/		/		/				
	TCOM-SG-007		1730	Sediment	7				/	/	/	/	/	/		/		/				
	TCOM-SC-007A	01-Oct-21	1600	Sediment	7				/	/	/	/	/	/		/		/				
	~~TCOM-SC-007B~~		~~1600~~	Sediment																		
				Sediment																		
				Sediment																		
				Sediment																		
				Sediment																		

Drinking Water (DW) Samples[1] (client use)	Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only)
Are samples taken from a Regulated DW System? ☐ YES ☑ NO	
Are samples for human consumption/ use? ☐ YES ☑ NO	

SAMPLE RECEIPT DETAILS (ALS use only)

Cooling Method: ☐ NONE ☑ ICE ☐ ICE PACKS ☐ FROZEN ☐ COOLING INITIATED

Submission Comments identified on Sample Receipt Notification: ☐ YES ☐ NO

Cooler Custody Seals Intact: ☐ YES ☐ N/A Sample Custody Seals Intact: ☐ YES ☐ N/A

INITIAL COOLER TEMPERATURES °C				FINAL COOLER TEMPERATURES °C			
				9.2			

SHIPMENT RELEASE (client use)			INITIAL SHIPMENT RECEPTION (ALS use only)			FINAL SHIPMENT RECEPTION (ALS use only)		
Released by:	Date:	Time:	Received by:	Date:	Time:	Received by:	Date:	Time:
	1 Oct-21					LD	01/01/21	17:13

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

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AUG 2020 FRONT

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

1. If any water samples are taken from a Regulated Drinking Water (DW) System, please submit using an Authorized DW COC form.

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GOLDER ASSOCIATES LTD (Whitby)
ATTN: Jill LaPorte
100 Scotia Court
Whitby ON L1N 8Y6

Date Received: 06-OCT-21
Report Date: 03-NOV-21 15:19 (MT)
Version: FINAL

Client Phone: 905-723-2727

Certificate of Analysis

Lab Work Order #: L2647880

Project P.O. #: NOT SUBMITTED
Job Reference: 1783886-8000-8006
C of C Numbers:
Legal Site Desc:

Amanda Overholster
Account Manager

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647880-1 TCAB-SC-001A Sampled By: CLIENT on 04-OCT-21 @ 11:20 Matrix: SEDIMENT							
Physical Tests							
% Moisture	80.3		0.25	%	08-OCT-21	12-OCT-21	R5614782
Liquid Limit (LL)	95		1	%	16-OCT-21	16-OCT-21	R5621298
Moisture at Plastic Limit	70		1	%	16-OCT-21	16-OCT-21	R5621298
Plasticity Index (PI)	25		1	%	16-OCT-21	16-OCT-21	R5621298
Specific Gravity	1.01		0.010	kg/L		01-NOV-21	R5634727
Particle Size							
General Texture Class	Fine				15-OCT-21	15-OCT-21	R5620016
MUST PSA % > 75um	4.2		1.0	%	15-OCT-21	15-OCT-21	R5620016
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0692		0.0010	g/g	19-OCT-21	19-OCT-21	R5624435
Total Organic Carbon	6.92		0.10	%	19-OCT-21	19-OCT-21	R5624435
Metals							
Aluminum (Al)	27900		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Antimony (Sb)	1.76		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Arsenic (As)	9.88		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Barium (Ba)	328		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Beryllium (Be)	0.79		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Bismuth (Bi)	0.85		0.20	ug/g	12-OCT-21	12-OCT-21	R5616407
Boron (B)	13.1		5.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Boron (B), Hot Water Ext.	0.92		0.10	ug/g	12-OCT-21	12-OCT-21	R5616090
Cadmium (Cd)	1.11		0.020	ug/g	12-OCT-21	12-OCT-21	R5616407
Calcium (Ca)	28800		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Chromium (Cr)	255		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Cobalt (Co)	14.7		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Copper (Cu)	528		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Iron (Fe)	38000		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Lead (Pb)	169		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Lithium (Li)	17.8		2.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Magnesium (Mg)	16600		20	ug/g	12-OCT-21	12-OCT-21	R5616407
Manganese (Mn)	907		1.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Mercury (Hg)	0.300	DLM	0.010	ug/g	12-OCT-21	13-OCT-21	R5616446
Molybdenum (Mo)	1.99		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Nickel (Ni)	37.0		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Phosphorus (P)	1520		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Potassium (K)	5790		100	ug/g	12-OCT-21	12-OCT-21	R5616407
Selenium (Se)	1.55		0.20	ug/g	12-OCT-21	12-OCT-21	R5616407
Silver (Ag)	0.60		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Sodium (Na)	1180		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Strontium (Sr)	113		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Sulfur (S)	6400		1000	ug/g	12-OCT-21	12-OCT-21	R5616407
Thallium (Tl)	0.377		0.050	ug/g	12-OCT-21	12-OCT-21	R5616407
Tin (Sn)	12.6		2.0	ug/g	12-OCT-21	12-OCT-21	R5616407

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647880-1 TCAB-SC-001A Sampled By: CLIENT on 04-OCT-21 @ 11:20 Matrix: SEDIMENT							
Metals							
Titanium (Ti)	1510		1.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Tungsten (W)	0.68		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Uranium (U)	0.903		0.050	ug/g	12-OCT-21	12-OCT-21	R5616407
Vanadium (V)	61.4		0.20	ug/g	12-OCT-21	12-OCT-21	R5616407
Zinc (Zn)	421		2.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Zirconium (Zr)	3.6		1.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Speciated Metals							
Chromium, Trivalent	255		10	ug/g		13-OCT-21	
Chromium, Hexavalent	<1.0	DLHM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616569
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.211	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Acenaphthylene	0.461	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Acridine	0.110	DLHM	0.050	ug/g	14-OCT-21	15-OCT-21	R5619198
Anthracene	0.627	DLHM	0.020	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(a)anthracene	1.95	R	0.050	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(a)pyrene	2.16	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(b&j)fluoranthene	2.59	DLHM	0.050	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(g,h,i)perylene	1.42	DLHM	0.050	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(k)fluoranthene	0.944	DLHM	0.050	ug/g	14-OCT-21	15-OCT-21	R5619198
Chrysene	2.02	DLHM	0.050	ug/g	14-OCT-21	15-OCT-21	R5619198
Dibenz(a,h)anthracene	0.344	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Fluoroanthene	3.02	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Fluorene	0.193	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Indeno(1,2,3-cd)pyrene	1.19	DLHM	0.050	ug/g	14-OCT-21	15-OCT-21	R5619198
1-Methylnaphthalene	0.096	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
2-Methylnaphthalene	0.110	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Naphthalene	0.120	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Phenanthrene	1.46	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Pyrene	3.17	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Quinoline	<0.025	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Surrogate: 2-Fluorobiphenyl	88.7		60-140	%	14-OCT-21	15-OCT-21	R5619198
Surrogate: d14-Terphenyl	88.4		60-140	%	14-OCT-21	15-OCT-21	R5619198
B(a)P Total Potency Equivalent	3.21		0.036	ug/g	14-OCT-21	15-OCT-21	R5619198
IACR (CCME)	36.9		0.50		14-OCT-21	15-OCT-21	R5619198
Polychlorinated Biphenyls							
Aroclor 1016	<0.032	DLHM	0.032	mg/kg	14-OCT-21	14-OCT-21	R5617747
Aroclor 1221	<0.032	DLHM	0.032	mg/kg	14-OCT-21	14-OCT-21	R5617747
Aroclor 1232	<0.032	DLHM	0.032	mg/kg	14-OCT-21	14-OCT-21	R5617747
Aroclor 1242	<0.032	DLHM	0.032	mg/kg	14-OCT-21	14-OCT-21	R5617747
Aroclor 1248	<0.032	DLHM	0.032	mg/kg	14-OCT-21	14-OCT-21	R5617747
Aroclor 1254	0.248	DLHM	0.023	mg/kg	14-OCT-21	14-OCT-21	R5617747
Aroclor 1260	0.176	DLHM	0.023	mg/kg	14-OCT-21	14-OCT-21	R5617747

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647880-1 TCAB-SC-001A Sampled By: CLIENT on 04-OCT-21 @ 11:20 Matrix: SEDIMENT							
Polychlorinated Biphenyls							
Aroclor 1262	<0.023	DLHM	0.023	mg/kg	14-OCT-21	14-OCT-21	R5617747
Aroclor 1268	<0.023	DLHM	0.023	mg/kg	14-OCT-21	14-OCT-21	R5617747
Total Polychlorinated Biphenyls	0.424	DLHM	0.068	mg/kg	14-OCT-21	14-OCT-21	R5617747
Surrogate: d14-Terphenyl	96.4	DLHM	50-140	%	14-OCT-21	14-OCT-21	R5617747
L2647880-2 TCAB-SG-001 Sampled By: CLIENT on 04-OCT-21 @ 12:45 Matrix: SEDIMENT							
Physical Tests							
% Moisture	83.2		0.25	%	08-OCT-21	12-OCT-21	R5614782
Liquid Limit (LL)	99		1	%	16-OCT-21	16-OCT-21	R5621298
Moisture at Plastic Limit	80		1	%	16-OCT-21	16-OCT-21	R5621298
Plasticity Index (PI)	19		1	%	16-OCT-21	16-OCT-21	R5621298
Specific Gravity	1.10		0.010	kg/L		25-OCT-21	R5628726
Particle Size							
General Texture Class	Fine				15-OCT-21	15-OCT-21	R5620016
MUST PSA % > 75um	4.2		1.0	%	15-OCT-21	15-OCT-21	R5620016
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0774		0.0010	g/g	19-OCT-21	19-OCT-21	R5624435
Total Organic Carbon	7.74		0.10	%	19-OCT-21	19-OCT-21	R5624435
Metals							
Aluminum (Al)	27900		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Antimony (Sb)	1.58		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Arsenic (As)	9.65		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Barium (Ba)	328		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Beryllium (Be)	0.87		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Bismuth (Bi)	0.85		0.20	ug/g	12-OCT-21	12-OCT-21	R5616407
Boron (B)	14.7		5.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Boron (B), Hot Water Ext.	0.79		0.10	ug/g	12-OCT-21	12-OCT-21	R5616090
Cadmium (Cd)	0.882		0.020	ug/g	12-OCT-21	12-OCT-21	R5616407
Calcium (Ca)	37400		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Chromium (Cr)	179		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Cobalt (Co)	14.7		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Copper (Cu)	534		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Iron (Fe)	38600		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Lead (Pb)	134		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Lithium (Li)	18.7		2.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Magnesium (Mg)	17200		20	ug/g	12-OCT-21	12-OCT-21	R5616407
Manganese (Mn)	1300		1.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Mercury (Hg)	0.247	DLM	0.010	ug/g	12-OCT-21	13-OCT-21	R5616446
Molybdenum (Mo)	1.69		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Nickel (Ni)	36.3		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Phosphorus (P)	1700		50	ug/g	12-OCT-21	12-OCT-21	R5616407

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647880-2 TCAB-SG-001 Sampled By: CLIENT on 04-OCT-21 @ 12:45 Matrix: SEDIMENT							
Metals							
Potassium (K)	6150		100	ug/g	12-OCT-21	12-OCT-21	R5616407
Selenium (Se)	1.47		0.20	ug/g	12-OCT-21	12-OCT-21	R5616407
Silver (Ag)	0.47		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Sodium (Na)	1140		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Strontium (Sr)	138		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Sulfur (S)	5200		1000	ug/g	12-OCT-21	12-OCT-21	R5616407
Thallium (Tl)	0.412		0.050	ug/g	12-OCT-21	12-OCT-21	R5616407
Tin (Sn)	8.7		2.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Titanium (Ti)	1470		1.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Tungsten (W)	1.31		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Uranium (U)	0.850		0.050	ug/g	12-OCT-21	12-OCT-21	R5616407
Vanadium (V)	59.7		0.20	ug/g	12-OCT-21	12-OCT-21	R5616407
Zinc (Zn)	420		2.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Zirconium (Zr)	3.2		1.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Speciated Metals							
Chromium, Trivalent	179		10	ug/g		13-OCT-21	
Chromium, Hexavalent	<1.0	DLHM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616569
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.147	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Acenaphthylene	0.376	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Acridine	<0.060	DLM	0.060	ug/g	14-OCT-21	15-OCT-21	R5619198
Anthracene	0.339	DLHM	0.020	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(a)anthracene	1.07	R	0.050	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(a)pyrene	1.38	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(b&j)fluoranthene	1.61	DLHM	0.050	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(g,h,i)perylene	0.974	DLHM	0.050	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(k)fluoranthene	0.518	DLHM	0.050	ug/g	14-OCT-21	15-OCT-21	R5619198
Chrysene	1.22	DLHM	0.050	ug/g	14-OCT-21	15-OCT-21	R5619198
Dibenz(a,h)anthracene	0.234	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Fluoroanthene	1.49	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Fluorene	0.143	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Indeno(1,2,3-cd)pyrene	0.732	DLHM	0.050	ug/g	14-OCT-21	15-OCT-21	R5619198
1-Methylnaphthalene	0.101	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
2-Methylnaphthalene	0.143	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Naphthalene	0.169	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Phenanthrene	0.755	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Pyrene	1.80	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Quinoline	<0.025	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Surrogate: 2-Fluorobiphenyl	90.5		60-140	%	14-OCT-21	15-OCT-21	R5619198
Surrogate: d14-Terphenyl	91.6		60-140	%	14-OCT-21	15-OCT-21	R5619198
B(a)P Total Potency Equivalent	2.02		0.036	ug/g	14-OCT-21	15-OCT-21	R5619198

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647880-2 TCAB-SG-001 Sampled By: CLIENT on 04-OCT-21 @ 12:45 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
IACR (CCME)	22.2		0.50		14-OCT-21	15-OCT-21	R5619198
Polychlorinated Biphenyls							
Aroclor 1016	<0.120	RRR	0.12	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1221	<0.120	RRR	0.12	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1232	<0.120	RRR	0.12	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1242	<0.120	RRR	0.12	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1248	<0.120	RRR	0.12	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1254	0.108	PRAR	0.023	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1260	<0.090	DLR	0.090	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1262	<0.023	DLR	0.023	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1268	<0.023	DLR	0.023	mg/kg	18-OCT-21	18-OCT-21	R5622261
Total Polychlorinated Biphenyls	<0.270		0.27	mg/kg	18-OCT-21	18-OCT-21	R5622261
Surrogate: d14-Terphenyl	88.4		50-140	%	18-OCT-21	18-OCT-21	R5622261
Report Remarks : RRR: Due to sample matrix interferences, PCB recoveries could not be determined in the matrix spike unless spiked with 5X the normal concentration and therefore the detection limit has been raised accordingly.							
L2647880-3 TCAB-SC-015A Sampled By: CLIENT on 04-OCT-21 @ 14:20 Matrix: SEDIMENT							
Physical Tests							
% Moisture	81.4		0.25	%	08-OCT-21	12-OCT-21	R5614782
Liquid Limit (LL)	99		1	%	16-OCT-21	16-OCT-21	R5621298
Moisture at Plastic Limit	78		1	%	16-OCT-21	16-OCT-21	R5621298
Plasticity Index (PI)	21		1	%	16-OCT-21	16-OCT-21	R5621298
Specific Gravity	1.11		0.010	kg/L		25-OCT-21	R5628726
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0742		0.0010	g/g	19-OCT-21	19-OCT-21	R5624435
Total Organic Carbon	7.42		0.10	%	19-OCT-21	19-OCT-21	R5624435
Metals							
Aluminum (Al)	29700		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Antimony (Sb)	1.35		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Arsenic (As)	9.13		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Barium (Ba)	346		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Beryllium (Be)	0.89		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Bismuth (Bi)	0.66		0.20	ug/g	12-OCT-21	12-OCT-21	R5616407
Boron (B)	13.8		5.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Cadmium (Cd)	1.18		0.020	ug/g	12-OCT-21	12-OCT-21	R5616407
Calcium (Ca)	42900		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Chromium (Cr)	289		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Cobalt (Co)	15.5		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Copper (Cu)	197		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Iron (Fe)	41300		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Lead (Pb)	125		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Lithium (Li)	19.7		2.0	ug/g	12-OCT-21	12-OCT-21	R5616407

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647880-3 TCAB-SC-015A Sampled By: CLIENT on 04-OCT-21 @ 14:20 Matrix: SEDIMENT							
Metals							
Magnesium (Mg)	18100		20	ug/g	12-OCT-21	12-OCT-21	R5616407
Manganese (Mn)	922		1.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Mercury (Hg)	0.294	DLM	0.010	ug/g	12-OCT-21	13-OCT-21	R5616446
Molybdenum (Mo)	1.62		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Nickel (Ni)	38.2		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Phosphorus (P)	1370		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Potassium (K)	6240		100	ug/g	12-OCT-21	12-OCT-21	R5616407
Selenium (Se)	1.63		0.20	ug/g	12-OCT-21	12-OCT-21	R5616407
Silver (Ag)	0.64		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Sodium (Na)	940		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Strontium (Sr)	169		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Sulfur (S)	8000		1000	ug/g	12-OCT-21	12-OCT-21	R5616407
Thallium (Tl)	0.405		0.050	ug/g	12-OCT-21	12-OCT-21	R5616407
Tin (Sn)	7.2		2.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Titanium (Ti)	1650		1.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Tungsten (W)	0.77		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Uranium (U)	1.07		0.050	ug/g	12-OCT-21	12-OCT-21	R5616407
Vanadium (V)	65.4		0.20	ug/g	12-OCT-21	12-OCT-21	R5616407
Zinc (Zn)	334		2.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Zirconium (Zr)	4.0		1.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.109	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Acenaphthylene	0.225	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Acridine	<0.050	DLHM	0.050	ug/g	14-OCT-21	15-OCT-21	R5619198
Anthracene	0.221	DLHM	0.020	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(a)anthracene	0.648	R	0.050	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(a)pyrene	0.843	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(b&j)fluoranthene	1.05	DLHM	0.050	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(g,h,i)perylene	0.628	DLHM	0.050	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(k)fluoranthene	0.294	DLHM	0.050	ug/g	14-OCT-21	15-OCT-21	R5619198
Chrysene	0.778	DLHM	0.050	ug/g	14-OCT-21	15-OCT-21	R5619198
Dibenz(a,h)anthracene	0.151	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Fluoroanthene	0.998	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Fluorene	0.087	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Indeno(1,2,3-cd)pyrene	0.504	DLHM	0.050	ug/g	14-OCT-21	15-OCT-21	R5619198
1-Methylnaphthalene	0.050	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
2-Methylnaphthalene	0.065	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Naphthalene	0.067	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Phenanthrene	0.464	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Pyrene	1.19	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Quinoline	<0.025	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647880-3 TCAB-SC-015A Sampled By: CLIENT on 04-OCT-21 @ 14:20 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
Surrogate: 2-Fluorobiphenyl	87.5		60-140	%	14-OCT-21	15-OCT-21	R5619198
Surrogate: d14-Terphenyl	87.0		60-140	%	14-OCT-21	15-OCT-21	R5619198
B(a)P Total Potency Equivalent	1.26		0.036	ug/g	14-OCT-21	15-OCT-21	R5619198
IACR (CCME)	14.0		0.50		14-OCT-21	15-OCT-21	R5619198
Polychlorinated Biphenyls							
Aroclor 1016	<0.120	RRR	0.12	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1221	<0.120	RRR	0.12	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1232	<0.120	RRR	0.12	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1242	<0.120	RRR	0.12	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1248	<0.120	RRR	0.12	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1254	0.112	DLR	0.023	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1260	0.088	DLR	0.023	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1262	<0.023	DLR	0.023	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1268	<0.023	DLR	0.023	mg/kg	18-OCT-21	18-OCT-21	R5622261
Total Polychlorinated Biphenyls	<0.270		0.27	mg/kg	18-OCT-21	18-OCT-21	R5622261
Surrogate: d14-Terphenyl	63.1		50-140	%	18-OCT-21	18-OCT-21	R5622261
Report Remarks : RRR: Due to sample matrix interferences, PCB recoveries could not be determined in the matrix spike unless spiked with 5X the normal concentration and therefore the detection limit has been raised accordingly.							
L2647880-4 TCAB-SG-015 Sampled By: CLIENT on 04-OCT-21 @ 15:20 Matrix: SEDIMENT							
Physical Tests							
% Moisture	83.6		0.25	%	08-OCT-21	12-OCT-21	R5614782
Liquid Limit (LL)	102		1	%	16-OCT-21	16-OCT-21	R5621298
Moisture at Plastic Limit	76		1	%	16-OCT-21	16-OCT-21	R5621298
Plasticity Index (PI)	26		1	%	16-OCT-21	16-OCT-21	R5621298
Specific Gravity	1.11		0.010	kg/L		25-OCT-21	R5628726
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0726		0.0010	g/g	19-OCT-21	19-OCT-21	R5624435
Total Organic Carbon	7.26		0.10	%	19-OCT-21	19-OCT-21	R5624435
Metals							
Aluminum (Al)	28800		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Antimony (Sb)	1.32		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Arsenic (As)	7.93		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Barium (Ba)	328		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Beryllium (Be)	0.88		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Bismuth (Bi)	0.52		0.20	ug/g	12-OCT-21	12-OCT-21	R5616407
Boron (B)	15.9		5.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Cadmium (Cd)	0.772		0.020	ug/g	12-OCT-21	12-OCT-21	R5616407
Calcium (Ca)	53900		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Chromium (Cr)	165		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Cobalt (Co)	14.8		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Copper (Cu)	202		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647880-4 TCAB-SG-015 Sampled By: CLIENT on 04-OCT-21 @ 15:20 Matrix: SEDIMENT							
Metals							
Iron (Fe)	39200		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Lead (Pb)	90.1		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Lithium (Li)	19.0		2.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Magnesium (Mg)	18900		20	ug/g	12-OCT-21	12-OCT-21	R5616407
Manganese (Mn)	1380		1.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Mercury (Hg)	0.186	DLM	0.010	ug/g	12-OCT-21	13-OCT-21	R5616446
Molybdenum (Mo)	1.47		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Nickel (Ni)	35.8		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Phosphorus (P)	1510		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Potassium (K)	6090		100	ug/g	12-OCT-21	12-OCT-21	R5616407
Selenium (Se)	1.47		0.20	ug/g	12-OCT-21	12-OCT-21	R5616407
Silver (Ag)	0.39		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Sodium (Na)	808		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Strontium (Sr)	174		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Sulfur (S)	5600		1000	ug/g	12-OCT-21	12-OCT-21	R5616407
Thallium (Tl)	0.394		0.050	ug/g	12-OCT-21	12-OCT-21	R5616407
Tin (Sn)	6.4		2.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Titanium (Ti)	1540		1.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Tungsten (W)	1.83		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Uranium (U)	0.898		0.050	ug/g	12-OCT-21	12-OCT-21	R5616407
Vanadium (V)	59.7		0.20	ug/g	12-OCT-21	12-OCT-21	R5616407
Zinc (Zn)	320		2.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Zirconium (Zr)	3.6		1.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.066	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Acenaphthylene	0.180	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Acridine	<0.050	DLHM	0.050	ug/g	14-OCT-21	15-OCT-21	R5619198
Anthracene	0.210	DLHM	0.020	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(a)anthracene	0.517	R	0.050	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(a)pyrene	0.653	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(b&j)fluoranthene	0.843	DLHM	0.050	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(g,h,i)perylene	0.503	DLHM	0.050	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(k)fluoranthene	0.215	DLHM	0.050	ug/g	14-OCT-21	15-OCT-21	R5619198
Chrysene	0.677	DLHM	0.050	ug/g	14-OCT-21	15-OCT-21	R5619198
Dibenz(a,h)anthracene	0.115	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Fluoroanthene	0.848	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Fluorene	0.074	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Indeno(1,2,3-cd)pyrene	0.401	DLHM	0.050	ug/g	14-OCT-21	15-OCT-21	R5619198
1-Methylnaphthalene	0.040	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
2-Methylnaphthalene	0.051	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Naphthalene	0.045	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647880-4 TCAB-SG-015 Sampled By: CLIENT on 04-OCT-21 @ 15:20 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
Phenanthrene	0.401	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Pyrene	0.965	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Quinoline	<0.025	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Surrogate: 2-Fluorobiphenyl	86.2		60-140	%	14-OCT-21	15-OCT-21	R5619198
Surrogate: d14-Terphenyl	85.0		60-140	%	14-OCT-21	15-OCT-21	R5619198
B(a)P Total Potency Equivalent	0.977		0.036	ug/g	14-OCT-21	15-OCT-21	R5619198
IACR (CCME)	11.0		0.50		14-OCT-21	15-OCT-21	R5619198
Polychlorinated Biphenyls							
Aroclor 1016	<0.120	RRR	0.12	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1221	<0.120	RRR	0.12	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1232	<0.120	RRR	0.12	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1242	<0.120	RRR	0.12	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1248	<0.120	RRR	0.12	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1254	<0.080	DLR	0.080	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1260	<0.0530	DLR	0.053	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1262	<0.023	DLR	0.023	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1268	<0.023	DLR	0.023	mg/kg	18-OCT-21	18-OCT-21	R5622261
Total Polychlorinated Biphenyls	<0.290		0.29	mg/kg	18-OCT-21	18-OCT-21	R5622261
Surrogate: d14-Terphenyl	76.5		50-140	%	18-OCT-21	18-OCT-21	R5622261
Report Remarks : RRR: Due to sample matrix interferences, PCB recoveries could not be determined in the matrix spike unless spiked with 5X the normal concentration and therefore the detection limit has been raised accordingly.							
L2647880-5 TCAB-SC12A Sampled By: CLIENT on 04-OCT-21 @ 15:50 Matrix: SEDIMENT							
Physical Tests							
% Moisture	78.8		0.25	%	08-OCT-21	12-OCT-21	R5614782
Liquid Limit (LL)	95		1	%	16-OCT-21	16-OCT-21	R5621298
Moisture at Plastic Limit	72		1	%	16-OCT-21	16-OCT-21	R5621298
Plasticity Index (PI)	24		1	%	16-OCT-21	16-OCT-21	R5621298
Specific Gravity	1.12		0.010	kg/L		25-OCT-21	R5628726
Particle Size							
General Texture Class	Fine				15-OCT-21	15-OCT-21	R5620016
MUST PSA % > 75um	<1.0		1.0	%	15-OCT-21	15-OCT-21	R5620016
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0769		0.0010	g/g	19-OCT-21	19-OCT-21	R5624435
Total Organic Carbon	7.69		0.10	%	19-OCT-21	19-OCT-21	R5624435
Metals							
Aluminum (Al)	24600		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Antimony (Sb)	1.54		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Arsenic (As)	7.10		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Barium (Ba)	293		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Beryllium (Be)	0.76		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Bismuth (Bi)	0.57		0.20	ug/g	12-OCT-21	12-OCT-21	R5616407

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647880-5 TCAB-SC12A Sampled By: CLIENT on 04-OCT-21 @ 15:50 Matrix: SEDIMENT							
Metals							
Boron (B)	13.5		5.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Boron (B), Hot Water Ext.	0.77		0.10	ug/g	12-OCT-21	12-OCT-21	R5616090
Cadmium (Cd)	1.05		0.020	ug/g	12-OCT-21	12-OCT-21	R5616407
Calcium (Ca)	56300		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Chromium (Cr)	227		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Cobalt (Co)	13.9		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Copper (Cu)	143		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Iron (Fe)	32900		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Lead (Pb)	118		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Lithium (Li)	16.9		2.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Magnesium (Mg)	20400		20	ug/g	12-OCT-21	12-OCT-21	R5616407
Manganese (Mn)	888		1.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Mercury (Hg)	0.274	DLM	0.010	ug/g	12-OCT-21	13-OCT-21	R5616446
Molybdenum (Mo)	1.51		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Nickel (Ni)	33.8		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Phosphorus (P)	1260		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Potassium (K)	5270		100	ug/g	12-OCT-21	12-OCT-21	R5616407
Selenium (Se)	1.26		0.20	ug/g	12-OCT-21	12-OCT-21	R5616407
Silver (Ag)	0.61		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Sodium (Na)	665		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Strontium (Sr)	143		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Sulfur (S)	5200		1000	ug/g	12-OCT-21	12-OCT-21	R5616407
Thallium (Tl)	0.376		0.050	ug/g	12-OCT-21	12-OCT-21	R5616407
Tin (Sn)	6.5		2.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Titanium (Ti)	1380		1.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Tungsten (W)	1.66		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Uranium (U)	0.887		0.050	ug/g	12-OCT-21	12-OCT-21	R5616407
Vanadium (V)	58.5		0.20	ug/g	12-OCT-21	12-OCT-21	R5616407
Zinc (Zn)	346		2.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Zirconium (Zr)	4.1		1.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Speciated Metals							
Chromium, Trivalent	226		10	ug/g		13-OCT-21	
Chromium, Hexavalent	0.77	DLHM	0.40	ug/g	12-OCT-21	13-OCT-21	R5616569
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.130	DLM	0.030	ug/g	14-OCT-21	15-OCT-21	R5619198
Acenaphthylene	0.229	DLM	0.030	ug/g	14-OCT-21	15-OCT-21	R5619198
Acridine	<0.060	DLM	0.060	ug/g	14-OCT-21	15-OCT-21	R5619198
Anthracene	0.283	DLM	0.024	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(a)anthracene	0.851	R	0.060	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(a)pyrene	1.10	DLM	0.030	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(b&j)fluoranthene	1.42	DLM	0.060	ug/g	14-OCT-21	15-OCT-21	R5619198

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647880-5 TCAB-SC12A Sampled By: CLIENT on 04-OCT-21 @ 15:50 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
Benzo(g,h,i)perylene	0.788	DLM	0.060	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(k)fluoranthene	0.398	DLM	0.060	ug/g	14-OCT-21	15-OCT-21	R5619198
Chrysene	1.13	DLM	0.060	ug/g	14-OCT-21	15-OCT-21	R5619198
Dibenz(a,h)anthracene	0.191	DLM	0.030	ug/g	14-OCT-21	15-OCT-21	R5619198
Fluoroanthene	1.55	DLM	0.030	ug/g	14-OCT-21	15-OCT-21	R5619198
Fluorene	0.126	DLM	0.030	ug/g	14-OCT-21	15-OCT-21	R5619198
Indeno(1,2,3-cd)pyrene	0.643	DLM	0.060	ug/g	14-OCT-21	15-OCT-21	R5619198
1-Methylnaphthalene	0.049	DLM	0.030	ug/g	14-OCT-21	15-OCT-21	R5619198
2-Methylnaphthalene	0.066	DLM	0.030	ug/g	14-OCT-21	15-OCT-21	R5619198
Naphthalene	0.067	DLM	0.030	ug/g	14-OCT-21	15-OCT-21	R5619198
Phenanthrene	0.698	DLM	0.030	ug/g	14-OCT-21	15-OCT-21	R5619198
Pyrene	1.69	DLM	0.030	ug/g	14-OCT-21	15-OCT-21	R5619198
Quinoline	<0.030	DLM	0.030	ug/g	14-OCT-21	15-OCT-21	R5619198
Surrogate: 2-Fluorobiphenyl	78.2		60-140	%	14-OCT-21	15-OCT-21	R5619198
Surrogate: d14-Terphenyl	80.4		60-140	%	14-OCT-21	15-OCT-21	R5619198
B(a)P Total Potency Equivalent	1.64		0.043	ug/g	14-OCT-21	15-OCT-21	R5619198
IACR (CCME)	18.6		0.60		14-OCT-21	15-OCT-21	R5619198
Polychlorinated Biphenyls							
Aroclor 1016	<0.120	RRR	0.12	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1221	<0.120	RRR	0.12	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1232	<0.120	RRR	0.12	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1242	<0.120	RRR	0.12	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1248	<0.120	RRR	0.12	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1254	0.126	DLR	0.023	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1260	0.099	DLR	0.023	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1262	<0.023	DLR	0.023	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1268	<0.023	DLR	0.023	mg/kg	18-OCT-21	18-OCT-21	R5622261
Total Polychlorinated Biphenyls	<0.270		0.27	mg/kg	18-OCT-21	18-OCT-21	R5622261
Surrogate: d14-Terphenyl	80.0		50-140	%	18-OCT-21	18-OCT-21	R5622261
Report Remarks : RRR: Due to sample matrix interferences, PCB recoveries could not be determined in the matrix spike unless spiked with 5X the normal concentration and therefore the detection limit has been raised accordingly.							
L2647880-6 TCAB-SG-12 Sampled By: CLIENT on 04-OCT-21 @ 16:45 Matrix: SEDIMENT							
Physical Tests							
% Moisture	81.8		0.25	%	08-OCT-21	09-OCT-21	R5614677
Liquid Limit (LL)	100		1	%	16-OCT-21	16-OCT-21	R5621298
Moisture at Plastic Limit	73		1	%	16-OCT-21	16-OCT-21	R5621298
Plasticity Index (PI)	27		1	%	16-OCT-21	16-OCT-21	R5621298
Specific Gravity	1.11		0.010	kg/L		25-OCT-21	R5628726
Particle Size							
General Texture Class	Fine				15-OCT-21	15-OCT-21	R5620016

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647880-6 TCAB-SG-12 Sampled By: CLIENT on 04-OCT-21 @ 16:45 Matrix: SEDIMENT							
Particle Size							
MUST PSA % > 75um	2.1		1.0	%	15-OCT-21	15-OCT-21	R5620016
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0775		0.0010	g/g	19-OCT-21	19-OCT-21	R5624435
Total Organic Carbon	7.75		0.10	%	19-OCT-21	19-OCT-21	R5624435
Metals							
Aluminum (Al)	25600		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Antimony (Sb)	1.78		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Arsenic (As)	7.05		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Barium (Ba)	295		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Beryllium (Be)	0.79		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Bismuth (Bi)	0.50		0.20	ug/g	12-OCT-21	12-OCT-21	R5616407
Boron (B)	15.1		5.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Boron (B), Hot Water Ext.	0.63		0.10	ug/g	12-OCT-21	12-OCT-21	R5616090
Cadmium (Cd)	0.798		0.020	ug/g	12-OCT-21	12-OCT-21	R5616407
Calcium (Ca)	58900		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Chromium (Cr)	167		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Cobalt (Co)	14.4		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Copper (Cu)	144		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Iron (Fe)	35300		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Lead (Pb)	86.9		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Lithium (Li)	17.4		2.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Magnesium (Mg)	20600		20	ug/g	12-OCT-21	12-OCT-21	R5616407
Manganese (Mn)	1260		1.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Mercury (Hg)	0.208	DLM	0.010	ug/g	12-OCT-21	13-OCT-21	R5616446
Molybdenum (Mo)	1.49		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Nickel (Ni)	34.5		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Phosphorus (P)	1420		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Potassium (K)	5370		100	ug/g	12-OCT-21	12-OCT-21	R5616407
Selenium (Se)	1.28		0.20	ug/g	12-OCT-21	12-OCT-21	R5616407
Silver (Ag)	0.40		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Sodium (Na)	696		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Strontium (Sr)	161		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Sulfur (S)	5200		1000	ug/g	12-OCT-21	12-OCT-21	R5616407
Thallium (Tl)	0.361		0.050	ug/g	12-OCT-21	12-OCT-21	R5616407
Tin (Sn)	6.0		2.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Titanium (Ti)	1430		1.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Tungsten (W)	2.52		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Uranium (U)	0.867		0.050	ug/g	12-OCT-21	12-OCT-21	R5616407
Vanadium (V)	59.0		0.20	ug/g	12-OCT-21	12-OCT-21	R5616407
Zinc (Zn)	336		2.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Zirconium (Zr)	3.6		1.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Speciated Metals							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647880-6 TCAB-SG-12 Sampled By: CLIENT on 04-OCT-21 @ 16:45 Matrix: SEDIMENT							
Speciated Metals							
Chromium, Trivalent	166		10	ug/g		15-OCT-21	
Chromium, Hexavalent	0.60		0.20	ug/g	13-OCT-21	14-OCT-21	R5617419
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.081	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Acenaphthylene	0.165	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Acridine	<0.050	DLHM	0.050	ug/g	14-OCT-21	15-OCT-21	R5619198
Anthracene	0.211	DLHM	0.020	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(a)anthracene	0.615	R	0.050	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(a)pyrene	0.753	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(b&j)fluoranthene	0.888	DLHM	0.050	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(g,h,i)perylene	0.652	DLHM	0.050	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(k)fluoranthene	0.250	DLHM	0.050	ug/g	14-OCT-21	15-OCT-21	R5619198
Chrysene	0.810	DLHM	0.050	ug/g	14-OCT-21	15-OCT-21	R5619198
Dibenz(a,h)anthracene	0.151	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Fluoroanthene	1.10	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Fluorene	0.083	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Indeno(1,2,3-cd)pyrene	0.508	DLHM	0.050	ug/g	14-OCT-21	15-OCT-21	R5619198
1-Methylnaphthalene	0.033	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
2-Methylnaphthalene	0.040	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Naphthalene	0.038	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Phenanthrene	0.507	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Pyrene	1.20	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Quinoline	<0.025	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Surrogate: 2-Fluorobiphenyl	86.3		60-140	%	14-OCT-21	15-OCT-21	R5619198
Surrogate: d14-Terphenyl	86.5		60-140	%	14-OCT-21	15-OCT-21	R5619198
B(a)P Total Potency Equivalent	1.14		0.036	ug/g	14-OCT-21	15-OCT-21	R5619198
IACR (CCME)	12.3		0.50		14-OCT-21	15-OCT-21	R5619198
Polychlorinated Biphenyls							
Aroclor 1016	<0.023	DLHM	0.023	mg/kg	18-OCT-21	18-OCT-21	R5623933
Aroclor 1221	<0.023	DLHM	0.023	mg/kg	18-OCT-21	18-OCT-21	R5623933
Aroclor 1232	<0.023	DLHM	0.023	mg/kg	18-OCT-21	18-OCT-21	R5623933
Aroclor 1242	<0.023	DLHM	0.023	mg/kg	18-OCT-21	18-OCT-21	R5623933
Aroclor 1248	<0.023	DLHM	0.023	mg/kg	18-OCT-21	18-OCT-21	R5623933
Aroclor 1254	0.068	DLHM	0.023	mg/kg	18-OCT-21	18-OCT-21	R5623933
Aroclor 1260	0.066	DLHM	0.023	mg/kg	18-OCT-21	18-OCT-21	R5623933
Aroclor 1262	<0.023	DLHM	0.023	mg/kg	18-OCT-21	18-OCT-21	R5623933
Aroclor 1268	<0.023	DLHM	0.023	mg/kg	18-OCT-21	18-OCT-21	R5623933
Total Polychlorinated Biphenyls	0.135		0.068	mg/kg	18-OCT-21	18-OCT-21	R5623933
Surrogate: d14-Terphenyl	96.2		50-140	%	18-OCT-21	18-OCT-21	R5623933
L2647880-7 PCW-SG-006 Sampled By: CLIENT on 04-OCT-21 @ 12:55 Matrix: SEDIMENT							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647880-7 PCW-SG-006 Sampled By: CLIENT on 04-OCT-21 @ 12:55 Matrix: SEDIMENT							
Physical Tests							
% Moisture	69.0		0.25	%	08-OCT-21	09-OCT-21	R5614677
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0422		0.0010	g/g	19-OCT-21	19-OCT-21	R5624435
Total Organic Carbon	4.22		0.10	%	19-OCT-21	19-OCT-21	R5624435
Metals							
Aluminum (Al)	18000		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Antimony (Sb)	1.20		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Arsenic (As)	5.64		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Barium (Ba)	261		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Beryllium (Be)	0.73		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Bismuth (Bi)	0.24		0.20	ug/g	12-OCT-21	12-OCT-21	R5616407
Boron (B)	10.9		5.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Cadmium (Cd)	0.490		0.020	ug/g	12-OCT-21	12-OCT-21	R5616407
Calcium (Ca)	43500		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Chromium (Cr)	1220		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Cobalt (Co)	14.2		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Copper (Cu)	39.4		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Iron (Fe)	29100		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Lead (Pb)	110		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Lithium (Li)	13.4		2.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Magnesium (Mg)	16800		20	ug/g	12-OCT-21	12-OCT-21	R5616407
Manganese (Mn)	594		1.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Mercury (Hg)	0.179	DLM	0.010	ug/g	12-OCT-21	13-OCT-21	R5616446
Molybdenum (Mo)	1.07		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Nickel (Ni)	26.0		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Phosphorus (P)	1470		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Potassium (K)	4920		100	ug/g	12-OCT-21	12-OCT-21	R5616407
Selenium (Se)	0.66		0.20	ug/g	12-OCT-21	12-OCT-21	R5616407
Silver (Ag)	0.25		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Sodium (Na)	689		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Strontium (Sr)	202		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Sulfur (S)	3900		1000	ug/g	12-OCT-21	12-OCT-21	R5616407
Thallium (Tl)	0.338		0.050	ug/g	12-OCT-21	12-OCT-21	R5616407
Tin (Sn)	6.1		2.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Titanium (Ti)	1410		1.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Tungsten (W)	<0.50		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Uranium (U)	0.753		0.050	ug/g	12-OCT-21	12-OCT-21	R5616407
Vanadium (V)	49.7		0.20	ug/g	12-OCT-21	12-OCT-21	R5616407
Zinc (Zn)	166		2.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Zirconium (Zr)	5.4		1.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.117	DLHM	0.010	ug/g	14-OCT-21	15-OCT-21	R5619198

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647880-7 PCW-SG-006 Sampled By: CLIENT on 04-OCT-21 @ 12:55 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
Acenaphthylene	0.665	DLHM	0.010	ug/g	14-OCT-21	15-OCT-21	R5619198
Acridine	0.041	AI	0.020	ug/g	14-OCT-21	15-OCT-21	R5619198
Anthracene	0.327	DLHM	0.0080	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(a)anthracene	1.30	R	0.020	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(a)pyrene	1.67	DLHM	0.010	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(b&j)fluoranthene	1.51	DLHM	0.020	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(g,h,i)perylene	0.940	DLHM	0.020	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(k)fluoranthene	0.422	DLHM	0.020	ug/g	14-OCT-21	15-OCT-21	R5619198
Chrysene	1.38	DLHM	0.020	ug/g	14-OCT-21	15-OCT-21	R5619198
Dibenz(a,h)anthracene	0.246	DLHM	0.010	ug/g	14-OCT-21	15-OCT-21	R5619198
Fluoroanthene	1.25	DLHM	0.010	ug/g	14-OCT-21	15-OCT-21	R5619198
Fluorene	0.139	DLHM	0.010	ug/g	14-OCT-21	15-OCT-21	R5619198
Indeno(1,2,3-cd)pyrene	0.732	DLHM	0.020	ug/g	14-OCT-21	15-OCT-21	R5619198
1-Methylnaphthalene	0.019	DLHM	0.010	ug/g	14-OCT-21	15-OCT-21	R5619198
2-Methylnaphthalene	0.025	DLHM	0.010	ug/g	14-OCT-21	15-OCT-21	R5619198
Naphthalene	0.022	DLHM	0.010	ug/g	14-OCT-21	15-OCT-21	R5619198
Phenanthrene	0.491	DLHM	0.010	ug/g	14-OCT-21	15-OCT-21	R5619198
Pyrene	1.70	DLHM	0.010	ug/g	14-OCT-21	15-OCT-21	R5619198
Quinoline	<0.010	DLHM	0.010	ug/g	14-OCT-21	15-OCT-21	R5619198
Surrogate: 2-Fluorobiphenyl	85.5		60-140	%	14-OCT-21	15-OCT-21	R5619198
Surrogate: d14-Terphenyl	82.9		60-140	%	14-OCT-21	15-OCT-21	R5619198
B(a)P Total Potency Equivalent	2.34		0.020	ug/g	14-OCT-21	15-OCT-21	R5619198
IACR (CCME)	22.7		0.20		14-OCT-21	15-OCT-21	R5619198
Polychlorinated Biphenyls							
Aroclor 1016	<0.070	RRR	0.070	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1221	<0.070	RRR	0.070	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1232	<0.070	RRR	0.070	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1242	<0.070	RRR	0.070	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1248	<0.070	RRR	0.070	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1254	0.073	DLR	0.014	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1260	0.092	DLR	0.014	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1262	<0.014	DLR	0.014	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1268	<0.014	DLR	0.014	mg/kg	18-OCT-21	18-OCT-21	R5622261
Total Polychlorinated Biphenyls	0.165		0.16	mg/kg	18-OCT-21	18-OCT-21	R5622261
Surrogate: d14-Terphenyl	73.2		50-140	%	18-OCT-21	18-OCT-21	R5622261
Report Remarks : RRR: Due to sample matrix interferences, PCB recoveries could not be determined in the matrix spike unless spiked with 5X the normal concentration and therefore the detection limit has been raised accordingly.							
L2647880-8 PCW-SG-002 Sampled By: CLIENT on 04-OCT-21 @ 13:15 Matrix: SEDIMENT							
Physical Tests							
% Moisture	77.4		0.25	%	08-OCT-21	09-OCT-21	R5614677

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647880-8 PCW-SG-002 Sampled By: CLIENT on 04-OCT-21 @ 13:15 Matrix: SEDIMENT							
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0616		0.0010	g/g	19-OCT-21	19-OCT-21	R5624435
Total Organic Carbon	6.16		0.10	%	19-OCT-21	19-OCT-21	R5624435
Metals							
Aluminum (Al)	23500		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Antimony (Sb)	0.73		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Arsenic (As)	5.91		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Barium (Ba)	331		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Beryllium (Be)	0.84		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Bismuth (Bi)	0.29		0.20	ug/g	12-OCT-21	12-OCT-21	R5616407
Boron (B)	10.2		5.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Cadmium (Cd)	0.510		0.020	ug/g	12-OCT-21	12-OCT-21	R5616407
Calcium (Ca)	62600		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Chromium (Cr)	895		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Cobalt (Co)	14.8		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Copper (Cu)	41.5		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Iron (Fe)	32900		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Lead (Pb)	78.5		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Lithium (Li)	18.1		2.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Magnesium (Mg)	18200		20	ug/g	12-OCT-21	12-OCT-21	R5616407
Manganese (Mn)	767		1.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Mercury (Hg)	0.158	DLM	0.010	ug/g	12-OCT-21	13-OCT-21	R5616446
Molybdenum (Mo)	0.89		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Nickel (Ni)	31.4		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Phosphorus (P)	1170		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Potassium (K)	6310		100	ug/g	12-OCT-21	12-OCT-21	R5616407
Selenium (Se)	0.62		0.20	ug/g	12-OCT-21	12-OCT-21	R5616407
Silver (Ag)	0.29		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Sodium (Na)	854		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Strontium (Sr)	330		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Sulfur (S)	3400		1000	ug/g	12-OCT-21	12-OCT-21	R5616407
Thallium (Tl)	0.333		0.050	ug/g	12-OCT-21	12-OCT-21	R5616407
Tin (Sn)	3.7		2.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Titanium (Ti)	1730		1.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Tungsten (W)	<0.50		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Uranium (U)	0.899		0.050	ug/g	12-OCT-21	12-OCT-21	R5616407
Vanadium (V)	63.0		0.20	ug/g	12-OCT-21	12-OCT-21	R5616407
Zinc (Zn)	147		2.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Zirconium (Zr)	7.1		1.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.048	DLHM	0.015	ug/g	14-OCT-21	15-OCT-21	R5619198
Acenaphthylene	0.336	DLHM	0.015	ug/g	14-OCT-21	15-OCT-21	R5619198

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647880-8 PCW-SG-002 Sampled By: CLIENT on 04-OCT-21 @ 13:15 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
Acridine	<0.030	DLHM	0.030	ug/g	14-OCT-21	15-OCT-21	R5619198
Anthracene	0.141	DLHM	0.012	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(a)anthracene	0.608	R	0.030	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(a)pyrene	0.809	DLHM	0.015	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(b&j)fluoranthene	0.826	DLHM	0.030	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(g,h,i)perylene	0.453	DLHM	0.030	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(k)fluoranthene	0.223	DLHM	0.030	ug/g	14-OCT-21	15-OCT-21	R5619198
Chrysene	0.710	DLHM	0.030	ug/g	14-OCT-21	15-OCT-21	R5619198
Dibenz(a,h)anthracene	0.105	DLHM	0.015	ug/g	14-OCT-21	15-OCT-21	R5619198
Fluoroanthene	0.716	DLHM	0.015	ug/g	14-OCT-21	15-OCT-21	R5619198
Fluorene	0.061	DLHM	0.015	ug/g	14-OCT-21	15-OCT-21	R5619198
Indeno(1,2,3-cd)pyrene	0.357	DLHM	0.030	ug/g	14-OCT-21	15-OCT-21	R5619198
1-Methylnaphthalene	<0.015	DLHM	0.015	ug/g	14-OCT-21	15-OCT-21	R5619198
2-Methylnaphthalene	0.017	DLHM	0.015	ug/g	14-OCT-21	15-OCT-21	R5619198
Naphthalene	0.015	DLHM	0.015	ug/g	14-OCT-21	15-OCT-21	R5619198
Phenanthrene	0.245	DLHM	0.015	ug/g	14-OCT-21	15-OCT-21	R5619198
Pyrene	1.11	DLHM	0.015	ug/g	14-OCT-21	15-OCT-21	R5619198
Quinoline	<0.015	DLHM	0.015	ug/g	14-OCT-21	15-OCT-21	R5619198
Surrogate: 2-Fluorobiphenyl	84.3		60-140	%	14-OCT-21	15-OCT-21	R5619198
Surrogate: d14-Terphenyl	69.3		60-140	%	14-OCT-21	15-OCT-21	R5619198
B(a)P Total Potency Equivalent	1.13		0.021	ug/g	14-OCT-21	15-OCT-21	R5619198
IACR (CCME)	11.6		0.30		14-OCT-21	15-OCT-21	R5619198
Polychlorinated Biphenyls							
Aroclor 1016	<0.070	RRR	0.070	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1221	<0.070	RRR	0.070	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1232	<0.070	RRR	0.070	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1242	<0.070	RRR	0.070	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1248	<0.070	RRR	0.070	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1254	0.150	DLR	0.014	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1260	0.247	DLR	0.014	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1262	<0.014	DLR	0.014	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1268	<0.014	DLR	0.014	mg/kg	18-OCT-21	18-OCT-21	R5622261
Total Polychlorinated Biphenyls	0.398		0.16	mg/kg	18-OCT-21	18-OCT-21	R5622261
Surrogate: d14-Terphenyl	68.5		50-140	%	18-OCT-21	18-OCT-21	R5622261
Report Remarks : RRR: Due to sample matrix interferences, PCB recoveries could not be determined in the matrix spike unless spiked with 5X the normal concentration and therefore the detection limit has been raised accordingly.							
L2647880-9 PCW-SG-004 Sampled By: CLIENT on 04-OCT-21 @ 13:40 Matrix: SEDIMENT							
Physical Tests							
% Moisture	86.3		0.25	%	08-OCT-21	09-OCT-21	R5614677
Organic / Inorganic Carbon							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647880-9 PCW-SG-004 Sampled By: CLIENT on 04-OCT-21 @ 13:40 Matrix: SEDIMENT							
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.117		0.0010	g/g	19-OCT-21	19-OCT-21	R5624435
Total Organic Carbon	11.7		0.10	%	19-OCT-21	19-OCT-21	R5624435
Metals							
Aluminum (Al)	14300		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Antimony (Sb)	1.76		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Arsenic (As)	7.17		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Barium (Ba)	267		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Beryllium (Be)	0.57		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Bismuth (Bi)	0.50		0.20	ug/g	12-OCT-21	12-OCT-21	R5616407
Boron (B)	12.1		5.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Cadmium (Cd)	1.02		0.020	ug/g	12-OCT-21	12-OCT-21	R5616407
Calcium (Ca)	40300		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Chromium (Cr)	1340	DLHC	10	ug/g	12-OCT-21	12-OCT-21	R5616407
Cobalt (Co)	12.8		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Copper (Cu)	55.5		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Iron (Fe)	24800		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Lead (Pb)	179		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Lithium (Li)	9.6		2.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Magnesium (Mg)	12900		20	ug/g	12-OCT-21	12-OCT-21	R5616407
Manganese (Mn)	653		1.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Mercury (Hg)	0.356	DLM	0.010	ug/g	12-OCT-21	13-OCT-21	R5616446
Molybdenum (Mo)	1.57		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Nickel (Ni)	23.8		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Phosphorus (P)	1770		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Potassium (K)	3210		100	ug/g	12-OCT-21	12-OCT-21	R5616407
Selenium (Se)	1.19		0.20	ug/g	12-OCT-21	12-OCT-21	R5616407
Silver (Ag)	0.53		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Sodium (Na)	560		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Strontium (Sr)	244		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Sulfur (S)	7900		1000	ug/g	12-OCT-21	12-OCT-21	R5616407
Thallium (Tl)	0.298		0.050	ug/g	12-OCT-21	12-OCT-21	R5616407
Tin (Sn)	7.8		2.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Titanium (Ti)	940		1.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Tungsten (W)	0.84		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Uranium (U)	0.763		0.050	ug/g	12-OCT-21	12-OCT-21	R5616407
Vanadium (V)	40.4		0.20	ug/g	12-OCT-21	12-OCT-21	R5616407
Zinc (Zn)	243		2.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Zirconium (Zr)	3.6		1.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.191	DLHM	0.038	ug/g	14-OCT-21	15-OCT-21	R5619198
Acenaphthylene	1.60	DLHM	0.038	ug/g	14-OCT-21	15-OCT-21	R5619198

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647880-9 PCW-SG-004 Sampled By: CLIENT on 04-OCT-21 @ 13:40 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
Acridine	<0.090	DLM	0.090	ug/g	14-OCT-21	15-OCT-21	R5619198
Anthracene	0.613	DLHM	0.030	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(a)anthracene	2.31	R	0.075	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(a)pyrene	3.47	DLHM	0.038	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(b&j)fluoranthene	3.29	DLHM	0.075	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(g,h,i)perylene	2.08	DLHM	0.075	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(k)fluoranthene	0.987	DLHM	0.075	ug/g	14-OCT-21	15-OCT-21	R5619198
Chrysene	2.59	DLHM	0.075	ug/g	14-OCT-21	15-OCT-21	R5619198
Dibenz(a,h)anthracene	0.515	DLHM	0.038	ug/g	14-OCT-21	15-OCT-21	R5619198
Fluoroanthene	2.10	DLHM	0.038	ug/g	14-OCT-21	15-OCT-21	R5619198
Fluorene	0.282	DLHM	0.038	ug/g	14-OCT-21	15-OCT-21	R5619198
Indeno(1,2,3-cd)pyrene	1.55	DLHM	0.075	ug/g	14-OCT-21	15-OCT-21	R5619198
1-Methylnaphthalene	0.054	DLHM	0.038	ug/g	14-OCT-21	15-OCT-21	R5619198
2-Methylnaphthalene	0.075	DLHM	0.038	ug/g	14-OCT-21	15-OCT-21	R5619198
Naphthalene	0.083	DLHM	0.038	ug/g	14-OCT-21	15-OCT-21	R5619198
Phenanthrene	0.866	DLHM	0.038	ug/g	14-OCT-21	15-OCT-21	R5619198
Pyrene	3.21	DLHM	0.038	ug/g	14-OCT-21	15-OCT-21	R5619198
Quinoline	<0.038	DLHM	0.038	ug/g	14-OCT-21	15-OCT-21	R5619198
Surrogate: 2-Fluorobiphenyl	89.2		60-140	%	14-OCT-21	15-OCT-21	R5619198
Surrogate: d14-Terphenyl	89.5		60-140	%	14-OCT-21	15-OCT-21	R5619198
B(a)P Total Potency Equivalent	4.84		0.053	ug/g	14-OCT-21	15-OCT-21	R5619198
IACR (CCME)	47.5		0.75		14-OCT-21	15-OCT-21	R5619198
Polychlorinated Biphenyls							
Aroclor 1016	<0.120	RRR	0.12	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1221	<0.120	RRR	0.12	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1232	<0.120	RRR	0.12	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1242	<0.120	RRR	0.12	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1248	<0.120	RRR	0.12	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1254	0.204	DLHM	0.023	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1260	0.283	DLHM	0.023	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1262	<0.023	DLHM	0.023	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1268	<0.023	DLHM	0.023	mg/kg	18-OCT-21	18-OCT-21	R5622261
Total Polychlorinated Biphenyls	0.487		0.27	mg/kg	18-OCT-21	18-OCT-21	R5622261
Surrogate: d14-Terphenyl	70.7		50-140	%	18-OCT-21	18-OCT-21	R5622261
Report Remarks : RRR: Due to sample matrix interferences, PCB recoveries could not be determined in the matrix spike unless spiked with 5X the normal concentration and therefore the detection limit has been raised accordingly.							
L2647880-10 PCW-SG-003 Sampled By: CLIENT on 04-OCT-21 @ 13:55 Matrix: SEDIMENT							
Physical Tests							
% Moisture	81.0		0.25	%	08-OCT-21	09-OCT-21	R5614677
Organic / Inorganic Carbon							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647880-10 PCW-SG-003 Sampled By: CLIENT on 04-OCT-21 @ 13:55 Matrix: SEDIMENT							
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0764		0.0010	g/g	19-OCT-21	19-OCT-21	R5624435
Total Organic Carbon	7.64		0.10	%	19-OCT-21	19-OCT-21	R5624435
Metals							
Aluminum (Al)	18900		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Antimony (Sb)	1.23		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Arsenic (As)	7.37		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Barium (Ba)	284		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Beryllium (Be)	0.61		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Bismuth (Bi)	0.42		0.20	ug/g	12-OCT-21	12-OCT-21	R5616407
Boron (B)	9.9		5.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Cadmium (Cd)	0.780		0.020	ug/g	12-OCT-21	12-OCT-21	R5616407
Calcium (Ca)	69800		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Chromium (Cr)	1110		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Cobalt (Co)	13.2		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Copper (Cu)	47.3		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Iron (Fe)	28200		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Lead (Pb)	114		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Lithium (Li)	11.4		2.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Magnesium (Mg)	15800		20	ug/g	12-OCT-21	12-OCT-21	R5616407
Manganese (Mn)	747		1.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Mercury (Hg)	0.263	DLM	0.010	ug/g	12-OCT-21	13-OCT-21	R5616446
Molybdenum (Mo)	1.02		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Nickel (Ni)	26.9		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Phosphorus (P)	1320		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Potassium (K)	4220		100	ug/g	12-OCT-21	12-OCT-21	R5616407
Selenium (Se)	1.01		0.20	ug/g	12-OCT-21	12-OCT-21	R5616407
Silver (Ag)	0.41		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Sodium (Na)	641		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Strontium (Sr)	427		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Sulfur (S)	6400		1000	ug/g	12-OCT-21	12-OCT-21	R5616407
Thallium (Tl)	0.324		0.050	ug/g	12-OCT-21	12-OCT-21	R5616407
Tin (Sn)	4.9		2.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Titanium (Ti)	1260		1.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Tungsten (W)	0.64		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Uranium (U)	0.778		0.050	ug/g	12-OCT-21	12-OCT-21	R5616407
Vanadium (V)	50.2		0.20	ug/g	12-OCT-21	12-OCT-21	R5616407
Zinc (Zn)	180		2.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Zirconium (Zr)	4.4		1.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.086	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Acenaphthylene	0.710	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647880-10 PCW-SG-003 Sampled By: CLIENT on 04-OCT-21 @ 13:55 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
Acridine	<0.050	DLHM	0.050	ug/g	14-OCT-21	15-OCT-21	R5619198
Anthracene	0.313	DLHM	0.020	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(a)anthracene	1.20	R	0.050	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(a)pyrene	1.71	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(b&j)fluoranthene	1.73	DLHM	0.050	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(g,h,i)perylene	1.02	DLHM	0.050	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(k)fluoranthene	0.439	DLHM	0.050	ug/g	14-OCT-21	15-OCT-21	R5619198
Chrysene	1.34	DLHM	0.050	ug/g	14-OCT-21	15-OCT-21	R5619198
Dibenz(a,h)anthracene	0.252	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Fluoroanthene	1.14	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Fluorene	0.110	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Indeno(1,2,3-cd)pyrene	0.825	DLHM	0.050	ug/g	14-OCT-21	15-OCT-21	R5619198
1-Methylnaphthalene	0.030	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
2-Methylnaphthalene	0.045	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Naphthalene	0.046	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Phenanthrene	0.388	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Pyrene	1.83	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Quinoline	<0.025	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Surrogate: 2-Fluorobiphenyl	86.3		60-140	%	14-OCT-21	15-OCT-21	R5619198
Surrogate: d14-Terphenyl	88.2		60-140	%	14-OCT-21	15-OCT-21	R5619198
B(a)P Total Potency Equivalent	2.40		0.036	ug/g	14-OCT-21	15-OCT-21	R5619198
IACR (CCME)	24.0		0.50		14-OCT-21	15-OCT-21	R5619198
Polychlorinated Biphenyls							
Aroclor 1016	<0.070	RRR	0.070	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1221	<0.070	RRR	0.070	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1232	<0.070	RRR	0.070	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1242	<0.070	RRR	0.070	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1248	<0.070	RRR	0.070	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1254	0.243	DLR	0.014	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1260	0.349	DLR	0.014	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1262	<0.014	DLR	0.014	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1268	<0.014	DLR	0.014	mg/kg	18-OCT-21	18-OCT-21	R5622261
Total Polychlorinated Biphenyls	0.592		0.16	mg/kg	18-OCT-21	18-OCT-21	R5622261
Surrogate: d14-Terphenyl	102.9		50-140	%	18-OCT-21	18-OCT-21	R5622261
Report Remarks : RRR: Due to sample matrix interferences, PCB recoveries could not be determined in the matrix spike unless spiked with 5X the normal concentration and therefore the detection limit has been raised accordingly.							
L2647880-11 PCW-SG-008 Sampled By: CLIENT on 04-OCT-21 @ 15:20 Matrix: SEDIMENT							
Physical Tests							
% Moisture	82.3		0.25	%	08-OCT-21	09-OCT-21	R5614677
Organic / Inorganic Carbon							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647880-11 PCW-SG-008 Sampled By: CLIENT on 04-OCT-21 @ 15:20 Matrix: SEDIMENT							
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0927		0.0010	g/g	19-OCT-21	19-OCT-21	R5624435
Total Organic Carbon	9.27		0.10	%	19-OCT-21	19-OCT-21	R5624435
Metals							
Aluminum (Al)	17900		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Antimony (Sb)	2.47		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Arsenic (As)	9.49		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Barium (Ba)	324		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Beryllium (Be)	0.67		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Bismuth (Bi)	0.60		0.20	ug/g	12-OCT-21	12-OCT-21	R5616407
Boron (B)	13.6		5.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Cadmium (Cd)	1.14		0.020	ug/g	12-OCT-21	12-OCT-21	R5616407
Calcium (Ca)	93400		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Chromium (Cr)	3090	DLHC	10	ug/g	12-OCT-21	12-OCT-21	R5616407
Cobalt (Co)	14.3		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Copper (Cu)	59.3		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Iron (Fe)	28600		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Lead (Pb)	234		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Lithium (Li)	12.4		2.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Magnesium (Mg)	15100		20	ug/g	12-OCT-21	12-OCT-21	R5616407
Manganese (Mn)	866		1.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Mercury (Hg)	0.369	DLM	0.010	ug/g	12-OCT-21	13-OCT-21	R5616446
Molybdenum (Mo)	1.50		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Nickel (Ni)	27.3		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Phosphorus (P)	1740		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Potassium (K)	4120		100	ug/g	12-OCT-21	12-OCT-21	R5616407
Selenium (Se)	1.17		0.20	ug/g	12-OCT-21	12-OCT-21	R5616407
Silver (Ag)	0.57		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Sodium (Na)	683		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Strontium (Sr)	555		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Sulfur (S)	8300		1000	ug/g	12-OCT-21	12-OCT-21	R5616407
Thallium (Tl)	0.360		0.050	ug/g	12-OCT-21	12-OCT-21	R5616407
Tin (Sn)	8.4		2.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Titanium (Ti)	1100		1.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Tungsten (W)	1.21		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Uranium (U)	0.839		0.050	ug/g	12-OCT-21	12-OCT-21	R5616407
Vanadium (V)	48.7		0.20	ug/g	12-OCT-21	12-OCT-21	R5616407
Zinc (Zn)	257		2.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Zirconium (Zr)	4.3		1.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.578	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Acenaphthylene	2.18	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647880-11 PCW-SG-008 Sampled By: CLIENT on 04-OCT-21 @ 15:20 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
Acridine	<0.130	DLM	0.13	ug/g	14-OCT-21	15-OCT-21	R5619198
Anthracene	0.811	DLHM	0.020	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(a)anthracene	1.98	R	0.050	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(a)pyrene	2.91	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(b&j)fluoranthene	2.57	DLHM	0.050	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(g,h,i)perylene	1.82	DLHM	0.050	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(k)fluoranthene	0.700	DLHM	0.050	ug/g	14-OCT-21	15-OCT-21	R5619198
Chrysene	2.16	DLHM	0.050	ug/g	14-OCT-21	15-OCT-21	R5619198
Dibenz(a,h)anthracene	0.444	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Fluoroanthene	1.79	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Fluorene	0.478	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Indeno(1,2,3-cd)pyrene	1.31	DLHM	0.050	ug/g	14-OCT-21	15-OCT-21	R5619198
1-Methylnaphthalene	0.070	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
2-Methylnaphthalene	0.103	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Naphthalene	0.096	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Phenanthrene	0.920	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Pyrene	3.25	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Quinoline	<0.025	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Surrogate: 2-Fluorobiphenyl	89.2		60-140	%	14-OCT-21	15-OCT-21	R5619198
Surrogate: d14-Terphenyl	91.5		60-140	%	14-OCT-21	15-OCT-21	R5619198
B(a)P Total Potency Equivalent	4.05		0.036	ug/g	14-OCT-21	15-OCT-21	R5619198
IACR (CCME)	38.0		0.50		14-OCT-21	15-OCT-21	R5619198
Polychlorinated Biphenyls							
Aroclor 1016	<0.075	RRR	0.075	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1221	<0.075	RRR	0.075	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1232	<0.075	RRR	0.075	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1242	<0.075	RRR	0.075	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1248	<0.075	RRR	0.075	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1254	0.239	DLHM	0.015	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1260	0.451	DLHM	0.015	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1262	<0.015	DLHM	0.015	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1268	<0.015	DLHM	0.015	mg/kg	18-OCT-21	18-OCT-21	R5622261
Total Polychlorinated Biphenyls	0.69		0.17	mg/kg	18-OCT-21	18-OCT-21	R5622261
Surrogate: d14-Terphenyl	99.0		50-140	%	18-OCT-21	18-OCT-21	R5622261
Report Remarks : RRR: Due to sample matrix interferences, PCB recoveries could not be determined in the matrix spike unless spiked with 5X the normal concentration and therefore the detection limit has been raised accordingly.							
L2647880-12 PCW-SG-012 Sampled By: CLIENT on 04-OCT-21 @ 15:40 Matrix: SEDIMENT							
Physical Tests							
% Moisture	82.8		0.25	%	08-OCT-21	09-OCT-21	R5614943
Organic / Inorganic Carbon							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647880-12 PCW-SG-012 Sampled By: CLIENT on 04-OCT-21 @ 15:40 Matrix: SEDIMENT							
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.116		0.0010	g/g	19-OCT-21	19-OCT-21	R5624435
Total Organic Carbon	11.6		0.10	%	19-OCT-21	19-OCT-21	R5624435
Metals							
Aluminum (Al)	14700		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Antimony (Sb)	3.55		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Arsenic (As)	8.63		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Barium (Ba)	348		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Beryllium (Be)	0.57		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Bismuth (Bi)	0.95		0.20	ug/g	12-OCT-21	12-OCT-21	R5616407
Boron (B)	11.9		5.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Cadmium (Cd)	1.70		0.020	ug/g	12-OCT-21	12-OCT-21	R5616407
Calcium (Ca)	79400		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Chromium (Cr)	2250	DLHC	10	ug/g	12-OCT-21	12-OCT-21	R5616407
Cobalt (Co)	13.9		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Copper (Cu)	85.9		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Iron (Fe)	26400		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Lead (Pb)	383		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Lithium (Li)	9.5		2.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Magnesium (Mg)	13600		20	ug/g	12-OCT-21	12-OCT-21	R5616407
Manganese (Mn)	563		1.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Mercury (Hg)	0.594	DLM	0.010	ug/g	12-OCT-21	13-OCT-21	R5616446
Molybdenum (Mo)	2.31		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Nickel (Ni)	26.3		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Phosphorus (P)	2180		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Potassium (K)	3160		100	ug/g	12-OCT-21	12-OCT-21	R5616407
Selenium (Se)	1.30		0.20	ug/g	12-OCT-21	12-OCT-21	R5616407
Silver (Ag)	0.99		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Sodium (Na)	562		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Strontium (Sr)	522		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Sulfur (S)	8900		1000	ug/g	12-OCT-21	12-OCT-21	R5616407
Thallium (Tl)	0.376		0.050	ug/g	12-OCT-21	12-OCT-21	R5616407
Tin (Sn)	13.7		2.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Titanium (Ti)	755		1.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Tungsten (W)	1.61		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Uranium (U)	0.661		0.050	ug/g	12-OCT-21	12-OCT-21	R5616407
Vanadium (V)	39.7		0.20	ug/g	12-OCT-21	12-OCT-21	R5616407
Zinc (Zn)	428		2.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Zirconium (Zr)	3.1		1.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.264	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Acenaphthylene	1.67	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647880-12 PCW-SG-012 Sampled By: CLIENT on 04-OCT-21 @ 15:40 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
Acridine	<0.100	DLM	0.10	ug/g	14-OCT-21	15-OCT-21	R5619198
Anthracene	0.607	DLHM	0.020	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(a)anthracene	1.88	R	0.050	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(a)pyrene	2.84	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(b&j)fluoranthene	2.70	DLHM	0.050	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(g,h,i)perylene	1.85	DLHM	0.050	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(k)fluoranthene	0.833	DLHM	0.050	ug/g	14-OCT-21	15-OCT-21	R5619198
Chrysene	2.14	DLHM	0.050	ug/g	14-OCT-21	15-OCT-21	R5619198
Dibenz(a,h)anthracene	0.408	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Fluoroanthene	2.25	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Fluorene	0.325	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Indeno(1,2,3-cd)pyrene	1.25	DLHM	0.050	ug/g	14-OCT-21	15-OCT-21	R5619198
1-Methylnaphthalene	0.093	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
2-Methylnaphthalene	0.110	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Naphthalene	0.103	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Phenanthrene	1.18	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Pyrene	3.27	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Quinoline	<0.025	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Surrogate: 2-Fluorobiphenyl	87.6		60-140	%	14-OCT-21	15-OCT-21	R5619198
Surrogate: d14-Terphenyl	89.4		60-140	%	14-OCT-21	15-OCT-21	R5619198
B(a)P Total Potency Equivalent	3.95		0.036	ug/g	14-OCT-21	15-OCT-21	R5619198
IACR (CCME)	39.0		0.50		14-OCT-21	15-OCT-21	R5619198
Polychlorinated Biphenyls							
Aroclor 1016	<0.120	RRR	0.12	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1221	<0.120	RRR	0.12	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1232	<0.120	RRR	0.12	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1242	<0.120	RRR	0.12	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1248	<0.120	RRR	0.12	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1254	0.301	DLR	0.023	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1260	0.562	DLR	0.023	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1262	<0.023	DLR	0.023	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1268	<0.023	DLR	0.023	mg/kg	18-OCT-21	18-OCT-21	R5622261
Total Polychlorinated Biphenyls	0.863		0.27	mg/kg	18-OCT-21	18-OCT-21	R5622261
Surrogate: d14-Terphenyl	85.0		50-140	%	18-OCT-21	18-OCT-21	R5622261
Report Remarks : RRR: Due to sample matrix interferences, PCB recoveries could not be determined in the matrix spike unless spiked with 5X the normal concentration and therefore the detection limit has been raised accordingly.							
L2647880-13 PCW-SG-010 Sampled By: CLIENT on 04-OCT-21 @ 15:55 Matrix: SEDIMENT							
Physical Tests							
% Moisture	82.2		0.25	%	08-OCT-21	09-OCT-21	R5614943
Organic / Inorganic Carbon							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647880-13 PCW-SG-010 Sampled By: CLIENT on 04-OCT-21 @ 15:55 Matrix: SEDIMENT							
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0928		0.0010	g/g	19-OCT-21	19-OCT-21	R5624426
Total Organic Carbon	9.28		0.10	%	19-OCT-21	19-OCT-21	R5624426
Metals							
Aluminum (Al)	12500		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Antimony (Sb)	3.65		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Arsenic (As)	9.90		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Barium (Ba)	352		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Beryllium (Be)	0.51		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Bismuth (Bi)	1.06		0.20	ug/g	12-OCT-21	12-OCT-21	R5616407
Boron (B)	9.6		5.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Cadmium (Cd)	1.74		0.020	ug/g	12-OCT-21	12-OCT-21	R5616407
Calcium (Ca)	112000		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Chromium (Cr)	5330	DLHC	10	ug/g	12-OCT-21	12-OCT-21	R5616407
Cobalt (Co)	14.1		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Copper (Cu)	81.8		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Iron (Fe)	25300		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Lead (Pb)	338		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Lithium (Li)	9.1		2.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Magnesium (Mg)	13900		20	ug/g	12-OCT-21	12-OCT-21	R5616407
Manganese (Mn)	607		1.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Mercury (Hg)	0.556	DLM	0.010	ug/g	12-OCT-21	13-OCT-21	R5616446
Molybdenum (Mo)	1.65		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Nickel (Ni)	25.4		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Phosphorus (P)	2060		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Potassium (K)	2920		100	ug/g	12-OCT-21	12-OCT-21	R5616407
Selenium (Se)	1.18		0.20	ug/g	12-OCT-21	12-OCT-21	R5616407
Silver (Ag)	0.79		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Sodium (Na)	609		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Strontium (Sr)	713		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Sulfur (S)	8000		1000	ug/g	12-OCT-21	12-OCT-21	R5616407
Thallium (Tl)	0.338		0.050	ug/g	12-OCT-21	12-OCT-21	R5616407
Tin (Sn)	12.3		2.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Titanium (Ti)	655		1.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Tungsten (W)	2.07		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Uranium (U)	0.585		0.050	ug/g	12-OCT-21	12-OCT-21	R5616407
Vanadium (V)	37.5		0.20	ug/g	12-OCT-21	12-OCT-21	R5616407
Zinc (Zn)	378		2.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Zirconium (Zr)	2.6		1.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.208	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Acenaphthylene	1.18	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647880-13 PCW-SG-010 Sampled By: CLIENT on 04-OCT-21 @ 15:55 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
Acridine	<0.100	DLM	0.10	ug/g	14-OCT-21	15-OCT-21	R5619198
Anthracene	0.400	DLHM	0.020	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(a)anthracene	1.35	R	0.050	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(a)pyrene	2.18	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(b&j)fluoranthene	2.37	DLHM	0.050	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(g,h,i)perylene	1.51	DLHM	0.050	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(k)fluoranthene	0.683	DLHM	0.050	ug/g	14-OCT-21	15-OCT-21	R5619198
Chrysene	1.66	DLHM	0.050	ug/g	14-OCT-21	15-OCT-21	R5619198
Dibenz(a,h)anthracene	0.347	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Fluoroanthene	1.68	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Fluorene	0.252	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Indeno(1,2,3-cd)pyrene	1.25	DLHM	0.050	ug/g	14-OCT-21	15-OCT-21	R5619198
1-Methylnaphthalene	0.084	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
2-Methylnaphthalene	0.103	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Naphthalene	0.135	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Phenanthrene	0.830	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Pyrene	2.49	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Quinoline	<0.025	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Surrogate: 2-Fluorobiphenyl	87.3		60-140	%	14-OCT-21	15-OCT-21	R5619198
Surrogate: d14-Terphenyl	88.8		60-140	%	14-OCT-21	15-OCT-21	R5619198
B(a)P Total Potency Equivalent	3.13		0.036	ug/g	14-OCT-21	15-OCT-21	R5619198
IACR (CCME)	32.0		0.50		14-OCT-21	15-OCT-21	R5619198
Polychlorinated Biphenyls							
Aroclor 1016	<0.120	RRR	0.12	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1221	<0.120	RRR	0.12	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1232	<0.120	RRR	0.12	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1242	<0.120	RRR	0.12	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1248	<0.120	RRR	0.12	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1254	0.204	DLR	0.023	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1260	0.335	DLR	0.023	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1262	<0.023	DLR	0.023	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1268	<0.023	DLR	0.023	mg/kg	18-OCT-21	18-OCT-21	R5622261
Total Polychlorinated Biphenyls	0.539		0.27	mg/kg	18-OCT-21	18-OCT-21	R5622261
Surrogate: d14-Terphenyl	87.0		50-140	%	18-OCT-21	18-OCT-21	R5622261
Report Remarks : RRR: Due to sample matrix interferences, PCB recoveries could not be determined in the matrix spike unless spiked with 5X the normal concentration and therefore the detection limit has been raised accordingly.							
L2647880-14 PCW-SG-009 Sampled By: CLIENT on 04-OCT-21 @ 16:05 Matrix: SEDIMENT							
Physical Tests							
% Moisture	83.3		0.25	%	08-OCT-21	09-OCT-21	R5614943
Organic / Inorganic Carbon							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647880-14 PCW-SG-009 Sampled By: CLIENT on 04-OCT-21 @ 16:05 Matrix: SEDIMENT							
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0825		0.0010	g/g	19-OCT-21	19-OCT-21	R5624426
Total Organic Carbon	8.25		0.10	%	19-OCT-21	19-OCT-21	R5624426
Metals							
Aluminum (Al)	11700		50	ug/g	13-OCT-21	13-OCT-21	R5617456
Antimony (Sb)	1.82		0.10	ug/g	13-OCT-21	13-OCT-21	R5617456
Arsenic (As)	5.91		0.10	ug/g	13-OCT-21	13-OCT-21	R5617456
Barium (Ba)	221		0.50	ug/g	13-OCT-21	13-OCT-21	R5617456
Beryllium (Be)	0.47		0.10	ug/g	13-OCT-21	13-OCT-21	R5617456
Bismuth (Bi)	0.41		0.20	ug/g	13-OCT-21	13-OCT-21	R5617456
Boron (B)	10.9		5.0	ug/g	13-OCT-21	13-OCT-21	R5617456
Cadmium (Cd)	0.761		0.020	ug/g	13-OCT-21	13-OCT-21	R5617456
Calcium (Ca)	96100		50	ug/g	13-OCT-21	13-OCT-21	R5617456
Chromium (Cr)	1790		0.50	ug/g	13-OCT-21	13-OCT-21	R5617456
Cobalt (Co)	9.07		0.10	ug/g	13-OCT-21	13-OCT-21	R5617456
Copper (Cu)	40.0		0.50	ug/g	13-OCT-21	13-OCT-21	R5617456
Iron (Fe)	18700		50	ug/g	13-OCT-21	13-OCT-21	R5617456
Lead (Pb)	157		0.50	ug/g	13-OCT-21	13-OCT-21	R5617456
Lithium (Li)	10.7		2.0	ug/g	13-OCT-21	13-OCT-21	R5617456
Magnesium (Mg)	10500		20	ug/g	13-OCT-21	13-OCT-21	R5617456
Manganese (Mn)	637		1.0	ug/g	13-OCT-21	13-OCT-21	R5617456
Mercury (Hg)	0.271	DLM	0.010	ug/g	13-OCT-21	14-OCT-21	R5617361
Molybdenum (Mo)	1.10		0.10	ug/g	13-OCT-21	13-OCT-21	R5617456
Nickel (Ni)	18.1		0.50	ug/g	13-OCT-21	13-OCT-21	R5617456
Phosphorus (P)	1060		50	ug/g	13-OCT-21	13-OCT-21	R5617456
Potassium (K)	2900		100	ug/g	13-OCT-21	13-OCT-21	R5617456
Selenium (Se)	0.71		0.20	ug/g	13-OCT-21	13-OCT-21	R5617456
Silver (Ag)	0.42		0.10	ug/g	13-OCT-21	13-OCT-21	R5617456
Sodium (Na)	518		50	ug/g	13-OCT-21	13-OCT-21	R5617456
Strontium (Sr)	594		0.50	ug/g	13-OCT-21	13-OCT-21	R5617456
Sulfur (S)	5400		1000	ug/g	13-OCT-21	13-OCT-21	R5617456
Thallium (Tl)	0.223		0.050	ug/g	13-OCT-21	13-OCT-21	R5617456
Tin (Sn)	5.6		2.0	ug/g	13-OCT-21	13-OCT-21	R5617456
Titanium (Ti)	649		1.0	ug/g	13-OCT-21	13-OCT-21	R5617456
Tungsten (W)	1.13		0.50	ug/g	13-OCT-21	13-OCT-21	R5617456
Uranium (U)	0.504		0.050	ug/g	13-OCT-21	13-OCT-21	R5617456
Vanadium (V)	32.4		0.20	ug/g	13-OCT-21	13-OCT-21	R5617456
Zinc (Zn)	183		2.0	ug/g	13-OCT-21	13-OCT-21	R5617456
Zirconium (Zr)	2.8		1.0	ug/g	13-OCT-21	13-OCT-21	R5617456
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.094	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Acenaphthylene	0.584	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647880-14 PCW-SG-009 Sampled By: CLIENT on 04-OCT-21 @ 16:05 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
Acridine	<0.050	DLHM	0.050	ug/g	14-OCT-21	15-OCT-21	R5619198
Anthracene	0.213	DLHM	0.020	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(a)anthracene	0.827	R	0.050	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(a)pyrene	1.26	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(b&j)fluoranthene	1.38	DLHM	0.050	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(g,h,i)perylene	0.889	DLHM	0.050	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(k)fluoranthene	0.383	DLHM	0.050	ug/g	14-OCT-21	15-OCT-21	R5619198
Chrysene	0.994	DLHM	0.050	ug/g	14-OCT-21	15-OCT-21	R5619198
Dibenz(a,h)anthracene	0.202	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Fluoroanthene	0.950	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Fluorene	0.115	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Indeno(1,2,3-cd)pyrene	0.677	DLHM	0.050	ug/g	14-OCT-21	15-OCT-21	R5619198
1-Methylnaphthalene	0.034	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
2-Methylnaphthalene	0.043	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Naphthalene	0.044	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Phenanthrene	0.393	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Pyrene	1.44	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Quinoline	<0.025	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Surrogate: 2-Fluorobiphenyl	87.6		60-140	%	14-OCT-21	15-OCT-21	R5619198
Surrogate: d14-Terphenyl	88.6		60-140	%	14-OCT-21	15-OCT-21	R5619198
B(a)P Total Potency Equivalent	1.80		0.036	ug/g	14-OCT-21	15-OCT-21	R5619198
IACR (CCME)	18.7		0.50		14-OCT-21	15-OCT-21	R5619198
Polychlorinated Biphenyls							
Aroclor 1016	<0.120	RRR	0.12	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1221	<0.120	RRR	0.12	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1232	<0.120	RRR	0.12	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1242	<0.120	RRR	0.12	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1248	<0.120	RRR	0.12	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1254	0.171	DLR	0.023	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1260	0.250	DLR	0.023	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1262	<0.023	DLR	0.023	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1268	<0.023	DLR	0.023	mg/kg	18-OCT-21	18-OCT-21	R5622261
Total Polychlorinated Biphenyls	0.421		0.27	mg/kg	18-OCT-21	18-OCT-21	R5622261
Surrogate: d14-Terphenyl	77.4		50-140	%	18-OCT-21	18-OCT-21	R5622261
Report Remarks : RRR: Due to sample matrix interferences, PCB recoveries could not be determined in the matrix spike unless spiked with 5X the normal concentration and therefore the detection limit has been raised accordingly.							
L2647880-15 PCE-SG-012 Sampled By: CLIENT on 04-OCT-21 @ 16:25 Matrix: SEDIMENT							
Physical Tests							
% Moisture	83.7		0.25	%	08-OCT-21	09-OCT-21	R5614943
Organic / Inorganic Carbon							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647880-15 PCE-SG-012 Sampled By: CLIENT on 04-OCT-21 @ 16:25 Matrix: SEDIMENT							
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0786		0.0010	g/g	19-OCT-21	19-OCT-21	R5624426
Total Organic Carbon	7.86		0.10	%	19-OCT-21	19-OCT-21	R5624426
Metals							
Aluminum (Al)	14900		50	ug/g	13-OCT-21	14-OCT-21	R5618240
Antimony (Sb)	1.86		0.10	ug/g	13-OCT-21	14-OCT-21	R5618240
Arsenic (As)	6.90		0.10	ug/g	13-OCT-21	14-OCT-21	R5618240
Barium (Ba)	266		0.50	ug/g	13-OCT-21	14-OCT-21	R5618240
Beryllium (Be)	0.60		0.10	ug/g	13-OCT-21	14-OCT-21	R5618240
Bismuth (Bi)	0.45		0.20	ug/g	13-OCT-21	14-OCT-21	R5618240
Boron (B)	13.6		5.0	ug/g	13-OCT-21	14-OCT-21	R5618240
Cadmium (Cd)	0.743		0.020	ug/g	13-OCT-21	14-OCT-21	R5618240
Calcium (Ca)	131000		50	ug/g	13-OCT-21	14-OCT-21	R5618240
Chromium (Cr)	1270		0.50	ug/g	13-OCT-21	14-OCT-21	R5618240
Cobalt (Co)	11.3		0.10	ug/g	13-OCT-21	14-OCT-21	R5618240
Copper (Cu)	46.7		0.50	ug/g	13-OCT-21	14-OCT-21	R5618240
Iron (Fe)	24100		50	ug/g	13-OCT-21	14-OCT-21	R5618240
Lead (Pb)	142		0.50	ug/g	13-OCT-21	14-OCT-21	R5618240
Lithium (Li)	15.5		2.0	ug/g	13-OCT-21	14-OCT-21	R5618240
Magnesium (Mg)	13100		20	ug/g	13-OCT-21	14-OCT-21	R5618240
Manganese (Mn)	743		1.0	ug/g	13-OCT-21	14-OCT-21	R5618240
Mercury (Hg)	0.208		0.0050	ug/g	13-OCT-21	14-OCT-21	R5617358
Molybdenum (Mo)	1.30		0.10	ug/g	13-OCT-21	14-OCT-21	R5618240
Nickel (Ni)	22.7		0.50	ug/g	13-OCT-21	14-OCT-21	R5618240
Phosphorus (P)	1230		50	ug/g	13-OCT-21	14-OCT-21	R5618240
Potassium (K)	3400		100	ug/g	13-OCT-21	14-OCT-21	R5618240
Selenium (Se)	1.06		0.20	ug/g	13-OCT-21	14-OCT-21	R5618240
Silver (Ag)	0.35		0.10	ug/g	13-OCT-21	14-OCT-21	R5618240
Sodium (Na)	739		50	ug/g	13-OCT-21	14-OCT-21	R5618240
Strontium (Sr)	799		0.50	ug/g	13-OCT-21	14-OCT-21	R5618240
Sulfur (S)	7900		1000	ug/g	13-OCT-21	14-OCT-21	R5618240
Thallium (Tl)	0.242		0.050	ug/g	13-OCT-21	14-OCT-21	R5618240
Tin (Sn)	4.9		2.0	ug/g	13-OCT-21	14-OCT-21	R5618240
Titanium (Ti)	768		1.0	ug/g	13-OCT-21	14-OCT-21	R5618240
Tungsten (W)	1.68		0.50	ug/g	13-OCT-21	14-OCT-21	R5618240
Uranium (U)	0.664		0.050	ug/g	13-OCT-21	14-OCT-21	R5618240
Vanadium (V)	42.3		0.20	ug/g	13-OCT-21	14-OCT-21	R5618240
Zinc (Zn)	200		2.0	ug/g	13-OCT-21	14-OCT-21	R5618240
Zirconium (Zr)	2.7		1.0	ug/g	13-OCT-21	14-OCT-21	R5618240
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.065	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Acenaphthylene	0.227	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647880-15 PCE-SG-012 Sampled By: CLIENT on 04-OCT-21 @ 16:25 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
Acridine	<0.050	DLHM	0.050	ug/g	14-OCT-21	15-OCT-21	R5619198
Anthracene	0.129	DLHM	0.020	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(a)anthracene	0.469	R	0.050	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(a)pyrene	0.680	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(b&j)fluoranthene	0.892	DLHM	0.050	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(g,h,i)perylene	0.513	DLHM	0.050	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(k)fluoranthene	0.233	DLHM	0.050	ug/g	14-OCT-21	15-OCT-21	R5619198
Chrysene	0.633	DLHM	0.050	ug/g	14-OCT-21	15-OCT-21	R5619198
Dibenz(a,h)anthracene	0.119	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Fluoroanthene	0.691	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Fluorene	0.066	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Indeno(1,2,3-cd)pyrene	0.412	DLHM	0.050	ug/g	14-OCT-21	15-OCT-21	R5619198
1-Methylnaphthalene	0.025	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
2-Methylnaphthalene	0.028	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Naphthalene	0.026	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Phenanthrene	0.314	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Pyrene	0.893	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Quinoline	<0.025	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Surrogate: 2-Fluorobiphenyl	87.6		60-140	%	14-OCT-21	15-OCT-21	R5619198
Surrogate: d14-Terphenyl	87.2		60-140	%	14-OCT-21	15-OCT-21	R5619198
B(a)P Total Potency Equivalent	1.01		0.036	ug/g	14-OCT-21	15-OCT-21	R5619198
IACR (CCME)	11.3		0.50		14-OCT-21	15-OCT-21	R5619198
Polychlorinated Biphenyls							
Aroclor 1016	<0.120	RRR	0.12	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1221	<0.120	RRR	0.12	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1232	<0.120	RRR	0.12	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1242	<0.120	RRR	0.12	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1248	<0.120	RRR	0.12	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1254	0.146	DLR	0.023	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1260	0.190	DLR	0.023	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1262	<0.023	DLR	0.023	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1268	<0.023	DLR	0.023	mg/kg	18-OCT-21	18-OCT-21	R5622261
Total Polychlorinated Biphenyls	0.336		0.27	mg/kg	18-OCT-21	18-OCT-21	R5622261
Surrogate: d14-Terphenyl	79.6		50-140	%	18-OCT-21	18-OCT-21	R5622261
Report Remarks : RRR: Due to sample matrix interferences, PCB recoveries could not be determined in the matrix spike unless spiked with 5X the normal concentration and therefore the detection limit has been raised accordingly.							
L2647880-16 PCW-SG-015 Sampled By: CLIENT on 04-OCT-21 @ 16:35 Matrix: SEDIMENT							
Physical Tests							
% Moisture	80.4		0.25	%	08-OCT-21	09-OCT-21	R5614943
Organic / Inorganic Carbon							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647880-16 PCW-SG-015 Sampled By: CLIENT on 04-OCT-21 @ 16:35 Matrix: SEDIMENT							
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0754		0.0010	g/g	19-OCT-21	19-OCT-21	R5624426
Total Organic Carbon	7.54		0.10	%	19-OCT-21	19-OCT-21	R5624426
Metals							
Aluminum (Al)	12100		50	ug/g	13-OCT-21	13-OCT-21	R5617456
Antimony (Sb)	2.68		0.10	ug/g	13-OCT-21	13-OCT-21	R5617456
Arsenic (As)	5.53		0.10	ug/g	13-OCT-21	13-OCT-21	R5617456
Barium (Ba)	258		0.50	ug/g	13-OCT-21	13-OCT-21	R5617456
Beryllium (Be)	0.49		0.10	ug/g	13-OCT-21	13-OCT-21	R5617456
Bismuth (Bi)	0.69		0.20	ug/g	13-OCT-21	13-OCT-21	R5617456
Boron (B)	13.0		5.0	ug/g	13-OCT-21	13-OCT-21	R5617456
Cadmium (Cd)	1.04		0.020	ug/g	13-OCT-21	13-OCT-21	R5617456
Calcium (Ca)	158000		50	ug/g	13-OCT-21	13-OCT-21	R5617456
Chromium (Cr)	2050	DLHC	10	ug/g	13-OCT-21	13-OCT-21	R5617456
Cobalt (Co)	9.62		0.10	ug/g	13-OCT-21	13-OCT-21	R5617456
Copper (Cu)	63.2		0.50	ug/g	13-OCT-21	13-OCT-21	R5617456
Iron (Fe)	21400		50	ug/g	13-OCT-21	13-OCT-21	R5617456
Lead (Pb)	223		0.50	ug/g	13-OCT-21	13-OCT-21	R5617456
Lithium (Li)	12.3		2.0	ug/g	13-OCT-21	13-OCT-21	R5617456
Magnesium (Mg)	13700		20	ug/g	13-OCT-21	13-OCT-21	R5617456
Manganese (Mn)	556		1.0	ug/g	13-OCT-21	13-OCT-21	R5617456
Mercury (Hg)	0.241	DLM	0.010	ug/g	13-OCT-21	14-OCT-21	R5617361
Molybdenum (Mo)	1.52		0.10	ug/g	13-OCT-21	13-OCT-21	R5617456
Nickel (Ni)	20.8		0.50	ug/g	13-OCT-21	13-OCT-21	R5617456
Phosphorus (P)	1300		50	ug/g	13-OCT-21	13-OCT-21	R5617456
Potassium (K)	2940		100	ug/g	13-OCT-21	13-OCT-21	R5617456
Selenium (Se)	0.80		0.20	ug/g	13-OCT-21	13-OCT-21	R5617456
Silver (Ag)	0.51		0.10	ug/g	13-OCT-21	13-OCT-21	R5617456
Sodium (Na)	515		50	ug/g	13-OCT-21	13-OCT-21	R5617456
Strontium (Sr)	841		0.50	ug/g	13-OCT-21	13-OCT-21	R5617456
Sulfur (S)	5800		1000	ug/g	13-OCT-21	13-OCT-21	R5617456
Thallium (Tl)	0.274		0.050	ug/g	13-OCT-21	13-OCT-21	R5617456
Tin (Sn)	7.8		2.0	ug/g	13-OCT-21	13-OCT-21	R5617456
Titanium (Ti)	553		1.0	ug/g	13-OCT-21	13-OCT-21	R5617456
Tungsten (W)	3.14		0.50	ug/g	13-OCT-21	13-OCT-21	R5617456
Uranium (U)	0.560		0.050	ug/g	13-OCT-21	13-OCT-21	R5617456
Vanadium (V)	35.0		0.20	ug/g	13-OCT-21	13-OCT-21	R5617456
Zinc (Zn)	290		2.0	ug/g	13-OCT-21	13-OCT-21	R5617456
Zirconium (Zr)	2.4		1.0	ug/g	13-OCT-21	13-OCT-21	R5617456
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.134	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Acenaphthylene	0.421	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647880-16 PCW-SG-015 Sampled By: CLIENT on 04-OCT-21 @ 16:35 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
Acridine	<0.100	DLM	0.10	ug/g	14-OCT-21	15-OCT-21	R5619198
Anthracene	0.243	DLHM	0.020	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(a)anthracene	0.898	R	0.050	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(a)pyrene	1.24	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(b&j)fluoranthene	1.55	DLHM	0.050	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(g,h,i)perylene	0.928	DLHM	0.050	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(k)fluoranthene	0.473	DLHM	0.050	ug/g	14-OCT-21	15-OCT-21	R5619198
Chrysene	1.20	DLHM	0.050	ug/g	14-OCT-21	15-OCT-21	R5619198
Dibenz(a,h)anthracene	0.213	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Fluoroanthene	1.45	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Fluorene	0.135	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Indeno(1,2,3-cd)pyrene	0.812	DLHM	0.050	ug/g	14-OCT-21	15-OCT-21	R5619198
1-Methylnaphthalene	0.055	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
2-Methylnaphthalene	0.048	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Naphthalene	0.044	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Phenanthrene	0.674	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Pyrene	1.85	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Quinoline	<0.025	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Surrogate: 2-Fluorobiphenyl	87.1		60-140	%	14-OCT-21	15-OCT-21	R5619198
Surrogate: d14-Terphenyl	87.4		60-140	%	14-OCT-21	15-OCT-21	R5619198
B(a)P Total Potency Equivalent	1.85		0.036	ug/g	14-OCT-21	15-OCT-21	R5619198
IACR (CCME)	20.7		0.50		14-OCT-21	15-OCT-21	R5619198
Polychlorinated Biphenyls							
Aroclor 1016	<0.120	RRR	0.12	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1221	<0.120	RRR	0.12	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1232	<0.120	RRR	0.12	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1242	<0.120	RRR	0.12	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1248	<0.120	RRR	0.12	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1254	0.128	DLR	0.023	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1260	0.190	DLR	0.023	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1262	<0.023	DLR	0.023	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1268	<0.023	DLR	0.023	mg/kg	18-OCT-21	18-OCT-21	R5622261
Total Polychlorinated Biphenyls	0.318		0.27	mg/kg	18-OCT-21	18-OCT-21	R5622261
Surrogate: d14-Terphenyl	73.4		50-140	%	18-OCT-21	18-OCT-21	R5622261
Report Remarks : RRR: Due to sample matrix interferences, PCB recoveries could not be determined in the matrix spike unless spiked with 5X the normal concentration and therefore the detection limit has been raised accordingly.							
L2647880-17 PCW-SG-014 Sampled By: CLIENT on 04-OCT-21 @ 16:50 Matrix: SEDIMENT							
Physical Tests							
% Moisture	73.4		0.25	%	08-OCT-21	09-OCT-21	R5614943
Organic / Inorganic Carbon							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647880-17 PCW-SG-014 Sampled By: CLIENT on 04-OCT-21 @ 16:50 Matrix: SEDIMENT							
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0818		0.0010	g/g	19-OCT-21	19-OCT-21	R5624426
Total Organic Carbon	8.18		0.10	%	19-OCT-21	19-OCT-21	R5624426
Metals							
Aluminum (Al)	9820		50	ug/g	13-OCT-21	13-OCT-21	R5617456
Antimony (Sb)	4.23		0.10	ug/g	13-OCT-21	13-OCT-21	R5617456
Arsenic (As)	5.46		0.10	ug/g	13-OCT-21	13-OCT-21	R5617456
Barium (Ba)	269		0.50	ug/g	13-OCT-21	13-OCT-21	R5617456
Beryllium (Be)	0.47		0.10	ug/g	13-OCT-21	13-OCT-21	R5617456
Bismuth (Bi)	0.78		0.20	ug/g	13-OCT-21	13-OCT-21	R5617456
Boron (B)	13.1		5.0	ug/g	13-OCT-21	13-OCT-21	R5617456
Cadmium (Cd)	1.28		0.020	ug/g	13-OCT-21	13-OCT-21	R5617456
Calcium (Ca)	149000		50	ug/g	13-OCT-21	13-OCT-21	R5617456
Chromium (Cr)	4380	DLHC	10	ug/g	13-OCT-21	13-OCT-21	R5617456
Cobalt (Co)	9.03		0.10	ug/g	13-OCT-21	13-OCT-21	R5617456
Copper (Cu)	81.4		0.50	ug/g	13-OCT-21	13-OCT-21	R5617456
Iron (Fe)	20900		50	ug/g	13-OCT-21	13-OCT-21	R5617456
Lead (Pb)	330		0.50	ug/g	13-OCT-21	13-OCT-21	R5617456
Lithium (Li)	10.5		2.0	ug/g	13-OCT-21	13-OCT-21	R5617456
Magnesium (Mg)	14300		20	ug/g	13-OCT-21	13-OCT-21	R5617456
Manganese (Mn)	421		1.0	ug/g	13-OCT-21	13-OCT-21	R5617456
Mercury (Hg)	0.334	DLM	0.010	ug/g	13-OCT-21	14-OCT-21	R5617361
Molybdenum (Mo)	2.13		0.10	ug/g	13-OCT-21	13-OCT-21	R5617456
Nickel (Ni)	19.6		0.50	ug/g	13-OCT-21	13-OCT-21	R5617456
Phosphorus (P)	1660		50	ug/g	13-OCT-21	13-OCT-21	R5617456
Potassium (K)	2350		100	ug/g	13-OCT-21	13-OCT-21	R5617456
Selenium (Se)	0.73		0.20	ug/g	13-OCT-21	13-OCT-21	R5617456
Silver (Ag)	0.75		0.10	ug/g	13-OCT-21	13-OCT-21	R5617456
Sodium (Na)	425		50	ug/g	13-OCT-21	13-OCT-21	R5617456
Strontium (Sr)	691		0.50	ug/g	13-OCT-21	13-OCT-21	R5617456
Sulfur (S)	4900		1000	ug/g	13-OCT-21	13-OCT-21	R5617456
Thallium (Tl)	0.319		0.050	ug/g	13-OCT-21	13-OCT-21	R5617456
Tin (Sn)	12.6		2.0	ug/g	13-OCT-21	13-OCT-21	R5617456
Titanium (Ti)	444		1.0	ug/g	13-OCT-21	13-OCT-21	R5617456
Tungsten (W)	3.55		0.50	ug/g	13-OCT-21	13-OCT-21	R5617456
Uranium (U)	0.483		0.050	ug/g	13-OCT-21	13-OCT-21	R5617456
Vanadium (V)	30.6		0.20	ug/g	13-OCT-21	13-OCT-21	R5617456
Zinc (Zn)	374		2.0	ug/g	13-OCT-21	13-OCT-21	R5617456
Zirconium (Zr)	2.2		1.0	ug/g	13-OCT-21	13-OCT-21	R5617456
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.389	DLM	0.038	ug/g	14-OCT-21	15-OCT-21	R5619198
Acenaphthylene	1.15	DLM	0.038	ug/g	14-OCT-21	15-OCT-21	R5619198

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647880-17 PCW-SG-014 Sampled By: CLIENT on 04-OCT-21 @ 16:50 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
Acridine	<0.140	DLM	0.14	ug/g	14-OCT-21	15-OCT-21	R5619198
Anthracene	0.622	DLM	0.030	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(a)anthracene	1.87	R	0.075	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(a)pyrene	2.61	DLM	0.038	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(b&j)fluoranthene	3.02	DLM	0.075	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(g,h,i)perylene	1.78	DLM	0.075	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(k)fluoranthene	0.823	DLM	0.075	ug/g	14-OCT-21	15-OCT-21	R5619198
Chrysene	2.21	DLM	0.075	ug/g	14-OCT-21	15-OCT-21	R5619198
Dibenz(a,h)anthracene	0.413	DLM	0.038	ug/g	14-OCT-21	15-OCT-21	R5619198
Fluoroanthene	3.08	DLM	0.038	ug/g	14-OCT-21	15-OCT-21	R5619198
Fluorene	0.351	DLM	0.038	ug/g	14-OCT-21	15-OCT-21	R5619198
Indeno(1,2,3-cd)pyrene	1.47	DLM	0.075	ug/g	14-OCT-21	15-OCT-21	R5619198
1-Methylnaphthalene	0.142	DLM	0.038	ug/g	14-OCT-21	15-OCT-21	R5619198
2-Methylnaphthalene	0.123	DLM	0.038	ug/g	14-OCT-21	15-OCT-21	R5619198
Naphthalene	0.132	DLM	0.038	ug/g	14-OCT-21	15-OCT-21	R5619198
Phenanthrene	1.69	DLM	0.038	ug/g	14-OCT-21	15-OCT-21	R5619198
Pyrene	4.13	DLM	0.038	ug/g	14-OCT-21	15-OCT-21	R5619198
Quinoline	<0.038	DLM	0.038	ug/g	14-OCT-21	15-OCT-21	R5619198
Surrogate: 2-Fluorobiphenyl	75.7		60-140	%	14-OCT-21	15-OCT-21	R5619198
Surrogate: d14-Terphenyl	77.8		60-140	%	14-OCT-21	15-OCT-21	R5619198
B(a)P Total Potency Equivalent	3.78		0.053	ug/g	14-OCT-21	15-OCT-21	R5619198
IACR (CCME)	40.4		0.75		14-OCT-21	15-OCT-21	R5619198
Polychlorinated Biphenyls							
Aroclor 1016	<0.23	RRR	0.23	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1221	<0.23	RRR	0.23	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1232	<0.23	RRR	0.23	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1242	<0.23	RRR	0.23	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1248	<0.23	RRR	0.23	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1254	0.124	DLR	0.014	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1260	0.160	DLR	0.014	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1262	<0.014	DLR	0.014	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1268	<0.014	DLR	0.014	mg/kg	18-OCT-21	18-OCT-21	R5622261
Total Polychlorinated Biphenyls	<0.520		0.52	mg/kg	18-OCT-21	18-OCT-21	R5622261
Surrogate: d14-Terphenyl	106.8		50-140	%	18-OCT-21	18-OCT-21	R5622261
Report Remarks : RRR: Due to sample matrix interferences, PCB recoveries could not be determined in the matrix spike unless spiked with 5X the normal concentration and therefore the detection limit has been raised accordingly.							
L2647880-18 PCW-SG-016 Sampled By: CLIENT on 04-OCT-21 @ 17:05 Matrix: SEDIMENT							
Physical Tests							
% Moisture	82.4		0.25	%	08-OCT-21	09-OCT-21	R5614943
Organic / Inorganic Carbon							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647880-18 PCW-SG-016 Sampled By: CLIENT on 04-OCT-21 @ 17:05 Matrix: SEDIMENT							
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0720		0.0010	g/g	19-OCT-21	19-OCT-21	R5624426
Total Organic Carbon	7.20		0.10	%	19-OCT-21	19-OCT-21	R5624426
Metals							
Aluminum (Al)	11500		50	ug/g	13-OCT-21	13-OCT-21	R5617456
Antimony (Sb)	1.59		0.10	ug/g	13-OCT-21	13-OCT-21	R5617456
Arsenic (As)	5.90		0.10	ug/g	13-OCT-21	13-OCT-21	R5617456
Barium (Ba)	266		0.50	ug/g	13-OCT-21	13-OCT-21	R5617456
Beryllium (Be)	0.46		0.10	ug/g	13-OCT-21	13-OCT-21	R5617456
Bismuth (Bi)	0.42		0.20	ug/g	13-OCT-21	13-OCT-21	R5617456
Boron (B)	11.2		5.0	ug/g	13-OCT-21	13-OCT-21	R5617456
Cadmium (Cd)	0.727		0.020	ug/g	13-OCT-21	13-OCT-21	R5617456
Calcium (Ca)	164000		50	ug/g	13-OCT-21	13-OCT-21	R5617456
Chromium (Cr)	1090		0.50	ug/g	13-OCT-21	13-OCT-21	R5617456
Cobalt (Co)	9.67		0.10	ug/g	13-OCT-21	13-OCT-21	R5617456
Copper (Cu)	44.3		0.50	ug/g	13-OCT-21	13-OCT-21	R5617456
Iron (Fe)	20000		50	ug/g	13-OCT-21	13-OCT-21	R5617456
Lead (Pb)	132		0.50	ug/g	13-OCT-21	13-OCT-21	R5617456
Lithium (Li)	10.5		2.0	ug/g	13-OCT-21	13-OCT-21	R5617456
Magnesium (Mg)	11600		20	ug/g	13-OCT-21	13-OCT-21	R5617456
Manganese (Mn)	611		1.0	ug/g	13-OCT-21	13-OCT-21	R5617456
Mercury (Hg)	0.177	DLM	0.010	ug/g	13-OCT-21	14-OCT-21	R5617361
Molybdenum (Mo)	1.28		0.10	ug/g	13-OCT-21	13-OCT-21	R5617456
Nickel (Ni)	19.0		0.50	ug/g	13-OCT-21	13-OCT-21	R5617456
Phosphorus (P)	1100		50	ug/g	13-OCT-21	13-OCT-21	R5617456
Potassium (K)	3020		100	ug/g	13-OCT-21	13-OCT-21	R5617456
Selenium (Se)	0.90		0.20	ug/g	13-OCT-21	13-OCT-21	R5617456
Silver (Ag)	0.34		0.10	ug/g	13-OCT-21	13-OCT-21	R5617456
Sodium (Na)	571		50	ug/g	13-OCT-21	13-OCT-21	R5617456
Strontium (Sr)	1040		0.50	ug/g	13-OCT-21	13-OCT-21	R5617456
Sulfur (S)	6700		1000	ug/g	13-OCT-21	13-OCT-21	R5617456
Thallium (Tl)	0.236		0.050	ug/g	13-OCT-21	13-OCT-21	R5617456
Tin (Sn)	4.6		2.0	ug/g	13-OCT-21	13-OCT-21	R5617456
Titanium (Ti)	571		1.0	ug/g	13-OCT-21	13-OCT-21	R5617456
Tungsten (W)	2.19		0.50	ug/g	13-OCT-21	13-OCT-21	R5617456
Uranium (U)	0.613		0.050	ug/g	13-OCT-21	13-OCT-21	R5617456
Vanadium (V)	35.6		0.20	ug/g	13-OCT-21	13-OCT-21	R5617456
Zinc (Zn)	195		2.0	ug/g	13-OCT-21	13-OCT-21	R5617456
Zirconium (Zr)	2.6		1.0	ug/g	13-OCT-21	13-OCT-21	R5617456
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.062	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Acenaphthylene	0.209	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647880-18 PCW-SG-016 Sampled By: CLIENT on 04-OCT-21 @ 17:05 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
Acridine	<0.050	DLHM	0.050	ug/g	14-OCT-21	15-OCT-21	R5619198
Anthracene	0.115	DLHM	0.020	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(a)anthracene	0.430	R	0.050	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(a)pyrene	0.626	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(b&j)fluoranthene	0.876	DLHM	0.050	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(g,h,i)perylene	0.496	DLHM	0.050	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(k)fluoranthene	0.235	DLHM	0.050	ug/g	14-OCT-21	15-OCT-21	R5619198
Chrysene	0.605	DLHM	0.050	ug/g	14-OCT-21	15-OCT-21	R5619198
Dibenz(a,h)anthracene	0.111	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Fluoroanthene	0.730	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Fluorene	0.072	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Indeno(1,2,3-cd)pyrene	0.417	DLHM	0.050	ug/g	14-OCT-21	15-OCT-21	R5619198
1-Methylnaphthalene	<0.025	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
2-Methylnaphthalene	0.025	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Naphthalene	<0.025	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Phenanthrene	0.308	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Pyrene	0.902	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Quinoline	<0.025	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Surrogate: 2-Fluorobiphenyl	87.3		60-140	%	14-OCT-21	15-OCT-21	R5619198
Surrogate: d14-Terphenyl	86.6		60-140	%	14-OCT-21	15-OCT-21	R5619198
B(a)P Total Potency Equivalent	0.944		0.036	ug/g	14-OCT-21	15-OCT-21	R5619198
IACR (CCME)	10.9		0.50		14-OCT-21	15-OCT-21	R5619198
Polychlorinated Biphenyls							
Aroclor 1016	<0.120	RRR	0.12	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1221	<0.120	RRR	0.12	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1232	<0.120	RRR	0.12	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1242	<0.120	RRR	0.12	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1248	<0.120	RRR	0.12	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1254	0.107	DLR	0.023	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1260	<0.0650	DLR	0.065	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1262	<0.023	DLR	0.023	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1268	<0.023	DLR	0.023	mg/kg	18-OCT-21	18-OCT-21	R5622261
Total Polychlorinated Biphenyls	<0.270		0.27	mg/kg	18-OCT-21	18-OCT-21	R5622261
Surrogate: d14-Terphenyl	60.0		50-140	%	18-OCT-21	18-OCT-21	R5622261
Report Remarks : RRR: Due to sample matrix interferences, PCB recoveries could not be determined in the matrix spike unless spiked with 5X the normal concentration and therefore the detection limit has been raised accordingly.							
L2647880-19 DUP- 007 Sampled By: CLIENT on 04-OCT-21 Matrix: SEDIMENT							
Physical Tests							
% Moisture	72.2		0.25	%	08-OCT-21	09-OCT-21	R5614943
Organic / Inorganic Carbon							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647880-19 DUP- 007 Sampled By: CLIENT on 04-OCT-21 Matrix: SEDIMENT							
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0525		0.0010	g/g	19-OCT-21	19-OCT-21	R5624426
Total Organic Carbon	5.25		0.10	%	19-OCT-21	19-OCT-21	R5624426
Metals							
Aluminum (Al)	15300		50	ug/g	13-OCT-21	14-OCT-21	R5618240
Antimony (Sb)	0.71		0.10	ug/g	13-OCT-21	14-OCT-21	R5618240
Arsenic (As)	5.11		0.10	ug/g	13-OCT-21	14-OCT-21	R5618240
Barium (Ba)	223		0.50	ug/g	13-OCT-21	14-OCT-21	R5618240
Beryllium (Be)	0.61		0.10	ug/g	13-OCT-21	14-OCT-21	R5618240
Bismuth (Bi)	<0.20		0.20	ug/g	13-OCT-21	14-OCT-21	R5618240
Boron (B)	9.4		5.0	ug/g	13-OCT-21	14-OCT-21	R5618240
Cadmium (Cd)	0.447		0.020	ug/g	13-OCT-21	14-OCT-21	R5618240
Calcium (Ca)	40400		50	ug/g	13-OCT-21	14-OCT-21	R5618240
Chromium (Cr)	1000		0.50	ug/g	13-OCT-21	14-OCT-21	R5618240
Cobalt (Co)	12.4		0.10	ug/g	13-OCT-21	14-OCT-21	R5618240
Copper (Cu)	35.7		0.50	ug/g	13-OCT-21	14-OCT-21	R5618240
Iron (Fe)	25400		50	ug/g	13-OCT-21	14-OCT-21	R5618240
Lead (Pb)	85.7		0.50	ug/g	13-OCT-21	14-OCT-21	R5618240
Lithium (Li)	14.7		2.0	ug/g	13-OCT-21	14-OCT-21	R5618240
Magnesium (Mg)	15300		20	ug/g	13-OCT-21	14-OCT-21	R5618240
Manganese (Mn)	510		1.0	ug/g	13-OCT-21	14-OCT-21	R5618240
Mercury (Hg)	0.159		0.0050	ug/g	13-OCT-21	14-OCT-21	R5617358
Molybdenum (Mo)	0.78		0.10	ug/g	13-OCT-21	14-OCT-21	R5618240
Nickel (Ni)	22.9		0.50	ug/g	13-OCT-21	14-OCT-21	R5618240
Phosphorus (P)	1280		50	ug/g	13-OCT-21	14-OCT-21	R5618240
Potassium (K)	3920		100	ug/g	13-OCT-21	14-OCT-21	R5618240
Selenium (Se)	0.53		0.20	ug/g	13-OCT-21	14-OCT-21	R5618240
Silver (Ag)	0.24		0.10	ug/g	13-OCT-21	14-OCT-21	R5618240
Sodium (Na)	559		50	ug/g	13-OCT-21	14-OCT-21	R5618240
Strontium (Sr)	171		0.50	ug/g	13-OCT-21	14-OCT-21	R5618240
Sulfur (S)	3800		1000	ug/g	13-OCT-21	14-OCT-21	R5618240
Thallium (Tl)	0.248		0.050	ug/g	13-OCT-21	14-OCT-21	R5618240
Tin (Sn)	5.9		2.0	ug/g	13-OCT-21	14-OCT-21	R5618240
Titanium (Ti)	1000		1.0	ug/g	13-OCT-21	14-OCT-21	R5618240
Tungsten (W)	<0.50		0.50	ug/g	13-OCT-21	14-OCT-21	R5618240
Uranium (U)	0.557		0.050	ug/g	13-OCT-21	14-OCT-21	R5618240
Vanadium (V)	41.6		0.20	ug/g	13-OCT-21	14-OCT-21	R5618240
Zinc (Zn)	150		2.0	ug/g	13-OCT-21	14-OCT-21	R5618240
Zirconium (Zr)	4.8		1.0	ug/g	13-OCT-21	14-OCT-21	R5618240
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.107	DLHM	0.015	ug/g	14-OCT-21	15-OCT-21	R5619198
Acenaphthylene	0.803	DLHM	0.015	ug/g	14-OCT-21	15-OCT-21	R5619198

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647880-19 DUP- 007 Sampled By: CLIENT on 04-OCT-21 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
Acridine	0.051	AI	0.030	ug/g	14-OCT-21	15-OCT-21	R5619198
Anthracene	0.408	DLHM	0.012	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(a)anthracene	1.59	R	0.030	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(a)pyrene	2.09	DLHM	0.015	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(b&j)fluoranthene	1.88	DLHM	0.030	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(g,h,i)perylene	1.09	DLHM	0.030	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(k)fluoranthene	0.520	DLHM	0.030	ug/g	14-OCT-21	15-OCT-21	R5619198
Chrysene	1.74	DLHM	0.030	ug/g	14-OCT-21	15-OCT-21	R5619198
Dibenz(a,h)anthracene	0.297	DLHM	0.015	ug/g	14-OCT-21	15-OCT-21	R5619198
Fluoroanthene	1.30	DLHM	0.015	ug/g	14-OCT-21	15-OCT-21	R5619198
Fluorene	0.146	DLHM	0.015	ug/g	14-OCT-21	15-OCT-21	R5619198
Indeno(1,2,3-cd)pyrene	0.879	DLHM	0.030	ug/g	14-OCT-21	15-OCT-21	R5619198
1-Methylnaphthalene	0.024	DLHM	0.015	ug/g	14-OCT-21	15-OCT-21	R5619198
2-Methylnaphthalene	0.033	DLHM	0.015	ug/g	14-OCT-21	15-OCT-21	R5619198
Naphthalene	0.033	DLHM	0.015	ug/g	14-OCT-21	15-OCT-21	R5619198
Phenanthrene	0.519	DLHM	0.015	ug/g	14-OCT-21	15-OCT-21	R5619198
Pyrene	1.82	DLHM	0.015	ug/g	14-OCT-21	15-OCT-21	R5619198
Quinoline	<0.015	DLHM	0.015	ug/g	14-OCT-21	15-OCT-21	R5619198
Surrogate: 2-Fluorobiphenyl	86.2		60-140	%	14-OCT-21	15-OCT-21	R5619198
Surrogate: d14-Terphenyl	86.2		60-140	%	14-OCT-21	15-OCT-21	R5619198
B(a)P Total Potency Equivalent	2.90		0.021	ug/g	14-OCT-21	15-OCT-21	R5619198
IACR (CCME)	28.1		0.30		14-OCT-21	15-OCT-21	R5619198
Polychlorinated Biphenyls							
Aroclor 1016	<0.070	RRR	0.070	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1221	<0.070	RRA	0.070	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1232	<0.070	RRR	0.070	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1242	<0.070	RRR	0.070	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1248	<0.070	RRR	0.070	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1254	0.076	DLR	0.014	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1260	0.090	DLR	0.014	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1262	<0.014	DLR	0.014	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1268	<0.014	DLR	0.014	mg/kg	18-OCT-21	18-OCT-21	R5622261
Total Polychlorinated Biphenyls	0.166		0.16	mg/kg	18-OCT-21	18-OCT-21	R5622261
Surrogate: d14-Terphenyl	81.0		50-140	%	18-OCT-21	18-OCT-21	R5622261
Report Remarks : RRR: Due to sample matrix interferences, PCB recoveries could not be determined in the matrix spike unless spiked with 5X the normal concentration and therefore the detection limit has been raised accordingly.							
L2647880-20 DUP- 008 Sampled By: CLIENT on 04-OCT-21 Matrix: SEDIMENT							
Physical Tests							
% Moisture	81.7		0.25	%	08-OCT-21	09-OCT-21	R5614943
Organic / Inorganic Carbon							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647880-20 DUP- 008 Sampled By: CLIENT on 04-OCT-21 Matrix: SEDIMENT							
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0721		0.0010	g/g	15-OCT-21	15-OCT-21	R5619419
Total Organic Carbon	7.21		0.10	%	15-OCT-21	15-OCT-21	R5619419
Metals							
Aluminum (Al)	12100		50	ug/g	15-OCT-21	15-OCT-21	R5619523
Antimony (Sb)	1.98		0.10	ug/g	15-OCT-21	15-OCT-21	R5619523
Arsenic (As)	5.64		0.10	ug/g	15-OCT-21	15-OCT-21	R5619523
Barium (Ba)	235		0.50	ug/g	15-OCT-21	15-OCT-21	R5619523
Beryllium (Be)	0.45		0.10	ug/g	15-OCT-21	15-OCT-21	R5619523
Bismuth (Bi)	0.65		0.20	ug/g	15-OCT-21	15-OCT-21	R5619523
Boron (B)	10.4		5.0	ug/g	15-OCT-21	15-OCT-21	R5619523
Cadmium (Cd)	1.03		0.020	ug/g	15-OCT-21	15-OCT-21	R5619523
Calcium (Ca)	146000		50	ug/g	15-OCT-21	15-OCT-21	R5619523
Chromium (Cr)	2460		0.50	ug/g	15-OCT-21	15-OCT-21	R5619523
Cobalt (Co)	10.2		0.10	ug/g	15-OCT-21	15-OCT-21	R5619523
Copper (Cu)	64.8		0.50	ug/g	15-OCT-21	15-OCT-21	R5619523
Iron (Fe)	22000		50	ug/g	15-OCT-21	15-OCT-21	R5619523
Lead (Pb)	213		0.50	ug/g	15-OCT-21	15-OCT-21	R5619523
Lithium (Li)	10.8		2.0	ug/g	15-OCT-21	15-OCT-21	R5619523
Magnesium (Mg)	14600		20	ug/g	15-OCT-21	15-OCT-21	R5619523
Manganese (Mn)	585		1.0	ug/g	15-OCT-21	15-OCT-21	R5619523
Mercury (Hg)	0.257		0.0050	ug/g	15-OCT-21	15-OCT-21	R5619437
Molybdenum (Mo)	1.44		0.10	ug/g	15-OCT-21	15-OCT-21	R5619523
Nickel (Ni)	20.7		0.50	ug/g	15-OCT-21	15-OCT-21	R5619523
Phosphorus (P)	1420		50	ug/g	15-OCT-21	15-OCT-21	R5619523
Potassium (K)	2790		100	ug/g	15-OCT-21	15-OCT-21	R5619523
Selenium (Se)	0.87		0.20	ug/g	15-OCT-21	15-OCT-21	R5619523
Silver (Ag)	0.51		0.10	ug/g	15-OCT-21	15-OCT-21	R5619523
Sodium (Na)	574		50	ug/g	15-OCT-21	15-OCT-21	R5619523
Strontium (Sr)	794		0.50	ug/g	15-OCT-21	15-OCT-21	R5619523
Sulfur (S)	6100		1000	ug/g	15-OCT-21	15-OCT-21	R5619523
Thallium (Tl)	0.242		0.050	ug/g	15-OCT-21	15-OCT-21	R5619523
Tin (Sn)	7.6		2.0	ug/g	15-OCT-21	15-OCT-21	R5619523
Titanium (Ti)	586		1.0	ug/g	15-OCT-21	15-OCT-21	R5619523
Tungsten (W)	2.98		0.50	ug/g	15-OCT-21	15-OCT-21	R5619523
Uranium (U)	0.521		0.050	ug/g	15-OCT-21	15-OCT-21	R5619523
Vanadium (V)	35.6		0.20	ug/g	15-OCT-21	15-OCT-21	R5619523
Zinc (Zn)	294		2.0	ug/g	15-OCT-21	15-OCT-21	R5619523
Zirconium (Zr)	1.8		1.0	ug/g	15-OCT-21	15-OCT-21	R5619523
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.197	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Acenaphthylene	0.683	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647880-20 DUP- 008 Sampled By: CLIENT on 04-OCT-21 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
Acridine	<0.270	DLM	0.27	ug/g	14-OCT-21	15-OCT-21	R5619198
Anthracene	0.331	DLHM	0.020	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(a)anthracene	1.05	R	0.050	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(a)pyrene	1.52	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(b&j)fluoranthene	1.79	DLHM	0.050	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(g,h,i)perylene	0.966	DLHM	0.050	ug/g	14-OCT-21	15-OCT-21	R5619198
Benzo(k)fluoranthene	0.516	DLHM	0.050	ug/g	14-OCT-21	15-OCT-21	R5619198
Chrysene	1.35	DLHM	0.050	ug/g	14-OCT-21	15-OCT-21	R5619198
Dibenz(a,h)anthracene	0.225	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Fluoroanthene	1.52	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Fluorene	0.198	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Indeno(1,2,3-cd)pyrene	0.712	DLHM	0.050	ug/g	14-OCT-21	15-OCT-21	R5619198
1-Methylnaphthalene	0.057	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
2-Methylnaphthalene	0.072	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Naphthalene	0.070	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Phenanthrene	0.709	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Pyrene	2.11	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Quinoline	<0.025	DLHM	0.025	ug/g	14-OCT-21	15-OCT-21	R5619198
Surrogate: 2-Fluorobiphenyl	88.4		60-140	%	14-OCT-21	15-OCT-21	R5619198
Surrogate: d14-Terphenyl	89.3		60-140	%	14-OCT-21	15-OCT-21	R5619198
B(a)P Total Potency Equivalent	2.18		0.036	ug/g	14-OCT-21	15-OCT-21	R5619198
IACR (CCME)	23.7		0.50		14-OCT-21	15-OCT-21	R5619198
Polychlorinated Biphenyls							
Aroclor 1016	<0.120	DLR	0.12	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1221	<0.120	DLR	0.12	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1232	<0.120	DLR	0.12	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1242	<0.120	DLR	0.12	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1248	<0.120	DLR	0.12	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1254	0.143	DLR	0.023	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1260	0.280	DLR	0.023	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1262	<0.023	DLR	0.023	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1268	<0.023	DLR	0.023	mg/kg	18-OCT-21	18-OCT-21	R5622261
Total Polychlorinated Biphenyls	0.423		0.27	mg/kg	18-OCT-21	18-OCT-21	R5622261
Surrogate: d14-Terphenyl	85.1		50-140	%	18-OCT-21	18-OCT-21	R5622261
Report Remarks : RRR: Due to sample matrix interferences, PCB recoveries could not be determined in the matrix spike unless spiked with 5X the normal concentration and therefore the detection limit has been raised accordingly.							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Reference Information

QC Samples with Qualifiers & Comments:

QC Type Description	Parameter	Qualifier	Applies to Sample Number(s)
Duplicate	Aluminum (Al)	DUP-H	L2647880-15, -19
Duplicate	Antimony (Sb)	DUP-H	L2647880-15, -19
Duplicate	Arsenic (As)	DUP-H	L2647880-15, -19
Duplicate	Barium (Ba)	DUP-H	L2647880-15, -19
Duplicate	Beryllium (Be)	DUP-H	L2647880-15, -19
Duplicate	Bismuth (Bi)	DUP-H	L2647880-15, -19
Duplicate	Boron (B)	DUP-H	L2647880-15, -19
Duplicate	Cadmium (Cd)	DUP-H	L2647880-15, -19
Duplicate	Calcium (Ca)	DUP-H	L2647880-15, -19
Duplicate	Chromium (Cr)	DUP-H	L2647880-15, -19
Duplicate	Cobalt (Co)	DUP-H	L2647880-15, -19
Duplicate	Copper (Cu)	DUP-H	L2647880-15, -19
Duplicate	Iron (Fe)	DUP-H	L2647880-15, -19
Duplicate	Lead (Pb)	DUP-H	L2647880-15, -19
Duplicate	Lithium (Li)	DUP-H	L2647880-15, -19
Duplicate	Magnesium (Mg)	DUP-H	L2647880-15, -19
Duplicate	Manganese (Mn)	DUP-H	L2647880-15, -19
Duplicate	Molybdenum (Mo)	DUP-H	L2647880-15, -19
Duplicate	Nickel (Ni)	DUP-H	L2647880-15, -19
Duplicate	Phosphorus (P)	DUP-H	L2647880-15, -19
Duplicate	Potassium (K)	DUP-H	L2647880-15, -19
Duplicate	Selenium (Se)	DUP-H	L2647880-15, -19
Duplicate	Silver (Ag)	DUP-H	L2647880-15, -19
Duplicate	Sodium (Na)	DUP-H	L2647880-15, -19
Duplicate	Strontium (Sr)	DUP-H	L2647880-15, -19
Duplicate	Sulfur (S)	DUP-H	L2647880-15, -19
Duplicate	Thallium (Tl)	DUP-H	L2647880-15, -19
Duplicate	Tin (Sn)	DUP-H	L2647880-15, -19
Duplicate	Titanium (Ti)	DUP-H	L2647880-15, -19
Duplicate	Tungsten (W)	DUP-H	L2647880-15, -19
Duplicate	Uranium (U)	DUP-H	L2647880-15, -19
Duplicate	Vanadium (V)	DUP-H	L2647880-15, -19
Duplicate	Zinc (Zn)	DUP-H	L2647880-15, -19
Duplicate	Zirconium (Zr)	DUP-H	L2647880-15, -19
Matrix Spike	Benzo(a)pyrene	MS-B	L2647880-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -20, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Benzo(b&j)fluoranthene	MS-B	L2647880-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -20, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Fluoroanthene	MS-B	L2647880-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -20, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Pyrene	MS-B	L2647880-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -20, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Aroclor 1254	MS-B	L2647880-10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -20, -3, -4, -5, -7, -8, -9
Matrix Spike	Aroclor 1260	MS-B	L2647880-10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -20, -3, -4, -5, -7, -8, -9

Sample Parameter Qualifier key listed:

Qualifier	Description
AI	Analytical interferences may be present. Result may be biased high.
DLHC	Detection Limit Raised: Dilution required due to high concentration of test analyte(s).
DLHM	Detection Limit Adjusted: Sample has High Moisture Content
DLM	Detection Limit Adjusted due to sample matrix effects (e.g. chemical interference, colour, turbidity).
DLR	Detection Limit Raised due to required dilution, limited sample amount, and/or high moisture content (soil samples)
DUP-H	Duplicate results outside ALS DQO, due to sample heterogeneity.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
PRAR	PCB Pattern Most Closely Resembles Aroclor Reported

Reference Information

R	The ion abundance ratio(s) did not meet the acceptance criteria. Value is an estimated maximum.
RRA	Heterogeneity was observed in test sample and in lab results. Reported result is the average of two or more analyses.
RRR	Refer to Report Remarks for issues regarding this analysis

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
ATTERBERG-SK	Soil	Atterberg limits	CARTER CSSS 58

The liquid limit (or upper plastic limit) is the point at which the soil becomes semifluid, like softened butter. In operational terms, the liquid limit is defined as the water content at which a trapezoidal groove cut in moist soil is closed after 25 taps on a hard rubber plate (ASTM D-18, 1958).

The plastic limit (or lower plastic limit) is defined as the water content at which soil begins to crumble on being rolled into a thread 1/8 inch (or 3 mm) in diameter. It represents the lowest water content at which soil can be deformed readily without cracking.

The plastic index (which is the difference between the liquid and plastic limits) gives an indication of the "clayeyness" or plasticity of a clay and is employed in engineering classification systems for soils.

This method is equivalent to ASTM D4318-10.

B-HWS-R511-WT	Soil	Boron-HWE-O.Reg 153/04 (July 2011)	HW EXTR, EPA 6010B

A dried solid sample is extracted with calcium chloride, the sample undergoes a heating process. After cooling the sample is filtered and analyzed by ICP/OES.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011 and as of November 30, 2020), unless a subset of the Analytical Test Group (ATG) has been requested (the Protocol states that all analytes in an ATG must be reported).

CR-CR3-WT	Soil	Trivalent Chromium in Soil Calculation	BC WLAP LAB MANUAL / EPA 3060A & 7196A

This analysis is carried out using the method "Trivalent Chromium in Solids", as published in the BC WLAP Laboratory Methods Manual (2003). Chromium (III) is determined by subtraction of chromium (VI) from total chromium. Chromium (VI) is determined by the alkaline leach method, and total chromium is determined using CSR Analytical Method 8 "Strong Acid Leachable Metals (SALM) in Soil", BC Ministry of Environment, Lands and Parks, 26 June 2001. All results are reported as milligrams per dry kilogram of sediment/soil.

CR-CR6-IC-WT	Soil	Hexavalent Chromium in Soil	SW846 3060A/7199

This analysis is carried out using procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846, Method 7199, published by the United States Environmental Protection Agency (EPA). The procedure involves analysis for chromium (VI) by ion chromatography using diphenylcarbazide in a sulphuric acid solution.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

HG-200.2-CVAA-WT	Soil	Mercury in Soil by CVAAS	EPA 200.2/1631E (mod)

Soil samples are digested with nitric and hydrochloric acids, followed by analysis by CVAAS.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

MET-200.2-CCMS-WT	Soil	Metals in Soil by CRC ICPMS	EPA 200.2/6020B (mod)

Soil/sediment is dried, disaggregated, and sieved (2 mm). For tests intended to support Ontario regulations, the <2mm fraction is ground to pass through a 0.355 mm sieve. Strong Acid Leachable Metals in the <2mm fraction are solubilized by heated digestion with nitric and hydrochloric acids. Instrumental analysis is by Collision / Reaction Cell ICPMS.

Limitations: This method is intended to liberate environmentally available metals. Silicate minerals are not solubilized. Some metals may be only partially recovered (matrix dependent), including Al, Ba, Be, Cr, S, Sr, Ti, Tl, V, W, and Zr. Elemental Sulfur may be poorly recovered by this method. Volatile forms of sulfur (e.g. sulfide, H2S) may be excluded if lost during sampling, storage, or digestion.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011), unless a subset of the Analytical Test Group (ATG) has been requested (the Protocol states that all analytes in an ATG must be reported).

MOISTURE-WT	Soil	% Moisture	CCME PHC in Soil - Tier 1 (mod)
PAH-CCME-SQGL-WT	Soil	PAHs in Sediment	SW846 8270

Reference Information

The procedure uses a mechanical shaking technique to extract a representative sub-sample with a mixture of methanol and toluene. The extract is analyzed by GC/MSD. Depending on the analytical GC/MS column used benzo(j)fluoranthene may chromatographically co-elute with benzo(b)fluoranthene or benzo(k)fluoranthene.

PCB9-LOW-WT	Soil	PCBs to meet CCME Sediment Criteria	SW846 8270

A representative sub-sample of a soil sample is mixed with methanol and extracted with toluene using a shaker technique. An aliquot of the separated toluene is analyzed by GC/MSD.

PSA-MUST-SK	Soil	% Particles > 75um (Coarse/Fine)	ASTM D6913

An air-dried sample is reduced to < 2 mm size and mixed with a dispersing agent (Calgon solution). The sample is washed through a 200 mesh (75 µm) sieve. The retained mass of sample is used to determine % sand fraction.

Reference: ASTM D422-63

SPECGRAV-CL	Soil	Specific Gravity	ASTM D 5057

A portion of sample is weighed in a container that is calibrated for volume. Specific Gravity is reported as the mass of sample per mass of an equal volume of pure water, where the density of pure water is taken to be 1.00 g/mL.

TOC-WT	Soil	TOC & FOC in Solids	CARTER 21.3.2

Soil is treated with excess acidic dichromate, which reacts with the organic carbon, oxidizing it to CO2. The residual dichromate is titrated with ferrous ammonium sulphate and TOC calculated by difference.

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
SK	ALS ENVIRONMENTAL - SASKATOON, SASKATCHEWAN, CANADA
WT	ALS ENVIRONMENTAL - WATERLOO, ONTARIO, CANADA
CL	ALS ENVIRONMENTAL - CALGARY, ALBERTA, CANADA

Chain of Custody Numbers:

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.
mg/kg - milligrams per kilogram based on dry weight of sample
mg/kg wwt - milligrams per kilogram based on wet weight of sample
mg/kg lwt - milligrams per kilogram based on lipid weight of sample
mg/L - unit of concentration based on volume, parts per million.
< - Less than.
D.L. - The reporting limit.
N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.
UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.
Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.

Quality Control Report

Workorder: L2647880 Report Date: 03-NOV-21

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
ATTERBERG-SK	**Soil**							
Batch R5621298								
WG3638575-1 DUP		**L2647880-1**						
Liquid Limit (LL)		95	95		%	0.5	20	16-OCT-21
Moisture at Plastic Limit		70	69		%	1.7	20	16-OCT-21
Plasticity Index (PI)		25	26		%	2.9	20	16-OCT-21
WG3638575-2 IRM		**ATB-1_SOIL**						
Liquid Limit (LL)			104.6		%		80-120	16-OCT-21
Moisture at Plastic Limit			109.1		%		80-120	16-OCT-21
Plasticity Index (PI)			97.4		%		80-120	16-OCT-21
B-HWS-R511-WT	**Soil**							
Batch R5616090								
WG3635844-4 DUP		**L2648821-1**						
Boron (B), Hot Water Ext.		<0.10	<0.10	RPD-NA	ug/g	N/A	30	12-OCT-21
WG3635844-2 IRM		**WT SAR4**						
Boron (B), Hot Water Ext.			112.5		%		70-130	12-OCT-21
WG3635844-3 LCS								
Boron (B), Hot Water Ext.			107.0		%		70-130	12-OCT-21
WG3635844-1 MB								
Boron (B), Hot Water Ext.			<0.10		ug/g		0.1	12-OCT-21
CR-CR6-IC-WT	**Soil**							
Batch R5616569								
WG3635403-4 CRM		**WT-SQC012**						
Chromium, Hexavalent			84.3		%		70-130	13-OCT-21
WG3635403-3 DUP		**L2648860-3**						
Chromium, Hexavalent		<0.20	<0.20	RPD-NA	ug/g	N/A	35	13-OCT-21
WG3635403-2 LCS								
Chromium, Hexavalent			93.5		%		80-120	13-OCT-21
WG3635403-1 MB								
Chromium, Hexavalent			<0.20		ug/g		0.2	13-OCT-21
Batch R5617419								
WG3636253-4 CRM		**WT-SQC012**						
Chromium, Hexavalent			78.5		%		70-130	14-OCT-21
WG3636253-3 DUP		**L2648720-3**						
Chromium, Hexavalent		<0.20	<0.20	RPD-NA	ug/g	N/A	35	14-OCT-21
WG3636253-2 LCS								
Chromium, Hexavalent			91.9		%		80-120	14-OCT-21
WG3636253-1 MB								
Chromium, Hexavalent			<0.20		ug/g		0.2	14-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
HG-200.2-CVAA-WT	**Soil**							
Batch R5616446								
WG3635672-2 CRM		**WT-SS-2**						
Mercury (Hg)			102.5		%		70-130	13-OCT-21
WG3635672-6 DUP		**WG3635672-5**						
Mercury (Hg)		0.263	0.256		ug/g	2.7	40	13-OCT-21
WG3635672-3 LCS								
Mercury (Hg)			111.0		%		80-120	13-OCT-21
WG3635672-1 MB								
Mercury (Hg)			<0.0050		mg/kg		0.005	13-OCT-21
Batch R5617358								
WG3637138-2 CRM		**WT-SS-2**						
Mercury (Hg)			102.6		%		70-130	14-OCT-21
WG3637138-7 DUP		**WG3637138-6**						
Mercury (Hg)		0.0125	0.0134		ug/g	6.4	40	14-OCT-21
WG3637138-3 LCS								
Mercury (Hg)			103.0		%		80-120	14-OCT-21
WG3637138-1 MB								
Mercury (Hg)			<0.0050		mg/kg		0.005	14-OCT-21
Batch R5617361								
WG3636643-2 CRM		**WT-SS-2**						
Mercury (Hg)			100.8		%		70-130	14-OCT-21
WG3636643-6 DUP		**WG3636643-5**						
Mercury (Hg)		0.0613	0.0613		ug/g	0.0	40	14-OCT-21
WG3636643-3 LCS								
Mercury (Hg)			101.0		%		80-120	14-OCT-21
WG3636643-1 MB								
Mercury (Hg)			<0.0050		mg/kg		0.005	14-OCT-21
Batch R5619437								
WG3638134-2 CRM		**WT-SS-2**						
Mercury (Hg)			102.6		%		70-130	15-OCT-21
WG3638134-7 DUP		**WG3638134-6**						
Mercury (Hg)		0.0297	0.0299		ug/g	0.6	40	15-OCT-21
WG3638134-3 LCS								
Mercury (Hg)			102.5		%		80-120	15-OCT-21
WG3638134-1 MB								
Mercury (Hg)			<0.0050		mg/kg		0.005	15-OCT-21
MET-200.2-CCMS-WT	**Soil**							

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5616407								
WG3635672-2 CRM		**WT-SS-2**						
Aluminum (Al)			124.7		%		70-130	12-OCT-21
Antimony (Sb)			93.9		%		70-130	12-OCT-21
Arsenic (As)			116.9		%		70-130	12-OCT-21
Barium (Ba)			127.1		%		70-130	12-OCT-21
Beryllium (Be)			99.9		%		70-130	12-OCT-21
Bismuth (Bi)			0.14		mg/kg		0-0.34	12-OCT-21
Boron (B)			7.7		mg/kg		3.5-13.5	12-OCT-21
Cadmium (Cd)			106.3		%		70-130	12-OCT-21
Calcium (Ca)			99.4		%		70-130	12-OCT-21
Chromium (Cr)			114.6		%		70-130	12-OCT-21
Cobalt (Co)			110.5		%		70-130	12-OCT-21
Copper (Cu)			116.5		%		70-130	12-OCT-21
Iron (Fe)			111.3		%		70-130	12-OCT-21
Lead (Pb)			98.4		%		70-130	12-OCT-21
Lithium (Li)			84.9		%		70-130	12-OCT-21
Magnesium (Mg)			118.7		%		70-130	12-OCT-21
Manganese (Mn)			122.5		%		70-130	12-OCT-21
Molybdenum (Mo)			98.1		%		70-130	12-OCT-21
Nickel (Ni)			111.4		%		70-130	12-OCT-21
Phosphorus (P)			113.0		%		70-130	12-OCT-21
Potassium (K)			117.4		%		70-130	12-OCT-21
Selenium (Se)			0.16		mg/kg		0-0.34	12-OCT-21
Silver (Ag)			80.3		%		70-130	12-OCT-21
Sodium (Na)			122.6		%		70-130	12-OCT-21
Strontium (Sr)			101.7		%		70-130	12-OCT-21
Thallium (Tl)			0.078		mg/kg		0.029-0.129	12-OCT-21
Tin (Sn)			95.5		%		70-130	12-OCT-21
Titanium (Ti)			113.6		%		70-130	12-OCT-21
Uranium (U)			105.9		%		70-130	12-OCT-21
Vanadium (V)			114.4		%		70-130	12-OCT-21
Zinc (Zn)			104.8		%		70-130	12-OCT-21
Zirconium (Zr)			98.6		%		70-130	12-OCT-21
WG3635672-6 DUP		**WG3635672-5**						
Aluminum (Al)		18900	21600		ug/g	13	40	12-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5616407								
WG3635672-6 DUP		**WG3635672-5**						
Antimony (Sb)		1.23	1.35		ug/g	9.6	30	12-OCT-21
Arsenic (As)		7.37	8.27		ug/g	11	30	12-OCT-21
Barium (Ba)		284	312		ug/g	9.4	40	12-OCT-21
Beryllium (Be)		0.61	0.74		ug/g	19	30	12-OCT-21
Bismuth (Bi)		0.42	0.46		ug/g	8.5	30	12-OCT-21
Boron (B)		9.9	12.3		ug/g	21	30	12-OCT-21
Cadmium (Cd)		0.780	0.863		ug/g	10	30	12-OCT-21
Calcium (Ca)		69800	84200		ug/g	19	30	12-OCT-21
Chromium (Cr)		1110	1250		ug/g	11	30	12-OCT-21
Cobalt (Co)		13.2	14.7		ug/g	11	30	12-OCT-21
Copper (Cu)		47.3	52.0		ug/g	9.6	30	12-OCT-21
Iron (Fe)		28200	31500		ug/g	11	30	12-OCT-21
Lead (Pb)		114	137		ug/g	19	40	12-OCT-21
Lithium (Li)		11.4	14.8		ug/g	26	30	12-OCT-21
Magnesium (Mg)		15800	17600		ug/g	10	30	12-OCT-21
Manganese (Mn)		747	875		ug/g	16	30	12-OCT-21
Molybdenum (Mo)		1.02	1.18		ug/g	15	40	12-OCT-21
Nickel (Ni)		26.9	30.1		ug/g	11	30	12-OCT-21
Phosphorus (P)		1320	1520		ug/g	14	30	12-OCT-21
Potassium (K)		4220	5040		ug/g	18	40	12-OCT-21
Selenium (Se)		1.01	1.07		ug/g	5.6	30	12-OCT-21
Silver (Ag)		0.41	0.43		ug/g	3.0	40	12-OCT-21
Sodium (Na)		641	722		ug/g	12	40	12-OCT-21
Strontium (Sr)		427	511		ug/g	18	40	12-OCT-21
Sulfur (S)		6400	7300		ug/g	14	30	12-OCT-21
Thallium (Tl)		0.324	0.333		ug/g	2.9	30	12-OCT-21
Tin (Sn)		4.9	5.6		ug/g	12	40	12-OCT-21
Titanium (Ti)		1260	1400		ug/g	11	40	12-OCT-21
Tungsten (W)		0.64	0.72		ug/g	12	30	12-OCT-21
Uranium (U)		0.778	0.947		ug/g	20	30	12-OCT-21
Vanadium (V)		50.2	56.3		ug/g	12	30	12-OCT-21
Zinc (Zn)		180	199		ug/g	10	30	12-OCT-21
Zirconium (Zr)		4.4	5.3		ug/g			12-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5616407								
WG3635672-6 DUP		**WG3635672-5**						
Zirconium (Zr)		4.4	5.3		ug/g	19	30	12-OCT-21
WG3635672-4 LCS								
Aluminum (Al)			111.3		%		80-120	12-OCT-21
Antimony (Sb)			104.3		%		80-120	12-OCT-21
Arsenic (As)			112.4		%		80-120	12-OCT-21
Barium (Ba)			109.6		%		80-120	12-OCT-21
Beryllium (Be)			101.7		%		80-120	12-OCT-21
Bismuth (Bi)			109.5		%		80-120	12-OCT-21
Boron (B)			97.4		%		80-120	12-OCT-21
Cadmium (Cd)			99.3		%		80-120	12-OCT-21
Calcium (Ca)			106.8		%		80-120	12-OCT-21
Chromium (Cr)			106.5		%		80-120	12-OCT-21
Cobalt (Co)			106.4		%		80-120	12-OCT-21
Copper (Cu)			103.6		%		80-120	12-OCT-21
Iron (Fe)			113.0		%		80-120	12-OCT-21
Lead (Pb)			106.2		%		80-120	12-OCT-21
Lithium (Li)			98.0		%		80-120	12-OCT-21
Magnesium (Mg)			119.0		%		80-120	12-OCT-21
Manganese (Mn)			107.7		%		80-120	12-OCT-21
Molybdenum (Mo)			104.9		%		80-120	12-OCT-21
Nickel (Ni)			105.2		%		80-120	12-OCT-21
Phosphorus (P)			117.3		%		80-120	12-OCT-21
Potassium (K)			118.8		%		80-120	12-OCT-21
Selenium (Se)			108.3		%		80-120	12-OCT-21
Silver (Ag)			91.9		%		80-120	12-OCT-21
Sodium (Na)			114.3		%		80-120	12-OCT-21
Strontium (Sr)			111.8		%		80-120	12-OCT-21
Sulfur (S)			102.7		%		80-120	12-OCT-21
Thallium (Tl)			101.9		%		80-120	12-OCT-21
Tin (Sn)			102.9		%		80-120	12-OCT-21
Titanium (Ti)			110.0		%		80-120	12-OCT-21
Tungsten (W)			100.2		%		80-120	12-OCT-21
Uranium (U)			104.3		%		80-120	12-OCT-21
Vanadium (V)			110.6		%		80-120	12-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5616407								
WG3635672-4 LCS								
Zinc (Zn)			101.5		%		80-120	12-OCT-21
Zirconium (Zr)			101.5		%		80-120	12-OCT-21
WG3635672-1 MB								
Aluminum (Al)			<50		mg/kg		50	12-OCT-21
Antimony (Sb)			<0.10		mg/kg		0.1	12-OCT-21
Arsenic (As)			<0.10		mg/kg		0.1	12-OCT-21
Barium (Ba)			<0.50		mg/kg		0.5	12-OCT-21
Beryllium (Be)			<0.10		mg/kg		0.1	12-OCT-21
Bismuth (Bi)			<0.20		mg/kg		0.2	12-OCT-21
Boron (B)			<5.0		mg/kg		5	12-OCT-21
Cadmium (Cd)			<0.020		mg/kg		0.02	12-OCT-21
Calcium (Ca)			<50		mg/kg		50	12-OCT-21
Chromium (Cr)			<0.50		mg/kg		0.5	12-OCT-21
Cobalt (Co)			<0.10		mg/kg		0.1	12-OCT-21
Copper (Cu)			<0.50		mg/kg		0.5	12-OCT-21
Iron (Fe)			<50		mg/kg		50	12-OCT-21
Lead (Pb)			<0.50		mg/kg		0.5	12-OCT-21
Lithium (Li)			<2.0		mg/kg		2	12-OCT-21
Magnesium (Mg)			<20		mg/kg		20	12-OCT-21
Manganese (Mn)			<1.0		mg/kg		1	12-OCT-21
Molybdenum (Mo)			<0.10		mg/kg		0.1	12-OCT-21
Nickel (Ni)			<0.50		mg/kg		0.5	12-OCT-21
Phosphorus (P)			<50		mg/kg		50	12-OCT-21
Potassium (K)			<100		mg/kg		100	12-OCT-21
Selenium (Se)			<0.20		mg/kg		0.2	12-OCT-21
Silver (Ag)			<0.10		mg/kg		0.1	12-OCT-21
Sodium (Na)			<50		mg/kg		50	12-OCT-21
Strontium (Sr)			<0.50		mg/kg		0.5	12-OCT-21
Sulfur (S)			<1000		mg/kg		1000	12-OCT-21
Thallium (Tl)			<0.050		mg/kg		0.05	12-OCT-21
Tin (Sn)			<2.0		mg/kg		2	12-OCT-21
Titanium (Ti)			<1.0		mg/kg		1	12-OCT-21
Tungsten (W)			<0.50		mg/kg		0.5	12-OCT-21
Uranium (U)			<0.050		mg/kg		0.05	12-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5616407								
WG3635672-1 MB								
Vanadium (V)			<0.20		mg/kg		0.2	12-OCT-21
Zinc (Zn)			<2.0		mg/kg		2	12-OCT-21
Zirconium (Zr)			<1.0		mg/kg		1	12-OCT-21
Batch R5617456								
WG3636643-2 CRM		**WT-SS-2**						
Aluminum (Al)			116.9		%		70-130	13-OCT-21
Antimony (Sb)			97.9		%		70-130	13-OCT-21
Arsenic (As)			113.3		%		70-130	13-OCT-21
Barium (Ba)			111.9		%		70-130	13-OCT-21
Beryllium (Be)			106.4		%		70-130	13-OCT-21
Bismuth (Bi)			0.13		mg/kg		0-0.34	13-OCT-21
Boron (B)			9.2		mg/kg		3.5-13.5	13-OCT-21
Cadmium (Cd)			97.8		%		70-130	13-OCT-21
Calcium (Ca)			109.3		%		70-130	13-OCT-21
Chromium (Cr)			105.5		%		70-130	13-OCT-21
Cobalt (Co)			100.3		%		70-130	13-OCT-21
Copper (Cu)			98.5		%		70-130	13-OCT-21
Iron (Fe)			104.3		%		70-130	13-OCT-21
Lead (Pb)			107.1		%		70-130	13-OCT-21
Lithium (Li)			96.8		%		70-130	13-OCT-21
Magnesium (Mg)			108.4		%		70-130	13-OCT-21
Manganese (Mn)			113.6		%		70-130	13-OCT-21
Molybdenum (Mo)			104.8		%		70-130	13-OCT-21
Nickel (Ni)			101.2		%		70-130	13-OCT-21
Phosphorus (P)			102.6		%		70-130	13-OCT-21
Potassium (K)			109.0		%		70-130	13-OCT-21
Selenium (Se)			0.12		mg/kg		0-0.34	13-OCT-21
Silver (Ag)			82.4		%		70-130	13-OCT-21
Sodium (Na)			104.0		%		70-130	13-OCT-21
Strontium (Sr)			108.2		%		70-130	13-OCT-21
Thallium (Tl)			0.076		mg/kg		0.029-0.129	13-OCT-21
Tin (Sn)			97.3		%		70-130	13-OCT-21
Titanium (Ti)			101.6		%		70-130	13-OCT-21
Uranium (U)			102.0		%		70-130	13-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5617456								
WG3636643-2 CRM		**WT-SS-2**						
Vanadium (V)			105.2		%		70-130	13-OCT-21
Zinc (Zn)			99.1		%		70-130	13-OCT-21
Zirconium (Zr)			108.3		%		70-130	13-OCT-21
WG3636643-6 DUP		**WG3636643-5**						
Aluminum (Al)		24100	23800		ug/g	1.1	40	13-OCT-21
Antimony (Sb)		<0.10	<0.10	RPD-NA	ug/g	N/A	30	13-OCT-21
Arsenic (As)		1.64	1.65		ug/g	0.5	30	13-OCT-21
Barium (Ba)		70.8	70.0		ug/g	1.1	40	13-OCT-21
Beryllium (Be)		0.57	0.55		ug/g	3.0	30	13-OCT-21
Bismuth (Bi)		<0.20	<0.20	RPD-NA	ug/g	N/A	30	13-OCT-21
Boron (B)		<5.0	<5.0	RPD-NA	ug/g	N/A	30	13-OCT-21
Cadmium (Cd)		0.222	0.220		ug/g	1.0	30	13-OCT-21
Calcium (Ca)		3060	3110		ug/g	1.9	30	13-OCT-21
Chromium (Cr)		34.4	32.8		ug/g	4.5	30	13-OCT-21
Cobalt (Co)		7.11	7.08		ug/g	0.4	30	13-OCT-21
Copper (Cu)		9.30	9.11		ug/g	2.0	30	13-OCT-21
Iron (Fe)		21500	20800		ug/g	3.1	30	13-OCT-21
Lead (Pb)		5.81	5.86		ug/g	0.9	40	13-OCT-21
Lithium (Li)		13.4	13.1		ug/g	1.8	30	13-OCT-21
Magnesium (Mg)		4440	4350		ug/g	2.0	30	13-OCT-21
Manganese (Mn)		404	390		ug/g	3.7	30	13-OCT-21
Molybdenum (Mo)		0.56	0.56		ug/g	1.7	40	13-OCT-21
Nickel (Ni)		15.7	15.6		ug/g	1.2	30	13-OCT-21
Phosphorus (P)		458	455		ug/g	0.6	30	13-OCT-21
Potassium (K)		1140	1090		ug/g	4.3	40	13-OCT-21
Selenium (Se)		0.51	0.50		ug/g	2.3	30	13-OCT-21
Silver (Ag)		<0.10	<0.10	RPD-NA	ug/g	N/A	40	13-OCT-21
Sodium (Na)		286	295		ug/g	3.1	40	13-OCT-21
Strontium (Sr)		16.5	17.8		ug/g	7.3	40	13-OCT-21
Sulfur (S)		<1000	<1000	RPD-NA	ug/g	N/A	30	13-OCT-21
Thallium (Tl)		0.110	0.106		ug/g	4.3	30	13-OCT-21
Tin (Sn)		<2.0	<2.0	RPD-NA	ug/g	N/A	40	13-OCT-21
Titanium (Ti)		1080	1100		ug/g	1.7	40	13-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5617456								
WG3636643-6 DUP		**WG3636643-5**						
Tungsten (W)		<0.50	<0.50	RPD-NA	ug/g	N/A	30	13-OCT-21
Uranium (U)		0.562	0.568		ug/g	1.1	30	13-OCT-21
Vanadium (V)		41.3	41.2		ug/g	0.4	30	13-OCT-21
Zinc (Zn)		74.1	72.9		ug/g	1.6	30	13-OCT-21
Zirconium (Zr)		1.9	1.7		ug/g	7.1	30	13-OCT-21
WG3636643-4 LCS								
Aluminum (Al)			102.3		%		80-120	13-OCT-21
Antimony (Sb)			100.4		%		80-120	13-OCT-21
Arsenic (As)			98.4		%		80-120	13-OCT-21
Barium (Ba)			96.5		%		80-120	13-OCT-21
Beryllium (Be)			92.4		%		80-120	13-OCT-21
Bismuth (Bi)			92.3		%		80-120	13-OCT-21
Boron (B)			95.2		%		80-120	13-OCT-21
Cadmium (Cd)			92.3		%		80-120	13-OCT-21
Calcium (Ca)			98.7		%		80-120	13-OCT-21
Chromium (Cr)			94.3		%		80-120	13-OCT-21
Cobalt (Co)			93.6		%		80-120	13-OCT-21
Copper (Cu)			89.5		%		80-120	13-OCT-21
Iron (Fe)			93.1		%		80-120	13-OCT-21
Lead (Pb)			95.1		%		80-120	13-OCT-21
Lithium (Li)			93.8		%		80-120	13-OCT-21
Magnesium (Mg)			100.4		%		80-120	13-OCT-21
Manganese (Mn)			97.5		%		80-120	13-OCT-21
Molybdenum (Mo)			100.4		%		80-120	13-OCT-21
Nickel (Ni)			90.7		%		80-120	13-OCT-21
Phosphorus (P)			99.2		%		80-120	13-OCT-21
Potassium (K)			104.9		%		80-120	13-OCT-21
Selenium (Se)			90.2		%		80-120	13-OCT-21
Silver (Ag)			85.1		%		80-120	13-OCT-21
Sodium (Na)			94.0		%		80-120	13-OCT-21
Strontium (Sr)			101.7		%		80-120	13-OCT-21
Sulfur (S)			91.9		%		80-120	13-OCT-21
Thallium (Tl)			98.4		%		80-120	13-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5617456								
WG3636643-4 LCS								
Tin (Sn)			96.5		%		80-120	13-OCT-21
Titanium (Ti)			95.0		%		80-120	13-OCT-21
Tungsten (W)			92.3		%		80-120	13-OCT-21
Uranium (U)			89.3		%		80-120	13-OCT-21
Vanadium (V)			97.2		%		80-120	13-OCT-21
Zinc (Zn)			90.1		%		80-120	13-OCT-21
Zirconium (Zr)			98.5		%		80-120	13-OCT-21
WG3636643-1 MB								
Aluminum (Al)			<50		mg/kg		50	13-OCT-21
Antimony (Sb)			<0.10		mg/kg		0.1	13-OCT-21
Arsenic (As)			<0.10		mg/kg		0.1	13-OCT-21
Barium (Ba)			<0.50		mg/kg		0.5	13-OCT-21
Beryllium (Be)			<0.10		mg/kg		0.1	13-OCT-21
Bismuth (Bi)			<0.20		mg/kg		0.2	13-OCT-21
Boron (B)			<5.0		mg/kg		5	13-OCT-21
Cadmium (Cd)			<0.020		mg/kg		0.02	13-OCT-21
Calcium (Ca)			<50		mg/kg		50	13-OCT-21
Chromium (Cr)			<0.50		mg/kg		0.5	13-OCT-21
Cobalt (Co)			<0.10		mg/kg		0.1	13-OCT-21
Copper (Cu)			<0.50		mg/kg		0.5	13-OCT-21
Iron (Fe)			<50		mg/kg		50	13-OCT-21
Lead (Pb)			<0.50		mg/kg		0.5	13-OCT-21
Lithium (Li)			<2.0		mg/kg		2	13-OCT-21
Magnesium (Mg)			<20		mg/kg		20	13-OCT-21
Manganese (Mn)			<1.0		mg/kg		1	13-OCT-21
Molybdenum (Mo)			<0.10		mg/kg		0.1	13-OCT-21
Nickel (Ni)			<0.50		mg/kg		0.5	13-OCT-21
Phosphorus (P)			<50		mg/kg		50	13-OCT-21
Potassium (K)			<100		mg/kg		100	13-OCT-21
Selenium (Se)			<0.20		mg/kg		0.2	13-OCT-21
Silver (Ag)			<0.10		mg/kg		0.1	13-OCT-21
Sodium (Na)			<50		mg/kg		50	13-OCT-21
Strontium (Sr)			<0.50		mg/kg		0.5	13-OCT-21
Sulfur (S)			<1000		mg/kg		1000	13-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5617456								
WG3636643-1 MB								
Thallium (Tl)			<0.050		mg/kg		0.05	13-OCT-21
Tin (Sn)			<2.0		mg/kg		2	13-OCT-21
Titanium (Ti)			<1.0		mg/kg		1	13-OCT-21
Tungsten (W)			<0.50		mg/kg		0.5	13-OCT-21
Uranium (U)			<0.050		mg/kg		0.05	13-OCT-21
Vanadium (V)			<0.20		mg/kg		0.2	13-OCT-21
Zinc (Zn)			<2.0		mg/kg		2	13-OCT-21
Zirconium (Zr)			<1.0		mg/kg		1	13-OCT-21
Batch R5618240								
WG3637138-2 CRM		**WT-SS-2**						
Aluminum (Al)			106.7		%		70-130	14-OCT-21
Antimony (Sb)			99.3		%		70-130	14-OCT-21
Arsenic (As)			111.3		%		70-130	14-OCT-21
Barium (Ba)			112.6		%		70-130	14-OCT-21
Beryllium (Be)			107.4		%		70-130	14-OCT-21
Bismuth (Bi)			0.15		mg/kg		0-0.34	14-OCT-21
Boron (B)			9.1		mg/kg		3.5-13.5	14-OCT-21
Cadmium (Cd)			93.3		%		70-130	14-OCT-21
Calcium (Ca)			107.1		%		70-130	14-OCT-21
Chromium (Cr)			97.3		%		70-130	14-OCT-21
Cobalt (Co)			103.4		%		70-130	14-OCT-21
Copper (Cu)			113.3		%		70-130	14-OCT-21
Iron (Fe)			100.1		%		70-130	14-OCT-21
Lead (Pb)			99.8		%		70-130	14-OCT-21
Lithium (Li)			110.8		%		70-130	14-OCT-21
Magnesium (Mg)			102.8		%		70-130	14-OCT-21
Manganese (Mn)			109.3		%		70-130	14-OCT-21
Molybdenum (Mo)			100.3		%		70-130	14-OCT-21
Nickel (Ni)			103.8		%		70-130	14-OCT-21
Phosphorus (P)			105.2		%		70-130	14-OCT-21
Potassium (K)			98.2		%		70-130	14-OCT-21
Selenium (Se)			0.12		mg/kg		0-0.34	14-OCT-21
Silver (Ag)			80.4		%		70-130	14-OCT-21
Sodium (Na)			97.8		%		70-130	14-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5618240								
WG3637138-2 CRM		**WT-SS-2**						
Strontium (Sr)			106.0		%		70-130	14-OCT-21
Thallium (Tl)			0.069		mg/kg		0.029-0.129	14-OCT-21
Tin (Sn)			95.6		%		70-130	14-OCT-21
Titanium (Ti)			90.3		%		70-130	14-OCT-21
Uranium (U)			88.5		%		70-130	14-OCT-21
Vanadium (V)			101.9		%		70-130	14-OCT-21
Zinc (Zn)			96.5		%		70-130	14-OCT-21
Zirconium (Zr)			94.7		%		70-130	14-OCT-21
WG3637138-7 DUP		**WG3637138-6**						
Aluminum (Al)		4260	2620	DUP-H	ug/g	47	40	14-OCT-21
Antimony (Sb)		<0.10	<0.10	DUP-H	ug/g	N/A	30	14-OCT-21
Arsenic (As)		1.58	1.05	DUP-H	ug/g	41	30	14-OCT-21
Barium (Ba)		16.6	10.1	DUP-H	ug/g	49	40	14-OCT-21
Beryllium (Be)		<0.10	<0.10	DUP-H	ug/g	N/A	30	14-OCT-21
Bismuth (Bi)		<0.20	<0.20	DUP-H	ug/g	N/A	30	14-OCT-21
Boron (B)		<5.0	<5.0	DUP-H	ug/g	N/A	30	14-OCT-21
Cadmium (Cd)		0.165	0.102	DUP-H	ug/g	47	30	14-OCT-21
Calcium (Ca)		1560	904	DUP-H	ug/g	53	30	14-OCT-21
Chromium (Cr)		7.95	5.05	DUP-H	ug/g	45	30	14-OCT-21
Cobalt (Co)		0.87	0.57	DUP-H	ug/g	42	30	14-OCT-21
Copper (Cu)		1.81	1.11	DUP-H	ug/g	0.70	1	14-OCT-21
Iron (Fe)		4340	2850	DUP-H	ug/g	42	30	14-OCT-21
Lead (Pb)		6.04	3.46	DUP-H	ug/g	54	40	14-OCT-21
Lithium (Li)		2.4	<2.0	DUP-H	ug/g	N/A	30	14-OCT-21
Magnesium (Mg)		709	454	DUP-H	ug/g	44	30	14-OCT-21
Manganese (Mn)		42.4	27.3	DUP-H	ug/g	43	30	14-OCT-21
Molybdenum (Mo)		0.30	0.16	DUP-H	ug/g	0.13	0.2	14-OCT-21
Nickel (Ni)		2.38	1.52	DUP-H	ug/g	0.87	1	14-OCT-21
Phosphorus (P)		192	106	DUP-H	ug/g	86	100	14-OCT-21
Potassium (K)		340	210	DUP-H	ug/g	130	200	14-OCT-21
Selenium (Se)		<0.20	<0.20	DUP-H	ug/g	N/A	30	14-OCT-21
Silver (Ag)		<0.10	<0.10	DUP-H	ug/g	N/A	40	14-OCT-21
Sodium (Na)		<50	<50	DUP-H	ug/g	N/A	40	14-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5618240								
WG3637138-7 DUP		**WG3637138-6**						
Strontium (Sr)		6.49	3.91	DUP-H	ug/g	50	40	14-OCT-21
Sulfur (S)		<1000	<1000	DUP-H	ug/g	N/A	30	14-OCT-21
Thallium (Tl)		<0.050	<0.050	DUP-H	ug/g	N/A	30	14-OCT-21
Tin (Sn)		<2.0	<2.0	DUP-H	ug/g	N/A	40	14-OCT-21
Titanium (Ti)		443	280	DUP-H	ug/g	45	40	14-OCT-21
Tungsten (W)		<0.50	<0.50	DUP-H	ug/g	N/A	30	14-OCT-21
Uranium (U)		0.395	0.222	DUP-H	ug/g	0.173	0.1	14-OCT-21
Vanadium (V)		16.5	10.2	DUP-H	ug/g	47	30	14-OCT-21
Zinc (Zn)		12.1	7.9	DUP-H	ug/g	4.3	4	14-OCT-21
Zirconium (Zr)		<1.0	<1.0	DUP-H	ug/g	N/A	30	14-OCT-21
WG3637138-4 LCS								
Aluminum (Al)			106.1		%		80-120	14-OCT-21
Antimony (Sb)			107.6		%		80-120	14-OCT-21
Arsenic (As)			105.3		%		80-120	14-OCT-21
Barium (Ba)			106.9		%		80-120	14-OCT-21
Beryllium (Be)			102.2		%		80-120	14-OCT-21
Bismuth (Bi)			92.7		%		80-120	14-OCT-21
Boron (B)			99.5		%		80-120	14-OCT-21
Cadmium (Cd)			100.1		%		80-120	14-OCT-21
Calcium (Ca)			103.0		%		80-120	14-OCT-21
Chromium (Cr)			101.0		%		80-120	14-OCT-21
Cobalt (Co)			101.1		%		80-120	14-OCT-21
Copper (Cu)			98.2		%		80-120	14-OCT-21
Iron (Fe)			103.3		%		80-120	14-OCT-21
Lead (Pb)			97.5		%		80-120	14-OCT-21
Lithium (Li)			104.0		%		80-120	14-OCT-21
Magnesium (Mg)			106.6		%		80-120	14-OCT-21
Manganese (Mn)			103.1		%		80-120	14-OCT-21
Molybdenum (Mo)			104.3		%		80-120	14-OCT-21
Nickel (Ni)			100.2		%		80-120	14-OCT-21
Phosphorus (P)			106.5		%		80-120	14-OCT-21
Potassium (K)			108.7		%		80-120	14-OCT-21
Selenium (Se)			100.8		%		80-120	14-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5618240								
WG3637138-4 LCS								
Silver (Ag)			91.5		%		80-120	14-OCT-21
Sodium (Na)			101.8		%		80-120	14-OCT-21
Strontium (Sr)			104.9		%		80-120	14-OCT-21
Sulfur (S)			101.0		%		80-120	14-OCT-21
Thallium (Tl)			100.6		%		80-120	14-OCT-21
Tin (Sn)			105.8		%		80-120	14-OCT-21
Titanium (Ti)			101.3		%		80-120	14-OCT-21
Tungsten (W)			94.8		%		80-120	14-OCT-21
Uranium (U)			91.2		%		80-120	14-OCT-21
Vanadium (V)			104.5		%		80-120	14-OCT-21
Zinc (Zn)			95.4		%		80-120	14-OCT-21
Zirconium (Zr)			104.0		%		80-120	14-OCT-21
WG3637138-1 MB								
Aluminum (Al)			<50		mg/kg		50	14-OCT-21
Antimony (Sb)			<0.10		mg/kg		0.1	14-OCT-21
Arsenic (As)			<0.10		mg/kg		0.1	14-OCT-21
Barium (Ba)			<0.50		mg/kg		0.5	14-OCT-21
Beryllium (Be)			<0.10		mg/kg		0.1	14-OCT-21
Bismuth (Bi)			<0.20		mg/kg		0.2	14-OCT-21
Boron (B)			<5.0		mg/kg		5	14-OCT-21
Cadmium (Cd)			<0.020		mg/kg		0.02	14-OCT-21
Calcium (Ca)			<50		mg/kg		50	14-OCT-21
Chromium (Cr)			<0.50		mg/kg		0.5	14-OCT-21
Cobalt (Co)			<0.10		mg/kg		0.1	14-OCT-21
Copper (Cu)			<0.50		mg/kg		0.5	14-OCT-21
Iron (Fe)			<50		mg/kg		50	14-OCT-21
Lead (Pb)			<0.50		mg/kg		0.5	14-OCT-21
Lithium (Li)			<2.0		mg/kg		2	14-OCT-21
Magnesium (Mg)			<20		mg/kg		20	14-OCT-21
Manganese (Mn)			<1.0		mg/kg		1	14-OCT-21
Molybdenum (Mo)			<0.10		mg/kg		0.1	14-OCT-21
Nickel (Ni)			<0.50		mg/kg		0.5	14-OCT-21
Phosphorus (P)			<50		mg/kg		50	14-OCT-21
Potassium (K)			<100		mg/kg		100	14-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5618240								
WG3637138-1 MB								
Selenium (Se)			<0.20		mg/kg		0.2	14-OCT-21
Silver (Ag)			<0.10		mg/kg		0.1	14-OCT-21
Sodium (Na)			<50		mg/kg		50	14-OCT-21
Strontium (Sr)			<0.50		mg/kg		0.5	14-OCT-21
Sulfur (S)			<1000		mg/kg		1000	14-OCT-21
Thallium (Tl)			<0.050		mg/kg		0.05	14-OCT-21
Tin (Sn)			<2.0		mg/kg		2	14-OCT-21
Titanium (Ti)			<1.0		mg/kg		1	14-OCT-21
Tungsten (W)			<0.50		mg/kg		0.5	14-OCT-21
Uranium (U)			<0.050		mg/kg		0.05	14-OCT-21
Vanadium (V)			<0.20		mg/kg		0.2	14-OCT-21
Zinc (Zn)			<2.0		mg/kg		2	14-OCT-21
Zirconium (Zr)			<1.0		mg/kg		1	14-OCT-21
Batch R5619523								
WG3638134-2 CRM		**WT-SS-2**						
Aluminum (Al)			112.2		%		70-130	15-OCT-21
Antimony (Sb)			100.3		%		70-130	15-OCT-21
Arsenic (As)			110.7		%		70-130	15-OCT-21
Barium (Ba)			111.4		%		70-130	15-OCT-21
Beryllium (Be)			99.6		%		70-130	15-OCT-21
Bismuth (Bi)			0.15		mg/kg		0-0.34	15-OCT-21
Boron (B)			8.3		mg/kg		3.5-13.5	15-OCT-21
Cadmium (Cd)			106.7		%		70-130	15-OCT-21
Calcium (Ca)			109.8		%		70-130	15-OCT-21
Chromium (Cr)			104.4		%		70-130	15-OCT-21
Cobalt (Co)			106.2		%		70-130	15-OCT-21
Copper (Cu)			109.9		%		70-130	15-OCT-21
Iron (Fe)			108.0		%		70-130	15-OCT-21
Lead (Pb)			108.2		%		70-130	15-OCT-21
Lithium (Li)			92.0		%		70-130	15-OCT-21
Magnesium (Mg)			108.9		%		70-130	15-OCT-21
Manganese (Mn)			114.2		%		70-130	15-OCT-21
Molybdenum (Mo)			103.1		%		70-130	15-OCT-21
Nickel (Ni)			106.8		%		70-130	15-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5619523								
WG3638134-2 CRM		**WT-SS-2**						
Phosphorus (P)			104.1		%		70-130	15-OCT-21
Potassium (K)			106.7		%		70-130	15-OCT-21
Selenium (Se)			0.13		mg/kg		0-0.34	15-OCT-21
Silver (Ag)			87.0		%		70-130	15-OCT-21
Sodium (Na)			104.4		%		70-130	15-OCT-21
Strontium (Sr)			104.3		%		70-130	15-OCT-21
Thallium (Tl)			0.077		mg/kg		0.029-0.129	15-OCT-21
Tin (Sn)			104.1		%		70-130	15-OCT-21
Titanium (Ti)			100.5		%		70-130	15-OCT-21
Uranium (U)			95.3		%		70-130	15-OCT-21
Vanadium (V)			106.5		%		70-130	15-OCT-21
Zinc (Zn)			105.0		%		70-130	15-OCT-21
Zirconium (Zr)			101.5		%		70-130	15-OCT-21
WG3638134-7 DUP		**WG3638134-6**						
Aluminum (Al)		20600	20600		ug/g	0.4	40	15-OCT-21
Antimony (Sb)		0.20	0.20		ug/g	1.5	30	15-OCT-21
Arsenic (As)		6.91	6.93		ug/g	0.3	30	15-OCT-21
Barium (Ba)		105	104		ug/g	0.6	40	15-OCT-21
Beryllium (Be)		0.80	0.78		ug/g	3.1	30	15-OCT-21
Bismuth (Bi)		<0.20	<0.20	RPD-NA	ug/g	N/A	30	15-OCT-21
Boron (B)		7.1	7.1		ug/g	0.2	30	15-OCT-21
Cadmium (Cd)		0.233	0.279		ug/g	18	30	15-OCT-21
Calcium (Ca)		30700	29300		ug/g	4.7	30	15-OCT-21
Chromium (Cr)		26.4	26.3		ug/g	0.4	30	15-OCT-21
Cobalt (Co)		12.6	11.9		ug/g	5.6	30	15-OCT-21
Copper (Cu)		26.7	25.9		ug/g	3.4	30	15-OCT-21
Iron (Fe)		29600	28900		ug/g	2.3	30	15-OCT-21
Lead (Pb)		17.9	18.1		ug/g	1.2	40	15-OCT-21
Lithium (Li)		22.4	21.9		ug/g	2.5	30	15-OCT-21
Magnesium (Mg)		16300	15600		ug/g	4.6	30	15-OCT-21
Manganese (Mn)		855	850		ug/g	0.6	30	15-OCT-21
Molybdenum (Mo)		0.46	0.46		ug/g	0.3	40	15-OCT-21
Nickel (Ni)		25.8	25.1		ug/g	2.6	30	15-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5619523								
WG3638134-7 DUP		**WG3638134-6**						
Phosphorus (P)		617	594		ug/g	3.9	30	15-OCT-21
Potassium (K)		2340	2270		ug/g	3.1	40	15-OCT-21
Selenium (Se)		0.22	0.23		ug/g	3.9	30	15-OCT-21
Silver (Ag)		<0.10	<0.10	RPD-NA	ug/g	N/A	40	15-OCT-21
Sodium (Na)		119	108		ug/g	9.4	40	15-OCT-21
Strontium (Sr)		39.5	39.4		ug/g	0.2	40	15-OCT-21
Sulfur (S)		<1000	<1000	RPD-NA	ug/g	N/A	30	15-OCT-21
Thallium (Tl)		0.169	0.163		ug/g	3.8	30	15-OCT-21
Tin (Sn)		<2.0	<2.0	RPD-NA	ug/g	N/A	40	15-OCT-21
Titanium (Ti)		109	111		ug/g	2.5	40	15-OCT-21
Tungsten (W)		<0.50	<0.50	RPD-NA	ug/g	N/A	30	15-OCT-21
Uranium (U)		0.479	0.489		ug/g	2.0	30	15-OCT-21
Vanadium (V)		36.3	35.2		ug/g	3.2	30	15-OCT-21
Zinc (Zn)		94.2	103		ug/g	8.7	30	15-OCT-21
Zirconium (Zr)		1.7	1.7		ug/g	0.1	30	15-OCT-21
WG3638134-4 LCS								
Aluminum (Al)			105.0		%		80-120	15-OCT-21
Antimony (Sb)			106.0		%		80-120	15-OCT-21
Arsenic (As)			104.6		%		80-120	15-OCT-21
Barium (Ba)			102.6		%		80-120	15-OCT-21
Beryllium (Be)			89.0		%		80-120	15-OCT-21
Bismuth (Bi)			98.9		%		80-120	15-OCT-21
Boron (B)			86.7		%		80-120	15-OCT-21
Cadmium (Cd)			97.4		%		80-120	15-OCT-21
Calcium (Ca)			98.6		%		80-120	15-OCT-21
Chromium (Cr)			100.0		%		80-120	15-OCT-21
Cobalt (Co)			101.2		%		80-120	15-OCT-21
Copper (Cu)			97.5		%		80-120	15-OCT-21
Iron (Fe)			94.9		%		80-120	15-OCT-21
Lead (Pb)			102.3		%		80-120	15-OCT-21
Lithium (Li)			85.5		%		80-120	15-OCT-21
Magnesium (Mg)			105.2		%		80-120	15-OCT-21
Manganese (Mn)			103.4		%		80-120	15-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5619523								
WG3638134-4 LCS								
Molybdenum (Mo)			103.7		%		80-120	15-OCT-21
Nickel (Ni)			97.9		%		80-120	15-OCT-21
Phosphorus (P)			110.5		%		80-120	15-OCT-21
Potassium (K)			108.3		%		80-120	15-OCT-21
Selenium (Se)			99.0		%		80-120	15-OCT-21
Silver (Ag)			94.3		%		80-120	15-OCT-21
Sodium (Na)			101.3		%		80-120	15-OCT-21
Strontium (Sr)			104.0		%		80-120	15-OCT-21
Sulfur (S)			98.5		%		80-120	15-OCT-21
Thallium (Tl)			100.9		%		80-120	15-OCT-21
Tin (Sn)			99.95		%		80-120	15-OCT-21
Titanium (Ti)			101.3		%		80-120	15-OCT-21
Tungsten (W)			102.2		%		80-120	15-OCT-21
Uranium (U)			97.5		%		80-120	15-OCT-21
Vanadium (V)			103.6		%		80-120	15-OCT-21
Zinc (Zn)			97.9		%		80-120	15-OCT-21
Zirconium (Zr)			101.4		%		80-120	15-OCT-21
WG3638134-1 MB								
Aluminum (Al)			<50		mg/kg		50	15-OCT-21
Antimony (Sb)			<0.10		mg/kg		0.1	15-OCT-21
Arsenic (As)			<0.10		mg/kg		0.1	15-OCT-21
Barium (Ba)			<0.50		mg/kg		0.5	15-OCT-21
Beryllium (Be)			<0.10		mg/kg		0.1	15-OCT-21
Bismuth (Bi)			<0.20		mg/kg		0.2	15-OCT-21
Boron (B)			<5.0		mg/kg		5	15-OCT-21
Cadmium (Cd)			<0.020		mg/kg		0.02	15-OCT-21
Calcium (Ca)			<50		mg/kg		50	15-OCT-21
Chromium (Cr)			<0.50		mg/kg		0.5	15-OCT-21
Cobalt (Co)			<0.10		mg/kg		0.1	15-OCT-21
Copper (Cu)			<0.50		mg/kg		0.5	15-OCT-21
Iron (Fe)			<50		mg/kg		50	15-OCT-21
Lead (Pb)			<0.50		mg/kg		0.5	15-OCT-21
Lithium (Li)			<2.0		mg/kg		2	15-OCT-21
Magnesium (Mg)			<20		mg/kg		20	15-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5619523								
WG3638134-1 MB								
Manganese (Mn)			<1.0		mg/kg		1	15-OCT-21
Molybdenum (Mo)			<0.10		mg/kg		0.1	15-OCT-21
Nickel (Ni)			<0.50		mg/kg		0.5	15-OCT-21
Phosphorus (P)			<50		mg/kg		50	15-OCT-21
Potassium (K)			<100		mg/kg		100	15-OCT-21
Selenium (Se)			<0.20		mg/kg		0.2	15-OCT-21
Silver (Ag)			<0.10		mg/kg		0.1	15-OCT-21
Sodium (Na)			<50		mg/kg		50	15-OCT-21
Strontium (Sr)			<0.50		mg/kg		0.5	15-OCT-21
Sulfur (S)			<1000		mg/kg		1000	15-OCT-21
Thallium (Tl)			<0.050		mg/kg		0.05	15-OCT-21
Tin (Sn)			<2.0		mg/kg		2	15-OCT-21
Titanium (Ti)			<1.0		mg/kg		1	15-OCT-21
Tungsten (W)			<0.50		mg/kg		0.5	15-OCT-21
Uranium (U)			<0.050		mg/kg		0.05	15-OCT-21
Vanadium (V)			<0.20		mg/kg		0.2	15-OCT-21
Zinc (Zn)			<2.0		mg/kg		2	15-OCT-21
Zirconium (Zr)			<1.0		mg/kg		1	15-OCT-21
MOISTURE-WT	**Soil**							
Batch R5614677								
WG3634109-5 DUP		**L2647365-4**						
% Moisture		16.8	17.2		%	2.3	20	09-OCT-21
WG3634109-2 LCS								
% Moisture			99.6		%		90-110	09-OCT-21
WG3634109-1 MB								
% Moisture			<0.25		%		0.25	09-OCT-21
Batch R5614782								
WG3634015-3 DUP		**L2647880-2**						
% Moisture		83.2	83.4		%	0.2	20	12-OCT-21
WG3634015-2 LCS								
% Moisture			98.7		%		90-110	12-OCT-21
WG3634015-1 MB								
% Moisture			<0.25		%		0.25	12-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MOISTURE-WT	**Soil**							
Batch R5614943								
WG3634499-3 DUP		**L2648186-4**						
% Moisture		68.5	69.1		%	1.0	20	09-OCT-21
WG3634499-2 LCS								
% Moisture			98.9		%		90-110	09-OCT-21
WG3634499-1 MB								
% Moisture			<0.25		%		0.25	09-OCT-21
PAH-CCME-SQGL-WT	**Soil**							
Batch R5619198								
WG3636180-3 DUP		**WG3636180-5**						
1-Methylnaphthalene		0.096	0.105		ug/g	9.1	50	15-OCT-21
2-Methylnaphthalene		0.110	0.112		ug/g	2.2	50	15-OCT-21
Acenaphthene		0.211	0.200		ug/g	5.0	50	15-OCT-21
Acenaphthylene		0.461	0.537		ug/g	15	50	15-OCT-21
Acridine		0.110	0.070		ug/g	44	50	15-OCT-21
Anthracene		0.627	0.426		ug/g	38	50	15-OCT-21
Benzo(a)anthracene		1.95	1.44		ug/g	30	50	15-OCT-21
Benzo(a)pyrene		2.16	2.11		ug/g	2.7	50	15-OCT-21
Benzo(b&j)fluoranthene		2.59	2.19		ug/g	17	50	15-OCT-21
Benzo(g,h,i)perylene		1.42	1.46		ug/g	3.0	50	15-OCT-21
Benzo(k)fluoranthene		0.944	0.802		ug/g	16	50	15-OCT-21
Chrysene		2.02	1.59		ug/g	24	50	15-OCT-21
Dibenz(a,h)anthracene		0.344	0.348		ug/g	1.1	50	15-OCT-21
Fluoroanthene		3.02	1.84		ug/g	49	50	15-OCT-21
Fluorene		0.193	0.167		ug/g	14	50	15-OCT-21
Indeno(1,2,3-cd)pyrene		1.19	1.11		ug/g	7.1	50	15-OCT-21
Naphthalene		0.120	0.111		ug/g	7.9	50	15-OCT-21
Phenanthrene		1.46	0.886		ug/g	49	50	15-OCT-21
Pyrene		3.17	2.33		ug/g	30	50	15-OCT-21
Quinoline		<0.025	<0.025	RPD-NA	ug/g	N/A	50	15-OCT-21
WG3636180-2 LCS								
1-Methylnaphthalene			96.3		%		50-140	15-OCT-21
2-Methylnaphthalene			91.7		%		50-140	15-OCT-21
Acenaphthene			90.7		%		50-140	15-OCT-21
Acenaphthylene			86.7		%		50-140	15-OCT-21
Acridine			88.3		%		50-140	15-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-CCME-SQGL-WT	**Soil**							
Batch R5619198								
WG3636180-2 LCS								
Anthracene			81.1		%		50-140	15-OCT-21
Benzo(a)anthracene			92.2		%		50-140	15-OCT-21
Benzo(a)pyrene			80.1		%		50-140	15-OCT-21
Benzo(b&j)fluoranthene			86.3		%		50-150	15-OCT-21
Benzo(g,h,i)perylene			74.0		%		50-140	15-OCT-21
Benzo(k)fluoranthene			96.9		%		50-140	15-OCT-21
Chrysene			99.2		%		50-140	15-OCT-21
Dibenz(a,h)anthracene			76.7		%		50-140	15-OCT-21
Fluoroanthene			92.7		%		50-140	15-OCT-21
Fluorene			87.7		%		50-140	15-OCT-21
Indeno(1,2,3-cd)pyrene			77.7		%		50-140	15-OCT-21
Naphthalene			88.3		%		50-140	15-OCT-21
Phenanthrene			92.6		%		50-140	15-OCT-21
Pyrene			92.1		%		50-140	15-OCT-21
Quinoline			79.4		%		50-140	15-OCT-21
WG3636180-1 MB								
1-Methylnaphthalene			<0.0050		ug/g		0.005	15-OCT-21
2-Methylnaphthalene			<0.0050		ug/g		0.005	15-OCT-21
Acenaphthene			<0.0050		ug/g		0.005	15-OCT-21
Acenaphthylene			<0.0050		ug/g		0.005	15-OCT-21
Acridine			<0.010		ug/g		0.01	15-OCT-21
Anthracene			<0.0040		ug/g		0.004	15-OCT-21
Benzo(a)anthracene			<0.010		ug/g		0.01	15-OCT-21
Benzo(a)pyrene			<0.0050		ug/g		0.005	15-OCT-21
Benzo(b&j)fluoranthene			<0.010		ug/g		0.01	15-OCT-21
Benzo(g,h,i)perylene			<0.010		ug/g		0.01	15-OCT-21
Benzo(k)fluoranthene			<0.010		ug/g		0.01	15-OCT-21
Chrysene			<0.010		ug/g		0.01	15-OCT-21
Dibenz(a,h)anthracene			<0.0050		ug/g		0.005	15-OCT-21
Fluoroanthene			<0.0050		ug/g		0.005	15-OCT-21
Fluorene			<0.0050		ug/g		0.005	15-OCT-21
Indeno(1,2,3-cd)pyrene			<0.010		ug/g		0.01	15-OCT-21
Naphthalene			<0.0050		ug/g		0.005	15-OCT-21
Phenanthrene			<0.0050		ug/g		0.005	15-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-CCME-SQGL-WT	**Soil**							
Batch R5619198								
WG3636180-1 MB								
Pyrene			<0.0050		ug/g		0.005	15-OCT-21
Quinoline			<0.0050		ug/g		0.005	15-OCT-21
Surrogate: 2-Fluorobiphenyl			86.4		%		60-140	15-OCT-21
Surrogate: d14-Terphenyl			92.2		%		60-140	15-OCT-21
WG3636180-4 MS		**WG3636180-5**						
1-Methylnaphthalene			99.4		%		50-150	15-OCT-21
2-Methylnaphthalene			98.0		%		50-150	15-OCT-21
Acenaphthene			93.6		%		50-150	15-OCT-21
Acenaphthylene			72.4		%		50-150	15-OCT-21
Acridine			88.9		%		50-150	15-OCT-21
Anthracene			73.0		%		50-150	15-OCT-21
Benzo(a)anthracene			75.6		%		50-150	15-OCT-21
Benzo(a)pyrene			N/A	MS-B	%		-	15-OCT-21
Benzo(b&j)fluoranthene			N/A	MS-B	%		-	15-OCT-21
Benzo(g,h,i)perylene			70.6		%		50-150	15-OCT-21
Benzo(k)fluoranthene			62.8		%		50-150	15-OCT-21
Chrysene			69.3		%		50-150	15-OCT-21
Dibenz(a,h)anthracene			80.2		%		50-150	15-OCT-21
Fluoroanthene			N/A	MS-B	%		-	15-OCT-21
Fluorene			95.7		%		50-150	15-OCT-21
Indeno(1,2,3-cd)pyrene			76.3		%		50-150	15-OCT-21
Naphthalene			96.5		%		50-150	15-OCT-21
Phenanthrene			67.4		%		50-150	15-OCT-21
Pyrene			N/A	MS-B	%		-	15-OCT-21
Quinoline			89.9		%		50-150	15-OCT-21
PCB9-LOW-WT	**Soil**							
Batch R5617747								
WG3636172-3 DUP		**WG3636172-5**						
Aroclor 1016		<0.0045	<0.0045	RPD-NA	mg/kg	N/A	50	14-OCT-21
Aroclor 1221		<0.0045	<0.0045	RPD-NA	mg/kg	N/A	50	14-OCT-21
Aroclor 1232		<0.0045	<0.0045	RPD-NA	mg/kg	N/A	50	14-OCT-21
Aroclor 1242		<0.0045	<0.0045	RPD-NA	mg/kg	N/A	40	14-OCT-21
Aroclor 1248		<0.0045	<0.0045	RPD-NA	mg/kg	N/A	40	14-OCT-21
Aroclor 1254		<0.0045	<0.0045	RPD-NA	mg/kg	N/A	40	14-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PCB9-LOW-WT	**Soil**							
Batch R5617747								
WG3636172-3 DUP		**WG3636172-5**						
Aroclor 1260		<0.0045	<0.0045	RPD-NA	mg/kg	N/A	40	14-OCT-21
Aroclor 1262		<0.0045	<0.0045	RPD-NA	mg/kg	N/A	50	14-OCT-21
Aroclor 1268		<0.0045	<0.0045	RPD-NA	mg/kg	N/A	50	14-OCT-21
WG3636172-2 LCS								
Aroclor 1242			111.1		%		60-140	14-OCT-21
Aroclor 1248			117.9		%		60-140	14-OCT-21
Aroclor 1254			132.5		%		60-140	14-OCT-21
Aroclor 1260			123.3		%		60-140	14-OCT-21
WG3636172-1 MB								
Aroclor 1016			<0.0030		mg/kg		0.003	14-OCT-21
Aroclor 1221			<0.0030		mg/kg		0.003	14-OCT-21
Aroclor 1232			<0.0030		mg/kg		0.003	14-OCT-21
Aroclor 1242			<0.0030		mg/kg		0.003	14-OCT-21
Aroclor 1248			<0.0030		mg/kg		0.003	14-OCT-21
Aroclor 1254			<0.0030		mg/kg		0.003	14-OCT-21
Aroclor 1260			<0.0030		mg/kg		0.003	14-OCT-21
Aroclor 1262			<0.0030		mg/kg		0.003	14-OCT-21
Aroclor 1268			<0.0030		mg/kg		0.003	14-OCT-21
Surrogate: d14-Terphenyl			108.7		%		50-140	14-OCT-21
WG3636172-4 MS		**WG3636172-5**						
Aroclor 1242			70.3		%		60-140	14-OCT-21
Aroclor 1254			94.3		%		60-140	14-OCT-21
Aroclor 1260			95.1		%		60-140	14-OCT-21
Batch R5622261								
WG3636249-3 DUP		**WG3636249-5**						
Aroclor 1016		N/A	<0.014	RPD-NA	mg/kg	N/A	50	18-OCT-21
Aroclor 1221		N/A	<0.014	RPD-NA	mg/kg	N/A	50	18-OCT-21
Aroclor 1232		N/A	<0.014	RPD-NA	mg/kg	N/A	50	18-OCT-21
Aroclor 1242		N/A	<0.014	RPD-NA	mg/kg	N/A	40	18-OCT-21
Aroclor 1248		N/A	<0.014	RPD-NA	mg/kg	N/A	40	18-OCT-21
Aroclor 1254		0.124	0.139		mg/kg	12	40	18-OCT-21
Aroclor 1260		0.160	0.221		mg/kg	32	40	18-OCT-21
Aroclor 1262		<0.014	<0.014	RPD-NA	mg/kg	N/A	50	18-OCT-21
Aroclor 1268		<0.014	<0.014	RPD-NA	mg/kg	N/A	50	18-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PCB9-LOW-WT	**Soil**							
Batch R5622261								
WG3636249-7 DUP		**WG3636249-6**						
Aroclor 1016		<0.23	<0.23	RPD-NA	mg/kg	N/A	50	18-OCT-21
Aroclor 1221		<0.23	<0.23	RPD-NA	mg/kg	N/A	50	18-OCT-21
Aroclor 1232		<0.23	<0.23	RPD-NA	mg/kg	N/A	50	18-OCT-21
Aroclor 1242		<0.23	<0.23	RPD-NA	mg/kg	N/A	40	18-OCT-21
Aroclor 1248		<0.23	<0.23	RPD-NA	mg/kg	N/A	40	18-OCT-21
WG3636249-2 LCS								
Aroclor 1242			77.6		%		60-140	18-OCT-21
Aroclor 1248			74.8		%		60-140	18-OCT-21
Aroclor 1254			96.5		%		60-140	18-OCT-21
Aroclor 1260			94.3		%		60-140	18-OCT-21
WG3636249-1 MB								
Aroclor 1016			<0.0030		mg/kg		0.003	18-OCT-21
Aroclor 1221			<0.0030		mg/kg		0.003	18-OCT-21
Aroclor 1232			<0.0030		mg/kg		0.003	18-OCT-21
Aroclor 1242			<0.0030		mg/kg		0.003	18-OCT-21
Aroclor 1248			<0.0030		mg/kg		0.003	18-OCT-21
Aroclor 1254			<0.0030		mg/kg		0.003	18-OCT-21
Aroclor 1260			<0.0030		mg/kg		0.003	18-OCT-21
Aroclor 1262			<0.0030		mg/kg		0.003	18-OCT-21
Aroclor 1268			<0.0030		mg/kg		0.003	18-OCT-21
Surrogate: d14-Terphenyl			100.6		%		50-140	18-OCT-21
WG3636249-4 MS		**WG3636249-5**						
Aroclor 1254			N/A	MS-B	%		60-140	18-OCT-21
Aroclor 1260			N/A	MS-B	%		60-140	18-OCT-21
WG3636249-8 MS		**WG3636249-6**						
Aroclor 1242			109.8		%		60-140	18-OCT-21
Batch R5623933								
WG3636193-3 DUP		**WG3636193-5**						
Aroclor 1016		<0.045	<0.045	RPD-NA	mg/kg	N/A	50	18-OCT-21
Aroclor 1221		<0.045	<0.045	RPD-NA	mg/kg	N/A	50	18-OCT-21
Aroclor 1232		<0.045	<0.045	RPD-NA	mg/kg	N/A	50	18-OCT-21
Aroclor 1242		<0.045	<0.045	RPD-NA	mg/kg	N/A	40	18-OCT-21
Aroclor 1248		<0.045	<0.045	RPD-NA	mg/kg	N/A	40	18-OCT-21
Aroclor 1254		0.130	0.155		mg/kg	17	40	18-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PCB9-LOW-WT	**Soil**							
Batch R5623933								
WG3636193-3 DUP		**WG3636193-5**						
Aroclor 1260		<0.045	<0.045	RPD-NA	mg/kg	N/A	40	18-OCT-21
Aroclor 1262		<0.045	<0.045	RPD-NA	mg/kg	N/A	50	18-OCT-21
Aroclor 1268		<0.045	<0.045	RPD-NA	mg/kg	N/A	50	18-OCT-21
WG3636193-2 LCS								
Aroclor 1242			86.1		%		60-140	18-OCT-21
Aroclor 1248			82.8		%		60-140	18-OCT-21
Aroclor 1254			97.8		%		60-140	18-OCT-21
Aroclor 1260			90.8		%		60-140	18-OCT-21
WG3636193-1 MB								
Aroclor 1016			<0.0030		mg/kg		0.003	18-OCT-21
Aroclor 1221			<0.0030		mg/kg		0.003	18-OCT-21
Aroclor 1232			<0.0030		mg/kg		0.003	18-OCT-21
Aroclor 1242			<0.0030		mg/kg		0.003	18-OCT-21
Aroclor 1248			<0.0030		mg/kg		0.003	18-OCT-21
Aroclor 1254			<0.0030		mg/kg		0.003	18-OCT-21
Aroclor 1260			<0.0030		mg/kg		0.003	18-OCT-21
Aroclor 1262			<0.0030		mg/kg		0.003	18-OCT-21
Aroclor 1268			<0.0030		mg/kg		0.003	18-OCT-21
Surrogate: d14-Terphenyl			106.3		%		50-140	18-OCT-21
WG3636193-4 MS		**WG3636193-5**						
Aroclor 1242			93.6		%		60-140	18-OCT-21
Aroclor 1254			117.4		%		60-140	18-OCT-21
Aroclor 1260			98.9		%		60-140	18-OCT-21
PSA-MUST-SK	**Soil**							
Batch R5620016								
WG3636514-1 DUP		**L2647880-2**						
MUST PSA % > 75um		4.2	3.8	J	%	0.4	5	15-OCT-21
WG3636514-2 IRM		**2020-PSA_SOIL**						
MUST PSA % > 75um			44.0		%		37.9-47.9	15-OCT-21
SPECGRAV-CL	**Soil**							
Batch R5628726								
WG3645808-2 DUP		**L2646722-10**						
Specific Gravity		1.10	1.11		kg/L	0.9	20	25-OCT-21
WG3645808-1 IRM		**DI_H2O**						
Specific Gravity			100.0		%		90-110	25-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
SPECGRAV-CL	**Soil**							
Batch R5634727								
WG3651002-2 DUP		**L2646743-14**						
Specific Gravity		1.48	1.45		kg/L	2.0	20	01-NOV-21
WG3651002-1 IRM		**DI_H2O**						
Specific Gravity			100.0		%		90-110	01-NOV-21
TOC-WT	**Soil**							
Batch R5619419								
WG3638222-3 CRM		**WT-TOC-CRM**						
Total Organic Carbon			109.5		%		70-130	15-OCT-21
WG3638222-4 DUP		**L2646527-14**						
Total Organic Carbon		12.8	12.8		%	0.1	20	15-OCT-21
Fraction Organic Carbon		0.128	0.128		g/g	0.1	25	15-OCT-21
WG3638222-2 LCS								
Total Organic Carbon			98.7		%		80-120	15-OCT-21
WG3638222-1 MB								
Total Organic Carbon			<0.10		%		0.1	15-OCT-21
Fraction Organic Carbon			<0.0010		g/g		0.001	15-OCT-21
Batch R5624426								
WG3640375-3 CRM		**WT-TOC-CRM**						
Total Organic Carbon			101.4		%		70-130	19-OCT-21
WG3640375-4 DUP		**L2647880-13**						
Total Organic Carbon		9.28	9.03		%	2.7	20	19-OCT-21
Fraction Organic Carbon		0.0928	0.0903		g/g	2.7	25	19-OCT-21
WG3640375-2 LCS								
Total Organic Carbon			101.0		%		80-120	19-OCT-21
WG3640375-1 MB								
Total Organic Carbon			<0.10		%		0.1	19-OCT-21
Fraction Organic Carbon			<0.0010		g/g		0.001	19-OCT-21
Batch R5624435								
WG3640373-3 CRM		**WT-TOC-CRM**						
Total Organic Carbon			95.9		%		70-130	19-OCT-21
WG3640373-4 DUP		**L2646527-5**						
Total Organic Carbon		4.94	4.64		%	6.3	20	19-OCT-21
Fraction Organic Carbon		0.0494	0.0464		g/g	6.3	25	19-OCT-21
WG3640373-2 LCS								
Total Organic Carbon			115.4		%		80-120	19-OCT-21
WG3640373-1 MB								
Total Organic Carbon			<0.10		%		0.1	19-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
TOC-WT	**Soil**							
Batch R5624435								
WG3640373-1 MB								
Fraction Organic Carbon			<0.0010		g/g		0.001	19-OCT-21

Quality Control Report

Workorder: L2647880 Report Date: 03-NOV-21

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Legend:

Limit	ALS Control Limit (Data Quality Objectives)
DUP	Duplicate
RPD	Relative Percent Difference
N/A	Not Available
LCS	Laboratory Control Sample
SRM	Standard Reference Material
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ADE	Average Desorption Efficiency
MB	Method Blank
IRM	Internal Reference Material
CRM	Certified Reference Material
CCV	Continuing Calibration Verification
CVS	Calibration Verification Standard
LCSD	Laboratory Control Sample Duplicate

Sample Parameter Qualifier Definitions:

Qualifier	Description
DUP-H	Duplicate results outside ALS DQO, due to sample heterogeneity.
J	Duplicate results and limits are expressed in terms of absolute difference.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Hold Time Exceedances:

All test results reported with this submission were conducted within ALS recommended hold times.

ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.

www.alsglobal.com

L2647880-COFC

...Form

COC Number: 20 - 020

Page 2 of 2

UR

Report To	Contact and company name below will appear on the final report
Company:	Golder Associates Ltd.
Contact:	Jill LaPorte
Phone:	905-723-2727
	Company address below will appear on the final report
Street:	100 Scotia Court
City/Province:	Whitby, Ontario
Postal Code:	L1N 8Y6
Invoice To	Same as Report To ☑ YES ☐ NO
	Copy of Invoice with Report ☑ YES ☐ NO
Company:	Golder Associates Ltd.
Contact:	Accounts Payables

Project Information

ALS Account # / Quote #:	15520 / Q86566
Job #:	1783686-8000-8006
PO / AFE:	
LSD:	

ALS Lab Work Order # (ALS use only): L2647880

Reports / Recip...

Select Report Format: ☑ PDF ☑ EXCEL ☐ EDD (DIGITAL)

Merge QC/QCI Reports with COA ☑ YES ☐ NO ☐ N/A

☐ Compare Results to Criteria on Report - provide details below if box checked

Select Distribution: ☑ EMAIL ☐ MAIL ☐ FAX

Email 1 or Fax: Jill_LaPorte@golder.com

Email 2: shawn_seguin@golder.com

Email 3:

Invoice Recipients

Select Invoice Distribution: ☑ EMAIL ☐ MAIL ☐ FAX

Email 1 or Fax: Jill_LaPorte@golder.com

Email 2: canadaaccountspayableinvoices@golder.com

Oil and Gas Required Fields (client use)

AFE/Cost Center:	PO#
Major/Minor Code:	Routing Code:
Requisitioner:	
Location:	

ALS Contact: Amanda Overholster **Sampler:**

Turnaround Time (TAT) Requested

☑ Routine [R] if received by 3pm M-F - no surcharges apply

☐ 4 day [P4] if received by 3pm M-F - 20% rush surcharge minimum

☐ 3 day [P3] if received by 3pm M-F - 25% rush surcharge minimum

☐ 2 day [P2] if received by 3pm M-F - 50% rush surcharge minimum

☐ 1 day [E] if received by 3pm M-F - 100% rush surcharge minimum

☐ Same day [E2] if received by 10am M-S - 200% rush surcharge. Additional fees may apply to rush requests on weekends, statutory holidays and non-routine tests

AFFIX ALS BARCODE LABEL HERE (ALS use only)

Date and Time Required for all E&P TATs: dd-mmm-yy hh:mm am/pm

For all tests with rush TATs requested, please contact your AM to confirm availability.

Analysis Request

ALS Sample # (ALS use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type
	PCW-SG-010	04-OCT-21	15:55	Sediment
	PCW-SG-009		1605	Sediment
	PCE-SG-012		1625	Sediment
	PCW-SG-015		1635	Sediment
	PCW-SG-014		1650	Sediment
	PCW-SG-016		1705	Sediment
	DUP-007		—	Sediment
	DUP-008	04-OCT-21	—	Sediment
				Sediment
				Sediment
				Sediment
				Sediment
				Sediment

NUMBER OF CONTAINERS

Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below

HWS-Boron (B-HWS-R511-WT)	Cr3 (CR-CR3-WT)	Cr6 (CR-CR6-IC-WT)	Mercury (HG-200.2-CVAA-WT)	Metals (MET-200.2-CCMS-WT)	PAH (PAH-CCME-SQGL-WT)	MOISTURE-WT	TOC (TOC-WT)	PCB9 (PCB9-LOW-WT)		Specific Gravity (SPECGRAV-CL)	PSA (PSA-MUST-WT-SK)	Atterberg (ATTERBERG-SK)		SAMPLES ON HOLD	EXTENDED STORAGE REQUIRED	SUSPECTED HAZARD (see notes)
			✓	✓	✓	✓	✓	✓								
			✓	✓	✓	✓	✓	✓								
			✓	✓	✓	✓	✓	✓								
			✓	✓	✓	✓	✓	✓								
			✓	✓	✓	✓	✓	✓								
			✓	✓	✓	✓	✓	✓								
			✓	✓	✓	✓	✓	✓								
			✓	✓	✓	✓	✓	✓								
			✓	✓	✓	✓	✓	✓								

Drinking Water (DW) Samples[1] (client use)

Are samples taken from a Regulated DW System? ☐ YES ☑ NO

Are samples for human consumption/ use? ☐ YES ☑ NO

Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only)

SAMPLE RECEIPT DETAILS (ALS use only)

Cooling Method: ☐ NONE ☑ ICE ☐ ICE PACKS ☐ FROZEN ☐ COOLING INITIATED

Submission Comments identified on Sample Receipt Notification: ☐ YES ☐ NO

Cooler Custody Seals Intact: ☐ YES ☐ N/A Sample Custody Seals Intact: ☐ YES ☐ N/A

INITIAL COOLER TEMPERATURES °C				FINAL COOLER TEMPERATURES °C			
				8.8			

SHIPMENT RELEASE (client use)

Released by: [signature] Date: 5-OCT-21 Time:

INITIAL SHIPMENT RECEPTION (ALS use only)

Received by: Date: Time:

FINAL SHIPMENT RECEPTION (ALS use only)

Received by: [signature] Date: Oct 6 Time: 17

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

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Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

1. If any water samples are taken from a Regulated Drinking Water (DW) System, please submit using an Authorized DW COC form.

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L2647880-COFC

Chain of Custody (COC) / Analytical Request Form

COC Number: 20 - 019

Page 1 of 2

Report To	Contact and company name below will appear on the final report
Company:	Golder Associates Ltd.
Contact:	Jill LaPorte
Phone:	905-723-2727
	Company address below will appear on the final report
Street:	100 Scotia Court
City/Province:	Whitby, Ontario
Postal Code:	L1N 8Y6
Invoice To	Same as Report To ☑ YES ☐ NO
	Copy of Invoice with Report ☑ YES ☐ NO
Company:	Golder Associates Ltd.
Contact:	Accounts Payables

Project Information

ALS Account # / Quote #:	15520 / Q86566
Job #:	1783886-8000-8006
PO / AFE:	
LSD:	
ALS Lab Work Order # (ALS use only):	L2647880

Reports / Recipients

Select Report Format: ☑ PDF ☑ EXCEL ☐ EDD (DIGITAL)
Merge QC/QCI Reports with COA ☑ YES ☐ NO ☐ N/A
☐ Compare Results to Criteria on Report - provide details below if box checked
Select Distribution: ☑ EMAIL ☐ MAIL ☐ FAX
Email 1 or Fax: Jill_LaPorte@golder.com
Email 2: shawn_seguin@golder.com
Email 3:

Invoice Recipients

Select Invoice Distribution: ☑ EMAIL ☐ MAIL ☐ FAX
Email 1 or Fax: Jill_LaPorte@golder.com
Email 2: canadaaccountspayableinvoices@golder.com

Oil and Gas Required Fields (client use)

AFE/Cost Center:	PO#
Major/Minor Code:	Routing Code:
Requisitioner:	
Location:	

ALS Contact: Amanda Overholster Sampler:

Turnaround Time (TAT) Requested

☑ Routine [R] if received by 3pm M-F - no surcharges apply
☐ 4 day [P4] if received by 3pm M-F - 20% rush surcharge minimum
☐ 3 day [P3] if received by 3pm M-F - 25% rush surcharge minimum
☐ 2 day [P2] if received by 3pm M-F - 50% rush surcharge minimum
☐ 1 day [E] if received by 3pm M-F - 100% rush surcharge minimum
☐ Same day [E2] if received by 10am M-S - 200% rush surcharge. Additional fees may apply to rush requests on weekends, statutory holidays and non-routine tests

Date and Time Required for all E&P TATs: dd-mmm-yy hh:mm am/pm

For all tests with rush TATs requested, please contact your AM to confirm availability.

AFFIX ALS BARCODE LABEL HERE (ALS use only)

Analysis Request

Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below

NUMBER OF CONTAINERS

ALS Sample # (ALS use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	HWS-Boron (B-HWS-R511-WT)	Cr3 (CR-CR3-WT)	Cr6 (CR-CR6-IC-WT)	Mercury (HG-200.2-CVAA-WT)	Metals (MET-200.2-CCMS-WT)	PAH (PAH-CCME-SOGL-WT)	MOISTURE-WT	TOC (TOC-WT)	PCB9 (PCB9-LOW-WT)		Specific Gravity (SPECGRAV-CL)	PSA (PSA-MUST-WT-SK)	Atterberg (ATTERBERG-SK)		SAMPLES ON HOLD	EXTENDED STORAGE REQUIRED	SUSPECTED HAZARD (see notes)
	TCAB-SC-001A	04-OCT-21	1120	Sediment	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓				
	TCAB-SG-001		1245	Sediment	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓				
	TCAB-SC-015A		1420	Sediment				✓	✓	✓	✓	✓	✓		✓		✓				
	TCAB-SG-015		1520	Sediment				✓	✓	✓	✓	✓	✓		✓		✓				
	TCAB-SC-012A		1550	Sediment	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓				
	TCAB-SG-012		1645	Sediment	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓				
	PCW-SG-006		1255	Sediment				✓	✓	✓	✓	✓	✓								
	PCW-SG-002		1315	Sediment				✓	✓	✓	✓	✓	✓								
	PCW-SG-004		1340	Sediment				✓	✓	✓	✓	✓	✓								
	PCW-SG-003		1355	Sediment				✓	✓	✓	✓	✓	✓								
	PCW-SG-008		1520	Sediment				✓	✓	✓	✓	✓	✓								
	PCW-SG-012	04-OCT-21	1540	Sediment				✓	✓	✓	✓	✓	✓								

Drinking Water (DW) Samples[1] (client use)

Are samples taken from a Regulated DW System? ☐ YES ☑ NO
Are samples for human consumption/ use? ☐ YES ☑ NO

Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only)

SAMPLE RECEIPT DETAILS (ALS use only)

Cooling Method: ☐ NONE ☑ ICE ☐ ICE PACKS ☐ FROZEN ☐ COOLING INITIATED
Submission Comments identified on Sample Receipt Notification: ☐ YES ☐ NO
Cooler Custody Seals Intact: ☐ YES ☐ N/A Sample Custody Seals Intact: ☐ YES ☐ N/A

INITIAL COOLER TEMPERATURES °C				FINAL COOLER TEMPERATURES °C			
				8.6			

SHIPMENT RELEASE (client use)

Released by:	Date:	Time:
	5-OCT-21	

INITIAL SHIPMENT RECEPTION (ALS use only)

Received by:	Date:	Time:

FINAL SHIPMENT RECEPTION (ALS use only)

Received by:	Date:	Time:
ML	Oct 5	17

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

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1. If any water samples are taken from a Regulated Drinking Water (DW) System, please submit using an Authorized DW COC form.

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GOLDER ASSOCIATES LTD (Whitby)
ATTN: Jill LaPorte
100 Scotia Court
Whitby ON L1N 8Y6

Date Received: 06-OCT-21
Report Date: 13-OCT-21 12:15 (MT)
Version: FINAL

Client Phone: 905-723-2727

Certificate of Analysis

Lab Work Order #: L2647892

Project P.O. #: NOT SUBMITTED
Job Reference: 1783886-8000-8006
C of C Numbers:
Legal Site Desc:

Amanda Overholster
Account Manager

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647892-1 TCAB-SC-001A Sampled By: CLIENT on 04-OCT-21 @ 11:20 Matrix: SEDIMENT							
Sample Preparation							
Initial pH	7.19		0.10	pH units		09-OCT-21	R5615005
Final pH	5.26		0.10	pH units		09-OCT-21	R5615005
TCLP Extractables							
Acenaphthene	<0.0050		0.0050	mg/L	12-OCT-21	13-OCT-21	R5616382
Acenaphthylene	<0.0050		0.0050	mg/L	12-OCT-21	13-OCT-21	R5616382
Anthracene	<0.0050		0.0050	mg/L	12-OCT-21	13-OCT-21	R5616382
Benzo(a)anthracene	<0.0050		0.0050	mg/L	12-OCT-21	13-OCT-21	R5616382
Benzo(a)pyrene	<0.0010		0.0010	mg/L	12-OCT-21	13-OCT-21	R5616382
Benzo(b&j)fluoranthene	<0.0050		0.0050	mg/L	12-OCT-21	13-OCT-21	R5616382
Benzo(g,h,i)perylene	<0.0050		0.0050	mg/L	12-OCT-21	13-OCT-21	R5616382
Benzo(k)fluoranthene	<0.0050		0.0050	mg/L	12-OCT-21	13-OCT-21	R5616382
Chrysene	<0.0050		0.0050	mg/L	12-OCT-21	13-OCT-21	R5616382
Dibenz(a,h)anthracene	<0.0050		0.0050	mg/L	12-OCT-21	13-OCT-21	R5616382
Fluoranthene	<0.0050		0.0050	mg/L	12-OCT-21	13-OCT-21	R5616382
Fluorene	<0.0050		0.0050	mg/L	12-OCT-21	13-OCT-21	R5616382
Indeno(1,2,3-cd)pyrene	<0.0050		0.0050	mg/L	12-OCT-21	13-OCT-21	R5616382
Naphthalene	<0.0050		0.0050	mg/L	12-OCT-21	13-OCT-21	R5616382
Phenanthrene	<0.0050		0.0050	mg/L	12-OCT-21	13-OCT-21	R5616382
Pyrene	<0.0050		0.0050	mg/L	12-OCT-21	13-OCT-21	R5616382
Surrogate: Chrysene d12	94.2		60-130	%	12-OCT-21	13-OCT-21	R5616382
Surrogate: Naphthalene d8	88.8		50-130	%	12-OCT-21	13-OCT-21	R5616382
Surrogate: Phenanthrene d10	92.5		60-130	%	12-OCT-21	13-OCT-21	R5616382
Quinoline	<0.0050		0.0050	mg/L	12-OCT-21	13-OCT-21	R5616382
TCLP Metals							
Arsenic (As)	<0.050		0.050	mg/L		12-OCT-21	R5616111
Barium (Ba)	0.85		0.50	mg/L		12-OCT-21	R5616111
Boron (B)	<2.5		2.5	mg/L		12-OCT-21	R5616111
Cadmium (Cd)	<0.0050		0.0050	mg/L		12-OCT-21	R5616111
Chromium (Cr)	<0.050		0.050	mg/L		12-OCT-21	R5616111
Lead (Pb)	0.070		0.025	mg/L		12-OCT-21	R5616111
Mercury (Hg)	<0.00010		0.00010	mg/L		12-OCT-21	R5615755
Selenium (Se)	<0.025		0.025	mg/L		12-OCT-21	R5616111
Silver (Ag)	<0.0050		0.0050	mg/L		12-OCT-21	R5616111
Uranium (U)	<0.25		0.25	mg/L		12-OCT-21	R5616111
L2647892-2 TCAB-SG-001 Sampled By: CLIENT on 04-OCT-21 @ 12:45 Matrix: SEDIMENT							
Sample Preparation							
Initial pH	8.16		0.10	pH units		09-OCT-21	R5615005
Final pH	5.34		0.10	pH units		09-OCT-21	R5615005
TCLP Extractables							
Acenaphthene	<0.0050		0.0050	mg/L	12-OCT-21	13-OCT-21	R5616382

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647892-2 TCAB-SG-001 Sampled By: CLIENT on 04-OCT-21 @ 12:45 Matrix: SEDIMENT							
TCLP Extractables							
Acenaphthylene	<0.0050		0.0050	mg/L	12-OCT-21	13-OCT-21	R5616382
Anthracene	<0.0050		0.0050	mg/L	12-OCT-21	13-OCT-21	R5616382
Benzo(a)anthracene	<0.0050		0.0050	mg/L	12-OCT-21	13-OCT-21	R5616382
Benzo(a)pyrene	<0.0010		0.0010	mg/L	12-OCT-21	13-OCT-21	R5616382
Benzo(b&j)fluoranthene	<0.0050		0.0050	mg/L	12-OCT-21	13-OCT-21	R5616382
Benzo(g,h,i)perylene	<0.0050		0.0050	mg/L	12-OCT-21	13-OCT-21	R5616382
Benzo(k)fluoranthene	<0.0050		0.0050	mg/L	12-OCT-21	13-OCT-21	R5616382
Chrysene	<0.0050		0.0050	mg/L	12-OCT-21	13-OCT-21	R5616382
Dibenz(a,h)anthracene	<0.0050		0.0050	mg/L	12-OCT-21	13-OCT-21	R5616382
Fluoranthene	<0.0050		0.0050	mg/L	12-OCT-21	13-OCT-21	R5616382
Fluorene	<0.0050		0.0050	mg/L	12-OCT-21	13-OCT-21	R5616382
Indeno(1,2,3-cd)pyrene	<0.0050		0.0050	mg/L	12-OCT-21	13-OCT-21	R5616382
Naphthalene	<0.0050		0.0050	mg/L	12-OCT-21	13-OCT-21	R5616382
Phenanthrene	<0.0050		0.0050	mg/L	12-OCT-21	13-OCT-21	R5616382
Pyrene	<0.0050		0.0050	mg/L	12-OCT-21	13-OCT-21	R5616382
Surrogate: Chrysene d12	90.0		60-130	%	12-OCT-21	13-OCT-21	R5616382
Surrogate: Naphthalene d8	85.5		50-130	%	12-OCT-21	13-OCT-21	R5616382
Surrogate: Phenanthrene d10	88.6		60-130	%	12-OCT-21	13-OCT-21	R5616382
Quinoline	<0.0050		0.0050	mg/L	12-OCT-21	13-OCT-21	R5616382
TCLP Metals							
Arsenic (As)	<0.050		0.050	mg/L		12-OCT-21	R5616111
Barium (Ba)	0.81		0.50	mg/L		12-OCT-21	R5616111
Boron (B)	<2.5		2.5	mg/L		12-OCT-21	R5616111
Cadmium (Cd)	<0.0050		0.0050	mg/L		12-OCT-21	R5616111
Chromium (Cr)	<0.050		0.050	mg/L		12-OCT-21	R5616111
Lead (Pb)	0.036		0.025	mg/L		12-OCT-21	R5616111
Mercury (Hg)	<0.00010		0.00010	mg/L		12-OCT-21	R5615755
Selenium (Se)	<0.025		0.025	mg/L		12-OCT-21	R5616111
Silver (Ag)	<0.0050		0.0050	mg/L		12-OCT-21	R5616111
Uranium (U)	<0.25		0.25	mg/L		12-OCT-21	R5616111
L2647892-3 TCAB-SC-012A Sampled By: CLIENT on 04-OCT-21 @ 15:50 Matrix: SEDIMENT							
Sample Preparation							
Initial pH	8.01		0.10	pH units		09-OCT-21	R5615005
Final pH	5.56		0.10	pH units		09-OCT-21	R5615005
TCLP Extractables							
Acenaphthene	<0.0050		0.0050	mg/L	12-OCT-21	13-OCT-21	R5616382
Acenaphthylene	<0.0050		0.0050	mg/L	12-OCT-21	13-OCT-21	R5616382
Anthracene	<0.0050		0.0050	mg/L	12-OCT-21	13-OCT-21	R5616382
Benzo(a)anthracene	<0.0050		0.0050	mg/L	12-OCT-21	13-OCT-21	R5616382
Benzo(a)pyrene	<0.0010		0.0010	mg/L	12-OCT-21	13-OCT-21	R5616382

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647892-3 TCAB-SC-012A Sampled By: CLIENT on 04-OCT-21 @ 15:50 Matrix: SEDIMENT							
TCLP Extractables							
Benzo(b&j)fluoranthene	<0.0050		0.0050	mg/L	12-OCT-21	13-OCT-21	R5616382
Benzo(g,h,i)perylene	<0.0050		0.0050	mg/L	12-OCT-21	13-OCT-21	R5616382
Benzo(k)fluoranthene	<0.0050		0.0050	mg/L	12-OCT-21	13-OCT-21	R5616382
Chrysene	<0.0050		0.0050	mg/L	12-OCT-21	13-OCT-21	R5616382
Dibenz(a,h)anthracene	<0.0050		0.0050	mg/L	12-OCT-21	13-OCT-21	R5616382
Fluoranthene	<0.0050		0.0050	mg/L	12-OCT-21	13-OCT-21	R5616382
Fluorene	<0.0050		0.0050	mg/L	12-OCT-21	13-OCT-21	R5616382
Indeno(1,2,3-cd)pyrene	<0.0050		0.0050	mg/L	12-OCT-21	13-OCT-21	R5616382
Naphthalene	<0.0050		0.0050	mg/L	12-OCT-21	13-OCT-21	R5616382
Phenanthrene	<0.0050		0.0050	mg/L	12-OCT-21	13-OCT-21	R5616382
Pyrene	<0.0050		0.0050	mg/L	12-OCT-21	13-OCT-21	R5616382
Surrogate: Chrysene d12	96.6		60-130	%	12-OCT-21	13-OCT-21	R5616382
Surrogate: Naphthalene d8	91.6		50-130	%	12-OCT-21	13-OCT-21	R5616382
Surrogate: Phenanthrene d10	94.3		60-130	%	12-OCT-21	13-OCT-21	R5616382
Quinoline	<0.0050		0.0050	mg/L	12-OCT-21	13-OCT-21	R5616382
TCLP Metals							
Arsenic (As)	<0.050		0.050	mg/L		12-OCT-21	R5616111
Barium (Ba)	0.86		0.50	mg/L		12-OCT-21	R5616111
Boron (B)	<2.5		2.5	mg/L		12-OCT-21	R5616111
Cadmium (Cd)	<0.0050		0.0050	mg/L		12-OCT-21	R5616111
Chromium (Cr)	<0.050		0.050	mg/L		12-OCT-21	R5616111
Lead (Pb)	0.026		0.025	mg/L		12-OCT-21	R5616111
Mercury (Hg)	<0.00010		0.00010	mg/L		12-OCT-21	R5615755
Selenium (Se)	<0.025		0.025	mg/L		12-OCT-21	R5616111
Silver (Ag)	<0.0050		0.0050	mg/L		12-OCT-21	R5616111
Uranium (U)	<0.25		0.25	mg/L		12-OCT-21	R5616111
L2647892-4 TCAB-SG-012 Sampled By: CLIENT on 04-OCT-21 @ 16:45 Matrix: SEDIMENT							
Sample Preparation							
Initial pH	8.17		0.10	pH units		09-OCT-21	R5615005
Final pH	5.57		0.10	pH units		09-OCT-21	R5615005
TCLP Extractables							
Acenaphthene	<0.0050		0.0050	mg/L	12-OCT-21	13-OCT-21	R5616382
Acenaphthylene	<0.0050		0.0050	mg/L	12-OCT-21	13-OCT-21	R5616382
Anthracene	<0.0050		0.0050	mg/L	12-OCT-21	13-OCT-21	R5616382
Benzo(a)anthracene	<0.0050		0.0050	mg/L	12-OCT-21	13-OCT-21	R5616382
Benzo(a)pyrene	<0.0010		0.0010	mg/L	12-OCT-21	13-OCT-21	R5616382
Benzo(b&j)fluoranthene	<0.0050		0.0050	mg/L	12-OCT-21	13-OCT-21	R5616382
Benzo(g,h,i)perylene	<0.0050		0.0050	mg/L	12-OCT-21	13-OCT-21	R5616382
Benzo(k)fluoranthene	<0.0050		0.0050	mg/L	12-OCT-21	13-OCT-21	R5616382
Chrysene	<0.0050		0.0050	mg/L	12-OCT-21	13-OCT-21	R5616382

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647892-4 TCAB-SG-012 Sampled By: CLIENT on 04-OCT-21 @ 16:45 Matrix: SEDIMENT							
TCLP Extractables							
Dibenz(a,h)anthracene	<0.0050		0.0050	mg/L	12-OCT-21	13-OCT-21	R5616382
Fluoranthene	<0.0050		0.0050	mg/L	12-OCT-21	13-OCT-21	R5616382
Fluorene	<0.0050		0.0050	mg/L	12-OCT-21	13-OCT-21	R5616382
Indeno(1,2,3-cd)pyrene	<0.0050		0.0050	mg/L	12-OCT-21	13-OCT-21	R5616382
Naphthalene	<0.0050		0.0050	mg/L	12-OCT-21	13-OCT-21	R5616382
Phenanthrene	<0.0050		0.0050	mg/L	12-OCT-21	13-OCT-21	R5616382
Pyrene	<0.0050		0.0050	mg/L	12-OCT-21	13-OCT-21	R5616382
Surrogate: Chrysene d12	96.2		60-130	%	12-OCT-21	13-OCT-21	R5616382
Surrogate: Naphthalene d8	90.8		50-130	%	12-OCT-21	13-OCT-21	R5616382
Surrogate: Phenanthrene d10	93.8		60-130	%	12-OCT-21	13-OCT-21	R5616382
Quinoline	<0.0050		0.0050	mg/L	12-OCT-21	13-OCT-21	R5616382
TCLP Metals							
Arsenic (As)	<0.050		0.050	mg/L		12-OCT-21	R5616111
Barium (Ba)	0.82		0.50	mg/L		12-OCT-21	R5616111
Boron (B)	<2.5		2.5	mg/L		12-OCT-21	R5616111
Cadmium (Cd)	<0.0050		0.0050	mg/L		12-OCT-21	R5616111
Chromium (Cr)	<0.050		0.050	mg/L		12-OCT-21	R5616111
Lead (Pb)	<0.025		0.025	mg/L		12-OCT-21	R5616111
Mercury (Hg)	<0.00010		0.00010	mg/L		12-OCT-21	R5615755
Selenium (Se)	<0.025		0.025	mg/L		12-OCT-21	R5616111
Silver (Ag)	<0.0050		0.0050	mg/L		12-OCT-21	R5616111
Uranium (U)	<0.25		0.25	mg/L		12-OCT-21	R5616111

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Reference Information

QC Samples with Qualifiers & Comments:

QC Type Description	Parameter	Qualifier	Applies to Sample Number(s)
Method Blank	Boron (B)	B	L2647892-1, -2, -3, -4

Sample Parameter Qualifier key listed:

Qualifier	Description
B	Method Blank exceeds ALS DQO. Associated sample results which are < Limit of Reporting or > 5 times blank level are considered reliable.

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
HG-TCLP-WT	Waste	Mercury (CVAA) for O.Reg 347	EPA 1631E

This analysis is carried out in accordance with the extraction procedure outlined in "Test Methods for Evaluating Solid Waste - Physical/Chemical Methods Volume 1C" SW-846 EPA Method 1311, published by the United States Environmental Protection Agency (EPA). In summary, the sample is extracted at a 20:1 liquid to solids ratio for 16 to 20 hours using either extraction fluid #1 (glacial acetic acid, water and sodium hydroxide) or extraction fluid #2 (glacial acetic acid), depending on the pH of the original sample. The extract is then filtered through a 0.6 to 0.8 micron glass fibre filter and analysed using atomic absorption spectrophotometry (EPA 1631E).

LEACH-TCLP-WT	Waste	Leachate Procedure for Reg 347	EPA 1311

Inorganic and Semi-Volatile Organic contaminants are leached from waste samples in strict accordance with US EPA Method 1311, "Toxicity Characteristic Leaching Procedure" (TCLP). Test results are reported in leachate concentration units (normally mg/L).

MET-TCLP-WT	Waste	O.Reg 347 TCLP Leachable Metals	EPA 6020B

This analysis is carried out in accordance with the extraction procedure outlined in "Test Methods for Evaluating Solid Waste - Physical/Chemical Methods Volume 1C" SW-846 EPA Method 1311, published by the United States Environmental Protection Agency (EPA). In summary, the sample is extracted at a 20:1 liquid to solids ratio for 16 to 20 hours using either extraction fluid #1 (glacial acetic acid, water and sodium hydroxide) or extraction fluid #2 (glacial acetic acid), depending on the pH of the original sample. The extract is then filtered through a 0.6 to 0.8 micron glass fibre filter. Instrumental analysis of the digested extract is by collision cell inductively coupled plasma - mass spectrometry (modifed from EPA Method 6020B).

PAH-TCLP-WT	Waste	PAH for O. Reg 347	SW846 8270 (PAH)

Samples are leached according to TCLP protocol and then the aqueous leachate is extracted and the resulting extracts are analyzed on GC/MSD. Depending on the analytical GC/MS column used benzo(j)fluoranthene may chromatographically co-elute with benzo(b)fluoranthene or benzo(k)fluoranthene.

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
WT	ALS ENVIRONMENTAL - WATERLOO, ONTARIO, CANADA

Chain of Custody Numbers:

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.
mg/kg - milligrams per kilogram based on dry weight of sample
mg/kg wwt - milligrams per kilogram based on wet weight of sample
mg/kg lwt - milligrams per kilogram based on lipid weight of sample
mg/L - unit of concentration based on volume, parts per million.
< - Less than.
D.L. - The reporting limit.
N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.
UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.
Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
HG-TCLP-WT	**Waste**							
Batch R5615755								
WG3635292-3 DUP		**L2647892-1**						
Mercury (Hg)		<0.00010	<0.00010	RPD-NA	mg/L	N/A	50	12-OCT-21
WG3635292-2 LCS								
Mercury (Hg)			101.0		%		70-130	12-OCT-21
WG3635292-1 MB								
Mercury (Hg)			<0.00010		mg/L		0.0001	12-OCT-21
WG3635292-4 MS		**L2647892-1**						
Mercury (Hg)			102.0		%		50-140	12-OCT-21
MET-TCLP-WT	**Waste**							
Batch R5616111								
WG3635516-4 DUP		**WG3635516-3**						
Silver (Ag)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	12-OCT-21
Arsenic (As)		<0.050	<0.050	RPD-NA	mg/L	N/A	50	12-OCT-21
Boron (B)		<2.5	<2.5	RPD-NA	mg/L	N/A	50	12-OCT-21
Barium (Ba)		0.85	0.85		mg/L	0.0	50	12-OCT-21
Cadmium (Cd)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	12-OCT-21
Chromium (Cr)		<0.050	<0.050	RPD-NA	mg/L	N/A	50	12-OCT-21
Lead (Pb)		0.070	0.069		mg/L	2.0	50	12-OCT-21
Selenium (Se)		<0.025	<0.025	RPD-NA	mg/L	N/A	50	12-OCT-21
Uranium (U)		<0.25	<0.25	RPD-NA	mg/L	N/A	50	12-OCT-21
WG3635516-2 LCS								
Silver (Ag)			110.1		%		70-130	12-OCT-21
Arsenic (As)			105.5		%		70-130	12-OCT-21
Boron (B)			99.7		%		70-130	12-OCT-21
Barium (Ba)			106.8		%		70-130	12-OCT-21
Cadmium (Cd)			106.2		%		70-130	12-OCT-21
Chromium (Cr)			103.9		%		70-130	12-OCT-21
Lead (Pb)			109.9		%		70-130	12-OCT-21
Selenium (Se)			103.4		%		70-130	12-OCT-21
Uranium (U)			112.9		%		70-130	12-OCT-21
WG3635516-1 MB								
Silver (Ag)			<0.0050		mg/L		0.005	12-OCT-21
Arsenic (As)			<0.050		mg/L		0.05	12-OCT-21
Boron (B)			3.5	B	mg/L		2.5	12-OCT-21
Barium (Ba)			<0.50		mg/L		0.5	12-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-TCLP-WT	**Waste**							
Batch R5616111								
WG3635516-1 MB								
Cadmium (Cd)			<0.0050		mg/L		0.005	12-OCT-21
Chromium (Cr)			<0.050		mg/L		0.05	12-OCT-21
Lead (Pb)			<0.025		mg/L		0.025	12-OCT-21
Selenium (Se)			<0.025		mg/L		0.025	12-OCT-21
Uranium (U)			<0.25		mg/L		0.25	12-OCT-21
WG3635516-5 MS		**WG3635516-3**						
Silver (Ag)			129.0		%		50-140	12-OCT-21
Arsenic (As)			105.8		%		50-140	12-OCT-21
Boron (B)			106.0		%		50-140	12-OCT-21
Barium (Ba)			103.0		%		50-140	12-OCT-21
Cadmium (Cd)			104.6		%		50-140	12-OCT-21
Chromium (Cr)			106.4		%		50-140	12-OCT-21
Lead (Pb)			106.2		%		50-140	12-OCT-21
Selenium (Se)			103.4		%		50-140	12-OCT-21
Uranium (U)			110.7		%		50-140	12-OCT-21
PAH-TCLP-WT	**Waste**							
Batch R5616382								
WG3635501-5 DUP		**WG3635501-3**						
Acenaphthene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	13-OCT-21
Acenaphthylene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	13-OCT-21
Anthracene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	13-OCT-21
Benzo(a)anthracene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	13-OCT-21
Benzo(a)pyrene		<0.0010	<0.0010	RPD-NA	mg/L	N/A	50	13-OCT-21
Benzo(b&j)fluoranthene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	13-OCT-21
Benzo(g,h,i)perylene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	13-OCT-21
Benzo(k)fluoranthene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	13-OCT-21
Chrysene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	13-OCT-21
Dibenz(a,h)anthracene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	13-OCT-21
Fluoranthene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	13-OCT-21
Fluorene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	13-OCT-21
Indeno(1,2,3-cd)pyrene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	13-OCT-21
Naphthalene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	13-OCT-21
Phenanthrene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	13-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-TCLP-WT	**Waste**							
Batch R5616382								
WG3635501-5 DUP		**WG3635501-3**						
Pyrene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	13-OCT-21
Quinoline		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	13-OCT-21
WG3635501-2 LCS								
Acenaphthene			89.6		%		50-130	13-OCT-21
Acenaphthylene			86.9		%		50-130	13-OCT-21
Anthracene			88.1		%		50-130	13-OCT-21
Benzo(a)anthracene			102.0		%		50-140	13-OCT-21
Benzo(a)pyrene			84.1		%		60-140	13-OCT-21
Benzo(b&j)fluoranthene			91.2		%		50-130	13-OCT-21
Benzo(g,h,i)perylene			96.8		%		50-140	13-OCT-21
Benzo(k)fluoranthene			94.0		%		50-150	13-OCT-21
Chrysene			101.0		%		50-140	13-OCT-21
Dibenz(a,h)anthracene			97.9		%		50-140	13-OCT-21
Fluoranthene			96.2		%		50-130	13-OCT-21
Fluorene			91.5		%		50-130	13-OCT-21
Indeno(1,2,3-cd)pyrene			97.4		%		50-140	13-OCT-21
Naphthalene			76.4		%		50-130	13-OCT-21
Phenanthrene			98.7		%		50-130	13-OCT-21
Pyrene			96.7		%		50-140	13-OCT-21
Quinoline			118.3		%		50-130	13-OCT-21
WG3635501-1 MB								
Acenaphthene			<0.0050		mg/L		0.005	13-OCT-21
Acenaphthylene			<0.0050		mg/L		0.005	13-OCT-21
Anthracene			<0.0050		mg/L		0.005	13-OCT-21
Benzo(a)anthracene			<0.0050		mg/L		0.005	13-OCT-21
Benzo(a)pyrene			<0.0010		mg/L		0.001	13-OCT-21
Benzo(b&j)fluoranthene			<0.0050		mg/L		0.005	13-OCT-21
Benzo(g,h,i)perylene			<0.0050		mg/L		0.005	13-OCT-21
Benzo(k)fluoranthene			<0.0050		mg/L		0.005	13-OCT-21
Chrysene			<0.0050		mg/L		0.005	13-OCT-21
Dibenz(a,h)anthracene			<0.0050		mg/L		0.005	13-OCT-21
Fluoranthene			<0.0050		mg/L		0.005	13-OCT-21
Fluorene			<0.0050		mg/L		0.005	13-OCT-21
Indeno(1,2,3-cd)pyrene			<0.0050		mg/L		0.005	13-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-TCLP-WT	**Waste**							
Batch R5616382								
WG3635501-1 MB								
Naphthalene			<0.0050		mg/L		0.005	13-OCT-21
Phenanthrene			<0.0050		mg/L		0.005	13-OCT-21
Pyrene			<0.0050		mg/L		0.005	13-OCT-21
Quinoline			<0.0050		mg/L		0.005	13-OCT-21
Surrogate: Naphthalene d8			89.0		%		50-130	13-OCT-21
Surrogate: Phenanthrene d10			93.6		%		60-130	13-OCT-21
Surrogate: Chrysene d12			94.7		%		60-130	13-OCT-21
WG3635501-6 MB								
Acenaphthene			<0.0050		mg/L		0.005	13-OCT-21
Acenaphthylene			<0.0050		mg/L		0.005	13-OCT-21
Anthracene			<0.0050		mg/L		0.005	13-OCT-21
Benzo(a)anthracene			<0.0050		mg/L		0.005	13-OCT-21
Benzo(a)pyrene			<0.0010		mg/L		0.001	13-OCT-21
Benzo(b&j)fluoranthene			<0.0050		mg/L		0.005	13-OCT-21
Benzo(g,h,i)perylene			<0.0050		mg/L		0.005	13-OCT-21
Benzo(k)fluoranthene			<0.0050		mg/L		0.005	13-OCT-21
Chrysene			<0.0050		mg/L		0.005	13-OCT-21
Dibenz(a,h)anthracene			<0.0050		mg/L		0.005	13-OCT-21
Fluoranthene			<0.0050		mg/L		0.005	13-OCT-21
Fluorene			<0.0050		mg/L		0.005	13-OCT-21
Indeno(1,2,3-cd)pyrene			<0.0050		mg/L		0.005	13-OCT-21
Naphthalene			<0.0050		mg/L		0.005	13-OCT-21
Phenanthrene			<0.0050		mg/L		0.005	13-OCT-21
Pyrene			<0.0050		mg/L		0.005	13-OCT-21
Quinoline			<0.0050		mg/L		0.005	13-OCT-21
Surrogate: Naphthalene d8			89.7		%		50-130	13-OCT-21
Surrogate: Phenanthrene d10			92.8		%		60-130	13-OCT-21
Surrogate: Chrysene d12			94.0		%		60-130	13-OCT-21
WG3635501-4 MS		**WG3635501-3**						
Acenaphthene			90.5		%		50-140	13-OCT-21
Acenaphthylene			87.2		%		50-140	13-OCT-21
Anthracene			88.1		%		50-150	13-OCT-21
Benzo(a)anthracene			102.4		%		50-140	13-OCT-21
Benzo(a)pyrene			84.9		%		50-140	13-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-TCLP-WT	**Waste**							
Batch R5616382								
WG3635501-4 MS		**WG3635501-3**						
Benzo(b&j)fluoranthene			90.7		%		50-150	13-OCT-21
Benzo(g,h,i)perylene			95.5		%		50-140	13-OCT-21
Benzo(k)fluoranthene			95.3		%		50-150	13-OCT-21
Chrysene			102.4		%		50-140	13-OCT-21
Dibenz(a,h)anthracene			93.1		%		50-140	13-OCT-21
Fluoranthene			97.1		%		50-140	13-OCT-21
Fluorene			91.8		%		50-140	13-OCT-21
Indeno(1,2,3-cd)pyrene			95.2		%		50-140	13-OCT-21
Naphthalene			76.4		%		50-140	13-OCT-21
Phenanthrene			98.3		%		50-150	13-OCT-21
Pyrene			97.3		%		50-150	13-OCT-21
Quinoline			116.5		%		50-150	13-OCT-21

Quality Control Report

Workorder: L2647892 Report Date: 13-OCT-21

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Legend:

Limit	ALS Control Limit (Data Quality Objectives)
DUP	Duplicate
RPD	Relative Percent Difference
N/A	Not Available
LCS	Laboratory Control Sample
SRM	Standard Reference Material
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ADE	Average Desorption Efficiency
MB	Method Blank
IRM	Internal Reference Material
CRM	Certified Reference Material
CCV	Continuing Calibration Verification
CVS	Calibration Verification Standard
LCSD	Laboratory Control Sample Duplicate

Sample Parameter Qualifier Definitions:

Qualifier	Description
B	Method Blank exceeds ALS DQO. Associated sample results which are < Limit of Reporting or > 5 times blank level are considered reliable.
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Hold Time Exceedances:

All test results reported with this submission were conducted within ALS recommended hold times.

ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.

www.alsglobal.com

L2647892-COFC

st Form

COC Number: 20 - 021

Page 1 of 1

Report To	Contact and company name below will appear on the final report
Company:	Golder Associates Ltd.
Contact:	Jill LaPorte
Phone:	905-723-2727
	Company address below will appear on the final report
Street:	100 Scotia Court
City/Province:	Whitby, Ontario
Postal Code:	L1N 8Y6
Invoice To	Same as Report To ☐ YES ☑ NO
	Copy of Invoice with Report ☑ YES ☐ NO
Company:	Golder Associates Ltd.
Contact:	Accounts Payable

Project Information

ALS Account # / Quote #:	15520 / Q86566
Job #:	1783886-8000-8006
PO / AFE:	
LSD:	

ALS Lab Work Order # (ALS use only): L2647892

Report Format: ☑ PDF ☑ EXCEL ☐ EDD (DIGITAL)

Merge QC/QCI Reports with COA ☑ YES ☐ NO ☐ N/A

☐ Compare Results to Criteria on Report - provide details below if box checked

Select Distribution: ☑ EMAIL ☐ MAIL ☐ FAX

Email 1 or Fax: Jill_LaPorte@golder.com

Email 2: shawn_sequin@golder.com

Email 3:

Invoice Recipients

Select Invoice Distribution: ☑ EMAIL ☐ MAIL ☐ FAX

Email 1 or Fax: Jill_LaPorte@golder.com

Email 2: canadaaccountspayableinvoices@golder.com

Oil and Gas Required Fields (client use)

AFE/Cost Center:	PO#
Major/Minor Code:	Routing Code:
Requisitioner:	
Location:	

ALS Contact: Amanda Overholster Sampler:

Turnaround Time (TAT) Requested

☑ Routine [R] if received by 3pm M-F - no surcharges apply

☐ 4 day [P4] if received by 3pm M-F - 25% rush surcharge minimum

☐ 3 day [P3] if received by 12pm M-F - 50% rush surcharge minimum

☐ 2 day [P2] if received by 12pm M-F - 100% rush surcharge minimum

☐ *1 day [E] if received by 12pm M-F - 200% rush surcharge minimum

*1 day only available for Inorganics, Metals, & VOC

• Same day [E2] unavailable for TCLP/SPLP

Date and Time Required for all E&P TATs: dd-mmm-yy hh:mm am/pm

For all tests with rush TATs requested, please contact your AM to confirm availability.

AFFIX ALS BARCODE LABEL HERE (ALS use only)

Analysis Request

ALS Sample # (ALS use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	NUMBER OF CONTAINERS	TCLP (EPA 1311) PAH (PAH-TCLP-WT)	TCLP (EPA 1311) Metals (MET-TCLP-P-WT)	TCLP (EPA 1311) LEACH (LEACH-TCLP-WT)	MISC	SAMPLES ON HOLD	EXTENDED STORAGE REQUIRED	SUSPECTED HAZARD (see notes)
	TCAB-SC-001A	04-OCT-21	1120	Sediment		✓	✓	✓				
	TCAB-SG-001	↓	1245	Sediment		✓	✓	✓				
	TCAB-SC-012A	↓	1550	Sediment		✓	✓	✓				
	TCAB-SG-012	04-OCT-21	1645	Sediment		✓	✓	✓				
				Sediment								
				Sediment								
				Sediment								
				Sediment								
				Sediment								
				Sediment								
				Sediment								
				Sediment								

Limited Sample Size Authorization

If the sample provided contains less than the minimum required weight, the samples may be leached at a lower volume and qualified as Limited Sample Size:

☐ YES ☐ NO

Minimum Sample Size: 1X250 mL - No Headspace

Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only)

Please provide 2X250 mL sample if both mSPLP and TCLP leaching procedures are requested or if Dioxins and Furans are required.

SAMPLE RECEIPT DETAILS (ALS use only)

Cooling Method: ☐ NONE ☑ ICE ☐ ICE PACKS ☐ FROZEN ☐ COOLING INITIATED

Submission Comments identified on Sample Receipt Notification: ☐ YES ☐ NO

Cooler Custody Seals Intact: ☐ YES ☐ N/A Sample Custody Seals Intact: ☐ YES ☐ N/A

INITIAL COOLER TEMPERATURES °C				FINAL COOLER TEMPERATURES °C			
				8.8			

SHIPMENT RELEASE (client use)

Released by: Date: 5-OCT-21 Time:

INITIAL SHIPMENT RECEPTION (ALS use only)

Received by: Date: Time:

FINAL SHIPMENT RECEPTION (ALS use only)

Received by: ML Date: Oct 6 Time: 17

Refer to the Locations Tab for ALS locations and Sampling Information

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions.

Reg. 406 mSPLP Metals scan includes: Sb,As,Ba,Be,B,Cd,Cr,Co,Cu,Pb,Mo,Ni,Se,Ag,Tl,U,V,Zn. Reg. 347/558 TCLP Metals+Inorganics includes: As,Ba,B,Cd,Cr,Pb,Se,Ag,U,Hg,Fluoride,CN (WAD),Nitrate+Nitrite as N

ALS 2020 FRONT

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GOLDER ASSOCIATES LTD (Whitby)
ATTN: Jill LaPorte
100 Scotia Court
Whitby ON L1N 8Y6

Date Received: 06-OCT-21
Report Date: 27-OCT-21 11:01 (MT)
Version: FINAL

Client Phone: 905-723-2727

Certificate of Analysis

Lab Work Order #: L2647897

Project P.O. #: NOT SUBMITTED
Job Reference: 1783886-8000-8006
C of C Numbers:
Legal Site Desc:

Amanda Overholster
Account Manager

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647897-1 TCAB-SG-005 Sampled By: CLIENT on 02-OCT-21 @ 09:30 Matrix: SEDIMENT							
Physical Tests							
% Moisture	82.6		0.25	%	07-OCT-21	08-OCT-21	R5614025
Particle Size							
General Texture Class	Fine				12-OCT-21	12-OCT-21	R5616952
MUST PSA % > 75um	12.4	PSAL	1.0	%	12-OCT-21	12-OCT-21	R5616952
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0753		0.0010	g/g	13-OCT-21	13-OCT-21	R5616841
Total Organic Carbon	7.53		0.10	%	13-OCT-21	13-OCT-21	R5616841
Metals							
Aluminum (Al)	22900	DLM	100	ug/g	11-OCT-21	12-OCT-21	R5616049
Antimony (Sb)	0.52	DLM	0.20	ug/g	11-OCT-21	12-OCT-21	R5616049
Arsenic (As)	6.19	DLM	0.20	ug/g	11-OCT-21	12-OCT-21	R5616049
Barium (Ba)	276	DLM	1.0	ug/g	11-OCT-21	12-OCT-21	R5616049
Beryllium (Be)	0.78	DLM	0.20	ug/g	11-OCT-21	12-OCT-21	R5616049
Bismuth (Bi)	<0.40	DLM	0.40	ug/g	11-OCT-21	12-OCT-21	R5616049
Boron (B)	13	DLM	10	ug/g	11-OCT-21	12-OCT-21	R5616049
Boron (B), Hot Water Ext.	1.17	FR4	0.10	ug/g	11-OCT-21	12-OCT-21	R5615797
Cadmium (Cd)	0.648	DLM	0.040	ug/g	11-OCT-21	12-OCT-21	R5616049
Calcium (Ca)	78300	DLM	100	ug/g	11-OCT-21	12-OCT-21	R5616049
Chromium (Cr)	170	DLM	1.0	ug/g	11-OCT-21	12-OCT-21	R5616049
Cobalt (Co)	12.6	DLM	0.20	ug/g	11-OCT-21	12-OCT-21	R5616049
Copper (Cu)	42.7	DLM	1.0	ug/g	11-OCT-21	12-OCT-21	R5616049
Iron (Fe)	30400	DLM	100	ug/g	11-OCT-21	12-OCT-21	R5616049
Lead (Pb)	75.8	DLM	1.0	ug/g	11-OCT-21	12-OCT-21	R5616049
Lithium (Li)	18.8	DLM	4.0	ug/g	11-OCT-21	12-OCT-21	R5616049
Magnesium (Mg)	11700	DLM	40	ug/g	11-OCT-21	12-OCT-21	R5616049
Manganese (Mn)	1400	DLM	2.0	ug/g	11-OCT-21	12-OCT-21	R5616049
Mercury (Hg)	0.169	DLM	0.010	ug/g	11-OCT-21	12-OCT-21	R5615540
Molybdenum (Mo)	0.83	DLM	0.20	ug/g	11-OCT-21	12-OCT-21	R5616049
Nickel (Ni)	29.9	DLM	1.0	ug/g	11-OCT-21	12-OCT-21	R5616049
Phosphorus (P)	1200	DLM	100	ug/g	11-OCT-21	12-OCT-21	R5616049
Potassium (K)	4590	DLM	200	ug/g	11-OCT-21	12-OCT-21	R5616049
Selenium (Se)	1.27	DLM	0.40	ug/g	11-OCT-21	12-OCT-21	R5616049
Silver (Ag)	0.36	DLM	0.20	ug/g	11-OCT-21	12-OCT-21	R5616049
Sodium (Na)	760	DLM	100	ug/g	11-OCT-21	12-OCT-21	R5616049
Strontium (Sr)	327	DLM	1.0	ug/g	11-OCT-21	12-OCT-21	R5616049
Sulfur (S)	7300	DLM	2000	ug/g	11-OCT-21	12-OCT-21	R5616049
Thallium (Tl)	0.33	DLM	0.10	ug/g	11-OCT-21	12-OCT-21	R5616049
Tin (Sn)	<4.0	DLM	4.0	ug/g	11-OCT-21	12-OCT-21	R5616049
Titanium (Ti)	1390	DLM	2.0	ug/g	11-OCT-21	12-OCT-21	R5616049
Tungsten (W)	<1.0	DLM	1.0	ug/g	11-OCT-21	12-OCT-21	R5616049
Uranium (U)	0.90	DLM	0.10	ug/g	11-OCT-21	12-OCT-21	R5616049
Vanadium (V)	49.0	DLM	0.40	ug/g	11-OCT-21	12-OCT-21	R5616049

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647897-1 TCAB-SG-005 Sampled By: CLIENT on 02-OCT-21 @ 09:30 Matrix: SEDIMENT							
Metals							
Zinc (Zn)	141	DLM	4.0	ug/g	11-OCT-21	12-OCT-21	R5616049
Zirconium (Zr)	4.7	DLM	2.0	ug/g	11-OCT-21	12-OCT-21	R5616049
Speciated Metals							
Chromium, Trivalent	169		10	ug/g		15-OCT-21	
Chromium, Hexavalent	1.23		0.20	ug/g	13-OCT-21	14-OCT-21	R5617419
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.125	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Acenaphthylene	0.526	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Acridine	<0.050	DLHM	0.050	ug/g	13-OCT-21	15-OCT-21	R5618524
Anthracene	0.687	DLHM	0.020	ug/g	13-OCT-21	15-OCT-21	R5618524
Benzo(a)anthracene	1.51	R	0.050	ug/g	13-OCT-21	15-OCT-21	R5618524
Benzo(a)pyrene	1.71	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Benzo(b&j)fluoranthene	1.44	DLHM	0.050	ug/g	13-OCT-21	15-OCT-21	R5618524
Benzo(g,h,i)perylene	0.998	DLHM	0.050	ug/g	13-OCT-21	15-OCT-21	R5618524
Benzo(k)fluoranthene	0.465	DLHM	0.050	ug/g	13-OCT-21	15-OCT-21	R5618524
Chrysene	1.43	DLHM	0.050	ug/g	13-OCT-21	15-OCT-21	R5618524
Dibenz(a,h)anthracene	0.230	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Fluoroanthene	1.53	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Fluorene	0.114	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Indeno(1,2,3-cd)pyrene	0.772	DLHM	0.050	ug/g	13-OCT-21	15-OCT-21	R5618524
1-Methylnaphthalene	0.064	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
2-Methylnaphthalene	0.082	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Naphthalene	0.105	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Phenanthrene	0.499	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Pyrene	2.29	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Quinoline	<0.025	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Surrogate: 2-Fluorobiphenyl	79.5		60-140	%	13-OCT-21	15-OCT-21	R5618524
Surrogate: d14-Terphenyl	84.6		60-140	%	13-OCT-21	15-OCT-21	R5618524
B(a)P Total Potency Equivalent	2.38		0.036	ug/g	13-OCT-21	15-OCT-21	R5618524
IACR (CCME)	23.2		0.50		13-OCT-21	15-OCT-21	R5618524
Polychlorinated Biphenyls							
Aroclor 1016	<0.120	RRR	0.12	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1221	<0.120	RRR	0.12	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1232	<0.120	RRR	0.12	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1242	<0.120	RRR	0.12	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1248	<0.120	RRR	0.12	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1254	0.081	DLR	0.023	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1260	0.094	DLR	0.023	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1262	<0.023	DLR	0.023	mg/kg	18-OCT-21	18-OCT-21	R5622261
Aroclor 1268	<0.023	DLR	0.023	mg/kg	18-OCT-21	18-OCT-21	R5622261
Total Polychlorinated Biphenyls	<0.270		0.27	mg/kg	18-OCT-21	18-OCT-21	R5622261
Surrogate: d14-Terphenyl	85.0		50-140	%	18-OCT-21	18-OCT-21	R5622261

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647897-1 TCAB-SG-005 Sampled By: CLIENT on 02-OCT-21 @ 09:30 Matrix: SEDIMENT							
Polychlorinated Biphenyls							
Report Remarks : RRR: Due to sample matrix interferences, PCB recoveries could not be determined in the matrix spike unless spiked with 5X the normal concentration and therefore the detection limit has been raised accordingly.							
L2647897-2 TCAB-SG-002 Sampled By: CLIENT on 02-OCT-21 @ 10:00 Matrix: SEDIMENT							
Physical Tests							
% Moisture	80.3		0.25	%	07-OCT-21	08-OCT-21	R5614025
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0748		0.0010	g/g	13-OCT-21	13-OCT-21	R5616841
Total Organic Carbon	7.48		0.10	%	13-OCT-21	13-OCT-21	R5616841
Metals							
Aluminum (Al)	21400		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Antimony (Sb)	0.56		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Arsenic (As)	6.99		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Barium (Ba)	278		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Beryllium (Be)	0.61		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Bismuth (Bi)	0.37		0.20	ug/g	12-OCT-21	12-OCT-21	R5616407
Boron (B)	8.7		5.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Cadmium (Cd)	0.646		0.020	ug/g	12-OCT-21	12-OCT-21	R5616407
Calcium (Ca)	65500		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Chromium (Cr)	207		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Cobalt (Co)	12.6		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Copper (Cu)	44.7		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Iron (Fe)	27900		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Lead (Pb)	75.1		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Lithium (Li)	11.7		2.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Magnesium (Mg)	11300		20	ug/g	12-OCT-21	12-OCT-21	R5616407
Manganese (Mn)	1130		1.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Mercury (Hg)	0.266	DLM	0.010	ug/g	12-OCT-21	13-OCT-21	R5616446
Molybdenum (Mo)	0.94		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Nickel (Ni)	27.7		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Phosphorus (P)	1120		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Potassium (K)	4100		100	ug/g	12-OCT-21	12-OCT-21	R5616407
Selenium (Se)	1.53		0.20	ug/g	12-OCT-21	12-OCT-21	R5616407
Silver (Ag)	0.39		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Sodium (Na)	674		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Strontium (Sr)	303		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Sulfur (S)	8400		1000	ug/g	12-OCT-21	12-OCT-21	R5616407
Thallium (Tl)	0.338		0.050	ug/g	12-OCT-21	12-OCT-21	R5616407
Tin (Sn)	4.1		2.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Titanium (Ti)	1280		1.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Tungsten (W)	<0.50		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647897-2 TCAB-SG-002 Sampled By: CLIENT on 02-OCT-21 @ 10:00 Matrix: SEDIMENT							
Metals							
Uranium (U)	0.846		0.050	ug/g	12-OCT-21	12-OCT-21	R5616407
Vanadium (V)	43.9		0.20	ug/g	12-OCT-21	12-OCT-21	R5616407
Zinc (Zn)	147		2.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Zirconium (Zr)	3.2		1.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.590	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Acenaphthylene	1.22	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Acridine	<0.100	DLM	0.10	ug/g	13-OCT-21	15-OCT-21	R5618524
Anthracene	1.04	DLHM	0.020	ug/g	13-OCT-21	15-OCT-21	R5618524
Benzo(a)anthracene	2.75	R	0.050	ug/g	13-OCT-21	15-OCT-21	R5618524
Benzo(a)pyrene	3.26	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Benzo(b&j)fluoranthene	2.75	DLHM	0.050	ug/g	13-OCT-21	15-OCT-21	R5618524
Benzo(g,h,i)perylene	1.95	DLHM	0.050	ug/g	13-OCT-21	15-OCT-21	R5618524
Benzo(k)fluoranthene	0.960	DLHM	0.050	ug/g	13-OCT-21	15-OCT-21	R5618524
Chrysene	2.48	DLHM	0.050	ug/g	13-OCT-21	15-OCT-21	R5618524
Dibenz(a,h)anthracene	0.470	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Fluoroanthene	2.69	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Fluorene	0.396	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Indeno(1,2,3-cd)pyrene	1.64	DLHM	0.050	ug/g	13-OCT-21	15-OCT-21	R5618524
1-Methylnaphthalene	0.200	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
2-Methylnaphthalene	0.260	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Naphthalene	0.358	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Phenanthrene	1.22	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Pyrene	3.81	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Quinoline	<0.025	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Surrogate: 2-Fluorobiphenyl	79.9		60-140	%	13-OCT-21	15-OCT-21	R5618524
Surrogate: d14-Terphenyl	84.6		60-140	%	13-OCT-21	15-OCT-21	R5618524
B(a)P Total Potency Equivalent	4.59		0.036	ug/g	13-OCT-21	15-OCT-21	R5618524
IACR (CCME)	44.4		0.50		13-OCT-21	15-OCT-21	R5618524
Polychlorinated Biphenyls							
Aroclor 1016	<0.014	DLHM	0.014	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1221	<0.014	DLHM	0.014	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1232	<0.014	DLHM	0.014	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1242	<0.014	DLHM	0.014	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1248	<0.014	DLHM	0.014	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1254	0.134	PRAR	0.014	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1260	<0.014	DLHM	0.014	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1262	<0.014	DLHM	0.014	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1268	<0.014	DLHM	0.014	mg/kg	15-OCT-21	15-OCT-21	R5620384
Total Polychlorinated Biphenyls	0.134		0.041	mg/kg	15-OCT-21	15-OCT-21	R5620384
Surrogate: d14-Terphenyl	79.2		50-140	%	15-OCT-21	15-OCT-21	R5620384

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647897-3 WM-SG-005 Sampled By: CLIENT on 02-OCT-21 @ 10:50 Matrix: SEDIMENT							
Physical Tests							
% Moisture	84.9		0.25	%	07-OCT-21	08-OCT-21	R5614025
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0858		0.0010	g/g	13-OCT-21	13-OCT-21	R5616841
Total Organic Carbon	8.58		0.10	%	13-OCT-21	13-OCT-21	R5616841
Metals							
Aluminum (Al)	19700		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Antimony (Sb)	3.19		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Arsenic (As)	54.9		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Barium (Ba)	289		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Beryllium (Be)	0.64		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Bismuth (Bi)	0.93		0.20	ug/g	12-OCT-21	12-OCT-21	R5616407
Boron (B)	11.4		5.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Cadmium (Cd)	1.21		0.020	ug/g	12-OCT-21	12-OCT-21	R5616407
Calcium (Ca)	58100		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Chromium (Cr)	669		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Cobalt (Co)	32.0		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Copper (Cu)	93.1		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Iron (Fe)	29900		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Lead (Pb)	210		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Lithium (Li)	11.6		2.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Magnesium (Mg)	15200		20	ug/g	12-OCT-21	12-OCT-21	R5616407
Manganese (Mn)	789		1.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Mercury (Hg)	1.48	DLM	0.010	ug/g	12-OCT-21	13-OCT-21	R5616446
Molybdenum (Mo)	1.21		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Nickel (Ni)	40.4		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Phosphorus (P)	1340		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Potassium (K)	4350		100	ug/g	12-OCT-21	12-OCT-21	R5616407
Selenium (Se)	1.20		0.20	ug/g	12-OCT-21	12-OCT-21	R5616407
Silver (Ag)	1.81		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Sodium (Na)	671		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Strontium (Sr)	316		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Sulfur (S)	7500		1000	ug/g	12-OCT-21	12-OCT-21	R5616407
Thallium (Tl)	0.332		0.050	ug/g	12-OCT-21	12-OCT-21	R5616407
Tin (Sn)	17.1		2.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Titanium (Ti)	1170		1.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Tungsten (W)	1.06		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Uranium (U)	0.812		0.050	ug/g	12-OCT-21	12-OCT-21	R5616407
Vanadium (V)	53.0		0.20	ug/g	12-OCT-21	12-OCT-21	R5616407
Zinc (Zn)	359		2.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Zirconium (Zr)	3.9		1.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.217	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647897-3 WM-SG-005 Sampled By: CLIENT on 02-OCT-21 @ 10:50 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
Acenaphthylene	0.342	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Acridine	0.099	AI	0.050	ug/g	13-OCT-21	15-OCT-21	R5618524
Anthracene	0.476	DLHM	0.020	ug/g	13-OCT-21	15-OCT-21	R5618524
Benzo(a)anthracene	2.17	DLHM	0.050	ug/g	13-OCT-21	15-OCT-21	R5618524
Benzo(a)pyrene	2.06	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Benzo(b&j)fluoranthene	2.86	DLHM	0.050	ug/g	13-OCT-21	15-OCT-21	R5618524
Benzo(g,h,i)perylene	1.39	DLHM	0.050	ug/g	13-OCT-21	15-OCT-21	R5618524
Benzo(k)fluoranthene	0.868	DLHM	0.050	ug/g	13-OCT-21	15-OCT-21	R5618524
Chrysene	2.25	DLHM	0.050	ug/g	13-OCT-21	15-OCT-21	R5618524
Dibenz(a,h)anthracene	0.381	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Fluoroanthene	4.33	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Fluorene	0.256	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Indeno(1,2,3-cd)pyrene	1.29	DLHM	0.050	ug/g	13-OCT-21	15-OCT-21	R5618524
1-Methylnaphthalene	0.076	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
2-Methylnaphthalene	0.084	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Naphthalene	0.133	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Phenanthrene	2.26	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Pyrene	3.82	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Quinoline	<0.025	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Surrogate: 2-Fluorobiphenyl	88.6		60-140	%	13-OCT-21	15-OCT-21	R5618524
Surrogate: d14-Terphenyl	90.4		60-140	%	13-OCT-21	15-OCT-21	R5618524
B(a)P Total Potency Equivalent	3.20		0.036	ug/g	13-OCT-21	15-OCT-21	R5618524
IACR (CCME)	38.9		0.50		13-OCT-21	15-OCT-21	R5618524
Polychlorinated Biphenyls							
Aroclor 1016	<0.023	DLHM	0.023	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1221	<0.023	DLHM	0.023	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1232	<0.023	DLHM	0.023	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1242	<0.023	DLHM	0.023	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1248	<0.023	DLHM	0.023	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1254	0.203	DLHM	0.023	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1260	0.223	DLHM	0.023	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1262	<0.023	DLHM	0.023	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1268	<0.023	DLHM	0.023	mg/kg	15-OCT-21	15-OCT-21	R5620384
Total Polychlorinated Biphenyls	0.426		0.068	mg/kg	15-OCT-21	15-OCT-21	R5620384
Surrogate: d14-Terphenyl	73.0		50-140	%	15-OCT-21	15-OCT-21	R5620384
L2647897-4 WM-SG-006 Sampled By: CLIENT on 02-OCT-21 @ 11:15 Matrix: SEDIMENT							
Physical Tests							
% Moisture	85.4		0.25	%	07-OCT-21	08-OCT-21	R5614025
Particle Size							
General Texture Class	Fine				12-OCT-21	12-OCT-21	R5616952

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647897-4 WM-SG-006 Sampled By: CLIENT on 02-OCT-21 @ 11:15 Matrix: SEDIMENT							
Particle Size							
MUST PSA % > 75um	2.5	PSAL	1.0	%	12-OCT-21	12-OCT-21	R5616952
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0759		0.0010	g/g	13-OCT-21	13-OCT-21	R5616841
Total Organic Carbon	7.59		0.10	%	13-OCT-21	13-OCT-21	R5616841
Metals							
Aluminum (Al)	22300		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Antimony (Sb)	1.32		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Arsenic (As)	17.4		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Barium (Ba)	340		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Beryllium (Be)	0.71		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Bismuth (Bi)	0.73		0.20	ug/g	12-OCT-21	12-OCT-21	R5616407
Boron (B)	11.3		5.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Cadmium (Cd)	0.902		0.020	ug/g	12-OCT-21	12-OCT-21	R5616407
Calcium (Ca)	85100		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Chromium (Cr)	748		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Cobalt (Co)	17.4		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Copper (Cu)	58.0		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Iron (Fe)	30900		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Lead (Pb)	133		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Lithium (Li)	13.8		2.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Magnesium (Mg)	16300		20	ug/g	12-OCT-21	12-OCT-21	R5616407
Manganese (Mn)	1070		1.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Mercury (Hg)	0.689	DLM	0.010	ug/g	12-OCT-21	13-OCT-21	R5616446
Molybdenum (Mo)	1.42		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Nickel (Ni)	32.0		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Phosphorus (P)	1350		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Potassium (K)	5420		100	ug/g	12-OCT-21	12-OCT-21	R5616407
Selenium (Se)	1.50		0.20	ug/g	12-OCT-21	12-OCT-21	R5616407
Silver (Ag)	1.00		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Sodium (Na)	739		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Strontium (Sr)	541		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Sulfur (S)	9400		1000	ug/g	12-OCT-21	12-OCT-21	R5616407
Thallium (Tl)	0.332		0.050	ug/g	12-OCT-21	12-OCT-21	R5616407
Tin (Sn)	7.9		2.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Titanium (Ti)	1320		1.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Tungsten (W)	0.67		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Uranium (U)	0.981		0.050	ug/g	12-OCT-21	12-OCT-21	R5616407
Vanadium (V)	54.3		0.20	ug/g	12-OCT-21	12-OCT-21	R5616407
Zinc (Zn)	234		2.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Zirconium (Zr)	3.7		1.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.047	DLHM	0.038	ug/g	13-OCT-21	15-OCT-21	R5618524

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647897-4 WM-SG-006 Sampled By: CLIENT on 02-OCT-21 @ 11:15 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
Acenaphthylene	0.199	DLHM	0.038	ug/g	13-OCT-21	15-OCT-21	R5618524
Acridine	<0.075	DLHM	0.075	ug/g	13-OCT-21	15-OCT-21	R5618524
Anthracene	0.107	DLHM	0.030	ug/g	13-OCT-21	15-OCT-21	R5618524
Benzo(a)anthracene	0.453	R	0.075	ug/g	13-OCT-21	15-OCT-21	R5618524
Benzo(a)pyrene	0.586	DLHM	0.038	ug/g	13-OCT-21	15-OCT-21	R5618524
Benzo(b&j)fluoranthene	0.781	DLHM	0.075	ug/g	13-OCT-21	15-OCT-21	R5618524
Benzo(g,h,i)perylene	0.491	DLHM	0.075	ug/g	13-OCT-21	15-OCT-21	R5618524
Benzo(k)fluoranthene	0.225	DLHM	0.075	ug/g	13-OCT-21	15-OCT-21	R5618524
Chrysene	0.505	DLHM	0.075	ug/g	13-OCT-21	15-OCT-21	R5618524
Dibenz(a,h)anthracene	0.108	DLHM	0.038	ug/g	13-OCT-21	15-OCT-21	R5618524
Fluoroanthene	0.733	DLHM	0.038	ug/g	13-OCT-21	15-OCT-21	R5618524
Fluorene	0.050	DLHM	0.038	ug/g	13-OCT-21	15-OCT-21	R5618524
Indeno(1,2,3-cd)pyrene	0.405	DLHM	0.075	ug/g	13-OCT-21	15-OCT-21	R5618524
1-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	13-OCT-21	15-OCT-21	R5618524
2-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	13-OCT-21	15-OCT-21	R5618524
Naphthalene	<0.038	DLHM	0.038	ug/g	13-OCT-21	15-OCT-21	R5618524
Phenanthrene	0.329	DLHM	0.038	ug/g	13-OCT-21	15-OCT-21	R5618524
Pyrene	0.751	DLHM	0.038	ug/g	13-OCT-21	15-OCT-21	R5618524
Quinoline	<0.038	DLHM	0.038	ug/g	13-OCT-21	15-OCT-21	R5618524
Surrogate: 2-Fluorobiphenyl	82.4		60-140	%	13-OCT-21	15-OCT-21	R5618524
Surrogate: d14-Terphenyl	86.7		60-140	%	13-OCT-21	15-OCT-21	R5618524
B(a)P Total Potency Equivalent	0.890		0.053	ug/g	13-OCT-21	15-OCT-21	R5618524
IACR (CCME)	10.2		0.75		13-OCT-21	15-OCT-21	R5618524
Polychlorinated Biphenyls							
Aroclor 1016	<0.023	DLHM	0.023	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1221	<0.023	DLHM	0.023	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1232	<0.023	DLHM	0.023	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1242	<0.023	DLHM	0.023	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1248	<0.023	DLHM	0.023	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1254	0.159	DLHM	0.023	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1260	0.221	DLHM	0.023	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1262	<0.023	DLHM	0.023	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1268	<0.023	DLHM	0.023	mg/kg	15-OCT-21	15-OCT-21	R5620384
Total Polychlorinated Biphenyls	0.380		0.068	mg/kg	15-OCT-21	15-OCT-21	R5620384
Surrogate: d14-Terphenyl	80.6		50-140	%	15-OCT-21	15-OCT-21	R5620384
L2647897-5 WM-SG-004 Sampled By: CLIENT on 02-OCT-21 @ 11:30 Matrix: SEDIMENT							
Physical Tests							
% Moisture	85.4		0.25	%	07-OCT-21	08-OCT-21	R5614025
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0857		0.0010	g/g	13-OCT-21	13-OCT-21	R5616841

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647897-5 WM-SG-004 Sampled By: CLIENT on 02-OCT-21 @ 11:30 Matrix: SEDIMENT							
Organic / Inorganic Carbon							
Total Organic Carbon	8.57		0.10	%	13-OCT-21	13-OCT-21	R5616841
Metals							
Aluminum (Al)	25100		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Antimony (Sb)	1.40		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Arsenic (As)	18.6		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Barium (Ba)	354		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Beryllium (Be)	0.77		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Bismuth (Bi)	0.76		0.20	ug/g	12-OCT-21	12-OCT-21	R5616407
Boron (B)	12.7		5.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Cadmium (Cd)	1.07		0.020	ug/g	12-OCT-21	12-OCT-21	R5616407
Calcium (Ca)	82300		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Chromium (Cr)	1000		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Cobalt (Co)	19.1		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Copper (Cu)	60.5		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Iron (Fe)	35200		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Lead (Pb)	152		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Lithium (Li)	15.0		2.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Magnesium (Mg)	17200		20	ug/g	12-OCT-21	12-OCT-21	R5616407
Manganese (Mn)	1160		1.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Mercury (Hg)	0.683	DLM	0.010	ug/g	12-OCT-21	13-OCT-21	R5616446
Molybdenum (Mo)	1.39		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Nickel (Ni)	34.8		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Phosphorus (P)	1430		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Potassium (K)	5770		100	ug/g	12-OCT-21	12-OCT-21	R5616407
Selenium (Se)	1.62		0.20	ug/g	12-OCT-21	12-OCT-21	R5616407
Silver (Ag)	1.02		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Sodium (Na)	838		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Strontium (Sr)	475		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Sulfur (S)	10800		1000	ug/g	12-OCT-21	12-OCT-21	R5616407
Thallium (Tl)	0.369		0.050	ug/g	12-OCT-21	12-OCT-21	R5616407
Tin (Sn)	8.0		2.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Titanium (Ti)	1500		1.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Tungsten (W)	0.69		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Uranium (U)	1.07		0.050	ug/g	12-OCT-21	12-OCT-21	R5616407
Vanadium (V)	60.7		0.20	ug/g	12-OCT-21	12-OCT-21	R5616407
Zinc (Zn)	241		2.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Zirconium (Zr)	4.1		1.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.043	DLHM	0.038	ug/g	13-OCT-21	15-OCT-21	R5618524
Acenaphthylene	0.232	DLHM	0.038	ug/g	13-OCT-21	15-OCT-21	R5618524
Acridine	<0.075	DLHM	0.075	ug/g	13-OCT-21	15-OCT-21	R5618524

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647897-5 WM-SG-004 Sampled By: CLIENT on 02-OCT-21 @ 11:30 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
Anthracene	0.102	DLHM	0.030	ug/g	13-OCT-21	15-OCT-21	R5618524
Benzo(a)anthracene	0.449	R	0.075	ug/g	13-OCT-21	15-OCT-21	R5618524
Benzo(a)pyrene	0.603	DLHM	0.038	ug/g	13-OCT-21	15-OCT-21	R5618524
Benzo(b&j)fluoranthene	0.756	DLHM	0.075	ug/g	13-OCT-21	15-OCT-21	R5618524
Benzo(g,h,i)perylene	0.480	DLHM	0.075	ug/g	13-OCT-21	15-OCT-21	R5618524
Benzo(k)fluoranthene	0.207	DLHM	0.075	ug/g	13-OCT-21	15-OCT-21	R5618524
Chrysene	0.475	DLHM	0.075	ug/g	13-OCT-21	15-OCT-21	R5618524
Dibenz(a,h)anthracene	0.105	DLHM	0.038	ug/g	13-OCT-21	15-OCT-21	R5618524
Fluoroanthene	0.648	DLHM	0.038	ug/g	13-OCT-21	15-OCT-21	R5618524
Fluorene	0.053	DLHM	0.038	ug/g	13-OCT-21	15-OCT-21	R5618524
Indeno(1,2,3-cd)pyrene	0.411	DLHM	0.075	ug/g	13-OCT-21	15-OCT-21	R5618524
1-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	13-OCT-21	15-OCT-21	R5618524
2-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	13-OCT-21	15-OCT-21	R5618524
Naphthalene	<0.038	DLHM	0.038	ug/g	13-OCT-21	15-OCT-21	R5618524
Phenanthrene	0.265	DLHM	0.038	ug/g	13-OCT-21	15-OCT-21	R5618524
Pyrene	0.742	DLHM	0.038	ug/g	13-OCT-21	15-OCT-21	R5618524
Quinoline	<0.038	DLHM	0.038	ug/g	13-OCT-21	15-OCT-21	R5618524
Surrogate: 2-Fluorobiphenyl	84.5		60-140	%	13-OCT-21	15-OCT-21	R5618524
Surrogate: d14-Terphenyl	89.2		60-140	%	13-OCT-21	15-OCT-21	R5618524
B(a)P Total Potency Equivalent	0.900		0.053	ug/g	13-OCT-21	15-OCT-21	R5618524
IACR (CCME)	9.92		0.75		13-OCT-21	15-OCT-21	R5618524
Polychlorinated Biphenyls							
Aroclor 1016	<0.023	DLHM	0.023	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1221	<0.023	DLHM	0.023	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1232	<0.023	DLHM	0.023	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1242	<0.023	DLHM	0.023	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1248	<0.023	DLHM	0.023	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1254	0.213	DLHM	0.023	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1260	0.304	DLHM	0.023	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1262	<0.023	DLHM	0.023	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1268	<0.023	DLHM	0.023	mg/kg	15-OCT-21	15-OCT-21	R5620384
Total Polychlorinated Biphenyls	0.517		0.068	mg/kg	15-OCT-21	15-OCT-21	R5620384
Surrogate: d14-Terphenyl	85.5		50-140	%	15-OCT-21	15-OCT-21	R5620384
L2647897-6 WM-SG-001 Sampled By: CLIENT on 02-OCT-21 @ 12:00 Matrix: SEDIMENT							
Physical Tests							
% Moisture	82.7		0.25	%	07-OCT-21	08-OCT-21	R5614025
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0679		0.0010	g/g	13-OCT-21	13-OCT-21	R5616841
Total Organic Carbon	6.79		0.10	%	13-OCT-21	13-OCT-21	R5616841
Metals							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647897-6 WM-SG-001 Sampled By: CLIENT on 02-OCT-21 @ 12:00 Matrix: SEDIMENT							
Metals							
Aluminum (Al)	15800		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Antimony (Sb)	2.85		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Arsenic (As)	45.4		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Barium (Ba)	254		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Beryllium (Be)	0.59		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Bismuth (Bi)	0.97		0.20	ug/g	12-OCT-21	12-OCT-21	R5616407
Boron (B)	13.0		5.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Cadmium (Cd)	1.01		0.020	ug/g	12-OCT-21	12-OCT-21	R5616407
Calcium (Ca)	97900		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Chromium (Cr)	305		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Cobalt (Co)	27.4		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Copper (Cu)	91.5		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Iron (Fe)	25100		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Lead (Pb)	166		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Lithium (Li)	11.1		2.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Magnesium (Mg)	18000		20	ug/g	12-OCT-21	12-OCT-21	R5616407
Manganese (Mn)	782		1.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Mercury (Hg)	1.30	DLM	0.010	ug/g	12-OCT-21	13-OCT-21	R5616446
Molybdenum (Mo)	1.23		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Nickel (Ni)	32.1		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Phosphorus (P)	1190		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Potassium (K)	3800		100	ug/g	12-OCT-21	12-OCT-21	R5616407
Selenium (Se)	0.93		0.20	ug/g	12-OCT-21	12-OCT-21	R5616407
Silver (Ag)	0.59		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Sodium (Na)	624		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Strontium (Sr)	362		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Sulfur (S)	6000		1000	ug/g	12-OCT-21	12-OCT-21	R5616407
Thallium (Tl)	0.277		0.050	ug/g	12-OCT-21	12-OCT-21	R5616407
Tin (Sn)	18.6		2.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Titanium (Ti)	958		1.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Tungsten (W)	2.21		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Uranium (U)	0.689		0.050	ug/g	12-OCT-21	12-OCT-21	R5616407
Vanadium (V)	46.4		0.20	ug/g	12-OCT-21	12-OCT-21	R5616407
Zinc (Zn)	361		2.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Zirconium (Zr)	2.7		1.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.273	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Acenaphthylene	0.240	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Acridine	0.161	DLHM	0.050	ug/g	13-OCT-21	15-OCT-21	R5618524
Anthracene	0.702	DLHM	0.020	ug/g	13-OCT-21	15-OCT-21	R5618524
Benzo(a)anthracene	2.76	DLHM	0.050	ug/g	13-OCT-21	15-OCT-21	R5618524

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647897-6 WM-SG-001 Sampled By: CLIENT on 02-OCT-21 @ 12:00 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
Benzo(a)pyrene	2.45	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Benzo(b&j)fluoranthene	3.42	DLHM	0.050	ug/g	13-OCT-21	15-OCT-21	R5618524
Benzo(g,h,i)perylene	1.65	DLHM	0.050	ug/g	13-OCT-21	15-OCT-21	R5618524
Benzo(k)fluoranthene	1.15	DLHM	0.050	ug/g	13-OCT-21	15-OCT-21	R5618524
Chrysene	2.80	DLHM	0.050	ug/g	13-OCT-21	15-OCT-21	R5618524
Dibenz(a,h)anthracene	0.444	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Fluoroanthene	5.81	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Fluorene	0.354	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Indeno(1,2,3-cd)pyrene	1.63	DLHM	0.050	ug/g	13-OCT-21	15-OCT-21	R5618524
1-Methylnaphthalene	0.087	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
2-Methylnaphthalene	0.098	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Naphthalene	0.164	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Phenanthrene	3.35	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Pyrene	4.99	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Quinoline	<0.025	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Surrogate: 2-Fluorobiphenyl	82.1		60-140	%	13-OCT-21	15-OCT-21	R5618524
Surrogate: d14-Terphenyl	85.1		60-140	%	13-OCT-21	15-OCT-21	R5618524
B(a)P Total Potency Equivalent	3.84		0.036	ug/g	13-OCT-21	15-OCT-21	R5618524
IACR (CCME)	47.6		0.50		13-OCT-21	15-OCT-21	R5618524
Polychlorinated Biphenyls							
Aroclor 1016	<0.045	DLHM	0.045	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1221	<0.045	DLHM	0.045	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1232	<0.045	DLHM	0.045	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1242	<0.045	DLHM	0.045	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1248	<0.045	DLHM	0.045	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1254	0.077	DLHM	0.045	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1260	0.055	DLHM	0.045	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1262	<0.045	DLHM	0.045	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1268	<0.045	DLHM	0.045	mg/kg	15-OCT-21	15-OCT-21	R5620384
Total Polychlorinated Biphenyls	<0.14		0.14	mg/kg	15-OCT-21	15-OCT-21	R5620384
Surrogate: d14-Terphenyl	47.3	RRR	50-140	%	15-OCT-21	15-OCT-21	R5620384
Report Remarks : RRR: Surrogate recovery is outside ALS DQO. Detection limits for affected compounds have been raised accordingly.							
L2647897-7 WM-SG-007 Sampled By: CLIENT on 02-OCT-21 @ 13:45 Matrix: SEDIMENT							
Physical Tests							
% Moisture	86.4		0.25	%	07-OCT-21	08-OCT-21	R5614025
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0827		0.0010	g/g	13-OCT-21	13-OCT-21	R5616841
Total Organic Carbon	8.27		0.10	%	13-OCT-21	13-OCT-21	R5616841
Metals							
Aluminum (Al)	21300		50	ug/g	12-OCT-21	12-OCT-21	R5616407

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647897-7 WM-SG-007 Sampled By: CLIENT on 02-OCT-21 @ 13:45 Matrix: SEDIMENT							
Metals							
Antimony (Sb)	1.24		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Arsenic (As)	12.8		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Barium (Ba)	329		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Beryllium (Be)	0.72		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Bismuth (Bi)	0.73		0.20	ug/g	12-OCT-21	12-OCT-21	R5616407
Boron (B)	11.0		5.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Cadmium (Cd)	0.877		0.020	ug/g	12-OCT-21	12-OCT-21	R5616407
Calcium (Ca)	75300		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Chromium (Cr)	771		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Cobalt (Co)	15.5		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Copper (Cu)	51.5		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Iron (Fe)	30200		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Lead (Pb)	132		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Lithium (Li)	14.1		2.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Magnesium (Mg)	15000		20	ug/g	12-OCT-21	12-OCT-21	R5616407
Manganese (Mn)	1030		1.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Mercury (Hg)	0.577	DLM	0.010	ug/g	12-OCT-21	13-OCT-21	R5616446
Molybdenum (Mo)	1.40		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Nickel (Ni)	30.5		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Phosphorus (P)	1270		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Potassium (K)	5010		100	ug/g	12-OCT-21	12-OCT-21	R5616407
Selenium (Se)	1.48		0.20	ug/g	12-OCT-21	12-OCT-21	R5616407
Silver (Ag)	0.95		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Sodium (Na)	725		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Strontium (Sr)	489		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Sulfur (S)	9400		1000	ug/g	12-OCT-21	12-OCT-21	R5616407
Thallium (Tl)	0.337		0.050	ug/g	12-OCT-21	12-OCT-21	R5616407
Tin (Sn)	7.3		2.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Titanium (Ti)	1300		1.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Tungsten (W)	0.56		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Uranium (U)	1.04		0.050	ug/g	12-OCT-21	12-OCT-21	R5616407
Vanadium (V)	52.5		0.20	ug/g	12-OCT-21	12-OCT-21	R5616407
Zinc (Zn)	204		2.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Zirconium (Zr)	4.3		1.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.038	DLHM	0.038	ug/g	13-OCT-21	15-OCT-21	R5618524
Acenaphthylene	0.195	DLHM	0.038	ug/g	13-OCT-21	15-OCT-21	R5618524
Acridine	<0.075	DLHM	0.075	ug/g	13-OCT-21	15-OCT-21	R5618524
Anthracene	0.091	DLHM	0.030	ug/g	13-OCT-21	15-OCT-21	R5618524
Benzo(a)anthracene	0.395	R	0.075	ug/g	13-OCT-21	15-OCT-21	R5618524
Benzo(a)pyrene	0.518	DLHM	0.038	ug/g	13-OCT-21	15-OCT-21	R5618524

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647897-7 WM-SG-007 Sampled By: CLIENT on 02-OCT-21 @ 13:45 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
Benzo(b&j)fluoranthene	0.648	DLHM	0.075	ug/g	13-OCT-21	15-OCT-21	R5618524
Benzo(g,h,i)perylene	0.413	DLHM	0.075	ug/g	13-OCT-21	15-OCT-21	R5618524
Benzo(k)fluoranthene	0.171	DLHM	0.075	ug/g	13-OCT-21	15-OCT-21	R5618524
Chrysene	0.409		0.075	ug/g	13-OCT-21	15-OCT-21	R5618524
Dibenz(a,h)anthracene	0.092	DLHM	0.038	ug/g	13-OCT-21	15-OCT-21	R5618524
Fluoroanthene	0.570	DLHM	0.038	ug/g	13-OCT-21	15-OCT-21	R5618524
Fluorene	0.046	DLHM	0.038	ug/g	13-OCT-21	15-OCT-21	R5618524
Indeno(1,2,3-cd)pyrene	0.340	DLHM	0.075	ug/g	13-OCT-21	15-OCT-21	R5618524
1-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	13-OCT-21	15-OCT-21	R5618524
2-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	13-OCT-21	15-OCT-21	R5618524
Naphthalene	<0.038	DLHM	0.038	ug/g	13-OCT-21	15-OCT-21	R5618524
Phenanthrene	0.237	DLHM	0.038	ug/g	13-OCT-21	15-OCT-21	R5618524
Pyrene	0.644	DLHM	0.038	ug/g	13-OCT-21	15-OCT-21	R5618524
Quinoline	<0.038	DLHM	0.038	ug/g	13-OCT-21	15-OCT-21	R5618524
Surrogate: 2-Fluorobiphenyl	82.1		60-140	%	13-OCT-21	15-OCT-21	R5618524
Surrogate: d14-Terphenyl	87.1		60-140	%	13-OCT-21	15-OCT-21	R5618524
B(a)P Total Potency Equivalent	0.774		0.053	ug/g	13-OCT-21	15-OCT-21	R5618524
IACR (CCME)	8.49		0.75		13-OCT-21	15-OCT-21	R5618524
Polychlorinated Biphenyls							
Aroclor 1016	<0.0060	DLHM	0.0060	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1221	<0.0060	DLHM	0.0060	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1232	<0.0060	DLHM	0.0060	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1242	<0.0060	DLHM	0.0060	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1248	<0.0060	DLHM	0.0060	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1254	0.105	DLHM	0.0060	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1260	0.0979	DLHM	0.0060	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1262	<0.0060	DLHM	0.0060	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1268	<0.0060	DLHM	0.0060	mg/kg	15-OCT-21	15-OCT-21	R5620384
Total Polychlorinated Biphenyls	0.203		0.018	mg/kg	15-OCT-21	15-OCT-21	R5620384
Surrogate: d14-Terphenyl	78.9		50-140	%	15-OCT-21	15-OCT-21	R5620384
L2647897-8 PPOM-SG-001 Sampled By: CLIENT on 02-OCT-21 @ 14:00 Matrix: SEDIMENT							
Physical Tests							
% Moisture	79.8		0.25	%	07-OCT-21	08-OCT-21	R5614025
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.110		0.0010	g/g	13-OCT-21	13-OCT-21	R5616841
Total Organic Carbon	11.0		0.10	%	13-OCT-21	13-OCT-21	R5616841
Metals							
Aluminum (Al)	12500		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Antimony (Sb)	2.48		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Arsenic (As)	6.65		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647897-8 PPOM-SG-001 Sampled By: CLIENT on 02-OCT-21 @ 14:00 Matrix: SEDIMENT							
Metals							
Barium (Ba)	266		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Beryllium (Be)	0.51		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Bismuth (Bi)	0.56		0.20	ug/g	12-OCT-21	12-OCT-21	R5616407
Boron (B)	12.8		5.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Cadmium (Cd)	1.41		0.020	ug/g	12-OCT-21	12-OCT-21	R5616407
Calcium (Ca)	129000		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Chromium (Cr)	4020	DLHC	10	ug/g	12-OCT-21	12-OCT-21	R5616407
Cobalt (Co)	11.7		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Copper (Cu)	82.0		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Iron (Fe)	25000		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Lead (Pb)	223		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Lithium (Li)	9.6		2.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Magnesium (Mg)	15700		20	ug/g	12-OCT-21	12-OCT-21	R5616407
Manganese (Mn)	525		1.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Mercury (Hg)	0.289	DLM	0.010	ug/g	12-OCT-21	13-OCT-21	R5616446
Molybdenum (Mo)	1.82		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Nickel (Ni)	25.1		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Phosphorus (P)	1430		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Potassium (K)	3140		100	ug/g	12-OCT-21	12-OCT-21	R5616407
Selenium (Se)	1.17		0.20	ug/g	12-OCT-21	12-OCT-21	R5616407
Silver (Ag)	0.52		0.10	ug/g	12-OCT-21	12-OCT-21	R5616407
Sodium (Na)	674		50	ug/g	12-OCT-21	12-OCT-21	R5616407
Strontium (Sr)	808		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Sulfur (S)	9100		1000	ug/g	12-OCT-21	12-OCT-21	R5616407
Thallium (Tl)	0.323		0.050	ug/g	12-OCT-21	12-OCT-21	R5616407
Tin (Sn)	7.3		2.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Titanium (Ti)	672		1.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Tungsten (W)	2.25		0.50	ug/g	12-OCT-21	12-OCT-21	R5616407
Uranium (U)	0.590		0.050	ug/g	12-OCT-21	12-OCT-21	R5616407
Vanadium (V)	41.4		0.20	ug/g	12-OCT-21	12-OCT-21	R5616407
Zinc (Zn)	345		2.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Zirconium (Zr)	3.2		1.0	ug/g	12-OCT-21	12-OCT-21	R5616407
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.140	DLHM	0.015	ug/g	13-OCT-21	15-OCT-21	R5618524
Acenaphthylene	0.536	DLHM	0.015	ug/g	13-OCT-21	15-OCT-21	R5618524
Acridine	<0.060	DLM	0.060	ug/g	13-OCT-21	15-OCT-21	R5618524
Anthracene	0.244	DLHM	0.012	ug/g	13-OCT-21	15-OCT-21	R5618524
Benzo(a)anthracene	1.18	R	0.030	ug/g	13-OCT-21	15-OCT-21	R5618524
Benzo(a)pyrene	1.61	DLHM	0.015	ug/g	13-OCT-21	15-OCT-21	R5618524
Benzo(b&j)fluoranthene	1.68	DLHM	0.030	ug/g	13-OCT-21	15-OCT-21	R5618524
Benzo(g,h,i)perylene	1.09	DLHM	0.030	ug/g	13-OCT-21	15-OCT-21	R5618524

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647897-8 PPOM-SG-001 Sampled By: CLIENT on 02-OCT-21 @ 14:00 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
Benzo(k)fluoranthene	0.577	DLHM	0.030	ug/g	13-OCT-21	15-OCT-21	R5618524
Chrysene	1.34	DLHM	0.030	ug/g	13-OCT-21	15-OCT-21	R5618524
Dibenz(a,h)anthracene	0.247	DLHM	0.015	ug/g	13-OCT-21	15-OCT-21	R5618524
Fluoroanthene	1.59	DLHM	0.015	ug/g	13-OCT-21	15-OCT-21	R5618524
Fluorene	0.133	DLHM	0.015	ug/g	13-OCT-21	15-OCT-21	R5618524
Indeno(1,2,3-cd)pyrene	0.965	DLHM	0.030	ug/g	13-OCT-21	15-OCT-21	R5618524
1-Methylnaphthalene	0.046	DLHM	0.015	ug/g	13-OCT-21	15-OCT-21	R5618524
2-Methylnaphthalene	0.051	DLHM	0.015	ug/g	13-OCT-21	15-OCT-21	R5618524
Naphthalene	0.063	DLHM	0.015	ug/g	13-OCT-21	15-OCT-21	R5618524
Phenanthrene	0.563	DLHM	0.015	ug/g	13-OCT-21	15-OCT-21	R5618524
Pyrene	2.21	DLHM	0.015	ug/g	13-OCT-21	15-OCT-21	R5618524
Quinoline	<0.015	DLHM	0.015	ug/g	13-OCT-21	15-OCT-21	R5618524
Surrogate: 2-Fluorobiphenyl	82.3		60-140	%	13-OCT-21	15-OCT-21	R5618524
Surrogate: d14-Terphenyl	86.9		60-140	%	13-OCT-21	15-OCT-21	R5618524
B(a)P Total Potency Equivalent	2.33		0.021	ug/g	13-OCT-21	15-OCT-21	R5618524
IACR (CCME)	24.3		0.30		13-OCT-21	15-OCT-21	R5618524
Polychlorinated Biphenyls							
Aroclor 1016	<0.015	DLHM	0.015	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1221	<0.015	DLHM	0.015	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1232	<0.015	DLHM	0.015	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1242	<0.015	DLHM	0.015	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1248	<0.015	DLHM	0.015	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1254	0.165	DLHM	0.015	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1260	0.280	DLHM	0.015	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1262	<0.015	DLHM	0.015	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1268	<0.015	DLHM	0.015	mg/kg	15-OCT-21	15-OCT-21	R5620384
Total Polychlorinated Biphenyls	0.445		0.045	mg/kg	15-OCT-21	15-OCT-21	R5620384
Surrogate: d14-Terphenyl	73.4		50-140	%	15-OCT-21	15-OCT-21	R5620384
L2647897-9 PPOM-SG-003 Sampled By: CLIENT on 02-OCT-21 @ 14:30 Matrix: SEDIMENT							
Physical Tests							
% Moisture	83.1		0.25	%	07-OCT-21	08-OCT-21	R5614025
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0831		0.0010	g/g	13-OCT-21	13-OCT-21	R5616841
Total Organic Carbon	8.31		0.10	%	13-OCT-21	13-OCT-21	R5616841
Metals							
Aluminum (Al)	13500	DLM	100	ug/g	12-OCT-21	13-OCT-21	R5616646
Antimony (Sb)	3.42	DLM	0.20	ug/g	12-OCT-21	13-OCT-21	R5616646
Arsenic (As)	7.07	DLM	0.20	ug/g	12-OCT-21	13-OCT-21	R5616646
Barium (Ba)	331	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Beryllium (Be)	0.58	DLM	0.20	ug/g	12-OCT-21	13-OCT-21	R5616646

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647897-9 PPOM-SG-003 Sampled By: CLIENT on 02-OCT-21 @ 14:30 Matrix: SEDIMENT							
Metals							
Bismuth (Bi)	0.65	DLM	0.40	ug/g	12-OCT-21	13-OCT-21	R5616646
Boron (B)	16	DLM	10	ug/g	12-OCT-21	13-OCT-21	R5616646
Cadmium (Cd)	1.32	DLM	0.040	ug/g	12-OCT-21	13-OCT-21	R5616646
Calcium (Ca)	169000	DLM	100	ug/g	12-OCT-21	13-OCT-21	R5616646
Chromium (Cr)	3890	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Cobalt (Co)	11.6	DLM	0.20	ug/g	12-OCT-21	13-OCT-21	R5616646
Copper (Cu)	69.7	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Iron (Fe)	24800	DLM	100	ug/g	12-OCT-21	13-OCT-21	R5616646
Lead (Pb)	263	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Lithium (Li)	15.2	DLM	4.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Magnesium (Mg)	15300	DLM	40	ug/g	12-OCT-21	13-OCT-21	R5616646
Manganese (Mn)	803	DLM	2.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Mercury (Hg)	0.295	DLM	0.010	ug/g	12-OCT-21	13-OCT-21	R5616461
Molybdenum (Mo)	1.94	DLM	0.20	ug/g	12-OCT-21	13-OCT-21	R5616646
Nickel (Ni)	23.4	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Phosphorus (P)	1810	DLM	100	ug/g	12-OCT-21	13-OCT-21	R5616646
Potassium (K)	3160	DLM	200	ug/g	12-OCT-21	13-OCT-21	R5616646
Selenium (Se)	1.15	DLM	0.40	ug/g	12-OCT-21	13-OCT-21	R5616646
Silver (Ag)	0.58	DLM	0.20	ug/g	12-OCT-21	13-OCT-21	R5616646
Sodium (Na)	610	DLM	100	ug/g	12-OCT-21	13-OCT-21	R5616646
Strontium (Sr)	917	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Sulfur (S)	7400	DLM	2000	ug/g	12-OCT-21	13-OCT-21	R5616646
Thallium (Tl)	0.29	DLM	0.10	ug/g	12-OCT-21	13-OCT-21	R5616646
Tin (Sn)	8.2	DLM	4.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Titanium (Ti)	711	DLM	2.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Tungsten (W)	2.7	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Uranium (U)	0.64	DLM	0.10	ug/g	12-OCT-21	13-OCT-21	R5616646
Vanadium (V)	42.7	DLM	0.40	ug/g	12-OCT-21	13-OCT-21	R5616646
Zinc (Zn)	305	DLM	4.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Zirconium (Zr)	2.3	DLM	2.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.168	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Acenaphthylene	0.746	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Acridine	<0.070	DLM	0.070	ug/g	13-OCT-21	15-OCT-21	R5618524
Anthracene	0.286	DLHM	0.020	ug/g	13-OCT-21	15-OCT-21	R5618524
Benzo(a)anthracene	1.15	R	0.050	ug/g	13-OCT-21	15-OCT-21	R5618524
Benzo(a)pyrene	1.63	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Benzo(b&j)fluoranthene	1.73	DLHM	0.050	ug/g	13-OCT-21	15-OCT-21	R5618524
Benzo(g,h,i)perylene	1.19	DLHM	0.050	ug/g	13-OCT-21	15-OCT-21	R5618524
Benzo(k)fluoranthene	0.607	DLHM	0.050	ug/g	13-OCT-21	15-OCT-21	R5618524
Chrysene	1.27	DLHM	0.050	ug/g	13-OCT-21	15-OCT-21	R5618524

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647897-9 PPOM-SG-003 Sampled By: CLIENT on 02-OCT-21 @ 14:30 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
Dibenz(a,h)anthracene	0.253	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Fluoroanthene	1.64	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Fluorene	0.174	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Indeno(1,2,3-cd)pyrene	0.980	DLHM	0.050	ug/g	13-OCT-21	15-OCT-21	R5618524
1-Methylnaphthalene	0.060	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
2-Methylnaphthalene	0.061	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Naphthalene	0.076	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Phenanthrene	0.832	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Pyrene	2.15	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Quinoline	<0.025	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Surrogate: 2-Fluorobiphenyl	82.5		60-140	%	13-OCT-21	15-OCT-21	R5618524
Surrogate: d14-Terphenyl	87.4		60-140	%	13-OCT-21	15-OCT-21	R5618524
B(a)P Total Potency Equivalent	2.35		0.036	ug/g	13-OCT-21	15-OCT-21	R5618524
IACR (CCME)	24.7		0.50		13-OCT-21	15-OCT-21	R5618524
Polychlorinated Biphenyls							
Aroclor 1016	<0.0090	DLHM	0.0090	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1221	<0.0090	DLHM	0.0090	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1232	<0.0090	DLHM	0.0090	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1242	<0.0090	DLHM	0.0090	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1248	<0.0090	DLHM	0.0090	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1254	0.0549	DLHM	0.0090	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1260	0.0687	DLHM	0.0090	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1262	<0.0090	DLHM	0.0090	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1268	<0.0090	DLHM	0.0090	mg/kg	15-OCT-21	15-OCT-21	R5620384
Total Polychlorinated Biphenyls	0.124		0.027	mg/kg	15-OCT-21	15-OCT-21	R5620384
Surrogate: d14-Terphenyl	40.4	RRR	50-140	%	15-OCT-21	15-OCT-21	R5620384
Report Remarks : RRR: Surrogate recovery is outside ALS DQO. Detection limits for affected compounds have been raised accordingly.							
L2647897-10 PPOM-SG-005 Sampled By: CLIENT on 02-OCT-21 @ 14:40 Matrix: SEDIMENT							
Physical Tests							
% Moisture	87.3		0.25	%	07-OCT-21	08-OCT-21	R5614025
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0886		0.0010	g/g	13-OCT-21	13-OCT-21	R5616839
Total Organic Carbon	8.86		0.10	%	13-OCT-21	13-OCT-21	R5616839
Metals							
Aluminum (Al)	12300	DLM	100	ug/g	12-OCT-21	13-OCT-21	R5616646
Antimony (Sb)	1.35	DLM	0.20	ug/g	12-OCT-21	13-OCT-21	R5616646
Arsenic (As)	5.29	DLM	0.20	ug/g	12-OCT-21	13-OCT-21	R5616646
Barium (Ba)	230	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Beryllium (Be)	0.46	DLM	0.20	ug/g	12-OCT-21	13-OCT-21	R5616646
Bismuth (Bi)	<0.40	DLM	0.40	ug/g	12-OCT-21	13-OCT-21	R5616646

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647897-10 PPOM-SG-005 Sampled By: CLIENT on 02-OCT-21 @ 14:40 Matrix: SEDIMENT							
Metals							
Boron (B)	13	DLM	10	ug/g	12-OCT-21	13-OCT-21	R5616646
Cadmium (Cd)	0.629	DLM	0.040	ug/g	12-OCT-21	13-OCT-21	R5616646
Calcium (Ca)	122000	DLM	100	ug/g	12-OCT-21	13-OCT-21	R5616646
Chromium (Cr)	737	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Cobalt (Co)	9.88	DLM	0.20	ug/g	12-OCT-21	13-OCT-21	R5616646
Copper (Cu)	46.6	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Iron (Fe)	22500	DLM	100	ug/g	12-OCT-21	13-OCT-21	R5616646
Lead (Pb)	95.7	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Lithium (Li)	10.9	DLM	4.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Magnesium (Mg)	12500	DLM	40	ug/g	12-OCT-21	13-OCT-21	R5616646
Manganese (Mn)	632	DLM	2.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Mercury (Hg)	0.196	DLM	0.010	ug/g	12-OCT-21	13-OCT-21	R5616461
Molybdenum (Mo)	1.30	DLM	0.20	ug/g	12-OCT-21	13-OCT-21	R5616646
Nickel (Ni)	20.3	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Phosphorus (P)	1140	DLM	100	ug/g	12-OCT-21	13-OCT-21	R5616646
Potassium (K)	2940	DLM	200	ug/g	12-OCT-21	13-OCT-21	R5616646
Selenium (Se)	0.95	DLM	0.40	ug/g	12-OCT-21	13-OCT-21	R5616646
Silver (Ag)	0.32	DLM	0.20	ug/g	12-OCT-21	13-OCT-21	R5616646
Sodium (Na)	560	DLM	100	ug/g	12-OCT-21	13-OCT-21	R5616646
Strontium (Sr)	728	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Sulfur (S)	6900	DLM	2000	ug/g	12-OCT-21	13-OCT-21	R5616646
Thallium (Tl)	0.22	DLM	0.10	ug/g	12-OCT-21	13-OCT-21	R5616646
Tin (Sn)	<4.0	DLM	4.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Titanium (Ti)	611	DLM	2.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Tungsten (W)	1.9	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Uranium (U)	0.59	DLM	0.10	ug/g	12-OCT-21	13-OCT-21	R5616646
Vanadium (V)	38.3	DLM	0.40	ug/g	12-OCT-21	13-OCT-21	R5616646
Zinc (Zn)	193	DLM	4.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Zirconium (Zr)	2.5	DLM	2.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.072	DLHM	0.038	ug/g	13-OCT-21	15-OCT-21	R5618524
Acenaphthylene	0.171	DLHM	0.038	ug/g	13-OCT-21	15-OCT-21	R5618524
Acridine	<0.075	DLHM	0.075	ug/g	13-OCT-21	15-OCT-21	R5618524
Anthracene	0.099	DLHM	0.030	ug/g	13-OCT-21	15-OCT-21	R5618524
Benzo(a)anthracene	0.461	R	0.075	ug/g	13-OCT-21	15-OCT-21	R5618524
Benzo(a)pyrene	0.624	DLHM	0.038	ug/g	13-OCT-21	15-OCT-21	R5618524
Benzo(b&j)fluoranthene	0.919	DLHM	0.075	ug/g	13-OCT-21	15-OCT-21	R5618524
Benzo(g,h,i)perylene	0.583	DLHM	0.075	ug/g	13-OCT-21	15-OCT-21	R5618524
Benzo(k)fluoranthene	0.314	DLHM	0.075	ug/g	13-OCT-21	15-OCT-21	R5618524
Chrysene	0.659	DLHM	0.075	ug/g	13-OCT-21	15-OCT-21	R5618524
Dibenz(a,h)anthracene	0.122	DLHM	0.038	ug/g	13-OCT-21	15-OCT-21	R5618524

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647897-10 PPOM-SG-005 Sampled By: CLIENT on 02-OCT-21 @ 14:40 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
Fluoroanthene	0.829	DLHM	0.038	ug/g	13-OCT-21	15-OCT-21	R5618524
Fluorene	0.068	DLHM	0.038	ug/g	13-OCT-21	15-OCT-21	R5618524
Indeno(1,2,3-cd)pyrene	0.484	DLHM	0.075	ug/g	13-OCT-21	15-OCT-21	R5618524
1-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	13-OCT-21	15-OCT-21	R5618524
2-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	13-OCT-21	15-OCT-21	R5618524
Naphthalene	<0.038	DLHM	0.038	ug/g	13-OCT-21	15-OCT-21	R5618524
Phenanthrene	0.333	DLHM	0.038	ug/g	13-OCT-21	15-OCT-21	R5618524
Pyrene	0.996	DLHM	0.038	ug/g	13-OCT-21	15-OCT-21	R5618524
Quinoline	<0.038	DLHM	0.038	ug/g	13-OCT-21	15-OCT-21	R5618524
Surrogate: 2-Fluorobiphenyl	82.7		60-140	%	13-OCT-21	15-OCT-21	R5618524
Surrogate: d14-Terphenyl	86.2		60-140	%	13-OCT-21	15-OCT-21	R5618524
B(a)P Total Potency Equivalent	0.976		0.053	ug/g	13-OCT-21	15-OCT-21	R5618524
IACR (CCME)	11.9		0.75		13-OCT-21	15-OCT-21	R5618524
Polychlorinated Biphenyls							
Aroclor 1016	<0.0060	DLHM	0.0060	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1221	<0.0060	DLHM	0.0060	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1232	<0.0060	DLHM	0.0060	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1242	<0.0060	DLHM	0.0060	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1248	<0.0060	DLHM	0.0060	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1254	0.0633	DLHM	0.0060	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1260	0.0780	DLHM	0.0060	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1262	<0.0060	DLHM	0.0060	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1268	<0.0060	DLHM	0.0060	mg/kg	15-OCT-21	15-OCT-21	R5620384
Total Polychlorinated Biphenyls	0.141		0.018	mg/kg	15-OCT-21	15-OCT-21	R5620384
Surrogate: d14-Terphenyl	57.8		50-140	%	15-OCT-21	15-OCT-21	R5620384
L2647897-11 PPOM-SG-006 Sampled By: CLIENT on 02-OCT-21 @ 15:00 Matrix: SEDIMENT							
Physical Tests							
% Moisture	83.2		0.25	%	07-OCT-21	08-OCT-21	R5614025
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.113		0.0010	g/g	13-OCT-21	13-OCT-21	R5616839
Total Organic Carbon	11.3		0.10	%	13-OCT-21	13-OCT-21	R5616839
Metals							
Aluminum (Al)	12200	DLM	100	ug/g	12-OCT-21	13-OCT-21	R5616646
Antimony (Sb)	1.65	DLM	0.20	ug/g	12-OCT-21	13-OCT-21	R5616646
Arsenic (As)	7.84	DLM	0.20	ug/g	12-OCT-21	13-OCT-21	R5616646
Barium (Ba)	235	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Beryllium (Be)	0.53	DLM	0.20	ug/g	12-OCT-21	13-OCT-21	R5616646
Bismuth (Bi)	0.51	DLM	0.40	ug/g	12-OCT-21	13-OCT-21	R5616646
Boron (B)	14	DLM	10	ug/g	12-OCT-21	13-OCT-21	R5616646
Cadmium (Cd)	0.899	DLM	0.040	ug/g	12-OCT-21	13-OCT-21	R5616646

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647897-11 PPOM-SG-006 Sampled By: CLIENT on 02-OCT-21 @ 15:00 Matrix: SEDIMENT							
Metals							
Calcium (Ca)	113000	DLM	100	ug/g	12-OCT-21	13-OCT-21	R5616646
Chromium (Cr)	1710	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Cobalt (Co)	12.2	DLM	0.20	ug/g	12-OCT-21	13-OCT-21	R5616646
Copper (Cu)	53.8	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Iron (Fe)	23300	DLM	100	ug/g	12-OCT-21	13-OCT-21	R5616646
Lead (Pb)	158	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Lithium (Li)	11.5	DLM	4.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Magnesium (Mg)	12500	DLM	40	ug/g	12-OCT-21	13-OCT-21	R5616646
Manganese (Mn)	526	DLM	2.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Mercury (Hg)	0.393	DLM	0.010	ug/g	12-OCT-21	13-OCT-21	R5616461
Molybdenum (Mo)	1.18	DLM	0.20	ug/g	12-OCT-21	13-OCT-21	R5616646
Nickel (Ni)	22.0	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Phosphorus (P)	1240	DLM	100	ug/g	12-OCT-21	13-OCT-21	R5616646
Potassium (K)	2900	DLM	200	ug/g	12-OCT-21	13-OCT-21	R5616646
Selenium (Se)	1.19	DLM	0.40	ug/g	12-OCT-21	13-OCT-21	R5616646
Silver (Ag)	0.37	DLM	0.20	ug/g	12-OCT-21	13-OCT-21	R5616646
Sodium (Na)	600	DLM	100	ug/g	12-OCT-21	13-OCT-21	R5616646
Strontium (Sr)	756	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Sulfur (S)	9800	DLM	2000	ug/g	12-OCT-21	13-OCT-21	R5616646
Thallium (Tl)	0.26	DLM	0.10	ug/g	12-OCT-21	13-OCT-21	R5616646
Tin (Sn)	5.9	DLM	4.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Titanium (Ti)	729	DLM	2.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Tungsten (W)	1.2	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Uranium (U)	0.61	DLM	0.10	ug/g	12-OCT-21	13-OCT-21	R5616646
Vanadium (V)	36.9	DLM	0.40	ug/g	12-OCT-21	13-OCT-21	R5616646
Zinc (Zn)	217	DLM	4.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Zirconium (Zr)	2.9	DLM	2.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.109	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Acenaphthylene	0.418	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Acridine	<0.050	DLHM	0.050	ug/g	13-OCT-21	15-OCT-21	R5618524
Anthracene	0.173	DLHM	0.020	ug/g	13-OCT-21	15-OCT-21	R5618524
Benzo(a)anthracene	0.672	R	0.050	ug/g	13-OCT-21	15-OCT-21	R5618524
Benzo(a)pyrene	0.896	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Benzo(b&j)fluoranthene	1.12	DLHM	0.050	ug/g	13-OCT-21	15-OCT-21	R5618524
Benzo(g,h,i)perylene	0.688	DLHM	0.050	ug/g	13-OCT-21	15-OCT-21	R5618524
Benzo(k)fluoranthene	0.392	DLHM	0.050	ug/g	13-OCT-21	15-OCT-21	R5618524
Chrysene	0.856	DLHM	0.050	ug/g	13-OCT-21	15-OCT-21	R5618524
Dibenz(a,h)anthracene	0.154	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Fluoroanthene	1.05	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Fluorene	0.115	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647897-11 PPOM-SG-006 Sampled By: CLIENT on 02-OCT-21 @ 15:00 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
Indeno(1,2,3-cd)pyrene	0.585	DLHM	0.050	ug/g	13-OCT-21	15-OCT-21	R5618524
1-Methylnaphthalene	0.039	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
2-Methylnaphthalene	0.051	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Naphthalene	0.054	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Phenanthrene	0.424	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Pyrene	1.40	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Quinoline	<0.025	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Surrogate: 2-Fluorobiphenyl	83.4		60-140	%	13-OCT-21	15-OCT-21	R5618524
Surrogate: d14-Terphenyl	89.6		60-140	%	13-OCT-21	15-OCT-21	R5618524
B(a)P Total Potency Equivalent	1.34		0.036	ug/g	13-OCT-21	15-OCT-21	R5618524
IACR (CCME)	15.3		0.50		13-OCT-21	15-OCT-21	R5618524
Polychlorinated Biphenyls							
Aroclor 1016	<0.023	DLHM	0.023	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1221	<0.023	DLHM	0.023	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1232	<0.023	DLHM	0.023	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1242	<0.023	DLHM	0.023	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1248	<0.023	DLHM	0.023	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1254	0.160	DLHM	0.023	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1260	0.242	DLHM	0.023	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1262	<0.023	DLHM	0.023	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1268	<0.023	DLHM	0.023	mg/kg	15-OCT-21	15-OCT-21	R5620384
Total Polychlorinated Biphenyls	0.402		0.068	mg/kg	15-OCT-21	15-OCT-21	R5620384
Surrogate: d14-Terphenyl	81.1		50-140	%	15-OCT-21	15-OCT-21	R5620384
L2647897-12 PCE-SG-001 Sampled By: CLIENT on 02-OCT-21 @ 15:30 Matrix: SEDIMENT							
Physical Tests							
% Moisture	83.0		0.25	%	07-OCT-21	08-OCT-21	R5614025
Particle Size							
General Texture Class	Fine				12-OCT-21	12-OCT-21	R5616952
MUST PSA % > 75um	1.4	PSAL	1.0	%	12-OCT-21	12-OCT-21	R5616952
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0724		0.0010	g/g	13-OCT-21	13-OCT-21	R5616839
Total Organic Carbon	7.24		0.10	%	13-OCT-21	13-OCT-21	R5616839
Metals							
Aluminum (Al)	18600	DLM	100	ug/g	12-OCT-21	13-OCT-21	R5616646
Antimony (Sb)	0.75	DLM	0.20	ug/g	12-OCT-21	13-OCT-21	R5616646
Arsenic (As)	5.45	DLM	0.20	ug/g	12-OCT-21	13-OCT-21	R5616646
Barium (Ba)	264	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Beryllium (Be)	0.70	DLM	0.20	ug/g	12-OCT-21	13-OCT-21	R5616646
Bismuth (Bi)	<0.40	DLM	0.40	ug/g	12-OCT-21	13-OCT-21	R5616646
Boron (B)	12	DLM	10	ug/g	12-OCT-21	13-OCT-21	R5616646

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647897-12 PCE-SG-001 Sampled By: CLIENT on 02-OCT-21 @ 15:30 Matrix: SEDIMENT							
Metals							
Cadmium (Cd)	0.544	DLM	0.040	ug/g	12-OCT-21	13-OCT-21	R5616646
Calcium (Ca)	90000	DLM	100	ug/g	12-OCT-21	13-OCT-21	R5616646
Chromium (Cr)	752	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Cobalt (Co)	11.9	DLM	0.20	ug/g	12-OCT-21	13-OCT-21	R5616646
Copper (Cu)	37.4	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Iron (Fe)	27500	DLM	100	ug/g	12-OCT-21	13-OCT-21	R5616646
Lead (Pb)	70.9	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Lithium (Li)	14.5	DLM	4.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Magnesium (Mg)	15700	DLM	40	ug/g	12-OCT-21	13-OCT-21	R5616646
Manganese (Mn)	770	DLM	2.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Mercury (Hg)	0.209	DLM	0.010	ug/g	12-OCT-21	13-OCT-21	R5616461
Molybdenum (Mo)	0.97	DLM	0.20	ug/g	12-OCT-21	13-OCT-21	R5616646
Nickel (Ni)	25.2	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Phosphorus (P)	1210	DLM	100	ug/g	12-OCT-21	13-OCT-21	R5616646
Potassium (K)	4380	DLM	200	ug/g	12-OCT-21	13-OCT-21	R5616646
Selenium (Se)	0.93	DLM	0.40	ug/g	12-OCT-21	13-OCT-21	R5616646
Silver (Ag)	0.28	DLM	0.20	ug/g	12-OCT-21	13-OCT-21	R5616646
Sodium (Na)	670	DLM	100	ug/g	12-OCT-21	13-OCT-21	R5616646
Strontium (Sr)	530	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Sulfur (S)	6600	DLM	2000	ug/g	12-OCT-21	13-OCT-21	R5616646
Thallium (Tl)	0.26	DLM	0.10	ug/g	12-OCT-21	13-OCT-21	R5616646
Tin (Sn)	<4.0	DLM	4.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Titanium (Ti)	1270	DLM	2.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Tungsten (W)	<1.0	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Uranium (U)	0.77	DLM	0.10	ug/g	12-OCT-21	13-OCT-21	R5616646
Vanadium (V)	50.1	DLM	0.40	ug/g	12-OCT-21	13-OCT-21	R5616646
Zinc (Zn)	132	DLM	4.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Zirconium (Zr)	4.6	DLM	2.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.033	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Acenaphthylene	0.248	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Acridine	<0.050	DLHM	0.050	ug/g	13-OCT-21	15-OCT-21	R5618524
Anthracene	0.090	DLHM	0.020	ug/g	13-OCT-21	15-OCT-21	R5618524
Benzo(a)anthracene	0.457	R	0.050	ug/g	13-OCT-21	15-OCT-21	R5618524
Benzo(a)pyrene	0.637	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Benzo(b&j)fluoranthene	0.683	DLHM	0.050	ug/g	13-OCT-21	15-OCT-21	R5618524
Benzo(g,h,i)perylene	0.421	DLHM	0.050	ug/g	13-OCT-21	15-OCT-21	R5618524
Benzo(k)fluoranthene	0.182	DLHM	0.050	ug/g	13-OCT-21	15-OCT-21	R5618524
Chrysene	0.485	DLHM	0.050	ug/g	13-OCT-21	15-OCT-21	R5618524
Dibenz(a,h)anthracene	0.094	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Fluoroanthene	0.489	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647897-12 PCE-SG-001 Sampled By: CLIENT on 02-OCT-21 @ 15:30 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
Fluorene	0.043	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Indeno(1,2,3-cd)pyrene	0.377	DLHM	0.050	ug/g	13-OCT-21	15-OCT-21	R5618524
1-Methylnaphthalene	<0.025	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
2-Methylnaphthalene	<0.025	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Naphthalene	<0.025	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Phenanthrene	0.175	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Pyrene	0.676	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Quinoline	<0.025	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Surrogate: 2-Fluorobiphenyl	82.5		60-140	%	13-OCT-21	15-OCT-21	R5618524
Surrogate: d14-Terphenyl	88.2		60-140	%	13-OCT-21	15-OCT-21	R5618524
B(a)P Total Potency Equivalent	0.910		0.036	ug/g	13-OCT-21	15-OCT-21	R5618524
IACR (CCME)	9.35		0.50		13-OCT-21	15-OCT-21	R5618524
Polychlorinated Biphenyls							
Aroclor 1016	<0.023	DLHM	0.023	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1221	<0.023	DLHM	0.023	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1232	<0.023	DLHM	0.023	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1242	<0.023	DLHM	0.023	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1248	<0.023	DLHM	0.023	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1254	0.086	DLHM	0.023	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1260	0.146	DLHM	0.023	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1262	<0.023	DLHM	0.023	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1268	<0.023	DLHM	0.023	mg/kg	15-OCT-21	15-OCT-21	R5620384
Total Polychlorinated Biphenyls	0.232		0.068	mg/kg	15-OCT-21	15-OCT-21	R5620384
Surrogate: d14-Terphenyl	83.4		50-140	%	15-OCT-21	15-OCT-21	R5620384
L2647897-13 PCE-SG-003 Sampled By: CLIENT on 02-OCT-21 @ 16:15 Matrix: SEDIMENT							
Physical Tests							
% Moisture	82.2		0.25	%	07-OCT-21	08-OCT-21	R5614025
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0676		0.0010	g/g	13-OCT-21	13-OCT-21	R5616839
Total Organic Carbon	6.76		0.10	%	13-OCT-21	13-OCT-21	R5616839
Metals							
Aluminum (Al)	18200	DLM	100	ug/g	12-OCT-21	13-OCT-21	R5616646
Antimony (Sb)	0.73	DLM	0.20	ug/g	12-OCT-21	13-OCT-21	R5616646
Arsenic (As)	5.72	DLM	0.20	ug/g	12-OCT-21	13-OCT-21	R5616646
Barium (Ba)	271	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Beryllium (Be)	0.70	DLM	0.20	ug/g	12-OCT-21	13-OCT-21	R5616646
Bismuth (Bi)	<0.40	DLM	0.40	ug/g	12-OCT-21	13-OCT-21	R5616646
Boron (B)	12	DLM	10	ug/g	12-OCT-21	13-OCT-21	R5616646
Cadmium (Cd)	0.594	DLM	0.040	ug/g	12-OCT-21	13-OCT-21	R5616646
Calcium (Ca)	99800	DLM	100	ug/g	12-OCT-21	13-OCT-21	R5616646

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647897-13 PCE-SG-003 Sampled By: CLIENT on 02-OCT-21 @ 16:15 Matrix: SEDIMENT							
Metals							
Chromium (Cr)	800	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Cobalt (Co)	12.1	DLM	0.20	ug/g	12-OCT-21	13-OCT-21	R5616646
Copper (Cu)	39.3	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Iron (Fe)	27500	DLM	100	ug/g	12-OCT-21	13-OCT-21	R5616646
Lead (Pb)	76.1	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Lithium (Li)	14.2	DLM	4.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Magnesium (Mg)	15000	DLM	40	ug/g	12-OCT-21	13-OCT-21	R5616646
Manganese (Mn)	771	DLM	2.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Mercury (Hg)	0.195	DLM	0.010	ug/g	12-OCT-21	13-OCT-21	R5616461
Molybdenum (Mo)	0.92	DLM	0.20	ug/g	12-OCT-21	13-OCT-21	R5616646
Nickel (Ni)	25.5	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Phosphorus (P)	1190	DLM	100	ug/g	12-OCT-21	13-OCT-21	R5616646
Potassium (K)	4230	DLM	200	ug/g	12-OCT-21	13-OCT-21	R5616646
Selenium (Se)	0.81	DLM	0.40	ug/g	12-OCT-21	13-OCT-21	R5616646
Silver (Ag)	0.29	DLM	0.20	ug/g	12-OCT-21	13-OCT-21	R5616646
Sodium (Na)	660	DLM	100	ug/g	12-OCT-21	13-OCT-21	R5616646
Strontium (Sr)	608	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Sulfur (S)	5600	DLM	2000	ug/g	12-OCT-21	13-OCT-21	R5616646
Thallium (Tl)	0.25	DLM	0.10	ug/g	12-OCT-21	13-OCT-21	R5616646
Tin (Sn)	<4.0	DLM	4.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Titanium (Ti)	1260	DLM	2.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Tungsten (W)	<1.0	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Uranium (U)	0.75	DLM	0.10	ug/g	12-OCT-21	13-OCT-21	R5616646
Vanadium (V)	49.6	DLM	0.40	ug/g	12-OCT-21	13-OCT-21	R5616646
Zinc (Zn)	138	DLM	4.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Zirconium (Zr)	4.7	DLM	2.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.044	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Acenaphthylene	0.412	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Acridine	<0.050	DLHM	0.050	ug/g	13-OCT-21	15-OCT-21	R5618524
Anthracene	0.136	DLHM	0.020	ug/g	13-OCT-21	15-OCT-21	R5618524
Benzo(a)anthracene	0.818	R	0.050	ug/g	13-OCT-21	15-OCT-21	R5618524
Benzo(a)pyrene	1.09	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Benzo(b&j)fluoranthene	1.07	DLHM	0.050	ug/g	13-OCT-21	15-OCT-21	R5618524
Benzo(g,h,i)perylene	0.655	DLHM	0.050	ug/g	13-OCT-21	15-OCT-21	R5618524
Benzo(k)fluoranthene	0.319	DLHM	0.050	ug/g	13-OCT-21	15-OCT-21	R5618524
Chrysene	0.852	DLHM	0.050	ug/g	13-OCT-21	15-OCT-21	R5618524
Dibenz(a,h)anthracene	0.155	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Fluoroanthene	0.894	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Fluorene	0.061	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Indeno(1,2,3-cd)pyrene	0.563	DLHM	0.050	ug/g	13-OCT-21	15-OCT-21	R5618524

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647897-13 PCE-SG-003 Sampled By: CLIENT on 02-OCT-21 @ 16:15 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
1-Methylnaphthalene	<0.025	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
2-Methylnaphthalene	<0.025	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Naphthalene	<0.025	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Phenanthrene	0.264	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Pyrene	1.47	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Quinoline	<0.025	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Surrogate: 2-Fluorobiphenyl	83.2		60-140	%	13-OCT-21	15-OCT-21	R5618524
Surrogate: d14-Terphenyl	88.1		60-140	%	13-OCT-21	15-OCT-21	R5618524
B(a)P Total Potency Equivalent	1.53		0.036	ug/g	13-OCT-21	15-OCT-21	R5618524
IACR (CCME)	15.5		0.50		13-OCT-21	15-OCT-21	R5618524
Polychlorinated Biphenyls							
Aroclor 1016	<0.0045	DLHM	0.0045	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1221	<0.0045	DLHM	0.0045	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1232	<0.0045	DLHM	0.0045	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1242	<0.0045	DLHM	0.0045	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1248	<0.0045	DLHM	0.0045	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1254	0.0540	DLHM	0.0045	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1260	0.0503	DLHM	0.0045	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1262	<0.0045	DLHM	0.0045	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1268	<0.0045	DLHM	0.0045	mg/kg	15-OCT-21	15-OCT-21	R5620384
Total Polychlorinated Biphenyls	0.104		0.014	mg/kg	15-OCT-21	15-OCT-21	R5620384
Surrogate: d14-Terphenyl	52.6		50-140	%	15-OCT-21	15-OCT-21	R5620384
L2647897-14 PCE-SG-002 Sampled By: CLIENT on 02-OCT-21 @ 15:55 Matrix: SEDIMENT							
Physical Tests							
% Moisture	82.6		0.25	%	07-OCT-21	08-OCT-21	R5614025
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0776		0.0010	g/g	13-OCT-21	13-OCT-21	R5616839
Total Organic Carbon	7.76		0.10	%	13-OCT-21	13-OCT-21	R5616839
Metals							
Aluminum (Al)	18000	DLM	100	ug/g	12-OCT-21	13-OCT-21	R5616646
Antimony (Sb)	0.68	DLM	0.20	ug/g	12-OCT-21	13-OCT-21	R5616646
Arsenic (As)	5.24	DLM	0.20	ug/g	12-OCT-21	13-OCT-21	R5616646
Barium (Ba)	240	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Beryllium (Be)	0.71	DLM	0.20	ug/g	12-OCT-21	13-OCT-21	R5616646
Bismuth (Bi)	<0.40	DLM	0.40	ug/g	12-OCT-21	13-OCT-21	R5616646
Boron (B)	11	DLM	10	ug/g	12-OCT-21	13-OCT-21	R5616646
Cadmium (Cd)	0.564	DLM	0.040	ug/g	12-OCT-21	13-OCT-21	R5616646
Calcium (Ca)	65400	DLM	100	ug/g	12-OCT-21	13-OCT-21	R5616646
Chromium (Cr)	946	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Cobalt (Co)	11.7	DLM	0.20	ug/g	12-OCT-21	13-OCT-21	R5616646

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647897-14 PCE-SG-002 Sampled By: CLIENT on 02-OCT-21 @ 15:55 Matrix: SEDIMENT							
Metals							
Copper (Cu)	35.7	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Iron (Fe)	26400	DLM	100	ug/g	12-OCT-21	13-OCT-21	R5616646
Lead (Pb)	76.6	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Lithium (Li)	14.0	DLM	4.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Magnesium (Mg)	14800	DLM	40	ug/g	12-OCT-21	13-OCT-21	R5616646
Manganese (Mn)	726	DLM	2.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Mercury (Hg)	0.205	DLM	0.010	ug/g	12-OCT-21	13-OCT-21	R5616461
Molybdenum (Mo)	0.90	DLM	0.20	ug/g	12-OCT-21	13-OCT-21	R5616646
Nickel (Ni)	23.9	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Phosphorus (P)	1140	DLM	100	ug/g	12-OCT-21	13-OCT-21	R5616646
Potassium (K)	3980	DLM	200	ug/g	12-OCT-21	13-OCT-21	R5616646
Selenium (Se)	0.92	DLM	0.40	ug/g	12-OCT-21	13-OCT-21	R5616646
Silver (Ag)	0.34	DLM	0.20	ug/g	12-OCT-21	13-OCT-21	R5616646
Sodium (Na)	590	DLM	100	ug/g	12-OCT-21	13-OCT-21	R5616646
Strontium (Sr)	372	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Sulfur (S)	6200	DLM	2000	ug/g	12-OCT-21	13-OCT-21	R5616646
Thallium (Tl)	0.26	DLM	0.10	ug/g	12-OCT-21	13-OCT-21	R5616646
Tin (Sn)	<4.0	DLM	4.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Titanium (Ti)	1240	DLM	2.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Tungsten (W)	<1.0	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Uranium (U)	0.74	DLM	0.10	ug/g	12-OCT-21	13-OCT-21	R5616646
Vanadium (V)	47.4	DLM	0.40	ug/g	12-OCT-21	13-OCT-21	R5616646
Zinc (Zn)	131	DLM	4.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Zirconium (Zr)	4.6	DLM	2.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.038	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Acenaphthylene	0.323	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Acridine	<0.050	DLHM	0.050	ug/g	13-OCT-21	15-OCT-21	R5618524
Anthracene	0.112	DLHM	0.020	ug/g	13-OCT-21	15-OCT-21	R5618524
Benzo(a)anthracene	0.583	R	0.050	ug/g	13-OCT-21	15-OCT-21	R5618524
Benzo(a)pyrene	0.780	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Benzo(b&j)fluoranthene	0.780	DLHM	0.050	ug/g	13-OCT-21	15-OCT-21	R5618524
Benzo(g,h,i)perylene	0.474	DLHM	0.050	ug/g	13-OCT-21	15-OCT-21	R5618524
Benzo(k)fluoranthene	0.242	DLHM	0.050	ug/g	13-OCT-21	15-OCT-21	R5618524
Chrysene	0.579	DLHM	0.050	ug/g	13-OCT-21	15-OCT-21	R5618524
Dibenz(a,h)anthracene	0.114	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Fluoroanthene	0.563	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Fluorene	0.052	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Indeno(1,2,3-cd)pyrene	0.432	DLHM	0.050	ug/g	13-OCT-21	15-OCT-21	R5618524
1-Methylnaphthalene	<0.025	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
2-Methylnaphthalene	<0.025	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647897-14 PCE-SG-002 Sampled By: CLIENT on 02-OCT-21 @ 15:55 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
Naphthalene	<0.025	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Phenanthrene	0.195	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Pyrene	0.817	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Quinoline	<0.025	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Surrogate: 2-Fluorobiphenyl	84.1		60-140	%	13-OCT-21	15-OCT-21	R5618524
Surrogate: d14-Terphenyl	89.5		60-140	%	13-OCT-21	15-OCT-21	R5618524
B(a)P Total Potency Equivalent	1.11		0.036	ug/g	13-OCT-21	15-OCT-21	R5618524
IACR (CCME)	11.3		0.50		13-OCT-21	15-OCT-21	R5618524
Polychlorinated Biphenyls							
Aroclor 1016	<0.0045	DLHM	0.0045	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1221	<0.0045	DLHM	0.0045	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1232	<0.0045	DLHM	0.0045	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1242	<0.0045	DLHM	0.0045	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1248	<0.0045	DLHM	0.0045	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1254	0.0733	DLHM	0.0045	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1260	0.0713	DLHM	0.0045	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1262	<0.0045	DLHM	0.0045	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1268	<0.0045	DLHM	0.0045	mg/kg	15-OCT-21	15-OCT-21	R5620384
Total Polychlorinated Biphenyls	0.145		0.014	mg/kg	15-OCT-21	15-OCT-21	R5620384
Surrogate: d14-Terphenyl	84.6		50-140	%	15-OCT-21	15-OCT-21	R5620384
L2647897-15 PPOM-SC-004A Sampled By: CLIENT on 02-OCT-21 @ 10:20 Matrix: SEDIMENT							
Physical Tests							
% Moisture	72.8		0.25	%	07-OCT-21	08-OCT-21	R5614025
Liquid Limit (LL)	101		1	%	15-OCT-21	15-OCT-21	R5619861
Moisture at Plastic Limit	89		1	%	15-OCT-21	15-OCT-21	R5619861
Plasticity Index (PI)	11		1	%	15-OCT-21	15-OCT-21	R5619861
Specific Gravity	1.11		0.010	kg/L		26-OCT-21	R5629385
Particle Size							
General Texture Class	Fine				12-OCT-21	12-OCT-21	R5616952
MUST PSA % > 75um	<1.0		1.0	%	12-OCT-21	12-OCT-21	R5616952
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.108		0.0010	g/g	13-OCT-21	13-OCT-21	R5616839
Total Organic Carbon	10.8		0.10	%	13-OCT-21	13-OCT-21	R5616839
Metals							
Aluminum (Al)	18100	DLM	100	ug/g	11-OCT-21	12-OCT-21	R5616049
Antimony (Sb)	4.72	DLM	0.20	ug/g	11-OCT-21	12-OCT-21	R5616049
Arsenic (As)	18.3	DLM	0.20	ug/g	11-OCT-21	12-OCT-21	R5616049
Barium (Ba)	306	DLM	1.0	ug/g	11-OCT-21	12-OCT-21	R5616049
Beryllium (Be)	0.76	DLM	0.20	ug/g	11-OCT-21	12-OCT-21	R5616049
Bismuth (Bi)	0.89	DLM	0.40	ug/g	11-OCT-21	12-OCT-21	R5616049

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647897-15 PPOM-SC-004A Sampled By: CLIENT on 02-OCT-21 @ 10:20 Matrix: SEDIMENT							
Metals							
Boron (B)	14	DLM	10	ug/g	11-OCT-21	12-OCT-21	R5616049
Boron (B), Hot Water Ext.	0.98	FR4	0.10	ug/g	11-OCT-21	12-OCT-21	R5615797
Cadmium (Cd)	1.91	DLM	0.040	ug/g	11-OCT-21	12-OCT-21	R5616049
Calcium (Ca)	58800	DLM	100	ug/g	11-OCT-21	12-OCT-21	R5616049
Chromium (Cr)	5150	DLM	1.0	ug/g	11-OCT-21	12-OCT-21	R5616049
Cobalt (Co)	17.9	DLM	0.20	ug/g	11-OCT-21	12-OCT-21	R5616049
Copper (Cu)	61.1	DLM	1.0	ug/g	11-OCT-21	12-OCT-21	R5616049
Iron (Fe)	28700	DLM	100	ug/g	11-OCT-21	12-OCT-21	R5616049
Lead (Pb)	387	DLM	1.0	ug/g	11-OCT-21	12-OCT-21	R5616049
Lithium (Li)	16.9	DLM	4.0	ug/g	11-OCT-21	12-OCT-21	R5616049
Magnesium (Mg)	13700	DLM	40	ug/g	11-OCT-21	12-OCT-21	R5616049
Manganese (Mn)	571	DLM	2.0	ug/g	11-OCT-21	12-OCT-21	R5616049
Mercury (Hg)	0.700	DLM	0.010	ug/g	11-OCT-21	12-OCT-21	R5615540
Molybdenum (Mo)	1.70	DLM	0.20	ug/g	11-OCT-21	12-OCT-21	R5616049
Nickel (Ni)	31.7	DLM	1.0	ug/g	11-OCT-21	12-OCT-21	R5616049
Phosphorus (P)	1530	DLM	100	ug/g	11-OCT-21	12-OCT-21	R5616049
Potassium (K)	4230	DLM	200	ug/g	11-OCT-21	12-OCT-21	R5616049
Selenium (Se)	1.18	DLM	0.40	ug/g	11-OCT-21	12-OCT-21	R5616049
Silver (Ag)	0.85	DLM	0.20	ug/g	11-OCT-21	12-OCT-21	R5616049
Sodium (Na)	720	DLM	100	ug/g	11-OCT-21	12-OCT-21	R5616049
Strontium (Sr)	420	DLM	1.0	ug/g	11-OCT-21	12-OCT-21	R5616049
Sulfur (S)	9100	DLM	2000	ug/g	11-OCT-21	12-OCT-21	R5616049
Thallium (Tl)	0.37	DLM	0.10	ug/g	11-OCT-21	12-OCT-21	R5616049
Tin (Sn)	13.6	DLM	4.0	ug/g	11-OCT-21	12-OCT-21	R5616049
Titanium (Ti)	1210	DLM	2.0	ug/g	11-OCT-21	12-OCT-21	R5616049
Tungsten (W)	<1.0	DLM	1.0	ug/g	11-OCT-21	12-OCT-21	R5616049
Uranium (U)	0.80	DLM	0.10	ug/g	11-OCT-21	12-OCT-21	R5616049
Vanadium (V)	54.2	DLM	0.40	ug/g	11-OCT-21	12-OCT-21	R5616049
Zinc (Zn)	269	DLM	4.0	ug/g	11-OCT-21	12-OCT-21	R5616049
Zirconium (Zr)	5.9	DLM	2.0	ug/g	11-OCT-21	12-OCT-21	R5616049
Speciated Metals							
Chromium, Trivalent	5130		10	ug/g		15-OCT-21	
Chromium, Hexavalent	17.9		0.20	ug/g	13-OCT-21	14-OCT-21	R5617419
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.205	DLHM	0.015	ug/g	13-OCT-21	15-OCT-21	R5618524
Acenaphthylene	0.661	DLHM	0.015	ug/g	13-OCT-21	15-OCT-21	R5618524
Acridine	0.083	AI	0.030	ug/g	13-OCT-21	15-OCT-21	R5618524
Anthracene	0.284	DLHM	0.012	ug/g	13-OCT-21	15-OCT-21	R5618524
Benzo(a)anthracene	1.15	R	0.030	ug/g	13-OCT-21	15-OCT-21	R5618524
Benzo(a)pyrene	1.45	DLHM	0.015	ug/g	13-OCT-21	15-OCT-21	R5618524
Benzo(b&j)fluoranthene	1.70	DLHM	0.030	ug/g	13-OCT-21	15-OCT-21	R5618524

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647897-15 PPOM-SC-004A Sampled By: CLIENT on 02-OCT-21 @ 10:20 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
Benzo(g,h,i)perylene	0.909	DLHM	0.030	ug/g	13-OCT-21	15-OCT-21	R5618524
Benzo(k)fluoranthene	0.469	DLHM	0.030	ug/g	13-OCT-21	15-OCT-21	R5618524
Chrysene	1.28	DLHM	0.030	ug/g	13-OCT-21	15-OCT-21	R5618524
Dibenz(a,h)anthracene	0.212	DLHM	0.015	ug/g	13-OCT-21	15-OCT-21	R5618524
Fluoroanthene	1.65	DLHM	0.015	ug/g	13-OCT-21	15-OCT-21	R5618524
Fluorene	0.143	DLHM	0.015	ug/g	13-OCT-21	15-OCT-21	R5618524
Indeno(1,2,3-cd)pyrene	0.832	DLHM	0.030	ug/g	13-OCT-21	15-OCT-21	R5618524
1-Methylnaphthalene	0.060	DLHM	0.015	ug/g	13-OCT-21	15-OCT-21	R5618524
2-Methylnaphthalene	0.088	DLHM	0.015	ug/g	13-OCT-21	15-OCT-21	R5618524
Naphthalene	0.100	DLHM	0.015	ug/g	13-OCT-21	15-OCT-21	R5618524
Phenanthrene	0.571	DLHM	0.015	ug/g	13-OCT-21	15-OCT-21	R5618524
Pyrene	2.59	DLHM	0.015	ug/g	13-OCT-21	15-OCT-21	R5618524
Quinoline	<0.015	DLHM	0.015	ug/g	13-OCT-21	15-OCT-21	R5618524
Surrogate: 2-Fluorobiphenyl	84.5		60-140	%	13-OCT-21	15-OCT-21	R5618524
Surrogate: d14-Terphenyl	91.0		60-140	%	13-OCT-21	15-OCT-21	R5618524
B(a)P Total Potency Equivalent	2.10		0.021	ug/g	13-OCT-21	15-OCT-21	R5618524
IACR (CCME)	23.0		0.30		13-OCT-21	15-OCT-21	R5618524
Polychlorinated Biphenyls							
Aroclor 1016	<0.0030		0.0030	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1221	<0.0030		0.0030	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1232	<0.0030		0.0030	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1242	<0.0030		0.0030	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1248	<0.0030		0.0030	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1254	0.160		0.0030	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1260	0.189		0.0030	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1262	<0.0030		0.0030	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1268	<0.0030		0.0030	mg/kg	15-OCT-21	15-OCT-21	R5620384
Total Polychlorinated Biphenyls	0.349		0.0090	mg/kg	15-OCT-21	15-OCT-21	R5620384
Surrogate: d14-Terphenyl	61.4		50-140	%	15-OCT-21	15-OCT-21	R5620384
L2647897-16 PPOM-SC-004B Sampled By: CLIENT on 02-OCT-21 @ 10:20 Matrix: SEDIMENT							
Physical Tests							
% Moisture	85.7		0.25	%	07-OCT-21	08-OCT-21	R5614025
Particle Size							
General Texture Class	Fine				12-OCT-21	12-OCT-21	R5616952
MUST PSA % > 75um	<1.0	PSAL	1.0	%	12-OCT-21	12-OCT-21	R5616952
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.227		0.050	g/g	13-OCT-21	13-OCT-21	R5616839
Total Organic Carbon	22.7	DLHC	5.0	%	13-OCT-21	13-OCT-21	R5616839
Metals							
Aluminum (Al)	11100	DLHC	2000	ug/g	12-OCT-21	13-OCT-21	R5616646

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647897-16 PPOM-SC-004B Sampled By: CLIENT on 02-OCT-21 @ 10:20 Matrix: SEDIMENT							
Metals							
Antimony (Sb)	7.7	DLHC	4.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Arsenic (As)	19.9	DLHC	4.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Barium (Ba)	211	DLHC	20	ug/g	12-OCT-21	13-OCT-21	R5616646
Beryllium (Be)	<4.0	DLHC	4.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Bismuth (Bi)	<8.0	DLHC	8.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Boron (B)	<200	DLHC	200	ug/g	12-OCT-21	13-OCT-21	R5616646
Cadmium (Cd)	1.91	DLHC	0.80	ug/g	12-OCT-21	13-OCT-21	R5616646
Calcium (Ca)	28100	DLHC	2000	ug/g	12-OCT-21	13-OCT-21	R5616646
Chromium (Cr)	7400	DLHC	20	ug/g	12-OCT-21	13-OCT-21	R5616646
Cobalt (Co)	15.1	DLHC	4.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Copper (Cu)	45	DLHC	20	ug/g	12-OCT-21	13-OCT-21	R5616646
Iron (Fe)	20200	DLHC	2000	ug/g	12-OCT-21	13-OCT-21	R5616646
Lead (Pb)	433	DLHC	20	ug/g	12-OCT-21	13-OCT-21	R5616646
Lithium (Li)	<80	DLHC	80	ug/g	12-OCT-21	13-OCT-21	R5616646
Magnesium (Mg)	8130	DLHC	800	ug/g	12-OCT-21	13-OCT-21	R5616646
Manganese (Mn)	401	DLHC	40	ug/g	12-OCT-21	13-OCT-21	R5616646
Mercury (Hg)	0.915	DLM	0.010	ug/g	12-OCT-21	13-OCT-21	R5616461
Molybdenum (Mo)	<4.0	DLHC	4.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Nickel (Ni)	<20	DLHC	20	ug/g	12-OCT-21	13-OCT-21	R5616646
Phosphorus (P)	<2000	DLHC	2000	ug/g	12-OCT-21	13-OCT-21	R5616646
Potassium (K)	<4000	DLHC	4000	ug/g	12-OCT-21	13-OCT-21	R5616646
Selenium (Se)	<8.0	DLHC	8.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Silver (Ag)	<4.0	DLHC	4.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Sodium (Na)	<2000	DLHC	2000	ug/g	12-OCT-21	13-OCT-21	R5616646
Strontium (Sr)	338	DLHC	20	ug/g	12-OCT-21	13-OCT-21	R5616646
Sulfur (S)	<40000	DLHC	40000	ug/g	12-OCT-21	13-OCT-21	R5616646
Thallium (Tl)	<2.0	DLHC	2.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Tin (Sn)	<80	DLHC	80	ug/g	12-OCT-21	13-OCT-21	R5616646
Titanium (Ti)	759	DLHC	40	ug/g	12-OCT-21	13-OCT-21	R5616646
Tungsten (W)	<20	DLHC	20	ug/g	12-OCT-21	13-OCT-21	R5616646
Uranium (U)	<2.0	DLHC	2.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Vanadium (V)	33.3	DLHC	8.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Zinc (Zn)	218	DLHC	80	ug/g	12-OCT-21	13-OCT-21	R5616646
Zirconium (Zr)	<40	DLHC	40	ug/g	12-OCT-21	13-OCT-21	R5616646
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.038	DLHM	0.038	ug/g	13-OCT-21	15-OCT-21	R5618524
Acenaphthylene	<0.038	DLHM	0.038	ug/g	13-OCT-21	15-OCT-21	R5618524
Acridine	<0.075	DLHM	0.075	ug/g	13-OCT-21	15-OCT-21	R5618524
Anthracene	<0.030	DLHM	0.030	ug/g	13-OCT-21	15-OCT-21	R5618524
Benzo(a)anthracene	<0.075	DLHM	0.075	ug/g	13-OCT-21	15-OCT-21	R5618524
Benzo(a)pyrene	0.044	DLHM	0.038	ug/g	13-OCT-21	15-OCT-21	R5618524

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647897-16 PPOM-SC-004B Sampled By: CLIENT on 02-OCT-21 @ 10:20 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
Benzo(b&j)fluoranthene	<0.075	DLHM	0.075	ug/g	13-OCT-21	15-OCT-21	R5618524
Benzo(g,h,i)perylene	<0.075	DLHM	0.075	ug/g	13-OCT-21	15-OCT-21	R5618524
Benzo(k)fluoranthene	<0.075	DLHM	0.075	ug/g	13-OCT-21	15-OCT-21	R5618524
Chrysene	<0.075	DLHM	0.075	ug/g	13-OCT-21	15-OCT-21	R5618524
Dibenz(a,h)anthracene	<0.038	DLHM	0.038	ug/g	13-OCT-21	15-OCT-21	R5618524
Fluoroanthene	0.089	DLHM	0.038	ug/g	13-OCT-21	15-OCT-21	R5618524
Fluorene	0.050	DLHM	0.038	ug/g	13-OCT-21	15-OCT-21	R5618524
Indeno(1,2,3-cd)pyrene	<0.075	DLHM	0.075	ug/g	13-OCT-21	15-OCT-21	R5618524
1-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	13-OCT-21	15-OCT-21	R5618524
2-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	13-OCT-21	15-OCT-21	R5618524
Naphthalene	<0.038	DLHM	0.038	ug/g	13-OCT-21	15-OCT-21	R5618524
Phenanthrene	0.087	DLHM	0.038	ug/g	13-OCT-21	15-OCT-21	R5618524
Pyrene	0.091	DLHM	0.038	ug/g	13-OCT-21	15-OCT-21	R5618524
Quinoline	<0.038	DLHM	0.038	ug/g	13-OCT-21	15-OCT-21	R5618524
Surrogate: 2-Fluorobiphenyl	81.4		60-140	%	13-OCT-21	15-OCT-21	R5618524
Surrogate: d14-Terphenyl	89.7		60-140	%	13-OCT-21	15-OCT-21	R5618524
B(a)P Total Potency Equivalent	0.078		0.053	ug/g	13-OCT-21	15-OCT-21	R5618524
IACR (CCME)	0.82		0.75		13-OCT-21	15-OCT-21	R5618524
Polychlorinated Biphenyls							
Aroclor 1016	<0.012	DLHM	0.012	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1221	<0.012	DLHM	0.012	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1232	<0.012	DLHM	0.012	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1242	<0.012	DLHM	0.012	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1248	<0.012	DLHM	0.012	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1254	0.122	DLHM	0.012	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1260	0.210	DLHM	0.012	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1262	<0.012	DLHM	0.012	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1268	<0.012	DLHM	0.012	mg/kg	15-OCT-21	15-OCT-21	R5620384
Total Polychlorinated Biphenyls	0.332		0.036	mg/kg	15-OCT-21	15-OCT-21	R5620384
Surrogate: d14-Terphenyl	37.8	RRR	50-140	%	15-OCT-21	15-OCT-21	R5620384
Report Remarks : RRR: Surrogate recovery is outside ALS DQO. Detection limits for affected compounds have been raised accordingly.							
L2647897-17 PPOM-SC-004C Sampled By: CLIENT on 02-OCT-21 @ 10:20 Matrix: SEDIMENT							
Physical Tests							
% Moisture	84.4		0.25	%	21-OCT-21	22-OCT-21	R5626261
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.372		0.0010	g/g	26-OCT-21	26-OCT-21	R5628928
Total Organic Carbon	37.2	DLHC	2.3	%	26-OCT-21	26-OCT-21	R5628928
Metals							
Aluminum (Al)	1130		50	ug/g	25-OCT-21	25-OCT-21	R5628138
Antimony (Sb)	0.19		0.10	ug/g	25-OCT-21	25-OCT-21	R5628138

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647897-17 PPOM-SC-004C Sampled By: CLIENT on 02-OCT-21 @ 10:20 Matrix: SEDIMENT							
Metals							
Arsenic (As)	1.26		0.10	ug/g	25-OCT-21	25-OCT-21	R5628138
Barium (Ba)	73.5		0.50	ug/g	25-OCT-21	25-OCT-21	R5628138
Beryllium (Be)	<0.10		0.10	ug/g	25-OCT-21	25-OCT-21	R5628138
Bismuth (Bi)	<0.20		0.20	ug/g	25-OCT-21	25-OCT-21	R5628138
Boron (B)	29.6		5.0	ug/g	25-OCT-21	25-OCT-21	R5628138
Cadmium (Cd)	0.191		0.020	ug/g	25-OCT-21	25-OCT-21	R5628138
Calcium (Ca)	30000		50	ug/g	25-OCT-21	25-OCT-21	R5628138
Chromium (Cr)	81.5		0.50	ug/g	25-OCT-21	25-OCT-21	R5628138
Cobalt (Co)	1.15		0.10	ug/g	25-OCT-21	25-OCT-21	R5628138
Copper (Cu)	5.73		0.50	ug/g	25-OCT-21	25-OCT-21	R5628138
Iron (Fe)	4100		50	ug/g	25-OCT-21	25-OCT-21	R5628138
Lead (Pb)	6.65		0.50	ug/g	25-OCT-21	25-OCT-21	R5628138
Lithium (Li)	<2.0		2.0	ug/g	25-OCT-21	25-OCT-21	R5628138
Magnesium (Mg)	3240		20	ug/g	25-OCT-21	25-OCT-21	R5628138
Manganese (Mn)	232		1.0	ug/g	25-OCT-21	25-OCT-21	R5628138
Mercury (Hg)	0.037	DLM	0.010	ug/g	25-OCT-21	25-OCT-21	R5627810
Molybdenum (Mo)	2.10		0.10	ug/g	25-OCT-21	25-OCT-21	R5628138
Nickel (Ni)	2.20		0.50	ug/g	25-OCT-21	25-OCT-21	R5628138
Phosphorus (P)	339		50	ug/g	25-OCT-21	25-OCT-21	R5628138
Potassium (K)	220		100	ug/g	25-OCT-21	25-OCT-21	R5628138
Selenium (Se)	0.55		0.20	ug/g	25-OCT-21	25-OCT-21	R5628138
Silver (Ag)	<0.10		0.10	ug/g	25-OCT-21	25-OCT-21	R5628138
Sodium (Na)	761		50	ug/g	25-OCT-21	25-OCT-21	R5628138
Strontium (Sr)	539		0.50	ug/g	25-OCT-21	25-OCT-21	R5628138
Sulfur (S)	16300		1000	ug/g	25-OCT-21	25-OCT-21	R5628138
Thallium (Tl)	<0.050		0.050	ug/g	25-OCT-21	25-OCT-21	R5628138
Tin (Sn)	<2.0		2.0	ug/g	25-OCT-21	25-OCT-21	R5628138
Titanium (Ti)	44.2		1.0	ug/g	25-OCT-21	25-OCT-21	R5628138
Tungsten (W)	<0.50		0.50	ug/g	25-OCT-21	25-OCT-21	R5628138
Uranium (U)	0.873		0.050	ug/g	25-OCT-21	25-OCT-21	R5628138
Vanadium (V)	4.16		0.20	ug/g	25-OCT-21	25-OCT-21	R5628138
Zinc (Zn)	16.3		2.0	ug/g	25-OCT-21	25-OCT-21	R5628138
Zirconium (Zr)	<1.0		1.0	ug/g	25-OCT-21	25-OCT-21	R5628138
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.044	DLHM	0.025	ug/g	21-OCT-21	22-OCT-21	R5626548
Acenaphthylene	<0.025	DLHM	0.025	ug/g	21-OCT-21	22-OCT-21	R5626548
Acridine	<0.050	DLHM	0.050	ug/g	21-OCT-21	22-OCT-21	R5626548
Anthracene	<0.020	DLHM	0.020	ug/g	21-OCT-21	22-OCT-21	R5626548
Benzo(a)anthracene	<0.050	DLHM	0.050	ug/g	21-OCT-21	22-OCT-21	R5626548
Benzo(a)pyrene	<0.025	DLHM	0.025	ug/g	21-OCT-21	22-OCT-21	R5626548
Benzo(b&j)fluoranthene	<0.050	DLHM	0.050	ug/g	21-OCT-21	22-OCT-21	R5626548

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647897-17 PPOM-SC-004C Sampled By: CLIENT on 02-OCT-21 @ 10:20 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
Benzo(g,h,i)perylene	<0.050	DLHM	0.050	ug/g	21-OCT-21	22-OCT-21	R5626548
Benzo(k)fluoranthene	<0.050	DLHM	0.050	ug/g	21-OCT-21	22-OCT-21	R5626548
Chrysene	<0.050	DLHM	0.050	ug/g	21-OCT-21	22-OCT-21	R5626548
Dibenz(a,h)anthracene	<0.025	DLHM	0.025	ug/g	21-OCT-21	22-OCT-21	R5626548
Fluoroanthene	0.045	DLHM	0.025	ug/g	21-OCT-21	22-OCT-21	R5626548
Fluorene	0.041	DLHM	0.025	ug/g	21-OCT-21	22-OCT-21	R5626548
Indeno(1,2,3-cd)pyrene	<0.050	DLHM	0.050	ug/g	21-OCT-21	22-OCT-21	R5626548
1-Methylnaphthalene	<0.025	DLHM	0.025	ug/g	21-OCT-21	22-OCT-21	R5626548
2-Methylnaphthalene	<0.025	DLHM	0.025	ug/g	21-OCT-21	22-OCT-21	R5626548
Naphthalene	<0.025	DLHM	0.025	ug/g	21-OCT-21	22-OCT-21	R5626548
Phenanthrene	0.058	DLHM	0.025	ug/g	21-OCT-21	22-OCT-21	R5626548
Pyrene	0.039	DLHM	0.025	ug/g	21-OCT-21	22-OCT-21	R5626548
Quinoline	<0.025	DLHM	0.025	ug/g	21-OCT-21	22-OCT-21	R5626548
Surrogate: 2-Fluorobiphenyl	91.2		60-140	%	21-OCT-21	22-OCT-21	R5626548
Surrogate: d14-Terphenyl	88.4		60-140	%	21-OCT-21	22-OCT-21	R5626548
B(a)P Total Potency Equivalent	<0.036		0.036	ug/g	21-OCT-21	22-OCT-21	R5626548
IACR (CCME)	<0.50		0.50		21-OCT-21	22-OCT-21	R5626548
Polychlorinated Biphenyls							
Aroclor 1016	<0.015	DLHM	0.015	mg/kg	26-OCT-21	26-OCT-21	R5628692
Aroclor 1221	<0.015	DLHM	0.015	mg/kg	26-OCT-21	26-OCT-21	R5628692
Aroclor 1232	<0.015	DLHM	0.015	mg/kg	26-OCT-21	26-OCT-21	R5628692
Aroclor 1242	<0.015	DLHM	0.015	mg/kg	26-OCT-21	26-OCT-21	R5628692
Aroclor 1248	<0.015	DLHM	0.015	mg/kg	26-OCT-21	26-OCT-21	R5628692
Aroclor 1254	<0.015	DLHM	0.015	mg/kg	26-OCT-21	26-OCT-21	R5628692
Aroclor 1260	<0.015	DLHM	0.015	mg/kg	26-OCT-21	26-OCT-21	R5628692
Aroclor 1262	<0.015	DLHM	0.015	mg/kg	26-OCT-21	26-OCT-21	R5628692
Aroclor 1268	<0.015	DLHM	0.015	mg/kg	26-OCT-21	26-OCT-21	R5628692
Total Polychlorinated Biphenyls	<0.045		0.045	mg/kg	26-OCT-21	26-OCT-21	R5628692
Surrogate: d14-Terphenyl	86.4		50-140	%	26-OCT-21	26-OCT-21	R5628692
L2647897-18 PPOM-SG-004 Sampled By: CLIENT on 02-OCT-21 @ 10:20 Matrix: SEDIMENT							
Physical Tests							
% Moisture	82.3		0.25	%	07-OCT-21	08-OCT-21	R5614025
Liquid Limit (LL)	110		1	%	15-OCT-21	15-OCT-21	R5619861
Moisture at Plastic Limit	95		1	%	15-OCT-21	15-OCT-21	R5619861
Plasticity Index (PI)	15		1	%	15-OCT-21	15-OCT-21	R5619861
Specific Gravity	1.08		0.010	kg/L		26-OCT-21	R5629385
Particle Size							
General Texture Class	Fine				12-OCT-21	12-OCT-21	R5616952
MUST PSA % > 75um	<1.0	PSAL	1.0	%	12-OCT-21	12-OCT-21	R5616952
Organic / Inorganic Carbon							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647897-18 PPOM-SG-004 Sampled By: CLIENT on 02-OCT-21 @ 10:20 Matrix: SEDIMENT							
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0973		0.0010	g/g	13-OCT-21	13-OCT-21	R5616839
Total Organic Carbon	9.73		0.10	%	13-OCT-21	13-OCT-21	R5616839
Metals							
Aluminum (Al)	12100		50	ug/g	11-OCT-21	12-OCT-21	R5616343
Antimony (Sb)	2.03		0.10	ug/g	11-OCT-21	12-OCT-21	R5616343
Arsenic (As)	8.59		0.10	ug/g	11-OCT-21	12-OCT-21	R5616343
Barium (Ba)	250		0.50	ug/g	11-OCT-21	12-OCT-21	R5616343
Beryllium (Be)	0.47		0.10	ug/g	11-OCT-21	12-OCT-21	R5616343
Bismuth (Bi)	0.50		0.20	ug/g	11-OCT-21	12-OCT-21	R5616343
Boron (B)	10.3		5.0	ug/g	11-OCT-21	12-OCT-21	R5616343
Boron (B), Hot Water Ext.	0.96	FR4	0.10	ug/g	11-OCT-21	12-OCT-21	R5615812
Cadmium (Cd)	1.21		0.020	ug/g	11-OCT-21	12-OCT-21	R5616343
Calcium (Ca)	97700		50	ug/g	11-OCT-21	12-OCT-21	R5616343
Chromium (Cr)	2230	DLHC	10	ug/g	11-OCT-21	12-OCT-21	R5616343
Cobalt (Co)	12.0		0.10	ug/g	11-OCT-21	12-OCT-21	R5616343
Copper (Cu)	61.3		0.50	ug/g	11-OCT-21	12-OCT-21	R5616343
Iron (Fe)	22000		50	ug/g	11-OCT-21	12-OCT-21	R5616343
Lead (Pb)	210		0.50	ug/g	11-OCT-21	12-OCT-21	R5616343
Lithium (Li)	9.8		2.0	ug/g	11-OCT-21	12-OCT-21	R5616343
Magnesium (Mg)	13300		20	ug/g	11-OCT-21	12-OCT-21	R5616343
Manganese (Mn)	551		1.0	ug/g	11-OCT-21	12-OCT-21	R5616343
Mercury (Hg)	0.361	DLM	0.010	ug/g	11-OCT-21	12-OCT-21	R5615544
Molybdenum (Mo)	1.36		0.10	ug/g	11-OCT-21	12-OCT-21	R5616343
Nickel (Ni)	23.3		0.50	ug/g	11-OCT-21	12-OCT-21	R5616343
Phosphorus (P)	1320		50	ug/g	11-OCT-21	12-OCT-21	R5616343
Potassium (K)	2960		100	ug/g	11-OCT-21	12-OCT-21	R5616343
Selenium (Se)	1.06		0.20	ug/g	11-OCT-21	12-OCT-21	R5616343
Silver (Ag)	0.46		0.10	ug/g	11-OCT-21	12-OCT-21	R5616343
Sodium (Na)	599		50	ug/g	11-OCT-21	12-OCT-21	R5616343
Strontium (Sr)	645		0.50	ug/g	11-OCT-21	12-OCT-21	R5616343
Sulfur (S)	8100		1000	ug/g	11-OCT-21	12-OCT-21	R5616343
Thallium (Tl)	0.277		0.050	ug/g	11-OCT-21	12-OCT-21	R5616343
Tin (Sn)	7.0		2.0	ug/g	11-OCT-21	12-OCT-21	R5616343
Titanium (Ti)	696		1.0	ug/g	11-OCT-21	12-OCT-21	R5616343
Tungsten (W)	1.18		0.50	ug/g	11-OCT-21	12-OCT-21	R5616343
Uranium (U)	0.585		0.050	ug/g	11-OCT-21	12-OCT-21	R5616343
Vanadium (V)	37.4		0.20	ug/g	11-OCT-21	12-OCT-21	R5616343
Zinc (Zn)	260		2.0	ug/g	11-OCT-21	12-OCT-21	R5616343
Zirconium (Zr)	2.8		1.0	ug/g	11-OCT-21	12-OCT-21	R5616343
Speciated Metals							
Chromium, Trivalent	2220		10	ug/g		15-OCT-21	

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647897-18 PPOM-SG-004 Sampled By: CLIENT on 02-OCT-21 @ 10:20 Matrix: SEDIMENT							
Speciated Metals							
Chromium, Hexavalent	13.6		0.20	ug/g	13-OCT-21	14-OCT-21	R5617419
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.127	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Acenaphthylene	0.540	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Acridine	<0.050	DLHM	0.050	ug/g	13-OCT-21	15-OCT-21	R5618524
Anthracene	0.211	DLHM	0.020	ug/g	13-OCT-21	15-OCT-21	R5618524
Benzo(a)anthracene	0.855	R	0.050	ug/g	13-OCT-21	15-OCT-21	R5618524
Benzo(a)pyrene	1.14	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Benzo(b&j)fluoranthene	1.40	DLHM	0.050	ug/g	13-OCT-21	15-OCT-21	R5618524
Benzo(g,h,i)perylene	0.859	DLHM	0.050	ug/g	13-OCT-21	15-OCT-21	R5618524
Benzo(k)fluoranthene	0.495	DLHM	0.050	ug/g	13-OCT-21	15-OCT-21	R5618524
Chrysene	1.08	DLHM	0.050	ug/g	13-OCT-21	15-OCT-21	R5618524
Dibenz(a,h)anthracene	0.198	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Fluoroanthene	1.35	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Fluorene	0.138	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Indeno(1,2,3-cd)pyrene	0.805	DLHM	0.050	ug/g	13-OCT-21	15-OCT-21	R5618524
1-Methylnaphthalene	0.044	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
2-Methylnaphthalene	0.049	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Naphthalene	0.056	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Phenanthrene	0.473	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Pyrene	1.83	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Quinoline	<0.025	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Surrogate: 2-Fluorobiphenyl	83.7		60-140	%	13-OCT-21	15-OCT-21	R5618524
Surrogate: d14-Terphenyl	89.3		60-140	%	13-OCT-21	15-OCT-21	R5618524
B(a)P Total Potency Equivalent	1.72		0.036	ug/g	13-OCT-21	15-OCT-21	R5618524
IACR (CCME)	19.3		0.50		13-OCT-21	15-OCT-21	R5618524
Polychlorinated Biphenyls							
Aroclor 1016	<0.023	DLHM	0.023	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1221	<0.023	DLHM	0.023	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1232	<0.023	DLHM	0.023	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1242	<0.023	DLHM	0.023	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1248	<0.023	DLHM	0.023	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1254	0.206	DLHM	0.023	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1260	0.359	DLHM	0.023	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1262	<0.023	DLHM	0.023	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1268	<0.023	DLHM	0.023	mg/kg	15-OCT-21	15-OCT-21	R5620384
Total Polychlorinated Biphenyls	0.565		0.068	mg/kg	15-OCT-21	15-OCT-21	R5620384
Surrogate: d14-Terphenyl	84.6		50-140	%	15-OCT-21	15-OCT-21	R5620384
L2647897-19 TCOM-SC-001A Sampled By: CLIENT on 02-OCT-21 @ 11:25 Matrix: SEDIMENT							
Physical Tests							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647897-19 TCOM-SC-001A Sampled By: CLIENT on 02-OCT-21 @ 11:25 Matrix: SEDIMENT							
Physical Tests							
% Moisture	66.8		0.25	%	07-OCT-21	08-OCT-21	R5614025
Liquid Limit (LL)	85		1	%	15-OCT-21	15-OCT-21	R5619861
Moisture at Plastic Limit	72		1	%	15-OCT-21	15-OCT-21	R5619861
Plasticity Index (PI)	13		1	%	15-OCT-21	15-OCT-21	R5619861
Specific Gravity	1.20		0.010	kg/L		26-OCT-21	R5629385
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0751		0.0010	g/g	13-OCT-21	13-OCT-21	R5616839
Total Organic Carbon	7.51		0.10	%	13-OCT-21	13-OCT-21	R5616839
Metals							
Aluminum (Al)	19900		50	ug/g	13-OCT-21	13-OCT-21	R5617181
Antimony (Sb)	1.59		0.10	ug/g	13-OCT-21	13-OCT-21	R5617181
Arsenic (As)	13.3		0.10	ug/g	13-OCT-21	13-OCT-21	R5617181
Barium (Ba)	281		0.50	ug/g	13-OCT-21	13-OCT-21	R5617181
Beryllium (Be)	0.71		0.10	ug/g	13-OCT-21	13-OCT-21	R5617181
Bismuth (Bi)	0.49		0.20	ug/g	13-OCT-21	13-OCT-21	R5617181
Boron (B)	9.4		5.0	ug/g	13-OCT-21	13-OCT-21	R5617181
Cadmium (Cd)	0.931		0.020	ug/g	13-OCT-21	13-OCT-21	R5617181
Calcium (Ca)	59400		50	ug/g	13-OCT-21	13-OCT-21	R5617181
Chromium (Cr)	1810	DLHC	10	ug/g	13-OCT-21	13-OCT-21	R5617181
Cobalt (Co)	19.1		0.10	ug/g	13-OCT-21	13-OCT-21	R5617181
Copper (Cu)	47.2		0.50	ug/g	13-OCT-21	13-OCT-21	R5617181
Iron (Fe)	30200		50	ug/g	13-OCT-21	13-OCT-21	R5617181
Lead (Pb)	190		0.50	ug/g	13-OCT-21	13-OCT-21	R5617181
Lithium (Li)	15.0		2.0	ug/g	13-OCT-21	13-OCT-21	R5617181
Magnesium (Mg)	15400		20	ug/g	13-OCT-21	13-OCT-21	R5617181
Manganese (Mn)	667		1.0	ug/g	13-OCT-21	13-OCT-21	R5617181
Mercury (Hg)	0.459		0.0050	ug/g	13-OCT-21	14-OCT-21	R5617360
Molybdenum (Mo)	1.15		0.10	ug/g	13-OCT-21	13-OCT-21	R5617181
Nickel (Ni)	31.4		0.50	ug/g	13-OCT-21	13-OCT-21	R5617181
Phosphorus (P)	1270		50	ug/g	13-OCT-21	13-OCT-21	R5617181
Potassium (K)	4560		100	ug/g	13-OCT-21	13-OCT-21	R5617181
Selenium (Se)	0.98		0.20	ug/g	13-OCT-21	13-OCT-21	R5617181
Silver (Ag)	0.60		0.10	ug/g	13-OCT-21	13-OCT-21	R5617181
Sodium (Na)	691		50	ug/g	13-OCT-21	13-OCT-21	R5617181
Strontium (Sr)	385		0.50	ug/g	13-OCT-21	13-OCT-21	R5617181
Sulfur (S)	7000		1000	ug/g	13-OCT-21	13-OCT-21	R5617181
Thallium (Tl)	0.367		0.050	ug/g	13-OCT-21	13-OCT-21	R5617181
Tin (Sn)	6.8		2.0	ug/g	13-OCT-21	13-OCT-21	R5617181
Titanium (Ti)	1210		1.0	ug/g	13-OCT-21	13-OCT-21	R5617181
Tungsten (W)	<0.50		0.50	ug/g	13-OCT-21	13-OCT-21	R5617181
Uranium (U)	0.811		0.050	ug/g	13-OCT-21	13-OCT-21	R5617181

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647897-19 TCOM-SC-001A Sampled By: CLIENT on 02-OCT-21 @ 11:25 Matrix: SEDIMENT							
Metals							
Vanadium (V)	54.5		0.20	ug/g	13-OCT-21	13-OCT-21	R5617181
Zinc (Zn)	201		2.0	ug/g	13-OCT-21	13-OCT-21	R5617181
Zirconium (Zr)	6.6		1.0	ug/g	13-OCT-21	13-OCT-21	R5617181
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.054	DLHM	0.010	ug/g	13-OCT-21	15-OCT-21	R5618524
Acenaphthylene	0.374	DLHM	0.010	ug/g	13-OCT-21	15-OCT-21	R5618524
Acridine	0.026	DLHM	0.020	ug/g	13-OCT-21	15-OCT-21	R5618524
Anthracene	0.131	DLHM	0.0080	ug/g	13-OCT-21	15-OCT-21	R5618524
Benzo(a)anthracene	0.481	R	0.020	ug/g	13-OCT-21	15-OCT-21	R5618524
Benzo(a)pyrene	0.683	DLHM	0.010	ug/g	13-OCT-21	15-OCT-21	R5618524
Benzo(b&j)fluoranthene	0.720	DLHM	0.020	ug/g	13-OCT-21	15-OCT-21	R5618524
Benzo(g,h,i)perylene	0.428	DLHM	0.020	ug/g	13-OCT-21	15-OCT-21	R5618524
Benzo(k)fluoranthene	0.246	DLHM	0.020	ug/g	13-OCT-21	15-OCT-21	R5618524
Chrysene	0.511	DLHM	0.020	ug/g	13-OCT-21	15-OCT-21	R5618524
Dibenz(a,h)anthracene	0.104	DLHM	0.010	ug/g	13-OCT-21	15-OCT-21	R5618524
Fluoroanthene	0.602	DLHM	0.010	ug/g	13-OCT-21	15-OCT-21	R5618524
Fluorene	0.068	DLHM	0.010	ug/g	13-OCT-21	15-OCT-21	R5618524
Indeno(1,2,3-cd)pyrene	0.376	DLHM	0.020	ug/g	13-OCT-21	15-OCT-21	R5618524
1-Methylnaphthalene	0.028	DLHM	0.010	ug/g	13-OCT-21	15-OCT-21	R5618524
2-Methylnaphthalene	0.039	DLHM	0.010	ug/g	13-OCT-21	15-OCT-21	R5618524
Naphthalene	0.046	DLHM	0.010	ug/g	13-OCT-21	15-OCT-21	R5618524
Phenanthrene	0.217	DLHM	0.010	ug/g	13-OCT-21	15-OCT-21	R5618524
Pyrene	0.944	DLHM	0.010	ug/g	13-OCT-21	15-OCT-21	R5618524
Quinoline	<0.010	DLHM	0.010	ug/g	13-OCT-21	15-OCT-21	R5618524
Surrogate: 2-Fluorobiphenyl	82.3		60-140	%	13-OCT-21	15-OCT-21	R5618524
Surrogate: d14-Terphenyl	89.5		60-140	%	13-OCT-21	15-OCT-21	R5618524
B(a)P Total Potency Equivalent	0.979		0.020	ug/g	13-OCT-21	15-OCT-21	R5618524
IACR (CCME)	10.2		0.20		13-OCT-21	15-OCT-21	R5618524
Polychlorinated Biphenyls							
Aroclor 1016	<0.0090	DLHM	0.0090	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1221	<0.0090	DLHM	0.0090	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1232	<0.0090	DLHM	0.0090	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1242	<0.0090	DLHM	0.0090	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1248	<0.0090	DLHM	0.0090	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1254	0.185	DLHM	0.0090	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1260	0.290	DLHM	0.0090	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1262	<0.0090	DLHM	0.0090	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1268	<0.0090	DLHM	0.0090	mg/kg	15-OCT-21	15-OCT-21	R5620384
Total Polychlorinated Biphenyls	0.475		0.027	mg/kg	15-OCT-21	15-OCT-21	R5620384
Surrogate: d14-Terphenyl	75.7		50-140	%	15-OCT-21	15-OCT-21	R5620384
L2647897-20 TCOM-SC-001B CLIENT on 02-OCT-21 @ 11:25							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647897-20 TCOM-SC-001B Sampled By: CLIENT on 02-OCT-21 @ 11:25 Matrix: SEDIMENT							
Physical Tests							
% Moisture	85.6		0.25	%	07-OCT-21	08-OCT-21	R5614025
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.392		0.050	g/g	13-OCT-21	13-OCT-21	R5616839
Total Organic Carbon	39.2	DLHC	5.0	%	13-OCT-21	13-OCT-21	R5616839
Metals							
Aluminum (Al)	2870	DLM	100	ug/g	12-OCT-21	13-OCT-21	R5616646
Antimony (Sb)	0.27	DLM	0.20	ug/g	12-OCT-21	13-OCT-21	R5616646
Arsenic (As)	5.08	DLM	0.20	ug/g	12-OCT-21	13-OCT-21	R5616646
Barium (Ba)	72.2	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Beryllium (Be)	<0.20	DLM	0.20	ug/g	12-OCT-21	13-OCT-21	R5616646
Bismuth (Bi)	<0.40	DLM	0.40	ug/g	12-OCT-21	13-OCT-21	R5616646
Boron (B)	17	DLM	10	ug/g	12-OCT-21	13-OCT-21	R5616646
Cadmium (Cd)	0.201	DLM	0.040	ug/g	12-OCT-21	13-OCT-21	R5616646
Calcium (Ca)	21900	DLM	100	ug/g	12-OCT-21	13-OCT-21	R5616646
Chromium (Cr)	136	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Cobalt (Co)	3.24	DLM	0.20	ug/g	12-OCT-21	13-OCT-21	R5616646
Copper (Cu)	9.0	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Iron (Fe)	9130	DLM	100	ug/g	12-OCT-21	13-OCT-21	R5616646
Lead (Pb)	12.8	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Lithium (Li)	<4.0	DLM	4.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Magnesium (Mg)	2530	DLM	40	ug/g	12-OCT-21	13-OCT-21	R5616646
Manganese (Mn)	509	DLM	2.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Mercury (Hg)	0.059	DLM	0.010	ug/g	12-OCT-21	13-OCT-21	R5616461
Molybdenum (Mo)	2.20	DLM	0.20	ug/g	12-OCT-21	13-OCT-21	R5616646
Nickel (Ni)	7.1	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Phosphorus (P)	400	DLM	100	ug/g	12-OCT-21	13-OCT-21	R5616646
Potassium (K)	560	DLM	200	ug/g	12-OCT-21	13-OCT-21	R5616646
Selenium (Se)	0.62	DLM	0.40	ug/g	12-OCT-21	13-OCT-21	R5616646
Silver (Ag)	<0.20	DLM	0.20	ug/g	12-OCT-21	13-OCT-21	R5616646
Sodium (Na)	400	DLM	100	ug/g	12-OCT-21	13-OCT-21	R5616646
Strontium (Sr)	244	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Sulfur (S)	14600	DLM	2000	ug/g	12-OCT-21	13-OCT-21	R5616646
Thallium (Tl)	<0.10	DLM	0.10	ug/g	12-OCT-21	13-OCT-21	R5616646
Tin (Sn)	<4.0	DLM	4.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Titanium (Ti)	190	DLM	2.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Tungsten (W)	<1.0	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Uranium (U)	1.22	DLM	0.10	ug/g	12-OCT-21	13-OCT-21	R5616646
Vanadium (V)	9.86	DLM	0.40	ug/g	12-OCT-21	13-OCT-21	R5616646
Zinc (Zn)	16.6	DLM	4.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Zirconium (Zr)	<2.0	DLM	2.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	<0.038	DLHM	0.038	ug/g	13-OCT-21	15-OCT-21	R5618524

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647897-20 TCOM-SC-001B Sampled By: CLIENT on 02-OCT-21 @ 11:25 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
Acenaphthylene	0.041	DLHM	0.038	ug/g	13-OCT-21	15-OCT-21	R5618524
Acridine	<0.075	DLHM	0.075	ug/g	13-OCT-21	15-OCT-21	R5618524
Anthracene	<0.030	DLHM	0.030	ug/g	13-OCT-21	15-OCT-21	R5618524
Benzo(a)anthracene	<0.075	DLHM	0.075	ug/g	13-OCT-21	15-OCT-21	R5618524
Benzo(a)pyrene	0.063	R	0.038	ug/g	13-OCT-21	15-OCT-21	R5618524
Benzo(b&j)fluoranthene	<0.075	DLHM	0.075	ug/g	13-OCT-21	15-OCT-21	R5618524
Benzo(g,h,i)perylene	<0.075	DLHM	0.075	ug/g	13-OCT-21	15-OCT-21	R5618524
Benzo(k)fluoranthene	<0.075	DLHM	0.075	ug/g	13-OCT-21	15-OCT-21	R5618524
Chrysene	<0.075	DLHM	0.075	ug/g	13-OCT-21	15-OCT-21	R5618524
Dibenz(a,h)anthracene	<0.038	DLHM	0.038	ug/g	13-OCT-21	15-OCT-21	R5618524
Fluoroanthene	0.094	DLHM	0.038	ug/g	13-OCT-21	15-OCT-21	R5618524
Fluorene	<0.038	DLHM	0.038	ug/g	13-OCT-21	15-OCT-21	R5618524
Indeno(1,2,3-cd)pyrene	<0.075	DLHM	0.075	ug/g	13-OCT-21	15-OCT-21	R5618524
1-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	13-OCT-21	15-OCT-21	R5618524
2-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	13-OCT-21	15-OCT-21	R5618524
Naphthalene	<0.038	DLHM	0.038	ug/g	13-OCT-21	15-OCT-21	R5618524
Phenanthrene	<0.038	DLHM	0.038	ug/g	13-OCT-21	15-OCT-21	R5618524
Pyrene	0.160	DLHM	0.038	ug/g	13-OCT-21	15-OCT-21	R5618524
Quinoline	<0.038	DLHM	0.038	ug/g	13-OCT-21	15-OCT-21	R5618524
Surrogate: 2-Fluorobiphenyl	81.0		60-140	%	13-OCT-21	15-OCT-21	R5618524
Surrogate: d14-Terphenyl	89.6		60-140	%	13-OCT-21	15-OCT-21	R5618524
B(a)P Total Potency Equivalent	0.098		0.053	ug/g	13-OCT-21	15-OCT-21	R5618524
IACR (CCME)	0.87		0.75		13-OCT-21	15-OCT-21	R5618524
Polychlorinated Biphenyls							
Aroclor 1016	<0.0060	DLHM	0.0060	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1221	<0.0060	DLHM	0.0060	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1232	<0.0060	DLHM	0.0060	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1242	<0.0060	DLHM	0.0060	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1248	<0.0060	DLHM	0.0060	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1254	0.0210	PRAR	0.0060	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1260	<0.0060	DLHM	0.0060	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1262	<0.0060	DLHM	0.0060	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1268	<0.0060	DLHM	0.0060	mg/kg	15-OCT-21	15-OCT-21	R5620384
Total Polychlorinated Biphenyls	0.021		0.018	mg/kg	15-OCT-21	15-OCT-21	R5620384
Surrogate: d14-Terphenyl	81.0		50-140	%	15-OCT-21	15-OCT-21	R5620384
L2647897-21 TCOM-SG-001 Sampled By: CLIENT on 02-OCT-21 @ 12:00 Matrix: SEDIMENT							
Physical Tests							
% Moisture	84.5		0.25	%	07-OCT-21	08-OCT-21	R5614025
Liquid Limit (LL)	97		1	%	15-OCT-21	15-OCT-21	R5619861
Moisture at Plastic Limit	85		1	%	15-OCT-21	15-OCT-21	R5619861

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647897-21 TCOM-SG-001 Sampled By: CLIENT on 02-OCT-21 @ 12:00 Matrix: SEDIMENT							
Physical Tests							
Plasticity Index (PI)	12		1	%	15-OCT-21	15-OCT-21	R5619861
Specific Gravity	1.12		0.010	kg/L		26-OCT-21	R5629385
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0957		0.0010	g/g	13-OCT-21	13-OCT-21	R5616839
Total Organic Carbon	9.57		0.10	%	13-OCT-21	13-OCT-21	R5616839
Metals							
Aluminum (Al)	20500	DLM	100	ug/g	12-OCT-21	13-OCT-21	R5616646
Antimony (Sb)	0.50	DLM	0.20	ug/g	12-OCT-21	13-OCT-21	R5616646
Arsenic (As)	4.73	DLM	0.20	ug/g	12-OCT-21	13-OCT-21	R5616646
Barium (Ba)	243	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Beryllium (Be)	0.64	DLM	0.20	ug/g	12-OCT-21	13-OCT-21	R5616646
Bismuth (Bi)	<0.40	DLM	0.40	ug/g	12-OCT-21	13-OCT-21	R5616646
Boron (B)	12	DLM	10	ug/g	12-OCT-21	13-OCT-21	R5616646
Cadmium (Cd)	0.623	DLM	0.040	ug/g	12-OCT-21	13-OCT-21	R5616646
Calcium (Ca)	59100	DLM	100	ug/g	12-OCT-21	13-OCT-21	R5616646
Chromium (Cr)	197	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Cobalt (Co)	10.8	DLM	0.20	ug/g	12-OCT-21	13-OCT-21	R5616646
Copper (Cu)	37.0	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Iron (Fe)	25200	DLM	100	ug/g	12-OCT-21	13-OCT-21	R5616646
Lead (Pb)	63.5	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Lithium (Li)	14.5	DLM	4.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Magnesium (Mg)	10400	DLM	40	ug/g	12-OCT-21	13-OCT-21	R5616646
Manganese (Mn)	846	DLM	2.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Mercury (Hg)	0.270	DLM	0.010	ug/g	12-OCT-21	13-OCT-21	R5616461
Molybdenum (Mo)	0.99	DLM	0.20	ug/g	12-OCT-21	13-OCT-21	R5616646
Nickel (Ni)	24.9	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Phosphorus (P)	870	DLM	100	ug/g	12-OCT-21	13-OCT-21	R5616646
Potassium (K)	3730	DLM	200	ug/g	12-OCT-21	13-OCT-21	R5616646
Selenium (Se)	1.35	DLM	0.40	ug/g	12-OCT-21	13-OCT-21	R5616646
Silver (Ag)	0.32	DLM	0.20	ug/g	12-OCT-21	13-OCT-21	R5616646
Sodium (Na)	580	DLM	100	ug/g	12-OCT-21	13-OCT-21	R5616646
Strontium (Sr)	271	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Sulfur (S)	7900	DLM	2000	ug/g	12-OCT-21	13-OCT-21	R5616646
Thallium (Tl)	0.29	DLM	0.10	ug/g	12-OCT-21	13-OCT-21	R5616646
Tin (Sn)	<4.0	DLM	4.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Titanium (Ti)	1180	DLM	2.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Tungsten (W)	<1.0	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Uranium (U)	0.85	DLM	0.10	ug/g	12-OCT-21	13-OCT-21	R5616646
Vanadium (V)	42.3	DLM	0.40	ug/g	12-OCT-21	13-OCT-21	R5616646
Zinc (Zn)	124	DLM	4.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Zirconium (Zr)	3.2	DLM	2.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Polycyclic Aromatic Hydrocarbons							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647897-21 TCOM-SG-001 Sampled By: CLIENT on 02-OCT-21 @ 12:00 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.103	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Acenaphthylene	0.708	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Acridine	<0.050	DLHM	0.050	ug/g	13-OCT-21	15-OCT-21	R5618524
Anthracene	0.301	DLHM	0.020	ug/g	13-OCT-21	15-OCT-21	R5618524
Benzo(a)anthracene	1.24	R	0.050	ug/g	13-OCT-21	15-OCT-21	R5618524
Benzo(a)pyrene	1.89	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Benzo(b&j)fluoranthene	1.50	DLHM	0.050	ug/g	13-OCT-21	15-OCT-21	R5618524
Benzo(g,h,i)perylene	1.02	DLHM	0.050	ug/g	13-OCT-21	15-OCT-21	R5618524
Benzo(k)fluoranthene	0.532	DLHM	0.050	ug/g	13-OCT-21	15-OCT-21	R5618524
Chrysene	1.13	DLHM	0.050	ug/g	13-OCT-21	15-OCT-21	R5618524
Dibenz(a,h)anthracene	0.254	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Fluoroanthene	1.07	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Fluorene	0.120	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Indeno(1,2,3-cd)pyrene	0.879	DLHM	0.050	ug/g	13-OCT-21	15-OCT-21	R5618524
1-Methylnaphthalene	0.059	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
2-Methylnaphthalene	0.059	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Naphthalene	0.076	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Phenanthrene	0.394	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Pyrene	1.57	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Quinoline	<0.025	DLHM	0.025	ug/g	13-OCT-21	15-OCT-21	R5618524
Surrogate: 2-Fluorobiphenyl	83.2		60-140	%	13-OCT-21	15-OCT-21	R5618524
Surrogate: d14-Terphenyl	89.6		60-140	%	13-OCT-21	15-OCT-21	R5618524
B(a)P Total Potency Equivalent	2.58		0.036	ug/g	13-OCT-21	15-OCT-21	R5618524
IACR (CCME)	23.7		0.50		13-OCT-21	15-OCT-21	R5618524
Polychlorinated Biphenyls							
Aroclor 1016	<0.023	DLHM	0.023	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1221	<0.023	DLHM	0.023	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1232	<0.023	DLHM	0.023	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1242	<0.023	DLHM	0.023	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1248	<0.023	DLHM	0.023	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1254	0.167	DLHM	0.023	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1260	0.156	DLHM	0.023	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1262	<0.023	DLHM	0.023	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1268	<0.023	DLHM	0.023	mg/kg	15-OCT-21	15-OCT-21	R5620384
Total Polychlorinated Biphenyls	0.324		0.068	mg/kg	15-OCT-21	15-OCT-21	R5620384
Surrogate: d14-Terphenyl	76.3		50-140	%	15-OCT-21	15-OCT-21	R5620384
L2647897-22 TCOM-SC-009A Sampled By: CLIENT on 02-OCT-21 @ 15:45 Matrix: SEDIMENT							
Physical Tests							
% Moisture	57.2		0.25	%	08-OCT-21	09-OCT-21	R5614911
Liquid Limit (LL)	64		1	%	15-OCT-21	15-OCT-21	R5619861

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647897-22 TCOM-SC-009A Sampled By: CLIENT on 02-OCT-21 @ 15:45 Matrix: SEDIMENT							
Physical Tests							
Moisture at Plastic Limit	47		1	%	15-OCT-21	15-OCT-21	R5619861
Plasticity Index (PI)	18		1	%	15-OCT-21	15-OCT-21	R5619861
Specific Gravity	1.38		0.010	kg/L		26-OCT-21	R5629385
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0282		0.0010	g/g	13-OCT-21	13-OCT-21	R5616839
Total Organic Carbon	2.82		0.10	%	13-OCT-21	13-OCT-21	R5616839
Metals							
Aluminum (Al)	25600		50	ug/g	13-OCT-21	13-OCT-21	R5617181
Antimony (Sb)	0.70		0.10	ug/g	13-OCT-21	13-OCT-21	R5617181
Arsenic (As)	8.43		0.10	ug/g	13-OCT-21	13-OCT-21	R5617181
Barium (Ba)	325		0.50	ug/g	13-OCT-21	13-OCT-21	R5617181
Beryllium (Be)	0.77		0.10	ug/g	13-OCT-21	13-OCT-21	R5617181
Bismuth (Bi)	0.27		0.20	ug/g	13-OCT-21	13-OCT-21	R5617181
Boron (B)	7.4		5.0	ug/g	13-OCT-21	13-OCT-21	R5617181
Cadmium (Cd)	0.382		0.020	ug/g	13-OCT-21	13-OCT-21	R5617181
Calcium (Ca)	49900		50	ug/g	13-OCT-21	13-OCT-21	R5617181
Chromium (Cr)	499		0.50	ug/g	13-OCT-21	13-OCT-21	R5617181
Cobalt (Co)	19.9		0.10	ug/g	13-OCT-21	13-OCT-21	R5617181
Copper (Cu)	36.8		0.50	ug/g	13-OCT-21	13-OCT-21	R5617181
Iron (Fe)	36900		50	ug/g	13-OCT-21	13-OCT-21	R5617181
Lead (Pb)	72.7		0.50	ug/g	13-OCT-21	13-OCT-21	R5617181
Lithium (Li)	17.9		2.0	ug/g	13-OCT-21	13-OCT-21	R5617181
Magnesium (Mg)	17400		20	ug/g	13-OCT-21	13-OCT-21	R5617181
Manganese (Mn)	934		1.0	ug/g	13-OCT-21	13-OCT-21	R5617181
Mercury (Hg)	0.188		0.0050	ug/g	13-OCT-21	14-OCT-21	R5617360
Molybdenum (Mo)	0.71		0.10	ug/g	13-OCT-21	13-OCT-21	R5617181
Nickel (Ni)	34.7		0.50	ug/g	13-OCT-21	13-OCT-21	R5617181
Phosphorus (P)	1150		50	ug/g	13-OCT-21	13-OCT-21	R5617181
Potassium (K)	5930		100	ug/g	13-OCT-21	13-OCT-21	R5617181
Selenium (Se)	0.44		0.20	ug/g	13-OCT-21	13-OCT-21	R5617181
Silver (Ag)	0.27		0.10	ug/g	13-OCT-21	13-OCT-21	R5617181
Sodium (Na)	806		50	ug/g	13-OCT-21	13-OCT-21	R5617181
Strontium (Sr)	335		0.50	ug/g	13-OCT-21	13-OCT-21	R5617181
Sulfur (S)	3000		1000	ug/g	13-OCT-21	13-OCT-21	R5617181
Thallium (Tl)	0.377		0.050	ug/g	13-OCT-21	13-OCT-21	R5617181
Tin (Sn)	6.5		2.0	ug/g	13-OCT-21	13-OCT-21	R5617181
Titanium (Ti)	1660		1.0	ug/g	13-OCT-21	13-OCT-21	R5617181
Tungsten (W)	<0.50		0.50	ug/g	13-OCT-21	13-OCT-21	R5617181
Uranium (U)	0.772		0.050	ug/g	13-OCT-21	13-OCT-21	R5617181
Vanadium (V)	62.4		0.20	ug/g	13-OCT-21	13-OCT-21	R5617181
Zinc (Zn)	138		2.0	ug/g	13-OCT-21	13-OCT-21	R5617181

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647897-22 TCOM-SC-009A Sampled By: CLIENT on 02-OCT-21 @ 15:45 Matrix: SEDIMENT							
Metals							
Zirconium (Zr)	7.2		1.0	ug/g	13-OCT-21	13-OCT-21	R5617181
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.0120	DLHM	0.0075	ug/g	13-OCT-21	14-OCT-21	R5616732
Acenaphthylene	0.0531	DLHM	0.0075	ug/g	13-OCT-21	14-OCT-21	R5616732
Acridine	<0.015	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5616732
Anthracene	0.0298	DLHM	0.0060	ug/g	13-OCT-21	14-OCT-21	R5616732
Benzo(a)anthracene	0.094	R	0.015	ug/g	13-OCT-21	14-OCT-21	R5616732
Benzo(a)pyrene	0.137	DLHM	0.0075	ug/g	13-OCT-21	14-OCT-21	R5616732
Benzo(b&j)fluoranthene	0.164	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5616732
Benzo(g,h,i)perylene	0.101	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5616732
Benzo(k)fluoranthene	0.061	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5616732
Chrysene	0.116	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5616732
Dibenz(a,h)anthracene	0.0258	DLHM	0.0075	ug/g	13-OCT-21	14-OCT-21	R5616732
Fluoroanthene	0.154	DLHM	0.0075	ug/g	13-OCT-21	14-OCT-21	R5616732
Fluorene	0.0155	DLHM	0.0075	ug/g	13-OCT-21	14-OCT-21	R5616732
Indeno(1,2,3-cd)pyrene	0.085	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5616732
1-Methylnaphthalene	<0.0075	DLHM	0.0075	ug/g	13-OCT-21	14-OCT-21	R5616732
2-Methylnaphthalene	0.0097	DLHM	0.0075	ug/g	13-OCT-21	14-OCT-21	R5616732
Naphthalene	0.0094	DLHM	0.0075	ug/g	13-OCT-21	14-OCT-21	R5616732
Phenanthrene	0.0758	DLHM	0.0075	ug/g	13-OCT-21	14-OCT-21	R5616732
Pyrene	0.181	DLHM	0.0075	ug/g	13-OCT-21	14-OCT-21	R5616732
Quinoline	<0.0075	DLHM	0.0075	ug/g	13-OCT-21	14-OCT-21	R5616732
Surrogate: 2-Fluorobiphenyl	85.5		60-140	%	13-OCT-21	14-OCT-21	R5616732
Surrogate: d14-Terphenyl	86.2		60-140	%	13-OCT-21	14-OCT-21	R5616732
B(a)P Total Potency Equivalent	0.205		0.020	ug/g	13-OCT-21	14-OCT-21	R5616732
IACR (CCME)	2.27		0.15		13-OCT-21	14-OCT-21	R5616732
Polychlorinated Biphenyls							
Aroclor 1016	<0.011	DLHM	0.011	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1221	<0.011	DLHM	0.011	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1232	<0.011	DLHM	0.011	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1242	<0.011	DLHM	0.011	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1248	<0.011	DLHM	0.011	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1254	0.033	DLHM	0.011	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1260	0.062	DLHM	0.011	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1262	<0.011	DLHM	0.011	mg/kg	15-OCT-21	15-OCT-21	R5620384
Aroclor 1268	<0.011	DLHM	0.011	mg/kg	15-OCT-21	15-OCT-21	R5620384
Total Polychlorinated Biphenyls	0.095		0.032	mg/kg	15-OCT-21	15-OCT-21	R5620384
Surrogate: d14-Terphenyl	93.3		50-140	%	15-OCT-21	15-OCT-21	R5620384
L2647897-24 TCOM-SG-009 Sampled By: CLIENT on 02-OCT-21 @ 16:10 Matrix: SEDIMENT							
Physical Tests							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647897-24 TCOM-SG-009 Sampled By: CLIENT on 02-OCT-21 @ 16:10 Matrix: SEDIMENT							
Physical Tests							
% Moisture	76.0		0.25	%	08-OCT-21	09-OCT-21	R5614911
Liquid Limit (LL)	81		1	%	15-OCT-21	15-OCT-21	R5619861
Moisture at Plastic Limit	64		1	%	15-OCT-21	15-OCT-21	R5619861
Plasticity Index (PI)	17		1	%	15-OCT-21	15-OCT-21	R5619861
Specific Gravity	1.17		0.010	kg/L		26-OCT-21	R5629385
Particle Size							
General Texture Class	Fine				12-OCT-21	12-OCT-21	R5616952
MUST PSA % > 75um	8.2	PSAL	1.0	%	12-OCT-21	12-OCT-21	R5616952
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0505		0.0010	g/g	13-OCT-21	13-OCT-21	R5616839
Total Organic Carbon	5.05		0.10	%	13-OCT-21	13-OCT-21	R5616839
Metals							
Aluminum (Al)	16800		50	ug/g	11-OCT-21	12-OCT-21	R5616343
Antimony (Sb)	0.67		0.10	ug/g	11-OCT-21	12-OCT-21	R5616343
Arsenic (As)	8.82		0.10	ug/g	11-OCT-21	12-OCT-21	R5616343
Barium (Ba)	292		0.50	ug/g	11-OCT-21	12-OCT-21	R5616343
Beryllium (Be)	0.57		0.10	ug/g	11-OCT-21	12-OCT-21	R5616343
Bismuth (Bi)	0.27		0.20	ug/g	11-OCT-21	12-OCT-21	R5616343
Boron (B)	7.0		5.0	ug/g	11-OCT-21	12-OCT-21	R5616343
Boron (B), Hot Water Ext.	0.65	FR4	0.10	ug/g	11-OCT-21	12-OCT-21	R5615812
Cadmium (Cd)	0.477		0.020	ug/g	11-OCT-21	12-OCT-21	R5616343
Calcium (Ca)	86100		50	ug/g	11-OCT-21	12-OCT-21	R5616343
Chromium (Cr)	598		0.50	ug/g	11-OCT-21	12-OCT-21	R5616343
Cobalt (Co)	15.0		0.10	ug/g	11-OCT-21	12-OCT-21	R5616343
Copper (Cu)	30.8		0.50	ug/g	11-OCT-21	12-OCT-21	R5616343
Iron (Fe)	26100		50	ug/g	11-OCT-21	12-OCT-21	R5616343
Lead (Pb)	75.7		0.50	ug/g	11-OCT-21	12-OCT-21	R5616343
Lithium (Li)	11.3		2.0	ug/g	11-OCT-21	12-OCT-21	R5616343
Magnesium (Mg)	13200		20	ug/g	11-OCT-21	12-OCT-21	R5616343
Manganese (Mn)	789		1.0	ug/g	11-OCT-21	12-OCT-21	R5616343
Mercury (Hg)	0.240	DLM	0.010	ug/g	11-OCT-21	12-OCT-21	R5615544
Molybdenum (Mo)	0.66		0.10	ug/g	11-OCT-21	12-OCT-21	R5616343
Nickel (Ni)	24.8		0.50	ug/g	11-OCT-21	12-OCT-21	R5616343
Phosphorus (P)	1040		50	ug/g	11-OCT-21	12-OCT-21	R5616343
Potassium (K)	3850		100	ug/g	11-OCT-21	12-OCT-21	R5616343
Selenium (Se)	0.69		0.20	ug/g	11-OCT-21	12-OCT-21	R5616343
Silver (Ag)	0.30		0.10	ug/g	11-OCT-21	12-OCT-21	R5616343
Sodium (Na)	588		50	ug/g	11-OCT-21	12-OCT-21	R5616343
Strontium (Sr)	567		0.50	ug/g	11-OCT-21	12-OCT-21	R5616343
Sulfur (S)	4600		1000	ug/g	11-OCT-21	12-OCT-21	R5616343
Thallium (Tl)	0.274		0.050	ug/g	11-OCT-21	12-OCT-21	R5616343
Tin (Sn)	3.5		2.0	ug/g	11-OCT-21	12-OCT-21	R5616343

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647897-24 TCOM-SG-009 Sampled By: CLIENT on 02-OCT-21 @ 16:10 Matrix: SEDIMENT							
Metals							
Titanium (Ti)	1150		1.0	ug/g	11-OCT-21	12-OCT-21	R5616343
Tungsten (W)	<0.50		0.50	ug/g	11-OCT-21	12-OCT-21	R5616343
Uranium (U)	0.588		0.050	ug/g	11-OCT-21	12-OCT-21	R5616343
Vanadium (V)	42.6		0.20	ug/g	11-OCT-21	12-OCT-21	R5616343
Zinc (Zn)	137		2.0	ug/g	11-OCT-21	12-OCT-21	R5616343
Zirconium (Zr)	3.8		1.0	ug/g	11-OCT-21	12-OCT-21	R5616343
Speciated Metals							
Chromium, Trivalent	594		10	ug/g		15-OCT-21	
Chromium, Hexavalent	4.26		0.20	ug/g	13-OCT-21	14-OCT-21	R5617419
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.030	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5616732
Acenaphthylene	0.169	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5616732
Acridine	<0.030	DLHM	0.030	ug/g	13-OCT-21	14-OCT-21	R5616732
Anthracene	0.073	DLHM	0.012	ug/g	13-OCT-21	14-OCT-21	R5616732
Benzo(a)anthracene	0.244	R	0.030	ug/g	13-OCT-21	14-OCT-21	R5616732
Benzo(a)pyrene	0.385	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5616732
Benzo(b&j)fluoranthene	0.424	DLHM	0.030	ug/g	13-OCT-21	14-OCT-21	R5616732
Benzo(g,h,i)perylene	0.301	DLHM	0.030	ug/g	13-OCT-21	14-OCT-21	R5616732
Benzo(k)fluoranthene	0.165	DLHM	0.030	ug/g	13-OCT-21	14-OCT-21	R5616732
Chrysene	0.297	DLHM	0.030	ug/g	13-OCT-21	14-OCT-21	R5616732
Dibenz(a,h)anthracene	0.069	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5616732
Fluoroanthene	0.324	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5616732
Fluorene	0.036	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5616732
Indeno(1,2,3-cd)pyrene	0.244	DLHM	0.030	ug/g	13-OCT-21	14-OCT-21	R5616732
1-Methylnaphthalene	<0.015	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5616732
2-Methylnaphthalene	0.022	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5616732
Naphthalene	0.021	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5616732
Phenanthrene	0.144	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5616732
Pyrene	0.419	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5616732
Quinoline	<0.015	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5616732
Surrogate: 2-Fluorobiphenyl	85.1		60-140	%	13-OCT-21	14-OCT-21	R5616732
Surrogate: d14-Terphenyl	86.8		60-140	%	13-OCT-21	14-OCT-21	R5616732
B(a)P Total Potency Equivalent	0.568		0.021	ug/g	13-OCT-21	14-OCT-21	R5616732
IACR (CCME)	6.04		0.30		13-OCT-21	14-OCT-21	R5616732
Polychlorinated Biphenyls							
Aroclor 1016	<0.014	DLHM	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623933
Aroclor 1221	<0.014	DLHM	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623933
Aroclor 1232	<0.014	DLHM	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623933
Aroclor 1242	<0.014	DLHM	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623933
Aroclor 1248	<0.014	DLHM	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623933
Aroclor 1254	0.096	DLHM	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623933
Aroclor 1260	0.158	DLHM	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623933

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647897-24 TCOM-SG-009 Sampled By: CLIENT on 02-OCT-21 @ 16:10 Matrix: SEDIMENT							
Polychlorinated Biphenyls							
Aroclor 1262	<0.014	DLHM	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623933
Aroclor 1268	<0.014	DLHM	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623933
Total Polychlorinated Biphenyls	0.254		0.041	mg/kg	18-OCT-21	18-OCT-21	R5623933
Surrogate: d14-Terphenyl	94.4		50-140	%	18-OCT-21	18-OCT-21	R5623933
L2647897-25 PPOM-SC-002A Sampled By: CLIENT on 02-OCT-21 @ 14:10 Matrix: SEDIMENT							
Physical Tests							
% Moisture	70.6		0.25	%	08-OCT-21	09-OCT-21	R5614911
Liquid Limit (LL)	92		1	%	16-OCT-21	16-OCT-21	R5621298
Moisture at Plastic Limit	71		1	%	16-OCT-21	16-OCT-21	R5621298
Plasticity Index (PI)	21		1	%	16-OCT-21	16-OCT-21	R5621298
Specific Gravity	1.16		0.010	kg/L		26-OCT-21	R5629385
Particle Size							
General Texture Class	Fine				15-OCT-21	15-OCT-21	R5620016
MUST PSA % > 75um	1.6		1.0	%	15-OCT-21	15-OCT-21	R5620016
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0733		0.0010	g/g	18-OCT-21	18-OCT-21	R5623497
Total Organic Carbon	7.33		0.10	%	18-OCT-21	18-OCT-21	R5623497
Metals							
Aluminum (Al)	13300		50	ug/g	14-OCT-21	15-OCT-21	R5619038
Antimony (Sb)	2.23		0.10	ug/g	14-OCT-21	15-OCT-21	R5619038
Arsenic (As)	6.84		0.10	ug/g	14-OCT-21	15-OCT-21	R5619038
Barium (Ba)	245		0.50	ug/g	14-OCT-21	15-OCT-21	R5619038
Beryllium (Be)	0.51		0.10	ug/g	14-OCT-21	15-OCT-21	R5619038
Bismuth (Bi)	0.72		0.20	ug/g	14-OCT-21	15-OCT-21	R5619038
Boron (B)	9.9		5.0	ug/g	14-OCT-21	15-OCT-21	R5619038
Boron (B), Hot Water Ext.	0.39		0.10	ug/g	15-OCT-21	15-OCT-21	R5619212
Cadmium (Cd)	1.37		0.020	ug/g	14-OCT-21	15-OCT-21	R5619038
Calcium (Ca)	132000		50	ug/g	14-OCT-21	15-OCT-21	R5619038
Chromium (Cr)	2950		0.50	ug/g	14-OCT-21	15-OCT-21	R5619038
Cobalt (Co)	11.2		0.10	ug/g	14-OCT-21	15-OCT-21	R5619038
Copper (Cu)	82.2		0.50	ug/g	14-OCT-21	15-OCT-21	R5619038
Iron (Fe)	24000		50	ug/g	14-OCT-21	15-OCT-21	R5619038
Lead (Pb)	262		0.50	ug/g	14-OCT-21	15-OCT-21	R5619038
Lithium (Li)	12.4		2.0	ug/g	14-OCT-21	15-OCT-21	R5619038
Magnesium (Mg)	16000		20	ug/g	14-OCT-21	15-OCT-21	R5619038
Manganese (Mn)	531		1.0	ug/g	14-OCT-21	15-OCT-21	R5619038
Mercury (Hg)	0.310		0.0050	ug/g	14-OCT-21	15-OCT-21	R5619400
Molybdenum (Mo)	1.72		0.10	ug/g	14-OCT-21	15-OCT-21	R5619038
Nickel (Ni)	23.9		0.50	ug/g	14-OCT-21	15-OCT-21	R5619038
Phosphorus (P)	1490		50	ug/g	14-OCT-21	15-OCT-21	R5619038

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647897-25 PPOM-SC-002A Sampled By: CLIENT on 02-OCT-21 @ 14:10 Matrix: SEDIMENT							
Metals							
Potassium (K)	2710		100	ug/g	14-OCT-21	15-OCT-21	R5619038
Selenium (Se)	0.88		0.20	ug/g	14-OCT-21	15-OCT-21	R5619038
Silver (Ag)	0.70		0.10	ug/g	14-OCT-21	15-OCT-21	R5619038
Sodium (Na)	528		50	ug/g	14-OCT-21	15-OCT-21	R5619038
Strontium (Sr)	727		0.50	ug/g	14-OCT-21	15-OCT-21	R5619038
Sulfur (S)	5500		1000	ug/g	14-OCT-21	15-OCT-21	R5619038
Thallium (Tl)	0.257		0.050	ug/g	14-OCT-21	15-OCT-21	R5619038
Tin (Sn)	7.9		2.0	ug/g	14-OCT-21	15-OCT-21	R5619038
Titanium (Ti)	568		1.0	ug/g	14-OCT-21	15-OCT-21	R5619038
Tungsten (W)	1.53		0.50	ug/g	14-OCT-21	15-OCT-21	R5619038
Uranium (U)	0.534		0.050	ug/g	14-OCT-21	15-OCT-21	R5619038
Vanadium (V)	37.4		0.20	ug/g	14-OCT-21	15-OCT-21	R5619038
Zinc (Zn)	333		2.0	ug/g	14-OCT-21	15-OCT-21	R5619038
Zirconium (Zr)	3.0		1.0	ug/g	14-OCT-21	15-OCT-21	R5619038
Speciated Metals							
Chromium, Trivalent	2940		10	ug/g		15-OCT-21	
Chromium, Hexavalent	13.6		0.20	ug/g	13-OCT-21	14-OCT-21	R5617419
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.200	DLM	0.038	ug/g	13-OCT-21	14-OCT-21	R5616732
Acenaphthylene	0.578	DLM	0.038	ug/g	13-OCT-21	14-OCT-21	R5616732
Acridine	0.087	DLM	0.075	ug/g	13-OCT-21	14-OCT-21	R5616732
Anthracene	0.311	DLM	0.030	ug/g	13-OCT-21	14-OCT-21	R5616732
Benzo(a)anthracene	1.14	R	0.075	ug/g	13-OCT-21	14-OCT-21	R5616732
Benzo(a)pyrene	1.59	DLM	0.038	ug/g	13-OCT-21	14-OCT-21	R5616732
Benzo(b&j)fluoranthene	1.87	DLM	0.075	ug/g	13-OCT-21	14-OCT-21	R5616732
Benzo(g,h,i)perylene	1.19	DLM	0.075	ug/g	13-OCT-21	14-OCT-21	R5616732
Benzo(k)fluoranthene	0.671	DLM	0.075	ug/g	13-OCT-21	14-OCT-21	R5616732
Chrysene	1.46	DLM	0.075	ug/g	13-OCT-21	14-OCT-21	R5616732
Dibenz(a,h)anthracene	0.258	DLM	0.038	ug/g	13-OCT-21	14-OCT-21	R5616732
Fluoroanthene	1.92	DLM	0.038	ug/g	13-OCT-21	14-OCT-21	R5616732
Fluorene	0.171	DLM	0.038	ug/g	13-OCT-21	14-OCT-21	R5616732
Indeno(1,2,3-cd)pyrene	0.937	DLM	0.075	ug/g	13-OCT-21	14-OCT-21	R5616732
1-Methylnaphthalene	0.064	DLM	0.038	ug/g	13-OCT-21	14-OCT-21	R5616732
2-Methylnaphthalene	0.061	DLM	0.038	ug/g	13-OCT-21	14-OCT-21	R5616732
Naphthalene	0.055	DLM	0.038	ug/g	13-OCT-21	14-OCT-21	R5616732
Phenanthrene	0.871	DLM	0.038	ug/g	13-OCT-21	14-OCT-21	R5616732
Pyrene	2.70	DLM	0.038	ug/g	13-OCT-21	14-OCT-21	R5616732
Quinoline	<0.038	DLM	0.038	ug/g	13-OCT-21	14-OCT-21	R5616732
Surrogate: 2-Fluorobiphenyl	78.7		60-140	%	13-OCT-21	14-OCT-21	R5616732
Surrogate: d14-Terphenyl	79.9		60-140	%	13-OCT-21	14-OCT-21	R5616732
B(a)P Total Potency Equivalent	2.34		0.053	ug/g	13-OCT-21	14-OCT-21	R5616732

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647897-25 PPOM-SC-002A Sampled By: CLIENT on 02-OCT-21 @ 14:10 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
IACR (CCME)	26.0		0.75		13-OCT-21	14-OCT-21	R5616732
Polychlorinated Biphenyls							
Aroclor 1016	<0.014	DLHM	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623933
Aroclor 1221	<0.014	DLHM	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623933
Aroclor 1232	<0.014	DLHM	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623933
Aroclor 1242	<0.014	DLHM	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623933
Aroclor 1248	<0.014	DLHM	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623933
Aroclor 1254	0.362	DLHM	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623933
Aroclor 1260	0.515	DLHM	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623933
Aroclor 1262	<0.014	DLHM	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623933
Aroclor 1268	<0.014	DLHM	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623933
Total Polychlorinated Biphenyls	0.877		0.041	mg/kg	18-OCT-21	18-OCT-21	R5623933
Surrogate: d14-Terphenyl	104.9		50-140	%	18-OCT-21	18-OCT-21	R5623933
L2647897-26 PPOM-SC-002B Sampled By: CLIENT on 02-OCT-21 @ 14:10 Matrix: SEDIMENT							
Physical Tests							
% Moisture	73.3		0.25	%	09-OCT-21	09-OCT-21	R5615082
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0859		0.0010	g/g	19-OCT-21	19-OCT-21	R5624426
Total Organic Carbon	8.59		0.10	%	19-OCT-21	19-OCT-21	R5624426
Metals							
Aluminum (Al)	13100		50	ug/g	13-OCT-21	13-OCT-21	R5617456
Antimony (Sb)	9.19		0.10	ug/g	13-OCT-21	13-OCT-21	R5617456
Arsenic (As)	20.8		0.10	ug/g	13-OCT-21	13-OCT-21	R5617456
Barium (Ba)	303		0.50	ug/g	13-OCT-21	13-OCT-21	R5617456
Beryllium (Be)	0.54		0.10	ug/g	13-OCT-21	13-OCT-21	R5617456
Bismuth (Bi)	0.94		0.20	ug/g	13-OCT-21	13-OCT-21	R5617456
Boron (B)	11.2		5.0	ug/g	13-OCT-21	13-OCT-21	R5617456
Cadmium (Cd)	1.80		0.020	ug/g	13-OCT-21	13-OCT-21	R5617456
Calcium (Ca)	91900		50	ug/g	13-OCT-21	13-OCT-21	R5617456
Chromium (Cr)	6120	DLHC	10	ug/g	13-OCT-21	13-OCT-21	R5617456
Cobalt (Co)	16.7		0.10	ug/g	13-OCT-21	13-OCT-21	R5617456
Copper (Cu)	65.0		0.50	ug/g	13-OCT-21	13-OCT-21	R5617456
Iron (Fe)	21000		50	ug/g	13-OCT-21	13-OCT-21	R5617456
Lead (Pb)	549		0.50	ug/g	13-OCT-21	13-OCT-21	R5617456
Lithium (Li)	11.7		2.0	ug/g	13-OCT-21	13-OCT-21	R5617456
Magnesium (Mg)	11000		20	ug/g	13-OCT-21	13-OCT-21	R5617456
Manganese (Mn)	480		1.0	ug/g	13-OCT-21	13-OCT-21	R5617456
Mercury (Hg)	0.781		0.0050	ug/g	13-OCT-21	14-OCT-21	R5617361
Molybdenum (Mo)	2.12		0.10	ug/g	13-OCT-21	13-OCT-21	R5617456
Nickel (Ni)	24.3		0.50	ug/g	13-OCT-21	13-OCT-21	R5617456

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647897-26 PPOM-SC-002B Sampled By: CLIENT on 02-OCT-21 @ 14:10 Matrix: SEDIMENT							
Metals							
Phosphorus (P)	1580		50	ug/g	13-OCT-21	13-OCT-21	R5617456
Potassium (K)	2810		100	ug/g	13-OCT-21	13-OCT-21	R5617456
Selenium (Se)	0.91		0.20	ug/g	13-OCT-21	13-OCT-21	R5617456
Silver (Ag)	1.02		0.10	ug/g	13-OCT-21	13-OCT-21	R5617456
Sodium (Na)	565		50	ug/g	13-OCT-21	13-OCT-21	R5617456
Strontium (Sr)	490		0.50	ug/g	13-OCT-21	13-OCT-21	R5617456
Sulfur (S)	6500		1000	ug/g	13-OCT-21	13-OCT-21	R5617456
Thallium (Tl)	0.323		0.050	ug/g	13-OCT-21	13-OCT-21	R5617456
Tin (Sn)	20.6		2.0	ug/g	13-OCT-21	13-OCT-21	R5617456
Titanium (Ti)	693		1.0	ug/g	13-OCT-21	13-OCT-21	R5617456
Tungsten (W)	<0.50		0.50	ug/g	13-OCT-21	13-OCT-21	R5617456
Uranium (U)	0.614		0.050	ug/g	13-OCT-21	13-OCT-21	R5617456
Vanadium (V)	37.7		0.20	ug/g	13-OCT-21	13-OCT-21	R5617456
Zinc (Zn)	317		2.0	ug/g	13-OCT-21	13-OCT-21	R5617456
Zirconium (Zr)	3.3		1.0	ug/g	13-OCT-21	13-OCT-21	R5617456
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.788		0.015	ug/g	14-OCT-21	15-OCT-21	R5619618
Acenaphthylene	1.64		0.015	ug/g	14-OCT-21	15-OCT-21	R5619618
Acridine	0.365		0.030	ug/g	14-OCT-21	15-OCT-21	R5619618
Anthracene	1.08		0.012	ug/g	14-OCT-21	15-OCT-21	R5619618
Benzo(a)anthracene	2.75	R	0.030	ug/g	14-OCT-21	15-OCT-21	R5619618
Benzo(a)pyrene	3.44		0.015	ug/g	14-OCT-21	15-OCT-21	R5619618
Benzo(b&j)fluoranthene	3.16		0.030	ug/g	14-OCT-21	15-OCT-21	R5619618
Benzo(g,h,i)perylene	1.83		0.030	ug/g	14-OCT-21	15-OCT-21	R5619618
Benzo(k)fluoranthene	1.05		0.030	ug/g	14-OCT-21	15-OCT-21	R5619618
Chrysene	3.01		0.030	ug/g	14-OCT-21	15-OCT-21	R5619618
Dibenz(a,h)anthracene	0.452		0.015	ug/g	14-OCT-21	15-OCT-21	R5619618
Fluoroanthene	3.76		0.015	ug/g	14-OCT-21	15-OCT-21	R5619618
Fluorene	0.590	R	0.015	ug/g	14-OCT-21	15-OCT-21	R5619618
Indeno(1,2,3-cd)pyrene	1.64		0.030	ug/g	14-OCT-21	15-OCT-21	R5619618
1-Methylnaphthalene	0.095		0.015	ug/g	14-OCT-21	15-OCT-21	R5619618
2-Methylnaphthalene	0.096		0.015	ug/g	14-OCT-21	15-OCT-21	R5619618
Naphthalene	0.096	R	0.015	ug/g	14-OCT-21	15-OCT-21	R5619618
Phenanthrene	2.34		0.015	ug/g	14-OCT-21	15-OCT-21	R5619618
Pyrene	6.23		0.015	ug/g	14-OCT-21	15-OCT-21	R5619618
Quinoline	<0.03	DLQ	0.030	ug/g	14-OCT-21	15-OCT-21	R5619618
Surrogate: 2-Fluorobiphenyl	93.7		60-140	%	14-OCT-21	15-OCT-21	R5619618
Surrogate: d14-Terphenyl	93.5		60-140	%	14-OCT-21	15-OCT-21	R5619618
B(a)P Total Potency Equivalent	4.80		0.021	ug/g	14-OCT-21	15-OCT-21	R5619618
IACR (CCME)	48.2		0.30		14-OCT-21	15-OCT-21	R5619618
Polychlorinated Biphenyls							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647897-26 PPOM-SC-002B Sampled By: CLIENT on 02-OCT-21 @ 14:10 Matrix: SEDIMENT							
Polychlorinated Biphenyls							
Aroclor 1016	<0.014	DLHM	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623933
Aroclor 1221	<0.014	DLHM	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623933
Aroclor 1232	<0.014	DLHM	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623933
Aroclor 1242	<0.014	DLHM	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623933
Aroclor 1248	<0.014	DLHM	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623933
Aroclor 1254	0.607	DLHM	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623933
Aroclor 1260	0.874	DLHM	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623933
Aroclor 1262	<0.014	DLHM	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623933
Aroclor 1268	<0.014	DLHM	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623933
Total Polychlorinated Biphenyls	1.48		0.041	mg/kg	18-OCT-21	18-OCT-21	R5623933
Surrogate: d14-Terphenyl	88.1		50-140	%	18-OCT-21	18-OCT-21	R5623933
L2647897-27 PPOM-SG-002 Sampled By: CLIENT on 02-OCT-21 @ 14:10 Matrix: SEDIMENT							
Physical Tests							
% Moisture	79.8		0.25	%	08-OCT-21	09-OCT-21	R5614911
Liquid Limit (LL)	96		1	%	16-OCT-21	16-OCT-21	R5621298
Moisture at Plastic Limit	77		1	%	16-OCT-21	16-OCT-21	R5621298
Plasticity Index (PI)	19		1	%	16-OCT-21	16-OCT-21	R5621298
Specific Gravity	1.14		0.010	kg/L		26-OCT-21	R5629385
Particle Size							
General Texture Class	Fine				15-OCT-21	15-OCT-21	R5620016
MUST PSA % > 75um	1.3		1.0	%	15-OCT-21	15-OCT-21	R5620016
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0736		0.0010	g/g	18-OCT-21	18-OCT-21	R5623497
Total Organic Carbon	7.36		0.10	%	18-OCT-21	18-OCT-21	R5623497
Metals							
Aluminum (Al)	11400		50	ug/g	14-OCT-21	15-OCT-21	R5619038
Antimony (Sb)	1.73		0.10	ug/g	14-OCT-21	15-OCT-21	R5619038
Arsenic (As)	4.95		0.10	ug/g	14-OCT-21	15-OCT-21	R5619038
Barium (Ba)	213		0.50	ug/g	14-OCT-21	15-OCT-21	R5619038
Beryllium (Be)	0.45		0.10	ug/g	14-OCT-21	15-OCT-21	R5619038
Bismuth (Bi)	0.58		0.20	ug/g	14-OCT-21	15-OCT-21	R5619038
Boron (B)	9.7		5.0	ug/g	14-OCT-21	15-OCT-21	R5619038
Boron (B), Hot Water Ext.	0.43		0.10	ug/g	15-OCT-21	15-OCT-21	R5619212
Cadmium (Cd)	1.08		0.020	ug/g	14-OCT-21	15-OCT-21	R5619038
Calcium (Ca)	131000		50	ug/g	14-OCT-21	15-OCT-21	R5619038
Chromium (Cr)	1950		0.50	ug/g	14-OCT-21	15-OCT-21	R5619038
Cobalt (Co)	9.64		0.10	ug/g	14-OCT-21	15-OCT-21	R5619038
Copper (Cu)	71.7		0.50	ug/g	14-OCT-21	15-OCT-21	R5619038
Iron (Fe)	21400		50	ug/g	14-OCT-21	15-OCT-21	R5619038
Lead (Pb)	196		0.50	ug/g	14-OCT-21	15-OCT-21	R5619038

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647897-27 PPOM-SG-002 Sampled By: CLIENT on 02-OCT-21 @ 14:10 Matrix: SEDIMENT							
Metals							
Lithium (Li)	11.1		2.0	ug/g	14-OCT-21	15-OCT-21	R5619038
Magnesium (Mg)	15400		20	ug/g	14-OCT-21	15-OCT-21	R5619038
Manganese (Mn)	495		1.0	ug/g	14-OCT-21	15-OCT-21	R5619038
Mercury (Hg)	0.278		0.0050	ug/g	14-OCT-21	15-OCT-21	R5619400
Molybdenum (Mo)	1.42		0.10	ug/g	14-OCT-21	15-OCT-21	R5619038
Nickel (Ni)	21.0		0.50	ug/g	14-OCT-21	15-OCT-21	R5619038
Phosphorus (P)	1210		50	ug/g	14-OCT-21	15-OCT-21	R5619038
Potassium (K)	2580		100	ug/g	14-OCT-21	15-OCT-21	R5619038
Selenium (Se)	0.79		0.20	ug/g	14-OCT-21	15-OCT-21	R5619038
Silver (Ag)	0.51		0.10	ug/g	14-OCT-21	15-OCT-21	R5619038
Sodium (Na)	489		50	ug/g	14-OCT-21	15-OCT-21	R5619038
Strontium (Sr)	675		0.50	ug/g	14-OCT-21	15-OCT-21	R5619038
Sulfur (S)	5100		1000	ug/g	14-OCT-21	15-OCT-21	R5619038
Thallium (Tl)	0.239		0.050	ug/g	14-OCT-21	15-OCT-21	R5619038
Tin (Sn)	6.4		2.0	ug/g	14-OCT-21	15-OCT-21	R5619038
Titanium (Ti)	493		1.0	ug/g	14-OCT-21	15-OCT-21	R5619038
Tungsten (W)	2.27		0.50	ug/g	14-OCT-21	15-OCT-21	R5619038
Uranium (U)	0.460		0.050	ug/g	14-OCT-21	15-OCT-21	R5619038
Vanadium (V)	32.6		0.20	ug/g	14-OCT-21	15-OCT-21	R5619038
Zinc (Zn)	307		2.0	ug/g	14-OCT-21	15-OCT-21	R5619038
Zirconium (Zr)	2.5		1.0	ug/g	14-OCT-21	15-OCT-21	R5619038
Speciated Metals							
Chromium, Trivalent	1930		10	ug/g		15-OCT-21	
Chromium, Hexavalent	18.3		0.20	ug/g	13-OCT-21	14-OCT-21	R5617419
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.200	DLM	0.038	ug/g	13-OCT-21	14-OCT-21	R5616732
Acenaphthylene	0.498	DLM	0.038	ug/g	13-OCT-21	14-OCT-21	R5616732
Acridine	0.082	AI	0.075	ug/g	13-OCT-21	14-OCT-21	R5616732
Anthracene	0.315	DLM	0.030	ug/g	13-OCT-21	14-OCT-21	R5616732
Benzo(a)anthracene	1.17	R	0.075	ug/g	13-OCT-21	14-OCT-21	R5616732
Benzo(a)pyrene	1.64	DLM	0.038	ug/g	13-OCT-21	14-OCT-21	R5616732
Benzo(b&j)fluoranthene	1.96	DLM	0.075	ug/g	13-OCT-21	14-OCT-21	R5616732
Benzo(g,h,i)perylene	1.30	DLM	0.075	ug/g	13-OCT-21	14-OCT-21	R5616732
Benzo(k)fluoranthene	0.762	DLM	0.075	ug/g	13-OCT-21	14-OCT-21	R5616732
Chrysene	1.63	DLM	0.075	ug/g	13-OCT-21	14-OCT-21	R5616732
Dibenz(a,h)anthracene	0.287	DLM	0.038	ug/g	13-OCT-21	14-OCT-21	R5616732
Fluoroanthene	2.16	DLM	0.038	ug/g	13-OCT-21	14-OCT-21	R5616732
Fluorene	0.173	DLM	0.038	ug/g	13-OCT-21	14-OCT-21	R5616732
Indeno(1,2,3-cd)pyrene	0.962	DLM	0.075	ug/g	13-OCT-21	14-OCT-21	R5616732
1-Methylnaphthalene	0.060	DLM	0.038	ug/g	13-OCT-21	14-OCT-21	R5616732
2-Methylnaphthalene	0.063	DLM	0.038	ug/g	13-OCT-21	14-OCT-21	R5616732

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647897-27 PPOM-SG-002 Sampled By: CLIENT on 02-OCT-21 @ 14:10 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
Naphthalene	0.059	DLM	0.038	ug/g	13-OCT-21	14-OCT-21	R5616732
Phenanthrene	0.948	DLM	0.038	ug/g	13-OCT-21	14-OCT-21	R5616732
Pyrene	2.77	DLM	0.038	ug/g	13-OCT-21	14-OCT-21	R5616732
Quinoline	<0.038	DLM	0.038	ug/g	13-OCT-21	14-OCT-21	R5616732
Surrogate: 2-Fluorobiphenyl	77.5		60-140	%	13-OCT-21	14-OCT-21	R5616732
Surrogate: d14-Terphenyl	78.5		60-140	%	13-OCT-21	14-OCT-21	R5616732
B(a)P Total Potency Equivalent	2.44		0.053	ug/g	13-OCT-21	14-OCT-21	R5616732
IACR (CCME)	27.6		0.75		13-OCT-21	14-OCT-21	R5616732
Polychlorinated Biphenyls							
Aroclor 1016	<0.014	DLHM	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623933
Aroclor 1221	<0.014	DLHM	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623933
Aroclor 1232	<0.014	DLHM	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623933
Aroclor 1242	<0.014	DLHM	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623933
Aroclor 1248	<0.014	DLHM	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623933
Aroclor 1254	0.237	DLHM	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623933
Aroclor 1260	0.296	DLHM	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623933
Aroclor 1262	<0.014	DLHM	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623933
Aroclor 1268	<0.014	DLHM	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623933
Total Polychlorinated Biphenyls	0.534		0.041	mg/kg	18-OCT-21	18-OCT-21	R5623933
Surrogate: d14-Terphenyl	89.1		50-140	%	18-OCT-21	18-OCT-21	R5623933
L2647897-28 PPOM-SC-002C Sampled By: CLIENT on 02-OCT-21 Matrix: SEDIMENT							
Physical Tests							
% Moisture	79.2		0.25	%	21-OCT-21	22-OCT-21	R5626550
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.153		0.0010	g/g	25-OCT-21	25-OCT-21	R5628209
Total Organic Carbon	15.3		0.10	%	25-OCT-21	25-OCT-21	R5628209
Metals							
Aluminum (Al)	7500		50	ug/g	25-OCT-21	25-OCT-21	R5628138
Antimony (Sb)	24.6		0.10	ug/g	25-OCT-21	25-OCT-21	R5628138
Arsenic (As)	38.6		0.10	ug/g	25-OCT-21	25-OCT-21	R5628138
Barium (Ba)	426		0.50	ug/g	25-OCT-21	25-OCT-21	R5628138
Beryllium (Be)	0.36		0.10	ug/g	25-OCT-21	25-OCT-21	R5628138
Bismuth (Bi)	1.98		0.20	ug/g	25-OCT-21	25-OCT-21	R5628138
Boron (B)	17.5		5.0	ug/g	25-OCT-21	25-OCT-21	R5628138
Cadmium (Cd)	1.77		0.020	ug/g	25-OCT-21	25-OCT-21	R5628138
Calcium (Ca)	98600		50	ug/g	25-OCT-21	25-OCT-21	R5628138
Chromium (Cr)	16400	DLHC	10	ug/g	25-OCT-21	25-OCT-21	R5628138
Cobalt (Co)	13.6		0.10	ug/g	25-OCT-21	25-OCT-21	R5628138
Copper (Cu)	53.7		0.50	ug/g	25-OCT-21	25-OCT-21	R5628138
Iron (Fe)	14000		50	ug/g	25-OCT-21	25-OCT-21	R5628138

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647897-28 PPOM-SC-002C Sampled By: CLIENT on 02-OCT-21 Matrix: SEDIMENT							
Metals							
Lead (Pb)	750		0.50	ug/g	25-OCT-21	25-OCT-21	R5628138
Lithium (Li)	5.9		2.0	ug/g	25-OCT-21	25-OCT-21	R5628138
Magnesium (Mg)	6420		20	ug/g	25-OCT-21	25-OCT-21	R5628138
Manganese (Mn)	445		1.0	ug/g	25-OCT-21	25-OCT-21	R5628138
Mercury (Hg)	0.921	DLM	0.010	ug/g	25-OCT-21	25-OCT-21	R5627810
Molybdenum (Mo)	1.51		0.10	ug/g	25-OCT-21	25-OCT-21	R5628138
Nickel (Ni)	15.9		0.50	ug/g	25-OCT-21	25-OCT-21	R5628138
Phosphorus (P)	1720		50	ug/g	25-OCT-21	25-OCT-21	R5628138
Potassium (K)	1500		100	ug/g	25-OCT-21	25-OCT-21	R5628138
Selenium (Se)	0.84		0.20	ug/g	25-OCT-21	25-OCT-21	R5628138
Silver (Ag)	0.66		0.10	ug/g	25-OCT-21	25-OCT-21	R5628138
Sodium (Na)	729		50	ug/g	25-OCT-21	25-OCT-21	R5628138
Strontium (Sr)	573		0.50	ug/g	25-OCT-21	25-OCT-21	R5628138
Sulfur (S)	10700		1000	ug/g	25-OCT-21	25-OCT-21	R5628138
Thallium (Tl)	0.256		0.050	ug/g	25-OCT-21	25-OCT-21	R5628138
Tin (Sn)	36.6		2.0	ug/g	25-OCT-21	25-OCT-21	R5628138
Titanium (Ti)	462		1.0	ug/g	25-OCT-21	25-OCT-21	R5628138
Tungsten (W)	<0.50		0.50	ug/g	25-OCT-21	25-OCT-21	R5628138
Uranium (U)	0.661		0.050	ug/g	25-OCT-21	25-OCT-21	R5628138
Vanadium (V)	22.7		0.20	ug/g	25-OCT-21	25-OCT-21	R5628138
Zinc (Zn)	299		2.0	ug/g	25-OCT-21	25-OCT-21	R5628138
Zirconium (Zr)	2.6		1.0	ug/g	25-OCT-21	25-OCT-21	R5628138
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.586	DLHM	0.015	ug/g	21-OCT-21	22-OCT-21	R5626548
Acenaphthylene	0.526	DLHM	0.015	ug/g	21-OCT-21	22-OCT-21	R5626548
Acridine	0.164	AI	0.030	ug/g	21-OCT-21	22-OCT-21	R5626548
Anthracene	0.409	DLHM	0.012	ug/g	21-OCT-21	22-OCT-21	R5626548
Benzo(a)anthracene	1.08	R	0.030	ug/g	21-OCT-21	22-OCT-21	R5626548
Benzo(a)pyrene	1.22	DLHM	0.015	ug/g	21-OCT-21	22-OCT-21	R5626548
Benzo(b&j)fluoranthene	1.21	DLHM	0.030	ug/g	21-OCT-21	22-OCT-21	R5626548
Benzo(g,h,i)perylene	0.722	DLHM	0.030	ug/g	21-OCT-21	22-OCT-21	R5626548
Benzo(k)fluoranthene	0.345	DLHM	0.030	ug/g	21-OCT-21	22-OCT-21	R5626548
Chrysene	1.28	DLHM	0.030	ug/g	21-OCT-21	22-OCT-21	R5626548
Dibenz(a,h)anthracene	0.157	DLHM	0.015	ug/g	21-OCT-21	22-OCT-21	R5626548
Fluoroanthene	2.06	DLHM	0.015	ug/g	21-OCT-21	22-OCT-21	R5626548
Fluorene	0.304	DLHM	0.015	ug/g	21-OCT-21	22-OCT-21	R5626548
Indeno(1,2,3-cd)pyrene	0.503	DLHM	0.030	ug/g	21-OCT-21	22-OCT-21	R5626548
1-Methylnaphthalene	0.048	DLHM	0.015	ug/g	21-OCT-21	22-OCT-21	R5626548
2-Methylnaphthalene	0.056	DLHM	0.015	ug/g	21-OCT-21	22-OCT-21	R5626548
Naphthalene	0.063	DLHM	0.015	ug/g	21-OCT-21	22-OCT-21	R5626548
Phenanthrene	1.42	DLHM	0.015	ug/g	21-OCT-21	22-OCT-21	R5626548

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647897-28 PPOM-SC-002C Sampled By: CLIENT on 02-OCT-21 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
Pyrene	2.93	DLHM	0.015	ug/g	21-OCT-21	22-OCT-21	R5626548
Quinoline	<0.015	DLHM	0.015	ug/g	21-OCT-21	22-OCT-21	R5626548
Surrogate: 2-Fluorobiphenyl	85.7		60-140	%	21-OCT-21	22-OCT-21	R5626548
Surrogate: d14-Terphenyl	78.2		60-140	%	21-OCT-21	22-OCT-21	R5626548
B(a)P Total Potency Equivalent	1.71		0.021	ug/g	21-OCT-21	22-OCT-21	R5626548
IACR (CCME)	17.9		0.30		21-OCT-21	22-OCT-21	R5626548
Polychlorinated Biphenyls							
Aroclor 1016	<0.0090	DLHM	0.0090	mg/kg	26-OCT-21	26-OCT-21	R5628692
Aroclor 1221	<0.0090	DLHM	0.0090	mg/kg	26-OCT-21	26-OCT-21	R5628692
Aroclor 1232	<0.0090	DLHM	0.0090	mg/kg	26-OCT-21	26-OCT-21	R5628692
Aroclor 1242	<0.030	DLM	0.030	mg/kg	26-OCT-21	26-OCT-21	R5628692
Aroclor 1248	<0.0090	DLHM	0.0090	mg/kg	26-OCT-21	26-OCT-21	R5628692
Aroclor 1254	0.209	DLHM	0.0090	mg/kg	26-OCT-21	26-OCT-21	R5628692
Aroclor 1260	0.303	DLHM	0.0090	mg/kg	26-OCT-21	26-OCT-21	R5628692
Aroclor 1262	<0.0090	DLHM	0.0090	mg/kg	26-OCT-21	26-OCT-21	R5628692
Aroclor 1268	<0.0090	DLHM	0.0090	mg/kg	26-OCT-21	26-OCT-21	R5628692
Total Polychlorinated Biphenyls	0.512		0.027	mg/kg	26-OCT-21	26-OCT-21	R5628692
Surrogate: d14-Terphenyl	98.9		50-140	%	26-OCT-21	26-OCT-21	R5628692
L2647897-33 TCOM-SC-006B Sampled By: CLIENT on 02-OCT-21 Matrix: SEDIMENT							
Physical Tests							
% Moisture	68.8		0.25	%	18-OCT-21	19-OCT-21	R5623898
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0725		0.0010	g/g	20-OCT-21	20-OCT-21	R5625292
Total Organic Carbon	7.25		0.10	%	20-OCT-21	20-OCT-21	R5625292
Metals							
Aluminum (Al)	22500		50	ug/g	19-OCT-21	19-OCT-21	R5624992
Antimony (Sb)	2.30		0.10	ug/g	19-OCT-21	19-OCT-21	R5624992
Arsenic (As)	20.7		0.10	ug/g	19-OCT-21	19-OCT-21	R5624992
Barium (Ba)	301		0.50	ug/g	19-OCT-21	19-OCT-21	R5624992
Beryllium (Be)	0.82		0.10	ug/g	19-OCT-21	19-OCT-21	R5624992
Bismuth (Bi)	0.76		0.20	ug/g	19-OCT-21	19-OCT-21	R5624992
Boron (B)	10.8		5.0	ug/g	19-OCT-21	19-OCT-21	R5624992
Cadmium (Cd)	1.08		0.020	ug/g	19-OCT-21	19-OCT-21	R5624992
Calcium (Ca)	31100		50	ug/g	19-OCT-21	19-OCT-21	R5624992
Chromium (Cr)	2980	DLHC	10	ug/g	19-OCT-21	19-OCT-21	R5624992
Cobalt (Co)	22.7		0.10	ug/g	19-OCT-21	19-OCT-21	R5624992
Copper (Cu)	51.5		0.50	ug/g	19-OCT-21	19-OCT-21	R5624992
Iron (Fe)	30600		50	ug/g	19-OCT-21	19-OCT-21	R5624992
Lead (Pb)	261		0.50	ug/g	19-OCT-21	19-OCT-21	R5624992
Lithium (Li)	17.6		2.0	ug/g	19-OCT-21	19-OCT-21	R5624992

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647897-33 TCOM-SC-006B Sampled By: CLIENT on 02-OCT-21 Matrix: SEDIMENT							
Metals							
Magnesium (Mg)	16200		20	ug/g	19-OCT-21	19-OCT-21	R5624992
Manganese (Mn)	719		1.0	ug/g	19-OCT-21	19-OCT-21	R5624992
Mercury (Hg)	0.845		0.0050	ug/g	19-OCT-21	20-OCT-21	R5624981
Molybdenum (Mo)	1.17		0.10	ug/g	19-OCT-21	19-OCT-21	R5624992
Nickel (Ni)	35.2		0.50	ug/g	19-OCT-21	19-OCT-21	R5624992
Phosphorus (P)	1360		50	ug/g	19-OCT-21	19-OCT-21	R5624992
Potassium (K)	4710		100	ug/g	19-OCT-21	19-OCT-21	R5624992
Selenium (Se)	0.93		0.20	ug/g	19-OCT-21	19-OCT-21	R5624992
Silver (Ag)	0.83		0.10	ug/g	19-OCT-21	19-OCT-21	R5624992
Sodium (Na)	650		50	ug/g	19-OCT-21	19-OCT-21	R5624992
Strontium (Sr)	179		0.50	ug/g	19-OCT-21	19-OCT-21	R5624992
Sulfur (S)	5600		1000	ug/g	19-OCT-21	19-OCT-21	R5624992
Thallium (Tl)	0.380		0.050	ug/g	19-OCT-21	19-OCT-21	R5624992
Tin (Sn)	9.3		2.0	ug/g	19-OCT-21	19-OCT-21	R5624992
Titanium (Ti)	1310		1.0	ug/g	19-OCT-21	19-OCT-21	R5624992
Tungsten (W)	<0.50		0.50	ug/g	19-OCT-21	19-OCT-21	R5624992
Uranium (U)	0.776		0.050	ug/g	19-OCT-21	19-OCT-21	R5624992
Vanadium (V)	56.5		0.20	ug/g	19-OCT-21	19-OCT-21	R5624992
Zinc (Zn)	236		2.0	ug/g	19-OCT-21	19-OCT-21	R5624992
Zirconium (Zr)	7.7		1.0	ug/g	19-OCT-21	19-OCT-21	R5624992
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.091		0.010	ug/g	19-OCT-21	20-OCT-21	R5625547
Acenaphthylene	0.775		0.010	ug/g	19-OCT-21	20-OCT-21	R5625547
Acridine	0.075	AI	0.020	ug/g	19-OCT-21	20-OCT-21	R5625547
Anthracene	0.319		0.0080	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(a)anthracene	0.956	R	0.020	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(a)pyrene	1.47		0.010	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(b&j)fluoranthene	1.32		0.020	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(g,h,i)perylene	0.787		0.020	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(k)fluoranthene	0.480		0.020	ug/g	19-OCT-21	20-OCT-21	R5625547
Chrysene	1.10		0.020	ug/g	19-OCT-21	20-OCT-21	R5625547
Dibenz(a,h)anthracene	0.205		0.010	ug/g	19-OCT-21	20-OCT-21	R5625547
Fluoroanthene	1.07		0.010	ug/g	19-OCT-21	20-OCT-21	R5625547
Fluorene	0.135	R	0.010	ug/g	19-OCT-21	20-OCT-21	R5625547
Indeno(1,2,3-cd)pyrene	0.752		0.020	ug/g	19-OCT-21	20-OCT-21	R5625547
1-Methylnaphthalene	0.050		0.010	ug/g	19-OCT-21	20-OCT-21	R5625547
2-Methylnaphthalene	0.070		0.010	ug/g	19-OCT-21	20-OCT-21	R5625547
Naphthalene	0.075		0.010	ug/g	19-OCT-21	20-OCT-21	R5625547
Phenanthrene	0.468		0.010	ug/g	19-OCT-21	20-OCT-21	R5625547
Pyrene	1.85		0.010	ug/g	19-OCT-21	20-OCT-21	R5625547
Quinoline	<0.02	DLQ	0.020	ug/g	19-OCT-21	20-OCT-21	R5625547

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647897-33 TCOM-SC-006B Sampled By: CLIENT on 02-OCT-21 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
Surrogate: 2-Fluorobiphenyl	89.1		60-140	%	19-OCT-21	20-OCT-21	R5625547
Surrogate: d14-Terphenyl	87.8		60-140	%	19-OCT-21	20-OCT-21	R5625547
B(a)P Total Potency Equivalent	2.05		0.020	ug/g	19-OCT-21	20-OCT-21	R5625547
IACR (CCME)	19.9		0.20		19-OCT-21	20-OCT-21	R5625547
Polychlorinated Biphenyls							
Aroclor 1016	<0.0060	DLHM	0.0060	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1221	<0.0060	DLHM	0.0060	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1232	<0.0060	DLHM	0.0060	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1242	<0.0350	DLM	0.035	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1248	<0.0060	DLHM	0.0060	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1254	0.409	DLHM	0.0060	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1260	0.743	DLHM	0.0060	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1262	<0.0060	DLHM	0.0060	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1268	<0.0060	DLHM	0.0060	mg/kg	21-OCT-21	21-OCT-21	R5625841
Total Polychlorinated Biphenyls	1.152		0.018	mg/kg	21-OCT-21	21-OCT-21	R5625841
Surrogate: d14-Terphenyl	95.9		50-140	%	21-OCT-21	21-OCT-21	R5625841

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Reference Information

QC Samples with Qualifiers & Comments:

QC Type Description	Parameter	Qualifier	Applies to Sample Number(s)
Duplicate	Benzo(a)pyrene	DUP-H	L2647897-22, -24, -25, -27
Duplicate	Fluoroanthene	DUP-H	L2647897-22, -24, -25, -27
Duplicate	Pyrene	DUP-H	L2647897-22, -24, -25, -27
Duplicate	Aroclor 1254	DUP-H	L2647897-10, -11, -12, -13, -14, -15, -16, -18, -19, -2, -20, -21, -22, -3, -4, -5, -6, -7, -8, -9
Duplicate	Aroclor 1260	DUP-H	L2647897-10, -11, -12, -13, -14, -15, -16, -18, -19, -2, -20, -21, -22, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Benzo(g,h,i)perylene	MES	L2647897-33
Matrix Spike	Benzo(a)pyrene	MS-B	L2647897-33
Matrix Spike	Benzo(b&j)fluoranthene	MS-B	L2647897-33
Matrix Spike	Pyrene	MS-B	L2647897-33
Matrix Spike	Aroclor 1254	MS-B	L2647897-1
Matrix Spike	Aroclor 1254	MS-B	L2647897-10, -11, -12, -13, -14, -15, -16, -18, -19, -2, -20, -21, -22, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Aroclor 1254	MS-B	L2647897-33
Matrix Spike	Aroclor 1254	MS-B	L2647897-17, -28
Matrix Spike	Aroclor 1260	MS-B	L2647897-1
Matrix Spike	Aroclor 1260	MS-B	L2647897-10, -11, -12, -13, -14, -15, -16, -18, -19, -2, -20, -21, -22, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Aroclor 1260	MS-B	L2647897-33
Matrix Spike	Aroclor 1260	MS-B	L2647897-17, -28

Sample Parameter Qualifier key listed:

Qualifier	Description
AI	Analytical interferences may be present. Result may be biased high.
DLHC	Detection Limit Raised: Dilution required due to high concentration of test analyte(s).
DLHM	Detection Limit Adjusted: Sample has High Moisture Content
DLM	Detection Limit Adjusted due to sample matrix effects (e.g. chemical interference, colour, turbidity).
DLQ	Detection Limit raised due to co-eluting interference. GCMS qualifier ion ratio did not meet acceptance criteria.
DLR	Detection Limit Raised due to required dilution, limited sample amount, and/or high moisture content (soil samples)
DUP-H	Duplicate results outside ALS DQO, due to sample heterogeneity.
FR4	As per applicable reference method(s), soil:water ratio for Fixed Ratio Leach was modified to 1:4 due to high soil organic content.
MES	Data Quality Objective was marginally exceeded (by < 10% absolute) for < 10% of analytes in a Multi-Element Scan / Multi-Parameter Scan (considered acceptable as per OMOE & CCME).
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
PRAR	PCB Pattern Most Closely Resembles Aroclor Reported
PSAL	Limited sample was available for Particle Size Analysis (100g minimum is standard). Measurement Uncertainty for PSA results may be higher than usual.
R	The ion abundance ratio(s) did not meet the acceptance criteria. Value is an estimated maximum.
RRR	Refer to Report Remarks for issues regarding this analysis

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
ATTERBERG-SK	Soil	Atterberg limits	CARTER CSSS 58

The liquid limit (or upper plastic limit) is the point at which the soil becomes semifluid, like softened butter. In operational terms, the liquid limit is defined as the water content at which a trapezoidal groove cut in moist soil is closed after 25 taps on a hard rubber plate (ASTM D-18, 1958).

The plastic limit (or lower plastic limit) is defined as the water content at which soil begins to crumble on being rolled into a thread 1/8 inch (or 3 mm) in diameter. It represents the lowest water content at which soil can be deformed readily without cracking.

The plastic index (which is the difference between the liquid and plastic limits) gives an indication of the "clayeyness" or plasticity of a clay and is employed in engineering classification systems for soils.

This method is equivalent to ASTM D4318-10.

B-HWS-R511-WT	Soil	Boron-HWE-O.Reg 153/04 (July 2011)	HW EXTR, EPA 6010B

A dried solid sample is extracted with calcium chloride, the sample undergoes a heating process. After cooling the sample is filtered and analyzed by ICP/OES.

Reference Information

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011 and as of November 30, 2020), unless a subset of the Analytical Test Group (ATG) has been requested (the Protocol states that all analytes in an ATG must be reported).

CR-CR3-WT	Soil	Trivalent Chromium in Soil Calculation	BC WLAP LAB MANUAL / EPA 3060A & 7196A

This analysis is carried out using the method "Trivalent Chromium in Solids", as published in the BC WLAP Laboratory Methods Manual (2003). Chromium (III) is determined by subtraction of chromium (VI) from total chromium. Chromium (VI) is determined by the alkaline leach method, and total chromium is determined using CSR Analytical Method 8 "Strong Acid Leachable Metals (SALM) in Soil", BC Ministry of Environment, Lands and Parks, 26 June 2001. All results are reported as milligrams per dry kilogram of sediment/soil.

CR-CR6-IC-WT	Soil	Hexavalent Chromium in Soil	SW846 3060A/7199

This analysis is carried out using procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846, Method 7199, published by the United States Environmental Protection Agency (EPA). The procedure involves analysis for chromium (VI) by ion chromatography using diphenylcarbazide in a sulphuric acid solution.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

HG-200.2-CVAA-WT	Soil	Mercury in Soil by CVAAS	EPA 200.2/1631E (mod)

Soil samples are digested with nitric and hydrochloric acids, followed by analysis by CVAAS.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

MET-200.2-CCMS-WT	Soil	Metals in Soil by CRC ICPMS	EPA 200.2/6020B (mod)

Soil/sediment is dried, disaggregated, and sieved (2 mm). For tests intended to support Ontario regulations, the <2mm fraction is ground to pass through a 0.355 mm sieve. Strong Acid Leachable Metals in the <2mm fraction are solubilized by heated digestion with nitric and hydrochloric acids. Instrumental analysis is by Collision / Reaction Cell ICPMS.

Limitations: This method is intended to liberate environmentally available metals. Silicate minerals are not solubilized. Some metals may be only partially recovered (matrix dependent), including Al, Ba, Be, Cr, S, Sr, Ti, Tl, V, W, and Zr. Elemental Sulfur may be poorly recovered by this method. Volatile forms of sulfur (e.g. sulfide, H2S) may be excluded if lost during sampling, storage, or digestion.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011), unless a subset of the Analytical Test Group (ATG) has been requested (the Protocol states that all analytes in an ATG must be reported).

MOISTURE-WT	Soil	% Moisture	CCME PHC in Soil - Tier 1 (mod)

PAH-CCME-SQGL-WT	Soil	PAHs in Sediment	SW846 8270

The procedure uses a mechanical shaking technique to extract a representative sub-sample with a mixture of methanol and toluene. The extract is analyzed by GC/MSD. Depending on the analytical GC/MS column used benzo(j)fluoranthene may chromatographically co-elute with benzo(b)fluoranthene or benzo(k)fluoranthene.

PCB9-LOW-WT	Soil	PCBs to meet CCME Sediment Criteria	SW846 8270

A representative sub-sample of a soil sample is mixed with methanol and extracted with toluene using a shaker technique. An aliquot of the separated toluene is analyzed by GC/MSD.

PSA-MUST-SK	Soil	% Particles > 75um (Coarse/Fine)	ASTM D6913

An air-dried sample is reduced to < 2 mm size and mixed with a dispersing agent (Calgon solution). The sample is washed through a 200 mesh (75 µm) sieve. The retained mass of sample is used to determine % sand fraction.

Reference: ASTM D422-63

SPECGRAV-CL	Soil	Specific Gravity	ASTM D 5057

A portion of sample is weighed in a container that is calibrated for volume. Specific Gravity is reported as the mass of sample per mass of an equal volume of pure water, where the density of pure water is taken to be 1.00 g/mL.

TOC-WT	Soil	TOC & FOC in Solids	CARTER 21.3.2

Soil is treated with excess acidic dichromate, which reacts with the organic carbon, oxidizing it to CO2. The residual dichromate is titrated with ferrous ammonium sulphate and TOC calculated by difference.

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

Reference Information

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
SK	ALS ENVIRONMENTAL - SASKATOON, SASKATCHEWAN, CANADA
WT	ALS ENVIRONMENTAL - WATERLOO, ONTARIO, CANADA
CL	ALS ENVIRONMENTAL - CALGARY, ALBERTA, CANADA

Chain of Custody Numbers:

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.
mg/kg - milligrams per kilogram based on dry weight of sample
mg/kg wwt - milligrams per kilogram based on wet weight of sample
mg/kg lwt - milligrams per kilogram based on lipid weight of sample
mg/L - unit of concentration based on volume, parts per million.
< - Less than.
D.L. - The reporting limit.
N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.
UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.
Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
ATTERBERG-SK	**Soil**							
Batch R5619861								
WG3634787-1 DUP		**L2648161-1**						
Liquid Limit (LL)		78	78		%	0.2	20	15-OCT-21
Moisture at Plastic Limit		55	56		%	1.7	20	15-OCT-21
Plasticity Index (PI)		23	23		%	3.4	20	15-OCT-21
WG3634787-2 IRM		**ATB-1_SOIL**						
Liquid Limit (LL)			107.5		%		80-120	15-OCT-21
Moisture at Plastic Limit			112.4		%		80-120	15-OCT-21
Plasticity Index (PI)			99.6		%		80-120	15-OCT-21
Batch R5621298								
WG3638575-1 DUP		**L2647880-1**						
Liquid Limit (LL)		95	95		%	0.5	20	16-OCT-21
Moisture at Plastic Limit		70	69		%	1.7	20	16-OCT-21
Plasticity Index (PI)		25	26		%	2.9	20	16-OCT-21
WG3638575-2 IRM		**ATB-1_SOIL**						
Liquid Limit (LL)			104.6		%		80-120	16-OCT-21
Moisture at Plastic Limit			109.1		%		80-120	16-OCT-21
Plasticity Index (PI)			97.4		%		80-120	16-OCT-21
B-HWS-R511-WT	**Soil**							
Batch R5615797								
WG3635385-4 DUP		**L2647444-4**						
Boron (B), Hot Water Ext.		0.20	0.20		ug/g	4.2	30	12-OCT-21
WG3635385-2 IRM		**WT SAR4**						
Boron (B), Hot Water Ext.			101.3		%		70-130	12-OCT-21
WG3635385-3 LCS								
Boron (B), Hot Water Ext.			106.0		%		70-130	12-OCT-21
WG3635385-1 MB								
Boron (B), Hot Water Ext.			<0.10		ug/g		0.1	12-OCT-21
Batch R5615812								
WG3635407-4 DUP		**L2648582-2**						
Boron (B), Hot Water Ext.		<0.10	<0.10	RPD-NA	ug/g	N/A	30	12-OCT-21
WG3635407-2 IRM		**WT SAR4**						
Boron (B), Hot Water Ext.			98.5		%		70-130	12-OCT-21
WG3635407-3 LCS								
Boron (B), Hot Water Ext.			106.0		%		70-130	12-OCT-21
WG3635407-1 MB								
Boron (B), Hot Water Ext.			<0.10		ug/g		0.1	12-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
B-HWS-R511-WT	**Soil**							
Batch R5619212								
WG3638137-4 DUP		**L2649800-3**						
Boron (B), Hot Water Ext.		<0.10	<0.10	RPD-NA	ug/g	N/A	30	15-OCT-21
WG3638137-2 IRM		**WT SAR4**						
Boron (B), Hot Water Ext.			110.2		%		70-130	15-OCT-21
WG3638137-3 LCS								
Boron (B), Hot Water Ext.			101.0		%		70-130	15-OCT-21
WG3638137-1 MB								
Boron (B), Hot Water Ext.			<0.10		ug/g		0.1	15-OCT-21
CR-CR6-IC-WT	**Soil**							
Batch R5617419								
WG3636253-4 CRM		**WT-SQC012**						
Chromium, Hexavalent			78.5		%		70-130	14-OCT-21
WG3636253-3 DUP		**L2648720-3**						
Chromium, Hexavalent		<0.20	<0.20	RPD-NA	ug/g	N/A	35	14-OCT-21
WG3636253-2 LCS								
Chromium, Hexavalent			91.9		%		80-120	14-OCT-21
WG3636253-1 MB								
Chromium, Hexavalent			<0.20		ug/g		0.2	14-OCT-21
HG-200.2-CVAA-WT	**Soil**							
Batch R5615540								
WG3635384-2 CRM		**WT-SS-2**						
Mercury (Hg)			98.0		%		70-130	12-OCT-21
WG3635384-6 DUP		**WG3635384-5**						
Mercury (Hg)		0.0135	0.0133		ug/g	1.4	40	12-OCT-21
WG3635384-3 LCS								
Mercury (Hg)			101.5		%		80-120	12-OCT-21
WG3635384-1 MB								
Mercury (Hg)			<0.0050		mg/kg		0.005	12-OCT-21
Batch R5615544								
WG3635380-2 CRM		**WT-SS-2**						
Mercury (Hg)			97.0		%		70-130	12-OCT-21
WG3635380-6 DUP		**WG3635380-5**						
Mercury (Hg)		0.0104	0.0101		ug/g	3.2	40	12-OCT-21
WG3635380-3 LCS								
Mercury (Hg)			104.0		%		80-120	12-OCT-21
WG3635380-1 MB								
Mercury (Hg)			<0.0050		mg/kg		0.005	12-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
HG-200.2-CVAA-WT	**Soil**							
Batch R5616446								
WG3635672-2 CRM		**WT-SS-2**						
Mercury (Hg)			102.5		%		70-130	13-OCT-21
WG3635672-6 DUP		**WG3635672-5**						
Mercury (Hg)		0.263	0.256		ug/g	2.7	40	13-OCT-21
WG3635672-3 LCS								
Mercury (Hg)			111.0		%		80-120	13-OCT-21
WG3635672-1 MB								
Mercury (Hg)			<0.0050		mg/kg		0.005	13-OCT-21
Batch R5616461								
WG3635707-2 CRM		**WT-SS-2**						
Mercury (Hg)			111.8		%		70-130	13-OCT-21
WG3635707-6 DUP		**WG3635707-5**						
Mercury (Hg)		0.295	0.252		ug/g	15	40	13-OCT-21
WG3635707-3 LCS								
Mercury (Hg)			114.0		%		80-120	13-OCT-21
WG3635707-1 MB								
Mercury (Hg)			<0.0050		mg/kg		0.005	13-OCT-21
Batch R5617360								
WG3636284-2 CRM		**WT-SS-2**						
Mercury (Hg)			106.1		%		70-130	14-OCT-21
WG3636284-6 DUP		**WG3636284-5**						
Mercury (Hg)		0.204	0.206		ug/g	1.1	40	14-OCT-21
WG3636284-3 LCS								
Mercury (Hg)			106.0		%		80-120	14-OCT-21
WG3636284-1 MB								
Mercury (Hg)			<0.0050		mg/kg		0.005	14-OCT-21
Batch R5617361								
WG3636643-2 CRM		**WT-SS-2**						
Mercury (Hg)			100.8		%		70-130	14-OCT-21
WG3636643-6 DUP		**WG3636643-5**						
Mercury (Hg)		0.0613	0.0613		ug/g	0.0	40	14-OCT-21
WG3636643-3 LCS								
Mercury (Hg)			101.0		%		80-120	14-OCT-21
WG3636643-1 MB								
Mercury (Hg)			<0.0050		mg/kg		0.005	14-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
HG-200.2-CVAA-WT	**Soil**							
Batch R5619400								
WG3638129-2 CRM		**WT-SS-2**						
Mercury (Hg)			93.6		%		70-130	15-OCT-21
WG3638129-6 DUP		**WG3638129-5**						
Mercury (Hg)		0.0077	0.0082		ug/g	6.4	40	15-OCT-21
WG3638129-3 LCS								
Mercury (Hg)			101.0		%		80-120	15-OCT-21
WG3638129-1 MB								
Mercury (Hg)			<0.0050		mg/kg		0.005	15-OCT-21
Batch R5624981								
WG3640343-9 CRM		**WT-SS-2**						
Mercury (Hg)			101.8		%		70-130	20-OCT-21
WG3640343-13 DUP		**WG3640343-12**						
Mercury (Hg)		0.0286	0.0192		ug/g	39	40	20-OCT-21
WG3640343-10 LCS								
Mercury (Hg)			106.5		%		80-120	20-OCT-21
WG3640343-8 MB								
Mercury (Hg)			<0.0050		mg/kg		0.005	20-OCT-21
Batch R5627810								
WG3644498-2 CRM		**WT-SS-2**						
Mercury (Hg)			93.9		%		70-130	25-OCT-21
WG3644498-6 DUP		**WG3644498-5**						
Mercury (Hg)		0.0729	0.0694		ug/g	4.9	40	25-OCT-21
WG3644498-3 LCS								
Mercury (Hg)			98.5		%		80-120	25-OCT-21
WG3644498-1 MB								
Mercury (Hg)			<0.0050		mg/kg		0.005	25-OCT-21
MET-200.2-CCMS-WT	**Soil**							
Batch R5616049								
WG3635384-2 CRM		**WT-SS-2**						
Aluminum (Al)			112.2		%		70-130	12-OCT-21
Antimony (Sb)			106.9		%		70-130	12-OCT-21
Arsenic (As)			120.4		%		70-130	12-OCT-21
Barium (Ba)			111.7		%		70-130	12-OCT-21
Beryllium (Be)			110.8		%		70-130	12-OCT-21
Bismuth (Bi)			0.14		mg/kg		0-0.34	12-OCT-21
Boron (B)			9.3		mg/kg		3.5-13.5	12-OCT-21
Cadmium (Cd)			104.1		%		70-130	12-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5616049								
WG3635384-2 CRM		**WT-SS-2**						
Calcium (Ca)			105.6		%		70-130	12-OCT-21
Chromium (Cr)			111.8		%		70-130	12-OCT-21
Cobalt (Co)			110.8		%		70-130	12-OCT-21
Copper (Cu)			113.3		%		70-130	12-OCT-21
Iron (Fe)			106.8		%		70-130	12-OCT-21
Lead (Pb)			106.3		%		70-130	12-OCT-21
Lithium (Li)			111.1		%		70-130	12-OCT-21
Magnesium (Mg)			111.2		%		70-130	12-OCT-21
Manganese (Mn)			110.6		%		70-130	12-OCT-21
Molybdenum (Mo)			108.8		%		70-130	12-OCT-21
Nickel (Ni)			111.4		%		70-130	12-OCT-21
Phosphorus (P)			118.1		%		70-130	12-OCT-21
Potassium (K)			110.6		%		70-130	12-OCT-21
Selenium (Se)			0.14		mg/kg		0-0.34	12-OCT-21
Silver (Ag)			99.5		%		70-130	12-OCT-21
Sodium (Na)			102.9		%		70-130	12-OCT-21
Strontium (Sr)			110.0		%		70-130	12-OCT-21
Thallium (Tl)			0.076		mg/kg		0.029-0.129	12-OCT-21
Tin (Sn)			108.2		%		70-130	12-OCT-21
Titanium (Ti)			102.3		%		70-130	12-OCT-21
Uranium (U)			94.2		%		70-130	12-OCT-21
Vanadium (V)			108.7		%		70-130	12-OCT-21
Zinc (Zn)			100.6		%		70-130	12-OCT-21
Zirconium (Zr)			101.9		%		70-130	12-OCT-21
WG3635384-6 DUP		**WG3635384-5**						
Aluminum (Al)		9780	10400		ug/g	6.3	40	12-OCT-21
Antimony (Sb)		<0.10	<0.10	RPD-NA	ug/g	N/A	30	12-OCT-21
Arsenic (As)		4.21	4.17		ug/g	0.9	30	12-OCT-21
Barium (Ba)		47.4	49.4		ug/g	4.1	40	12-OCT-21
Beryllium (Be)		0.47	0.49		ug/g	5.8	30	12-OCT-21
Bismuth (Bi)		<0.20	<0.20	RPD-NA	ug/g	N/A	30	12-OCT-21
Boron (B)		6.9	8.0		ug/g	14	30	12-OCT-21
Cadmium (Cd)		0.088	0.108		ug/g	21	30	12-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5616049								
WG3635384-6 DUP		**WG3635384-5**						
Calcium (Ca)		99800	98400		ug/g	1.5	30	12-OCT-21
Chromium (Cr)		18.5	18.3		ug/g	0.8	30	12-OCT-21
Cobalt (Co)		8.73	8.61		ug/g	1.5	30	12-OCT-21
Copper (Cu)		20.2	20.1		ug/g	0.4	30	12-OCT-21
Iron (Fe)		19700	20100		ug/g	1.7	30	12-OCT-21
Lead (Pb)		10.7	7.99		ug/g	29	40	12-OCT-21
Lithium (Li)		19.3	19.8		ug/g	2.6	30	12-OCT-21
Magnesium (Mg)		12900	12700		ug/g	1.9	30	12-OCT-21
Manganese (Mn)		530	512		ug/g	3.5	30	12-OCT-21
Molybdenum (Mo)		0.45	0.50		ug/g	10	40	12-OCT-21
Nickel (Ni)		19.1	18.8		ug/g	1.8	30	12-OCT-21
Phosphorus (P)		766	734		ug/g	4.3	30	12-OCT-21
Potassium (K)		1580	1700		ug/g	7.3	40	12-OCT-21
Selenium (Se)		<0.20	<0.20	RPD-NA	ug/g	N/A	30	12-OCT-21
Silver (Ag)		<0.10	<0.10	RPD-NA	ug/g	N/A	40	12-OCT-21
Sodium (Na)		269	270		ug/g	0.3	40	12-OCT-21
Strontium (Sr)		170	168		ug/g	1.2	40	12-OCT-21
Sulfur (S)		2700	2700		ug/g	0.4	30	12-OCT-21
Thallium (Tl)		0.111	0.109		ug/g	2.2	30	12-OCT-21
Tin (Sn)		<2.0	<2.0	RPD-NA	ug/g	N/A	40	12-OCT-21
Titanium (Ti)		243	262		ug/g	7.3	40	12-OCT-21
Tungsten (W)		<0.50	<0.50	RPD-NA	ug/g	N/A	30	12-OCT-21
Uranium (U)		0.680	0.648		ug/g	4.7	30	12-OCT-21
Vanadium (V)		24.7	25.2		ug/g	2.0	30	12-OCT-21
Zinc (Zn)		42.7	48.6		ug/g	13	30	12-OCT-21
Zirconium (Zr)		7.1	7.6		ug/g	6.7	30	12-OCT-21
WG3635384-4 LCS								
Aluminum (Al)			113.2		%		80-120	12-OCT-21
Antimony (Sb)			101.2		%		80-120	12-OCT-21
Arsenic (As)			112.0		%		80-120	12-OCT-21
Barium (Ba)			113.9		%		80-120	12-OCT-21
Beryllium (Be)			99.4		%		80-120	12-OCT-21
Bismuth (Bi)			93.5		%		80-120	12-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5616049								
WG3635384-4 LCS								
Boron (B)			94.7		%		80-120	12-OCT-21
Cadmium (Cd)			98.6		%		80-120	12-OCT-21
Calcium (Ca)			99.6		%		80-120	12-OCT-21
Chromium (Cr)			110.3		%		80-120	12-OCT-21
Cobalt (Co)			109.4		%		80-120	12-OCT-21
Copper (Cu)			106.9		%		80-120	12-OCT-21
Iron (Fe)			99.2		%		80-120	12-OCT-21
Lead (Pb)			97.9		%		80-120	12-OCT-21
Lithium (Li)			101.9		%		80-120	12-OCT-21
Magnesium (Mg)			116.0		%		80-120	12-OCT-21
Manganese (Mn)			108.8		%		80-120	12-OCT-21
Molybdenum (Mo)			104.0		%		80-120	12-OCT-21
Nickel (Ni)			108.7		%		80-120	12-OCT-21
Phosphorus (P)			116.2		%		80-120	12-OCT-21
Potassium (K)			109.7		%		80-120	12-OCT-21
Selenium (Se)			97.1		%		80-120	12-OCT-21
Silver (Ag)			92.1		%		80-120	12-OCT-21
Sodium (Na)			104.3		%		80-120	12-OCT-21
Strontium (Sr)			105.9		%		80-120	12-OCT-21
Sulfur (S)			98.0		%		80-120	12-OCT-21
Thallium (Tl)			99.98		%		80-120	12-OCT-21
Tin (Sn)			101.9		%		80-120	12-OCT-21
Titanium (Ti)			110.5		%		80-120	12-OCT-21
Tungsten (W)			97.6		%		80-120	12-OCT-21
Uranium (U)			94.5		%		80-120	12-OCT-21
Vanadium (V)			114.3		%		80-120	12-OCT-21
Zinc (Zn)			99.5		%		80-120	12-OCT-21
Zirconium (Zr)			100.4		%		80-120	12-OCT-21
WG3635384-1 MB								
Aluminum (Al)			<50		mg/kg		50	12-OCT-21
Antimony (Sb)			<0.10		mg/kg		0.1	12-OCT-21
Arsenic (As)			<0.10		mg/kg		0.1	12-OCT-21
Barium (Ba)			<0.50		mg/kg		0.5	12-OCT-21
Beryllium (Be)			<0.10		mg/kg		0.1	12-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5616049								
WG3635384-1 MB								
Bismuth (Bi)			<0.20		mg/kg		0.2	12-OCT-21
Boron (B)			<5.0		mg/kg		5	12-OCT-21
Cadmium (Cd)			<0.020		mg/kg		0.02	12-OCT-21
Calcium (Ca)			<50		mg/kg		50	12-OCT-21
Chromium (Cr)			<0.50		mg/kg		0.5	12-OCT-21
Cobalt (Co)			<0.10		mg/kg		0.1	12-OCT-21
Copper (Cu)			<0.50		mg/kg		0.5	12-OCT-21
Iron (Fe)			<50		mg/kg		50	12-OCT-21
Lead (Pb)			<0.50		mg/kg		0.5	12-OCT-21
Lithium (Li)			<2.0		mg/kg		2	12-OCT-21
Magnesium (Mg)			<20		mg/kg		20	12-OCT-21
Manganese (Mn)			<1.0		mg/kg		1	12-OCT-21
Molybdenum (Mo)			<0.10		mg/kg		0.1	12-OCT-21
Nickel (Ni)			<0.50		mg/kg		0.5	12-OCT-21
Phosphorus (P)			<50		mg/kg		50	12-OCT-21
Potassium (K)			<100		mg/kg		100	12-OCT-21
Selenium (Se)			<0.20		mg/kg		0.2	12-OCT-21
Silver (Ag)			<0.10		mg/kg		0.1	12-OCT-21
Sodium (Na)			<50		mg/kg		50	12-OCT-21
Strontium (Sr)			<0.50		mg/kg		0.5	12-OCT-21
Sulfur (S)			<1000		mg/kg		1000	12-OCT-21
Thallium (Tl)			<0.050		mg/kg		0.05	12-OCT-21
Tin (Sn)			<2.0		mg/kg		2	12-OCT-21
Titanium (Ti)			<1.0		mg/kg		1	12-OCT-21
Tungsten (W)			<0.50		mg/kg		0.5	12-OCT-21
Uranium (U)			<0.050		mg/kg		0.05	12-OCT-21
Vanadium (V)			<0.20		mg/kg		0.2	12-OCT-21
Zinc (Zn)			<2.0		mg/kg		2	12-OCT-21
Zirconium (Zr)			<1.0		mg/kg		1	12-OCT-21
Batch R5616343								
WG3635380-2 CRM		**WT-SS-2**						
Aluminum (Al)			100.0		%		70-130	12-OCT-21
Antimony (Sb)			81.8		%		70-130	12-OCT-21
Arsenic (As)			100.7		%		70-130	12-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5616343								
WG3635380-2 CRM		**WT-SS-2**						
Barium (Ba)			110.8		%		70-130	12-OCT-21
Beryllium (Be)			88.4		%		70-130	12-OCT-21
Bismuth (Bi)			0.15		mg/kg		0-0.34	12-OCT-21
Boron (B)			7.2		mg/kg		3.5-13.5	12-OCT-21
Cadmium (Cd)			92.1		%		70-130	12-OCT-21
Calcium (Ca)			92.3		%		70-130	12-OCT-21
Chromium (Cr)			98.3		%		70-130	12-OCT-21
Cobalt (Co)			97.3		%		70-130	12-OCT-21
Copper (Cu)			97.3		%		70-130	12-OCT-21
Iron (Fe)			99.5		%		70-130	12-OCT-21
Lead (Pb)			87.7		%		70-130	12-OCT-21
Lithium (Li)			82.4		%		70-130	12-OCT-21
Magnesium (Mg)			104.5		%		70-130	12-OCT-21
Manganese (Mn)			106.4		%		70-130	12-OCT-21
Molybdenum (Mo)			93.0		%		70-130	12-OCT-21
Nickel (Ni)			99.9		%		70-130	12-OCT-21
Phosphorus (P)			100.2		%		70-130	12-OCT-21
Potassium (K)			95.6		%		70-130	12-OCT-21
Selenium (Se)			0.13		mg/kg		0-0.34	12-OCT-21
Silver (Ag)			101.4		%		70-130	12-OCT-21
Sodium (Na)			97.4		%		70-130	12-OCT-21
Strontium (Sr)			89.4		%		70-130	12-OCT-21
Thallium (Tl)			0.073		mg/kg		0.029-0.129	12-OCT-21
Tin (Sn)			84.7		%		70-130	12-OCT-21
Titanium (Ti)			95.6		%		70-130	12-OCT-21
Uranium (U)			90.1		%		70-130	12-OCT-21
Vanadium (V)			98.2		%		70-130	12-OCT-21
Zinc (Zn)			94.6		%		70-130	12-OCT-21
Zirconium (Zr)			87.6		%		70-130	12-OCT-21
WG3635380-6 DUP		**WG3635380-5**						
Aluminum (Al)		13400	14300		ug/g	6.6	40	12-OCT-21
Antimony (Sb)		<0.10	<0.10	RPD-NA	ug/g	N/A	30	12-OCT-21
Arsenic (As)		4.59	4.63		ug/g	1.0	30	12-OCT-21
Barium (Ba)		60.9	63.7					

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5616343								
WG3635380-6 DUP		**WG3635380-5**						
Barium (Ba)		60.9	63.7		ug/g	4.4	40	12-OCT-21
Beryllium (Be)		0.52	0.50		ug/g	4.9	30	12-OCT-21
Bismuth (Bi)		<0.20	<0.20	RPD-NA	ug/g	N/A	30	12-OCT-21
Boron (B)		13.9	13.5		ug/g	2.9	30	12-OCT-21
Cadmium (Cd)		0.052	0.048		ug/g	6.4	30	12-OCT-21
Calcium (Ca)		125000	122000		ug/g	2.5	30	12-OCT-21
Chromium (Cr)		20.4	21.0		ug/g	2.9	30	12-OCT-21
Cobalt (Co)		9.84	10.1		ug/g	2.3	30	12-OCT-21
Copper (Cu)		17.6	18.1		ug/g	2.9	30	12-OCT-21
Iron (Fe)		22800	22700		ug/g	0.3	30	12-OCT-21
Lead (Pb)		6.05	5.90		ug/g	2.5	40	12-OCT-21
Lithium (Li)		16.6	16.4		ug/g	0.8	30	12-OCT-21
Magnesium (Mg)		15200	15500		ug/g	2.0	30	12-OCT-21
Manganese (Mn)		650	663		ug/g	2.0	30	12-OCT-21
Molybdenum (Mo)		0.29	0.30		ug/g	3.6	40	12-OCT-21
Nickel (Ni)		20.9	21.4		ug/g	2.6	30	12-OCT-21
Phosphorus (P)		701	743		ug/g	5.7	30	12-OCT-21
Potassium (K)		2770	2920		ug/g	5.2	40	12-OCT-21
Selenium (Se)		<0.20	<0.20	RPD-NA	ug/g	N/A	30	12-OCT-21
Silver (Ag)		<0.10	<0.10	RPD-NA	ug/g	N/A	40	12-OCT-21
Sodium (Na)		378	386		ug/g	2.1	40	12-OCT-21
Strontium (Sr)		190	193		ug/g	1.1	40	12-OCT-21
Sulfur (S)		<1000	<1000	RPD-NA	ug/g	N/A	30	12-OCT-21
Thallium (Tl)		0.107	0.105		ug/g	1.6	30	12-OCT-21
Tin (Sn)		<2.0	<2.0	RPD-NA	ug/g	N/A	40	12-OCT-21
Titanium (Ti)		389	383		ug/g	1.5	40	12-OCT-21
Tungsten (W)		<0.50	<0.50	RPD-NA	ug/g	N/A	30	12-OCT-21
Uranium (U)		0.519	0.501		ug/g	3.7	30	12-OCT-21
Vanadium (V)		28.8	29.3		ug/g	1.7	30	12-OCT-21
Zinc (Zn)		39.6	40.1		ug/g	1.2	30	12-OCT-21
Zirconium (Zr)		7.5	7.4		ug/g	1.5	30	12-OCT-21
WG3635380-4 LCS								
Aluminum (Al)			101.8		%		80-120	12-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5616343								
WG3635380-4 LCS								
Antimony (Sb)			105.8		%		80-120	12-OCT-21
Arsenic (As)			102.6		%		80-120	12-OCT-21
Barium (Ba)			104.6		%		80-120	12-OCT-21
Beryllium (Be)			100.6		%		80-120	12-OCT-21
Bismuth (Bi)			101.8		%		80-120	12-OCT-21
Boron (B)			97.5		%		80-120	12-OCT-21
Cadmium (Cd)			99.2		%		80-120	12-OCT-21
Calcium (Ca)			105.8		%		80-120	12-OCT-21
Chromium (Cr)			99.3		%		80-120	12-OCT-21
Cobalt (Co)			99.3		%		80-120	12-OCT-21
Copper (Cu)			97.4		%		80-120	12-OCT-21
Iron (Fe)			104.2		%		80-120	12-OCT-21
Lead (Pb)			102.8		%		80-120	12-OCT-21
Lithium (Li)			90.2		%		80-120	12-OCT-21
Magnesium (Mg)			103.7		%		80-120	12-OCT-21
Manganese (Mn)			99.7		%		80-120	12-OCT-21
Molybdenum (Mo)			110.3		%		80-120	12-OCT-21
Nickel (Ni)			98.5		%		80-120	12-OCT-21
Phosphorus (P)			107.9		%		80-120	12-OCT-21
Potassium (K)			109.1		%		80-120	12-OCT-21
Selenium (Se)			98.6		%		80-120	12-OCT-21
Silver (Ag)			96.0		%		80-120	12-OCT-21
Sodium (Na)			104.2		%		80-120	12-OCT-21
Strontium (Sr)			113.8		%		80-120	12-OCT-21
Sulfur (S)			95.3		%		80-120	12-OCT-21
Thallium (Tl)			101.8		%		80-120	12-OCT-21
Tin (Sn)			102.9		%		80-120	12-OCT-21
Titanium (Ti)			100.4		%		80-120	12-OCT-21
Tungsten (W)			102.2		%		80-120	12-OCT-21
Uranium (U)			100.9		%		80-120	12-OCT-21
Vanadium (V)			102.2		%		80-120	12-OCT-21
Zinc (Zn)			94.2		%		80-120	12-OCT-21
Zirconium (Zr)			106.8		%		80-120	12-OCT-21
WG3635380-1 MB								

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5616343								
WG3635380-1 MB								
Aluminum (Al)			<50		mg/kg		50	12-OCT-21
Antimony (Sb)			<0.10		mg/kg		0.1	12-OCT-21
Arsenic (As)			<0.10		mg/kg		0.1	12-OCT-21
Barium (Ba)			<0.50		mg/kg		0.5	12-OCT-21
Beryllium (Be)			<0.10		mg/kg		0.1	12-OCT-21
Bismuth (Bi)			<0.20		mg/kg		0.2	12-OCT-21
Boron (B)			<5.0		mg/kg		5	12-OCT-21
Cadmium (Cd)			<0.020		mg/kg		0.02	12-OCT-21
Calcium (Ca)			<50		mg/kg		50	12-OCT-21
Chromium (Cr)			<0.50		mg/kg		0.5	12-OCT-21
Cobalt (Co)			<0.10		mg/kg		0.1	12-OCT-21
Copper (Cu)			<0.50		mg/kg		0.5	12-OCT-21
Iron (Fe)			<50		mg/kg		50	12-OCT-21
Lead (Pb)			<0.50		mg/kg		0.5	12-OCT-21
Lithium (Li)			<2.0		mg/kg		2	12-OCT-21
Magnesium (Mg)			<20		mg/kg		20	12-OCT-21
Manganese (Mn)			<1.0		mg/kg		1	12-OCT-21
Molybdenum (Mo)			<0.10		mg/kg		0.1	12-OCT-21
Nickel (Ni)			<0.50		mg/kg		0.5	12-OCT-21
Phosphorus (P)			<50		mg/kg		50	12-OCT-21
Potassium (K)			<100		mg/kg		100	12-OCT-21
Selenium (Se)			<0.20		mg/kg		0.2	12-OCT-21
Silver (Ag)			<0.10		mg/kg		0.1	12-OCT-21
Sodium (Na)			<50		mg/kg		50	12-OCT-21
Strontium (Sr)			<0.50		mg/kg		0.5	12-OCT-21
Sulfur (S)			<1000		mg/kg		1000	12-OCT-21
Thallium (Tl)			<0.050		mg/kg		0.05	12-OCT-21
Tin (Sn)			<2.0		mg/kg		2	12-OCT-21
Titanium (Ti)			<1.0		mg/kg		1	12-OCT-21
Tungsten (W)			<0.50		mg/kg		0.5	12-OCT-21
Uranium (U)			<0.050		mg/kg		0.05	12-OCT-21
Vanadium (V)			<0.20		mg/kg		0.2	12-OCT-21
Zinc (Zn)			<2.0		mg/kg		2	12-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5616343								
WG3635380-1 MB								
Zirconium (Zr)			<1.0		mg/kg		1	12-OCT-21
Batch R5616407								
WG3635672-2 CRM		**WT-SS-2**						
Aluminum (Al)			124.7		%		70-130	12-OCT-21
Antimony (Sb)			93.9		%		70-130	12-OCT-21
Arsenic (As)			116.9		%		70-130	12-OCT-21
Barium (Ba)			127.1		%		70-130	12-OCT-21
Beryllium (Be)			99.9		%		70-130	12-OCT-21
Bismuth (Bi)			0.14		mg/kg		0-0.34	12-OCT-21
Boron (B)			7.7		mg/kg		3.5-13.5	12-OCT-21
Cadmium (Cd)			106.3		%		70-130	12-OCT-21
Calcium (Ca)			99.4		%		70-130	12-OCT-21
Chromium (Cr)			114.6		%		70-130	12-OCT-21
Cobalt (Co)			110.5		%		70-130	12-OCT-21
Copper (Cu)			116.5		%		70-130	12-OCT-21
Iron (Fe)			111.3		%		70-130	12-OCT-21
Lead (Pb)			98.4		%		70-130	12-OCT-21
Lithium (Li)			84.9		%		70-130	12-OCT-21
Magnesium (Mg)			118.7		%		70-130	12-OCT-21
Manganese (Mn)			122.5		%		70-130	12-OCT-21
Molybdenum (Mo)			98.1		%		70-130	12-OCT-21
Nickel (Ni)			111.4		%		70-130	12-OCT-21
Phosphorus (P)			113.0		%		70-130	12-OCT-21
Potassium (K)			117.4		%		70-130	12-OCT-21
Selenium (Se)			0.16		mg/kg		0-0.34	12-OCT-21
Silver (Ag)			80.3		%		70-130	12-OCT-21
Sodium (Na)			122.6		%		70-130	12-OCT-21
Strontium (Sr)			101.7		%		70-130	12-OCT-21
Thallium (Tl)			0.078		mg/kg		0.029-0.129	12-OCT-21
Tin (Sn)			95.5		%		70-130	12-OCT-21
Titanium (Ti)			113.6		%		70-130	12-OCT-21
Uranium (U)			105.9		%		70-130	12-OCT-21
Vanadium (V)			114.4		%		70-130	12-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5616407								
WG3635672-2 CRM		**WT-SS-2**						
Zinc (Zn)			104.8		%		70-130	12-OCT-21
Zirconium (Zr)			98.6		%		70-130	12-OCT-21
WG3635672-6 DUP		**WG3635672-5**						
Aluminum (Al)		18900	21600		ug/g	13	40	12-OCT-21
Antimony (Sb)		1.23	1.35		ug/g	9.6	30	12-OCT-21
Arsenic (As)		7.37	8.27		ug/g	11	30	12-OCT-21
Barium (Ba)		284	312		ug/g	9.4	40	12-OCT-21
Beryllium (Be)		0.61	0.74		ug/g	19	30	12-OCT-21
Bismuth (Bi)		0.42	0.46		ug/g	8.5	30	12-OCT-21
Boron (B)		9.9	12.3		ug/g	21	30	12-OCT-21
Cadmium (Cd)		0.780	0.863		ug/g	10	30	12-OCT-21
Calcium (Ca)		69800	84200		ug/g	19	30	12-OCT-21
Chromium (Cr)		1110	1250		ug/g	11	30	12-OCT-21
Cobalt (Co)		13.2	14.7		ug/g	11	30	12-OCT-21
Copper (Cu)		47.3	52.0		ug/g	9.6	30	12-OCT-21
Iron (Fe)		28200	31500		ug/g	11	30	12-OCT-21
Lead (Pb)		114	137		ug/g	19	40	12-OCT-21
Lithium (Li)		11.4	14.8		ug/g	26	30	12-OCT-21
Magnesium (Mg)		15800	17600		ug/g	10	30	12-OCT-21
Manganese (Mn)		747	875		ug/g	16	30	12-OCT-21
Molybdenum (Mo)		1.02	1.18		ug/g	15	40	12-OCT-21
Nickel (Ni)		26.9	30.1		ug/g	11	30	12-OCT-21
Phosphorus (P)		1320	1520		ug/g	14	30	12-OCT-21
Potassium (K)		4220	5040		ug/g	18	40	12-OCT-21
Selenium (Se)		1.01	1.07		ug/g	5.6	30	12-OCT-21
Silver (Ag)		0.41	0.43		ug/g	3.0	40	12-OCT-21
Sodium (Na)		641	722		ug/g	12	40	12-OCT-21
Strontium (Sr)		427	511		ug/g	18	40	12-OCT-21
Sulfur (S)		6400	7300		ug/g	14	30	12-OCT-21
Thallium (Tl)		0.324	0.333		ug/g	2.9	30	12-OCT-21
Tin (Sn)		4.9	5.6		ug/g	12	40	12-OCT-21
Titanium (Ti)		1260	1400		ug/g	11	40	12-OCT-21
Tungsten (W)		0.64	0.72		ug/g	12	30	12-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5616407								
WG3635672-6 DUP		**WG3635672-5**						
Uranium (U)		0.778	0.947		ug/g	20	30	12-OCT-21
Vanadium (V)		50.2	56.3		ug/g	12	30	12-OCT-21
Zinc (Zn)		180	199		ug/g	10	30	12-OCT-21
Zirconium (Zr)		4.4	5.3		ug/g	19	30	12-OCT-21
WG3635672-4 LCS								
Aluminum (Al)			111.3		%		80-120	12-OCT-21
Antimony (Sb)			104.3		%		80-120	12-OCT-21
Arsenic (As)			112.4		%		80-120	12-OCT-21
Barium (Ba)			109.6		%		80-120	12-OCT-21
Beryllium (Be)			101.7		%		80-120	12-OCT-21
Bismuth (Bi)			109.5		%		80-120	12-OCT-21
Boron (B)			97.4		%		80-120	12-OCT-21
Cadmium (Cd)			99.3		%		80-120	12-OCT-21
Calcium (Ca)			106.8		%		80-120	12-OCT-21
Chromium (Cr)			106.5		%		80-120	12-OCT-21
Cobalt (Co)			106.4		%		80-120	12-OCT-21
Copper (Cu)			103.6		%		80-120	12-OCT-21
Iron (Fe)			113.0		%		80-120	12-OCT-21
Lead (Pb)			106.2		%		80-120	12-OCT-21
Lithium (Li)			98.0		%		80-120	12-OCT-21
Magnesium (Mg)			119.0		%		80-120	12-OCT-21
Manganese (Mn)			107.7		%		80-120	12-OCT-21
Molybdenum (Mo)			104.9		%		80-120	12-OCT-21
Nickel (Ni)			105.2		%		80-120	12-OCT-21
Phosphorus (P)			117.3		%		80-120	12-OCT-21
Potassium (K)			118.8		%		80-120	12-OCT-21
Selenium (Se)			108.3		%		80-120	12-OCT-21
Silver (Ag)			91.9		%		80-120	12-OCT-21
Sodium (Na)			114.3		%		80-120	12-OCT-21
Strontium (Sr)			111.8		%		80-120	12-OCT-21
Sulfur (S)			102.7		%		80-120	12-OCT-21
Thallium (Tl)			101.9		%		80-120	12-OCT-21
Tin (Sn)			102.9		%		80-120	12-OCT-21
Titanium (Ti)			110.0				80-120	

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5616407								
WG3635672-4 LCS								
Titanium (Ti)			110.0		%		80-120	12-OCT-21
Tungsten (W)			100.2		%		80-120	12-OCT-21
Uranium (U)			104.3		%		80-120	12-OCT-21
Vanadium (V)			110.6		%		80-120	12-OCT-21
Zinc (Zn)			101.5		%		80-120	12-OCT-21
Zirconium (Zr)			101.5		%		80-120	12-OCT-21
WG3635672-1 MB								
Aluminum (Al)			<50		mg/kg		50	12-OCT-21
Antimony (Sb)			<0.10		mg/kg		0.1	12-OCT-21
Arsenic (As)			<0.10		mg/kg		0.1	12-OCT-21
Barium (Ba)			<0.50		mg/kg		0.5	12-OCT-21
Beryllium (Be)			<0.10		mg/kg		0.1	12-OCT-21
Bismuth (Bi)			<0.20		mg/kg		0.2	12-OCT-21
Boron (B)			<5.0		mg/kg		5	12-OCT-21
Cadmium (Cd)			<0.020		mg/kg		0.02	12-OCT-21
Calcium (Ca)			<50		mg/kg		50	12-OCT-21
Chromium (Cr)			<0.50		mg/kg		0.5	12-OCT-21
Cobalt (Co)			<0.10		mg/kg		0.1	12-OCT-21
Copper (Cu)			<0.50		mg/kg		0.5	12-OCT-21
Iron (Fe)			<50		mg/kg		50	12-OCT-21
Lead (Pb)			<0.50		mg/kg		0.5	12-OCT-21
Lithium (Li)			<2.0		mg/kg		2	12-OCT-21
Magnesium (Mg)			<20		mg/kg		20	12-OCT-21
Manganese (Mn)			<1.0		mg/kg		1	12-OCT-21
Molybdenum (Mo)			<0.10		mg/kg		0.1	12-OCT-21
Nickel (Ni)			<0.50		mg/kg		0.5	12-OCT-21
Phosphorus (P)			<50		mg/kg		50	12-OCT-21
Potassium (K)			<100		mg/kg		100	12-OCT-21
Selenium (Se)			<0.20		mg/kg		0.2	12-OCT-21
Silver (Ag)			<0.10		mg/kg		0.1	12-OCT-21
Sodium (Na)			<50		mg/kg		50	12-OCT-21
Strontium (Sr)			<0.50		mg/kg		0.5	12-OCT-21
Sulfur (S)			<1000		mg/kg		1000	12-OCT-21
Thallium (Tl)			<0.050		mg/kg		0.05	12-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5616407								
WG3635672-1 MB								
Tin (Sn)			<2.0		mg/kg		2	12-OCT-21
Titanium (Ti)			<1.0		mg/kg		1	12-OCT-21
Tungsten (W)			<0.50		mg/kg		0.5	12-OCT-21
Uranium (U)			<0.050		mg/kg		0.05	12-OCT-21
Vanadium (V)			<0.20		mg/kg		0.2	12-OCT-21
Zinc (Zn)			<2.0		mg/kg		2	12-OCT-21
Zirconium (Zr)			<1.0		mg/kg		1	12-OCT-21
Batch R5616646								
WG3635707-2 CRM		**WT-SS-2**						
Aluminum (Al)			104.1		%		70-130	13-OCT-21
Antimony (Sb)			90.7		%		70-130	13-OCT-21
Arsenic (As)			96.8		%		70-130	13-OCT-21
Barium (Ba)			103.9		%		70-130	13-OCT-21
Beryllium (Be)			104.8		%		70-130	13-OCT-21
Bismuth (Bi)			0.14		mg/kg		0-0.34	13-OCT-21
Boron (B)			9.0		mg/kg		3.5-13.5	13-OCT-21
Cadmium (Cd)			94.1		%		70-130	13-OCT-21
Calcium (Ca)			101.5		%		70-130	13-OCT-21
Chromium (Cr)			97.9		%		70-130	13-OCT-21
Cobalt (Co)			99.0		%		70-130	13-OCT-21
Copper (Cu)			98.9		%		70-130	13-OCT-21
Iron (Fe)			99.2		%		70-130	13-OCT-21
Lead (Pb)			96.8		%		70-130	13-OCT-21
Lithium (Li)			98.7		%		70-130	13-OCT-21
Magnesium (Mg)			103.5		%		70-130	13-OCT-21
Manganese (Mn)			98.9		%		70-130	13-OCT-21
Molybdenum (Mo)			97.6		%		70-130	13-OCT-21
Nickel (Ni)			100.9		%		70-130	13-OCT-21
Phosphorus (P)			101.9		%		70-130	13-OCT-21
Potassium (K)			98.7		%		70-130	13-OCT-21
Selenium (Se)			0.12		mg/kg		0-0.34	13-OCT-21
Silver (Ag)			100.8		%		70-130	13-OCT-21
Sodium (Na)			98.3		%		70-130	13-OCT-21
Strontium (Sr)			96.2		%		70-130	13-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5616646								
WG3635707-2 CRM		**WT-SS-2**						
Thallium (Tl)			0.075		mg/kg		0.029-0.129	13-OCT-21
Tin (Sn)			92.9		%		70-130	13-OCT-21
Titanium (Ti)			101.2		%		70-130	13-OCT-21
Uranium (U)			95.3		%		70-130	13-OCT-21
Vanadium (V)			101.2		%		70-130	13-OCT-21
Zinc (Zn)			93.8		%		70-130	13-OCT-21
Zirconium (Zr)			96.6		%		70-130	13-OCT-21
WG3635707-6 DUP		**WG3635707-5**						
Aluminum (Al)		13500	14100		ug/g	4.6	40	13-OCT-21
Antimony (Sb)		3.42	3.44		ug/g	0.6	30	13-OCT-21
Arsenic (As)		7.07	7.30		ug/g	3.1	30	13-OCT-21
Barium (Ba)		331	359		ug/g	8.2	40	13-OCT-21
Beryllium (Be)		0.58	0.65		ug/g	11	30	13-OCT-21
Bismuth (Bi)		0.65	0.63		ug/g	3.2	30	13-OCT-21
Boron (B)		16	16		ug/g	2.5	30	13-OCT-21
Cadmium (Cd)		1.32	1.38		ug/g	4.3	30	13-OCT-21
Calcium (Ca)		169000	173000		ug/g	2.2	30	13-OCT-21
Chromium (Cr)		3890	4040		ug/g	3.7	30	13-OCT-21
Cobalt (Co)		11.6	12.5		ug/g	7.4	30	13-OCT-21
Copper (Cu)		69.7	76.5		ug/g	9.3	30	13-OCT-21
Iron (Fe)		24800	26300		ug/g	6.1	30	13-OCT-21
Lead (Pb)		263	276		ug/g	4.7	40	13-OCT-21
Lithium (Li)		15.2	15.6		ug/g	2.8	30	13-OCT-21
Magnesium (Mg)		15300	16700		ug/g	8.7	30	13-OCT-21
Manganese (Mn)		803	893		ug/g	11	30	13-OCT-21
Molybdenum (Mo)		1.94	2.12		ug/g	8.7	40	13-OCT-21
Nickel (Ni)		23.4	25.0		ug/g	6.6	30	13-OCT-21
Phosphorus (P)		1810	1940		ug/g	7.3	30	13-OCT-21
Potassium (K)		3160	3270		ug/g	3.3	40	13-OCT-21
Selenium (Se)		1.15	1.27		ug/g	9.9	30	13-OCT-21
Silver (Ag)		0.58	0.63		ug/g	8.4	40	13-OCT-21
Sodium (Na)		610	640		ug/g	5.1	40	13-OCT-21
Strontium (Sr)		917	939		ug/g	2.3	40	13-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5616646								
WG3635707-6 DUP		**WG3635707-5**						
Sulfur (S)		7400	8100		ug/g	9.9	30	13-OCT-21
Thallium (Tl)		0.29	0.29		ug/g	0.1	30	13-OCT-21
Tin (Sn)		8.2	9.0		ug/g	8.8	40	13-OCT-21
Titanium (Ti)		711	732		ug/g	2.9	40	13-OCT-21
Tungsten (W)		2.7	2.7		ug/g	0.3	30	13-OCT-21
Uranium (U)		0.64	0.63		ug/g	1.3	30	13-OCT-21
Vanadium (V)		42.7	44.9		ug/g	5.0	30	13-OCT-21
Zinc (Zn)		305	319		ug/g	4.4	30	13-OCT-21
Zirconium (Zr)		2.3	2.2		ug/g	4.3	30	13-OCT-21
WG3635707-4 LCS								
Aluminum (Al)			106.4		%		80-120	13-OCT-21
Antimony (Sb)			104.5		%		80-120	13-OCT-21
Arsenic (As)			109.4		%		80-120	13-OCT-21
Barium (Ba)			109.0		%		80-120	13-OCT-21
Beryllium (Be)			100.6		%		80-120	13-OCT-21
Bismuth (Bi)			103.9		%		80-120	13-OCT-21
Boron (B)			97.9		%		80-120	13-OCT-21
Cadmium (Cd)			97.8		%		80-120	13-OCT-21
Calcium (Ca)			102.9		%		80-120	13-OCT-21
Chromium (Cr)			105.2		%		80-120	13-OCT-21
Cobalt (Co)			103.1		%		80-120	13-OCT-21
Copper (Cu)			101.7		%		80-120	13-OCT-21
Iron (Fe)			106.4		%		80-120	13-OCT-21
Lead (Pb)			101.9		%		80-120	13-OCT-21
Lithium (Li)			98.9		%		80-120	13-OCT-21
Magnesium (Mg)			107.0		%		80-120	13-OCT-21
Manganese (Mn)			105.3		%		80-120	13-OCT-21
Molybdenum (Mo)			105.3		%		80-120	13-OCT-21
Nickel (Ni)			101.5		%		80-120	13-OCT-21
Phosphorus (P)			112.9		%		80-120	13-OCT-21
Potassium (K)			103.2		%		80-120	13-OCT-21
Selenium (Se)			102.5		%		80-120	13-OCT-21
Silver (Ag)			94.8		%		80-120	13-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5616646								
WG3635707-4 LCS								
Sodium (Na)			105.2		%		80-120	13-OCT-21
Strontium (Sr)			105.3		%		80-120	13-OCT-21
Sulfur (S)			101.4		%		80-120	13-OCT-21
Thallium (Tl)			102.9		%		80-120	13-OCT-21
Tin (Sn)			100.4		%		80-120	13-OCT-21
Titanium (Ti)			106.2		%		80-120	13-OCT-21
Tungsten (W)			105.3		%		80-120	13-OCT-21
Uranium (U)			103.1		%		80-120	13-OCT-21
Vanadium (V)			107.5		%		80-120	13-OCT-21
Zinc (Zn)			98.1		%		80-120	13-OCT-21
Zirconium (Zr)			101.5		%		80-120	13-OCT-21
WG3635707-1 MB								
Aluminum (Al)			<50		mg/kg		50	13-OCT-21
Antimony (Sb)			<0.10		mg/kg		0.1	13-OCT-21
Arsenic (As)			<0.10		mg/kg		0.1	13-OCT-21
Barium (Ba)			<0.50		mg/kg		0.5	13-OCT-21
Beryllium (Be)			<0.10		mg/kg		0.1	13-OCT-21
Bismuth (Bi)			<0.20		mg/kg		0.2	13-OCT-21
Boron (B)			<5.0		mg/kg		5	13-OCT-21
Cadmium (Cd)			<0.020		mg/kg		0.02	13-OCT-21
Calcium (Ca)			<50		mg/kg		50	13-OCT-21
Chromium (Cr)			<0.50		mg/kg		0.5	13-OCT-21
Cobalt (Co)			<0.10		mg/kg		0.1	13-OCT-21
Copper (Cu)			<0.50		mg/kg		0.5	13-OCT-21
Iron (Fe)			<50		mg/kg		50	13-OCT-21
Lead (Pb)			<0.50		mg/kg		0.5	13-OCT-21
Lithium (Li)			<2.0		mg/kg		2	13-OCT-21
Magnesium (Mg)			<20		mg/kg		20	13-OCT-21
Manganese (Mn)			<1.0		mg/kg		1	13-OCT-21
Molybdenum (Mo)			<0.10		mg/kg		0.1	13-OCT-21
Nickel (Ni)			<0.50		mg/kg		0.5	13-OCT-21
Phosphorus (P)			<50		mg/kg		50	13-OCT-21
Potassium (K)			<100		mg/kg		100	13-OCT-21
Selenium (Se)			<0.20		mg/kg		0.2	13-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5616646								
WG3635707-1 MB								
Silver (Ag)			<0.10		mg/kg		0.1	13-OCT-21
Sodium (Na)			<50		mg/kg		50	13-OCT-21
Strontium (Sr)			<0.50		mg/kg		0.5	13-OCT-21
Sulfur (S)			<1000		mg/kg		1000	13-OCT-21
Thallium (Tl)			<0.050		mg/kg		0.05	13-OCT-21
Tin (Sn)			<2.0		mg/kg		2	13-OCT-21
Titanium (Ti)			<1.0		mg/kg		1	13-OCT-21
Tungsten (W)			<0.50		mg/kg		0.5	13-OCT-21
Uranium (U)			<0.050		mg/kg		0.05	13-OCT-21
Vanadium (V)			<0.20		mg/kg		0.2	13-OCT-21
Zinc (Zn)			<2.0		mg/kg		2	13-OCT-21
Zirconium (Zr)			<1.0		mg/kg		1	13-OCT-21
Batch R5617181								
WG3636284-2 CRM		**WT-SS-2**						
Aluminum (Al)			123.8		%		70-130	13-OCT-21
Antimony (Sb)			115.9		%		70-130	13-OCT-21
Arsenic (As)			117.3		%		70-130	13-OCT-21
Barium (Ba)			125.2		%		70-130	13-OCT-21
Beryllium (Be)			107.8		%		70-130	13-OCT-21
Bismuth (Bi)			0.19		mg/kg		0-0.34	13-OCT-21
Boron (B)			9.1		mg/kg		3.5-13.5	13-OCT-21
Cadmium (Cd)			119.0		%		70-130	13-OCT-21
Calcium (Ca)			111.3		%		70-130	13-OCT-21
Chromium (Cr)			117.8		%		70-130	13-OCT-21
Cobalt (Co)			115.5		%		70-130	13-OCT-21
Copper (Cu)			117.4		%		70-130	13-OCT-21
Iron (Fe)			117.5		%		70-130	13-OCT-21
Lead (Pb)			106.3		%		70-130	13-OCT-21
Lithium (Li)			96.8		%		70-130	13-OCT-21
Magnesium (Mg)			125.5		%		70-130	13-OCT-21
Manganese (Mn)			124.4		%		70-130	13-OCT-21
Molybdenum (Mo)			114.1		%		70-130	13-OCT-21
Nickel (Ni)			115.8		%		70-130	13-OCT-21
Phosphorus (P)			123.6		%		70-130	13-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5617181								
WG3636284-2 CRM		**WT-SS-2**						
Potassium (K)			115.9		%		70-130	13-OCT-21
Selenium (Se)			0.15		mg/kg		0-0.34	13-OCT-21
Silver (Ag)			112.7		%		70-130	13-OCT-21
Sodium (Na)			117.5		%		70-130	13-OCT-21
Strontium (Sr)			111.8		%		70-130	13-OCT-21
Thallium (Tl)			0.080		mg/kg		0.029-0.129	13-OCT-21
Tin (Sn)			106.6		%		70-130	13-OCT-21
Titanium (Ti)			116.0		%		70-130	13-OCT-21
Uranium (U)			117.2		%		70-130	13-OCT-21
Vanadium (V)			117.5		%		70-130	13-OCT-21
Zinc (Zn)			110.0		%		70-130	13-OCT-21
Zirconium (Zr)			113.8		%		70-130	13-OCT-21
WG3636284-6 DUP		**WG3636284-5**						
Aluminum (Al)		12900	14300		ug/g	9.6	40	13-OCT-21
Antimony (Sb)		0.80	0.85		ug/g	5.8	30	13-OCT-21
Arsenic (As)		5.14	5.90		ug/g	14	30	13-OCT-21
Barium (Ba)		202	227		ug/g	12	40	13-OCT-21
Beryllium (Be)		0.50	0.56		ug/g	12	30	13-OCT-21
Bismuth (Bi)		0.25	0.28		ug/g	13	30	13-OCT-21
Boron (B)		8.4	8.5		ug/g	0.6	30	13-OCT-21
Cadmium (Cd)		0.569	0.613		ug/g	7.4	30	13-OCT-21
Calcium (Ca)		61300	63800		ug/g	4.0	30	13-OCT-21
Chromium (Cr)		1500	1450		ug/g	3.9	30	13-OCT-21
Cobalt (Co)		10.4	11.6		ug/g	11	30	13-OCT-21
Copper (Cu)		32.8	36.5		ug/g	11	30	13-OCT-21
Iron (Fe)		21500	23600		ug/g	9.4	30	13-OCT-21
Lead (Pb)		104	117		ug/g	11	40	13-OCT-21
Lithium (Li)		9.4	9.8		ug/g	3.5	30	13-OCT-21
Magnesium (Mg)		13500	15000		ug/g	10	30	13-OCT-21
Manganese (Mn)		761	842		ug/g	10	30	13-OCT-21
Molybdenum (Mo)		0.87	0.90		ug/g	4.2	40	13-OCT-21
Nickel (Ni)		19.3	21.2		ug/g	9.4	30	13-OCT-21
Phosphorus (P)		1330	1430		ug/g	7.2	30	13-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5617181								
WG3636284-6 DUP		**WG3636284-5**						
Potassium (K)		2760	3130		ug/g	12	40	13-OCT-21
Selenium (Se)		0.70	0.79		ug/g	12	30	13-OCT-21
Silver (Ag)		0.30	0.40		ug/g	27	40	13-OCT-21
Sodium (Na)		455	503		ug/g	10	40	13-OCT-21
Strontium (Sr)		353	377		ug/g	6.8	40	13-OCT-21
Sulfur (S)		5900	6400		ug/g	8.7	30	13-OCT-21
Thallium (Tl)		0.221	0.255		ug/g	14	30	13-OCT-21
Tin (Sn)		5.2	6.8		ug/g	26	40	13-OCT-21
Titanium (Ti)		740	779		ug/g	5.1	40	13-OCT-21
Tungsten (W)		<0.50	<0.50	RPD-NA	ug/g	N/A	30	13-OCT-21
Uranium (U)		0.563	0.633		ug/g	12	30	13-OCT-21
Vanadium (V)		33.4	36.9		ug/g	9.9	30	13-OCT-21
Zinc (Zn)		143	158		ug/g	9.9	30	13-OCT-21
Zirconium (Zr)		3.7	4.1		ug/g	9.2	30	13-OCT-21
WG3636284-4 LCS								
Aluminum (Al)			100.5		%		80-120	13-OCT-21
Antimony (Sb)			99.4		%		80-120	13-OCT-21
Arsenic (As)			101.5		%		80-120	13-OCT-21
Barium (Ba)			101.1		%		80-120	13-OCT-21
Beryllium (Be)			92.4		%		80-120	13-OCT-21
Bismuth (Bi)			92.9		%		80-120	13-OCT-21
Boron (B)			88.1		%		80-120	13-OCT-21
Cadmium (Cd)			95.4		%		80-120	13-OCT-21
Calcium (Ca)			96.0		%		80-120	13-OCT-21
Chromium (Cr)			99.0		%		80-120	13-OCT-21
Cobalt (Co)			99.2		%		80-120	13-OCT-21
Copper (Cu)			96.8		%		80-120	13-OCT-21
Iron (Fe)			99.0		%		80-120	13-OCT-21
Lead (Pb)			96.1		%		80-120	13-OCT-21
Lithium (Li)			81.7		%		80-120	13-OCT-21
Magnesium (Mg)			108.4		%		80-120	13-OCT-21
Manganese (Mn)			99.0		%		80-120	13-OCT-21
Molybdenum (Mo)			96.9		%		80-120	13-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5617181								
WG3636284-4 LCS								
Nickel (Ni)			96.4		%		80-120	13-OCT-21
Phosphorus (P)			108.4		%		80-120	13-OCT-21
Potassium (K)			103.7		%		80-120	13-OCT-21
Selenium (Se)			98.2		%		80-120	13-OCT-21
Silver (Ag)			86.5		%		80-120	13-OCT-21
Sodium (Na)			103.6		%		80-120	13-OCT-21
Strontium (Sr)			103.5		%		80-120	13-OCT-21
Sulfur (S)			96.4		%		80-120	13-OCT-21
Thallium (Tl)			94.5		%		80-120	13-OCT-21
Tin (Sn)			96.5		%		80-120	13-OCT-21
Titanium (Ti)			100.3		%		80-120	13-OCT-21
Tungsten (W)			90.8		%		80-120	13-OCT-21
Uranium (U)			91.5		%		80-120	13-OCT-21
Vanadium (V)			101.7		%		80-120	13-OCT-21
Zinc (Zn)			92.9		%		80-120	13-OCT-21
Zirconium (Zr)			93.9		%		80-120	13-OCT-21
WG3636284-1 MB								
Aluminum (Al)			<50		mg/kg		50	13-OCT-21
Antimony (Sb)			<0.10		mg/kg		0.1	13-OCT-21
Arsenic (As)			<0.10		mg/kg		0.1	13-OCT-21
Barium (Ba)			<0.50		mg/kg		0.5	13-OCT-21
Beryllium (Be)			<0.10		mg/kg		0.1	13-OCT-21
Bismuth (Bi)			<0.20		mg/kg		0.2	13-OCT-21
Boron (B)			<5.0		mg/kg		5	13-OCT-21
Cadmium (Cd)			<0.020		mg/kg		0.02	13-OCT-21
Calcium (Ca)			<50		mg/kg		50	13-OCT-21
Chromium (Cr)			<0.50		mg/kg		0.5	13-OCT-21
Cobalt (Co)			<0.10		mg/kg		0.1	13-OCT-21
Copper (Cu)			<0.50		mg/kg		0.5	13-OCT-21
Iron (Fe)			<50		mg/kg		50	13-OCT-21
Lead (Pb)			<0.50		mg/kg		0.5	13-OCT-21
Lithium (Li)			<2.0		mg/kg		2	13-OCT-21
Magnesium (Mg)			<20		mg/kg		20	13-OCT-21
Manganese (Mn)			<1.0		mg/kg		1	13-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5617181								
WG3636284-1 MB								
Molybdenum (Mo)			<0.10		mg/kg		0.1	13-OCT-21
Nickel (Ni)			<0.50		mg/kg		0.5	13-OCT-21
Phosphorus (P)			<50		mg/kg		50	13-OCT-21
Potassium (K)			<100		mg/kg		100	13-OCT-21
Selenium (Se)			<0.20		mg/kg		0.2	13-OCT-21
Silver (Ag)			<0.10		mg/kg		0.1	13-OCT-21
Sodium (Na)			<50		mg/kg		50	13-OCT-21
Strontium (Sr)			<0.50		mg/kg		0.5	13-OCT-21
Sulfur (S)			<1000		mg/kg		1000	13-OCT-21
Thallium (Tl)			<0.050		mg/kg		0.05	13-OCT-21
Tin (Sn)			<2.0		mg/kg		2	13-OCT-21
Titanium (Ti)			<1.0		mg/kg		1	13-OCT-21
Tungsten (W)			<0.50		mg/kg		0.5	13-OCT-21
Uranium (U)			<0.050		mg/kg		0.05	13-OCT-21
Vanadium (V)			<0.20		mg/kg		0.2	13-OCT-21
Zinc (Zn)			<2.0		mg/kg		2	13-OCT-21
Zirconium (Zr)			<1.0		mg/kg		1	13-OCT-21
Batch R5617456								
WG3636643-2 CRM		**WT-SS-2**						
Aluminum (Al)			116.9		%		70-130	13-OCT-21
Antimony (Sb)			97.9		%		70-130	13-OCT-21
Arsenic (As)			113.3		%		70-130	13-OCT-21
Barium (Ba)			111.9		%		70-130	13-OCT-21
Beryllium (Be)			106.4		%		70-130	13-OCT-21
Bismuth (Bi)			0.13		mg/kg		0-0.34	13-OCT-21
Boron (B)			9.2		mg/kg		3.5-13.5	13-OCT-21
Cadmium (Cd)			97.8		%		70-130	13-OCT-21
Calcium (Ca)			109.3		%		70-130	13-OCT-21
Chromium (Cr)			105.5		%		70-130	13-OCT-21
Cobalt (Co)			100.3		%		70-130	13-OCT-21
Copper (Cu)			98.5		%		70-130	13-OCT-21
Iron (Fe)			104.3		%		70-130	13-OCT-21
Lead (Pb)			107.1		%		70-130	13-OCT-21
Lithium (Li)			96.8		%		70-130	13-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5617456								
WG3636643-2 CRM		**WT-SS-2**						
Magnesium (Mg)			108.4		%		70-130	13-OCT-21
Manganese (Mn)			113.6		%		70-130	13-OCT-21
Molybdenum (Mo)			104.8		%		70-130	13-OCT-21
Nickel (Ni)			101.2		%		70-130	13-OCT-21
Phosphorus (P)			102.6		%		70-130	13-OCT-21
Potassium (K)			109.0		%		70-130	13-OCT-21
Selenium (Se)			0.12		mg/kg		0-0.34	13-OCT-21
Silver (Ag)			82.4		%		70-130	13-OCT-21
Sodium (Na)			104.0		%		70-130	13-OCT-21
Strontium (Sr)			108.2		%		70-130	13-OCT-21
Thallium (Tl)			0.076		mg/kg		0.029-0.129	13-OCT-21
Tin (Sn)			97.3		%		70-130	13-OCT-21
Titanium (Ti)			101.6		%		70-130	13-OCT-21
Uranium (U)			102.0		%		70-130	13-OCT-21
Vanadium (V)			105.2		%		70-130	13-OCT-21
Zinc (Zn)			99.1		%		70-130	13-OCT-21
Zirconium (Zr)			108.3		%		70-130	13-OCT-21
WG3636643-6 DUP		**WG3636643-5**						
Aluminum (Al)		24100	23800		ug/g	1.1	40	13-OCT-21
Antimony (Sb)		<0.10	<0.10	RPD-NA	ug/g	N/A	30	13-OCT-21
Arsenic (As)		1.64	1.65		ug/g	0.5	30	13-OCT-21
Barium (Ba)		70.8	70.0		ug/g	1.1	40	13-OCT-21
Beryllium (Be)		0.57	0.55		ug/g	3.0	30	13-OCT-21
Bismuth (Bi)		<0.20	<0.20	RPD-NA	ug/g	N/A	30	13-OCT-21
Boron (B)		<5.0	<5.0	RPD-NA	ug/g	N/A	30	13-OCT-21
Cadmium (Cd)		0.222	0.220		ug/g	1.0	30	13-OCT-21
Calcium (Ca)		3060	3110		ug/g	1.9	30	13-OCT-21
Chromium (Cr)		34.4	32.8		ug/g	4.5	30	13-OCT-21
Cobalt (Co)		7.11	7.08		ug/g	0.4	30	13-OCT-21
Copper (Cu)		9.30	9.11		ug/g	2.0	30	13-OCT-21
Iron (Fe)		21500	20800		ug/g	3.1	30	13-OCT-21
Lead (Pb)		5.81	5.86		ug/g	0.9	40	13-OCT-21
Lithium (Li)		13.4	13.1		ug/g	1.8	30	13-OCT-21

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5617456								
WG3636643-6 DUP		**WG3636643-5**						
Magnesium (Mg)		4440	4350		ug/g	2.0	30	13-OCT-21
Manganese (Mn)		404	390		ug/g	3.7	30	13-OCT-21
Molybdenum (Mo)		0.56	0.56		ug/g	1.7	40	13-OCT-21
Nickel (Ni)		15.7	15.6		ug/g	1.2	30	13-OCT-21
Phosphorus (P)		458	455		ug/g	0.6	30	13-OCT-21
Potassium (K)		1140	1090		ug/g	4.3	40	13-OCT-21
Selenium (Se)		0.51	0.50		ug/g	2.3	30	13-OCT-21
Silver (Ag)		<0.10	<0.10	RPD-NA	ug/g	N/A	40	13-OCT-21
Sodium (Na)		286	295		ug/g	3.1	40	13-OCT-21
Strontium (Sr)		16.5	17.8		ug/g	7.3	40	13-OCT-21
Sulfur (S)		<1000	<1000	RPD-NA	ug/g	N/A	30	13-OCT-21
Thallium (Tl)		0.110	0.106		ug/g	4.3	30	13-OCT-21
Tin (Sn)		<2.0	<2.0	RPD-NA	ug/g	N/A	40	13-OCT-21
Titanium (Ti)		1080	1100		ug/g	1.7	40	13-OCT-21
Tungsten (W)		<0.50	<0.50	RPD-NA	ug/g	N/A	30	13-OCT-21
Uranium (U)		0.562	0.568		ug/g	1.1	30	13-OCT-21
Vanadium (V)		41.3	41.2		ug/g	0.4	30	13-OCT-21
Zinc (Zn)		74.1	72.9		ug/g	1.6	30	13-OCT-21
Zirconium (Zr)		1.9	1.7		ug/g	7.1	30	13-OCT-21
WG3636643-4 LCS								
Aluminum (Al)			102.3		%		80-120	13-OCT-21
Antimony (Sb)			100.4		%		80-120	13-OCT-21
Arsenic (As)			98.4		%		80-120	13-OCT-21
Barium (Ba)			96.5		%		80-120	13-OCT-21
Beryllium (Be)			92.4		%		80-120	13-OCT-21
Bismuth (Bi)			92.3		%		80-120	13-OCT-21
Boron (B)			95.2		%		80-120	13-OCT-21
Cadmium (Cd)			92.3		%		80-120	13-OCT-21
Calcium (Ca)			98.7		%		80-120	13-OCT-21
Chromium (Cr)			94.3		%		80-120	13-OCT-21
Cobalt (Co)			93.6		%		80-120	13-OCT-21
Copper (Cu)			89.5		%		80-120	13-OCT-21
Iron (Fe)			93.1		%		80-120	13-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5617456								
WG3636643-4 LCS								
Lead (Pb)			95.1		%		80-120	13-OCT-21
Lithium (Li)			93.8		%		80-120	13-OCT-21
Magnesium (Mg)			100.4		%		80-120	13-OCT-21
Manganese (Mn)			97.5		%		80-120	13-OCT-21
Molybdenum (Mo)			100.4		%		80-120	13-OCT-21
Nickel (Ni)			90.7		%		80-120	13-OCT-21
Phosphorus (P)			99.2		%		80-120	13-OCT-21
Potassium (K)			104.9		%		80-120	13-OCT-21
Selenium (Se)			90.2		%		80-120	13-OCT-21
Silver (Ag)			85.1		%		80-120	13-OCT-21
Sodium (Na)			94.0		%		80-120	13-OCT-21
Strontium (Sr)			101.7		%		80-120	13-OCT-21
Sulfur (S)			91.9		%		80-120	13-OCT-21
Thallium (Tl)			98.4		%		80-120	13-OCT-21
Tin (Sn)			96.5		%		80-120	13-OCT-21
Titanium (Ti)			95.0		%		80-120	13-OCT-21
Tungsten (W)			92.3		%		80-120	13-OCT-21
Uranium (U)			89.3		%		80-120	13-OCT-21
Vanadium (V)			97.2		%		80-120	13-OCT-21
Zinc (Zn)			90.1		%		80-120	13-OCT-21
Zirconium (Zr)			98.5		%		80-120	13-OCT-21
WG3636643-1 MB								
Aluminum (Al)			<50		mg/kg		50	13-OCT-21
Antimony (Sb)			<0.10		mg/kg		0.1	13-OCT-21
Arsenic (As)			<0.10		mg/kg		0.1	13-OCT-21
Barium (Ba)			<0.50		mg/kg		0.5	13-OCT-21
Beryllium (Be)			<0.10		mg/kg		0.1	13-OCT-21
Bismuth (Bi)			<0.20		mg/kg		0.2	13-OCT-21
Boron (B)			<5.0		mg/kg		5	13-OCT-21
Cadmium (Cd)			<0.020		mg/kg		0.02	13-OCT-21
Calcium (Ca)			<50		mg/kg		50	13-OCT-21
Chromium (Cr)			<0.50		mg/kg		0.5	13-OCT-21
Cobalt (Co)			<0.10		mg/kg		0.1	13-OCT-21
Copper (Cu)			<0.50		mg/kg		0.5	13-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5617456								
WG3636643-1 MB								
Iron (Fe)			<50		mg/kg		50	13-OCT-21
Lead (Pb)			<0.50		mg/kg		0.5	13-OCT-21
Lithium (Li)			<2.0		mg/kg		2	13-OCT-21
Magnesium (Mg)			<20		mg/kg		20	13-OCT-21
Manganese (Mn)			<1.0		mg/kg		1	13-OCT-21
Molybdenum (Mo)			<0.10		mg/kg		0.1	13-OCT-21
Nickel (Ni)			<0.50		mg/kg		0.5	13-OCT-21
Phosphorus (P)			<50		mg/kg		50	13-OCT-21
Potassium (K)			<100		mg/kg		100	13-OCT-21
Selenium (Se)			<0.20		mg/kg		0.2	13-OCT-21
Silver (Ag)			<0.10		mg/kg		0.1	13-OCT-21
Sodium (Na)			<50		mg/kg		50	13-OCT-21
Strontium (Sr)			<0.50		mg/kg		0.5	13-OCT-21
Sulfur (S)			<1000		mg/kg		1000	13-OCT-21
Thallium (Tl)			<0.050		mg/kg		0.05	13-OCT-21
Tin (Sn)			<2.0		mg/kg		2	13-OCT-21
Titanium (Ti)			<1.0		mg/kg		1	13-OCT-21
Tungsten (W)			<0.50		mg/kg		0.5	13-OCT-21
Uranium (U)			<0.050		mg/kg		0.05	13-OCT-21
Vanadium (V)			<0.20		mg/kg		0.2	13-OCT-21
Zinc (Zn)			<2.0		mg/kg		2	13-OCT-21
Zirconium (Zr)			<1.0		mg/kg		1	13-OCT-21
Batch R5619038								
WG3638129-2 CRM		**WT-SS-2**						
Aluminum (Al)			115.2		%		70-130	15-OCT-21
Antimony (Sb)			95.3		%		70-130	15-OCT-21
Arsenic (As)			106.6		%		70-130	15-OCT-21
Barium (Ba)			103.8		%		70-130	15-OCT-21
Beryllium (Be)			106.1		%		70-130	15-OCT-21
Bismuth (Bi)			0.14		mg/kg		0-0.34	15-OCT-21
Boron (B)			8.7		mg/kg		3.5-13.5	15-OCT-21
Cadmium (Cd)			94.8		%		70-130	15-OCT-21
Calcium (Ca)			100.4		%		70-130	15-OCT-21
Chromium (Cr)			98.8		%		70-130	15-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5619038								
WG3638129-2 CRM		**WT-SS-2**						
Cobalt (Co)			103.7		%		70-130	15-OCT-21
Copper (Cu)			103.7		%		70-130	15-OCT-21
Iron (Fe)			107.3		%		70-130	15-OCT-21
Lead (Pb)			102.2		%		70-130	15-OCT-21
Lithium (Li)			98.7		%		70-130	15-OCT-21
Magnesium (Mg)			115.3		%		70-130	15-OCT-21
Manganese (Mn)			113.8		%		70-130	15-OCT-21
Molybdenum (Mo)			99.8		%		70-130	15-OCT-21
Nickel (Ni)			104.0		%		70-130	15-OCT-21
Phosphorus (P)			104.3		%		70-130	15-OCT-21
Potassium (K)			99.0		%		70-130	15-OCT-21
Selenium (Se)			0.13		mg/kg		0-0.34	15-OCT-21
Silver (Ag)			87.1		%		70-130	15-OCT-21
Sodium (Na)			104.5		%		70-130	15-OCT-21
Strontium (Sr)			102.5		%		70-130	15-OCT-21
Thallium (Tl)			0.077		mg/kg		0.029-0.129	15-OCT-21
Tin (Sn)			106.0		%		70-130	15-OCT-21
Titanium (Ti)			99.9		%		70-130	15-OCT-21
Uranium (U)			95.0		%		70-130	15-OCT-21
Vanadium (V)			102.9		%		70-130	15-OCT-21
Zinc (Zn)			101.0		%		70-130	15-OCT-21
Zirconium (Zr)			96.1		%		70-130	15-OCT-21
WG3638129-6 DUP		**WG3638129-5**						
Aluminum (Al)		5680	5790		ug/g	1.9	40	15-OCT-21
Antimony (Sb)		<0.10	<0.10	RPD-NA	ug/g	N/A	30	15-OCT-21
Arsenic (As)		1.91	1.94		ug/g	1.7	30	15-OCT-21
Barium (Ba)		37.6	37.8		ug/g	0.4	40	15-OCT-21
Beryllium (Be)		0.27	0.26		ug/g	3.4	30	15-OCT-21
Bismuth (Bi)		<0.20	<0.20	RPD-NA	ug/g	N/A	30	15-OCT-21
Boron (B)		<5.0	<5.0	RPD-NA	ug/g	N/A	30	15-OCT-21
Cadmium (Cd)		0.045	0.040		ug/g	13	30	15-OCT-21
Calcium (Ca)		79800	82800		ug/g	3.7	30	15-OCT-21
Chromium (Cr)		11.8	12.1		ug/g	2.7	30	15-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5619038								
WG3638129-6 DUP		**WG3638129-5**						
Cobalt (Co)		4.72	4.70		ug/g	0.4	30	15-OCT-21
Copper (Cu)		10.4	10.3		ug/g	1.0	30	15-OCT-21
Iron (Fe)		12800	12800		ug/g	0.3	30	15-OCT-21
Lead (Pb)		4.71	4.34		ug/g	8.0	40	15-OCT-21
Lithium (Li)		8.5	9.0		ug/g	5.5	30	15-OCT-21
Magnesium (Mg)		11400	11200		ug/g	1.8	30	15-OCT-21
Manganese (Mn)		351	341		ug/g	2.8	30	15-OCT-21
Molybdenum (Mo)		0.24	0.24		ug/g	0.8	40	15-OCT-21
Nickel (Ni)		9.97	9.94		ug/g	0.3	30	15-OCT-21
Phosphorus (P)		694	718		ug/g	3.4	30	15-OCT-21
Potassium (K)		950	1000		ug/g	4.7	40	15-OCT-21
Selenium (Se)		<0.20	<0.20	RPD-NA	ug/g	N/A	30	15-OCT-21
Silver (Ag)		<0.10	<0.10	RPD-NA	ug/g	N/A	40	15-OCT-21
Sodium (Na)		199	206		ug/g	3.7	40	15-OCT-21
Strontium (Sr)		136	136		ug/g	0.1	40	15-OCT-21
Sulfur (S)		1300	1300		ug/g	2.1	30	15-OCT-21
Thallium (Tl)		0.053	0.060		ug/g	11	30	15-OCT-21
Tin (Sn)		<2.0	<2.0	RPD-NA	ug/g	N/A	40	15-OCT-21
Titanium (Ti)		311	333		ug/g	7.0	40	15-OCT-21
Tungsten (W)		<0.50	<0.50	RPD-NA	ug/g	N/A	30	15-OCT-21
Uranium (U)		0.495	0.572		ug/g	14	30	15-OCT-21
Vanadium (V)		19.2	19.8		ug/g	3.0	30	15-OCT-21
Zinc (Zn)		23.1	22.3		ug/g	3.7	30	15-OCT-21
Zirconium (Zr)		4.8	5.0		ug/g	3.7	30	15-OCT-21
WG3638129-4 LCS								
Aluminum (Al)			111.5		%		80-120	15-OCT-21
Antimony (Sb)			108.1		%		80-120	15-OCT-21
Arsenic (As)			112.3		%		80-120	15-OCT-21
Barium (Ba)			104.2		%		80-120	15-OCT-21
Beryllium (Be)			103.7		%		80-120	15-OCT-21
Bismuth (Bi)			109.0		%		80-120	15-OCT-21
Boron (B)			101.3		%		80-120	15-OCT-21
Cadmium (Cd)			101.5		%		80-120	15-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5619038								
WG3638129-4 LCS								
Calcium (Ca)			105.2		%		80-120	15-OCT-21
Chromium (Cr)			109.1		%		80-120	15-OCT-21
Cobalt (Co)			108.7		%		80-120	15-OCT-21
Copper (Cu)			107.1		%		80-120	15-OCT-21
Iron (Fe)			106.9		%		80-120	15-OCT-21
Lead (Pb)			104.1		%		80-120	15-OCT-21
Lithium (Li)			102.3		%		80-120	15-OCT-21
Magnesium (Mg)			117.7		%		80-120	15-OCT-21
Manganese (Mn)			110.0		%		80-120	15-OCT-21
Molybdenum (Mo)			106.8		%		80-120	15-OCT-21
Nickel (Ni)			107.6		%		80-120	15-OCT-21
Phosphorus (P)			116.1		%		80-120	15-OCT-21
Potassium (K)			111.0		%		80-120	15-OCT-21
Selenium (Se)			109.4		%		80-120	15-OCT-21
Silver (Ag)			99.1		%		80-120	15-OCT-21
Sodium (Na)			114.0		%		80-120	15-OCT-21
Strontium (Sr)			111.1		%		80-120	15-OCT-21
Sulfur (S)			110.1		%		80-120	15-OCT-21
Thallium (Tl)			103.4		%		80-120	15-OCT-21
Tin (Sn)			103.0		%		80-120	15-OCT-21
Titanium (Ti)			111.9		%		80-120	15-OCT-21
Tungsten (W)			106.6		%		80-120	15-OCT-21
Uranium (U)			101.7		%		80-120	15-OCT-21
Vanadium (V)			112.0		%		80-120	15-OCT-21
Zinc (Zn)			104.9		%		80-120	15-OCT-21
Zirconium (Zr)			105.1		%		80-120	15-OCT-21
WG3638129-1 MB								
Aluminum (Al)			<50		mg/kg		50	15-OCT-21
Antimony (Sb)			<0.10		mg/kg		0.1	15-OCT-21
Arsenic (As)			<0.10		mg/kg		0.1	15-OCT-21
Barium (Ba)			<0.50		mg/kg		0.5	15-OCT-21
Beryllium (Be)			<0.10		mg/kg		0.1	15-OCT-21
Bismuth (Bi)			<0.20		mg/kg		0.2	15-OCT-21
Boron (B)			<5.0		mg/kg		5	15-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5619038								
WG3638129-1 MB								
Cadmium (Cd)			<0.020		mg/kg		0.02	15-OCT-21
Calcium (Ca)			<50		mg/kg		50	15-OCT-21
Chromium (Cr)			<0.50		mg/kg		0.5	15-OCT-21
Cobalt (Co)			<0.10		mg/kg		0.1	15-OCT-21
Copper (Cu)			<0.50		mg/kg		0.5	15-OCT-21
Iron (Fe)			<50		mg/kg		50	15-OCT-21
Lead (Pb)			<0.50		mg/kg		0.5	15-OCT-21
Lithium (Li)			<2.0		mg/kg		2	15-OCT-21
Magnesium (Mg)			<20		mg/kg		20	15-OCT-21
Manganese (Mn)			<1.0		mg/kg		1	15-OCT-21
Molybdenum (Mo)			<0.10		mg/kg		0.1	15-OCT-21
Nickel (Ni)			<0.50		mg/kg		0.5	15-OCT-21
Phosphorus (P)			<50		mg/kg		50	15-OCT-21
Potassium (K)			<100		mg/kg		100	15-OCT-21
Selenium (Se)			<0.20		mg/kg		0.2	15-OCT-21
Silver (Ag)			<0.10		mg/kg		0.1	15-OCT-21
Sodium (Na)			<50		mg/kg		50	15-OCT-21
Strontium (Sr)			<0.50		mg/kg		0.5	15-OCT-21
Sulfur (S)			<1000		mg/kg		1000	15-OCT-21
Thallium (Tl)			<0.050		mg/kg		0.05	15-OCT-21
Tin (Sn)			<2.0		mg/kg		2	15-OCT-21
Titanium (Ti)			<1.0		mg/kg		1	15-OCT-21
Tungsten (W)			<0.50		mg/kg		0.5	15-OCT-21
Uranium (U)			<0.050		mg/kg		0.05	15-OCT-21
Vanadium (V)			<0.20		mg/kg		0.2	15-OCT-21
Zinc (Zn)			<2.0		mg/kg		2	15-OCT-21
Zirconium (Zr)			<1.0		mg/kg		1	15-OCT-21
Batch R5624992								
WG3640343-9 CRM		**WT-SS-2**						
Aluminum (Al)			107.4		%		70-130	19-OCT-21
Antimony (Sb)			106.4		%		70-130	19-OCT-21
Arsenic (As)			106.1		%		70-130	19-OCT-21
Barium (Ba)			125.1		%		70-130	19-OCT-21
Beryllium (Be)			97.1		%		70-130	19-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5624992								
WG3640343-9 CRM		**WT-SS-2**						
Bismuth (Bi)			0.26		mg/kg		0-0.34	19-OCT-21
Boron (B)			8.2		mg/kg		3.5-13.5	19-OCT-21
Cadmium (Cd)			99.8		%		70-130	19-OCT-21
Calcium (Ca)			95.3		%		70-130	19-OCT-21
Chromium (Cr)			100.3		%		70-130	19-OCT-21
Cobalt (Co)			103.7		%		70-130	19-OCT-21
Copper (Cu)			104.9		%		70-130	19-OCT-21
Iron (Fe)			99.5		%		70-130	19-OCT-21
Lead (Pb)			101.4		%		70-130	19-OCT-21
Lithium (Li)			87.1		%		70-130	19-OCT-21
Magnesium (Mg)			104.0		%		70-130	19-OCT-21
Manganese (Mn)			110.1		%		70-130	19-OCT-21
Molybdenum (Mo)			107.4		%		70-130	19-OCT-21
Nickel (Ni)			104.4		%		70-130	19-OCT-21
Phosphorus (P)			105.2		%		70-130	19-OCT-21
Potassium (K)			98.5		%		70-130	19-OCT-21
Selenium (Se)			0.15		mg/kg		0-0.34	19-OCT-21
Silver (Ag)			86.8		%		70-130	19-OCT-21
Sodium (Na)			100.9		%		70-130	19-OCT-21
Strontium (Sr)			109.5		%		70-130	19-OCT-21
Thallium (Tl)			0.081		mg/kg		0.029-0.129	19-OCT-21
Tin (Sn)			109.5		%		70-130	19-OCT-21
Titanium (Ti)			104.1		%		70-130	19-OCT-21
Uranium (U)			105.3		%		70-130	19-OCT-21
Vanadium (V)			103.2		%		70-130	19-OCT-21
Zinc (Zn)			100.0		%		70-130	19-OCT-21
Zirconium (Zr)			111.5		%		70-130	19-OCT-21
WG3640343-13 DUP		**WG3640343-12**						
Aluminum (Al)		18400	18600		ug/g	1.1	40	19-OCT-21
Antimony (Sb)		0.13	0.14		ug/g	4.9	30	19-OCT-21
Arsenic (As)		4.42	4.34		ug/g	1.9	30	19-OCT-21
Barium (Ba)		128	125		ug/g	2.3	40	19-OCT-21
Beryllium (Be)		0.74	0.82		ug/g	10	30	19-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5624992								
WG3640343-13 DUP		**WG3640343-12**						
Bismuth (Bi)		<0.20	<0.20	RPD-NA	ug/g	N/A	30	19-OCT-21
Boron (B)		11.7	12.4		ug/g	5.8	30	19-OCT-21
Cadmium (Cd)		0.099	0.096		ug/g	3.7	30	19-OCT-21
Calcium (Ca)		72200	77600		ug/g	7.3	30	19-OCT-21
Chromium (Cr)		29.7	29.4		ug/g	0.8	30	19-OCT-21
Cobalt (Co)		12.4	12.1		ug/g	2.4	30	19-OCT-21
Copper (Cu)		24.6	23.4		ug/g	5.1	30	19-OCT-21
Iron (Fe)		26800	27800		ug/g	3.7	30	19-OCT-21
Lead (Pb)		10.6	11.3		ug/g	6.2	40	19-OCT-21
Lithium (Li)		24.6	27.1		ug/g	9.5	30	19-OCT-21
Magnesium (Mg)		13300	13500		ug/g	1.4	30	19-OCT-21
Manganese (Mn)		695	693		ug/g	0.3	30	19-OCT-21
Molybdenum (Mo)		0.39	0.40		ug/g	2.3	40	19-OCT-21
Nickel (Ni)		28.0	27.7		ug/g	0.9	30	19-OCT-21
Phosphorus (P)		745	710		ug/g	4.9	30	19-OCT-21
Potassium (K)		3020	3060		ug/g	1.3	40	19-OCT-21
Selenium (Se)		<0.20	<0.20	RPD-NA	ug/g	N/A	30	19-OCT-21
Silver (Ag)		<0.10	<0.10	RPD-NA	ug/g	N/A	40	19-OCT-21
Sodium (Na)		411	401		ug/g	2.5	40	19-OCT-21
Strontium (Sr)		154	160		ug/g	3.7	40	19-OCT-21
Sulfur (S)		<1000	<1000	RPD-NA	ug/g	N/A	30	19-OCT-21
Thallium (Tl)		0.150	0.165		ug/g	9.3	30	19-OCT-21
Tin (Sn)		<2.0	<2.0	RPD-NA	ug/g	N/A	40	19-OCT-21
Titanium (Ti)		440	427		ug/g	2.9	40	19-OCT-21
Tungsten (W)		<0.50	<0.50	RPD-NA	ug/g	N/A	30	19-OCT-21
Uranium (U)		0.688	0.730		ug/g	5.9	30	19-OCT-21
Vanadium (V)		36.1	35.9		ug/g	0.4	30	19-OCT-21
Zinc (Zn)		59.0	59.6		ug/g	0.9	30	19-OCT-21
Zirconium (Zr)		12.5	13.2		ug/g	5.5	30	19-OCT-21
WG3640343-11 LCS								
Aluminum (Al)			98.1		%		80-120	19-OCT-21
Antimony (Sb)			99.9		%		80-120	19-OCT-21
Arsenic (As)			105.2		%		80-120	19-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5624992								
WG3640343-11 LCS								
Barium (Ba)			106.5		%		80-120	19-OCT-21
Beryllium (Be)			92.2		%		80-120	19-OCT-21
Bismuth (Bi)			97.1		%		80-120	19-OCT-21
Boron (B)			88.2		%		80-120	19-OCT-21
Cadmium (Cd)			100.9		%		80-120	19-OCT-21
Calcium (Ca)			96.5		%		80-120	19-OCT-21
Chromium (Cr)			98.3		%		80-120	19-OCT-21
Cobalt (Co)			100.8		%		80-120	19-OCT-21
Copper (Cu)			98.7		%		80-120	19-OCT-21
Iron (Fe)			95.3		%		80-120	19-OCT-21
Lead (Pb)			100.3		%		80-120	19-OCT-21
Lithium (Li)			87.0		%		80-120	19-OCT-21
Magnesium (Mg)			106.6		%		80-120	19-OCT-21
Manganese (Mn)			100.9		%		80-120	19-OCT-21
Molybdenum (Mo)			102.7		%		80-120	19-OCT-21
Nickel (Ni)			99.2		%		80-120	19-OCT-21
Phosphorus (P)			113.0		%		80-120	19-OCT-21
Potassium (K)			97.2		%		80-120	19-OCT-21
Selenium (Se)			102.6		%		80-120	19-OCT-21
Silver (Ag)			90.8		%		80-120	19-OCT-21
Sodium (Na)			97.7		%		80-120	19-OCT-21
Strontium (Sr)			104.2		%		80-120	19-OCT-21
Sulfur (S)			91.8		%		80-120	19-OCT-21
Thallium (Tl)			97.3		%		80-120	19-OCT-21
Tin (Sn)			100.1		%		80-120	19-OCT-21
Titanium (Ti)			100.8		%		80-120	19-OCT-21
Tungsten (W)			100.5		%		80-120	19-OCT-21
Uranium (U)			102.7		%		80-120	19-OCT-21
Vanadium (V)			101.2		%		80-120	19-OCT-21
Zinc (Zn)			97.9		%		80-120	19-OCT-21
Zirconium (Zr)			98.8		%		80-120	19-OCT-21
WG3640343-8 MB								
Aluminum (Al)			<50		mg/kg		50	19-OCT-21
Antimony (Sb)			<0.10		mg/kg		0.1	19-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5624992								
WG3640343-8 MB								
Arsenic (As)			<0.10		mg/kg		0.1	19-OCT-21
Barium (Ba)			<0.50		mg/kg		0.5	19-OCT-21
Beryllium (Be)			<0.10		mg/kg		0.1	19-OCT-21
Bismuth (Bi)			<0.20		mg/kg		0.2	19-OCT-21
Boron (B)			<5.0		mg/kg		5	19-OCT-21
Cadmium (Cd)			<0.020		mg/kg		0.02	19-OCT-21
Calcium (Ca)			<50		mg/kg		50	19-OCT-21
Chromium (Cr)			<0.50		mg/kg		0.5	19-OCT-21
Cobalt (Co)			<0.10		mg/kg		0.1	19-OCT-21
Copper (Cu)			<0.50		mg/kg		0.5	19-OCT-21
Iron (Fe)			<50		mg/kg		50	19-OCT-21
Lead (Pb)			<0.50		mg/kg		0.5	19-OCT-21
Lithium (Li)			<2.0		mg/kg		2	19-OCT-21
Magnesium (Mg)			<20		mg/kg		20	19-OCT-21
Manganese (Mn)			<1.0		mg/kg		1	19-OCT-21
Molybdenum (Mo)			<0.10		mg/kg		0.1	19-OCT-21
Nickel (Ni)			<0.50		mg/kg		0.5	19-OCT-21
Phosphorus (P)			<50		mg/kg		50	19-OCT-21
Potassium (K)			<100		mg/kg		100	19-OCT-21
Selenium (Se)			<0.20		mg/kg		0.2	19-OCT-21
Silver (Ag)			<0.10		mg/kg		0.1	19-OCT-21
Sodium (Na)			<50		mg/kg		50	19-OCT-21
Strontium (Sr)			<0.50		mg/kg		0.5	19-OCT-21
Sulfur (S)			<1000		mg/kg		1000	19-OCT-21
Thallium (Tl)			<0.050		mg/kg		0.05	19-OCT-21
Tin (Sn)			<2.0		mg/kg		2	19-OCT-21
Titanium (Ti)			<1.0		mg/kg		1	19-OCT-21
Tungsten (W)			<0.50		mg/kg		0.5	19-OCT-21
Uranium (U)			<0.050		mg/kg		0.05	19-OCT-21
Vanadium (V)			<0.20		mg/kg		0.2	19-OCT-21
Zinc (Zn)			<2.0		mg/kg		2	19-OCT-21
Zirconium (Zr)			<1.0		mg/kg		1	19-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5628138								
WG3644498-2 CRM		**WT-SS-2**						
Aluminum (Al)			105.4		%		70-130	25-OCT-21
Antimony (Sb)			86.7		%		70-130	25-OCT-21
Arsenic (As)			107.7		%		70-130	25-OCT-21
Barium (Ba)			116.6		%		70-130	25-OCT-21
Beryllium (Be)			100.4		%		70-130	25-OCT-21
Bismuth (Bi)			0.13		mg/kg		0-0.34	25-OCT-21
Boron (B)			8.4		mg/kg		3.5-13.5	25-OCT-21
Cadmium (Cd)			105.5		%		70-130	25-OCT-21
Calcium (Ca)			99.2		%		70-130	25-OCT-21
Chromium (Cr)			102.9		%		70-130	25-OCT-21
Cobalt (Co)			105.8		%		70-130	25-OCT-21
Copper (Cu)			111.9		%		70-130	25-OCT-21
Iron (Fe)			106.2		%		70-130	25-OCT-21
Lead (Pb)			98.1		%		70-130	25-OCT-21
Lithium (Li)			92.8		%		70-130	25-OCT-21
Magnesium (Mg)			116.6		%		70-130	25-OCT-21
Manganese (Mn)			105.4		%		70-130	25-OCT-21
Molybdenum (Mo)			97.8		%		70-130	25-OCT-21
Nickel (Ni)			109.5		%		70-130	25-OCT-21
Phosphorus (P)			113.4		%		70-130	25-OCT-21
Potassium (K)			98.8		%		70-130	25-OCT-21
Selenium (Se)			0.14		mg/kg		0-0.34	25-OCT-21
Silver (Ag)			83.4		%		70-130	25-OCT-21
Sodium (Na)			103.0		%		70-130	25-OCT-21
Strontium (Sr)			97.0		%		70-130	25-OCT-21
Thallium (Tl)			0.072		mg/kg		0.029-0.129	25-OCT-21
Tin (Sn)			94.3		%		70-130	25-OCT-21
Titanium (Ti)			105.1		%		70-130	25-OCT-21
Uranium (U)			93.9		%		70-130	25-OCT-21
Vanadium (V)			104.7		%		70-130	25-OCT-21
Zinc (Zn)			103.0		%		70-130	25-OCT-21
Zirconium (Zr)			95.5		%		70-130	25-OCT-21
WG3644498-6 DUP		**WG3644498-5**						
Aluminum (Al)		7960	7610		ug/g	4.6	40	25-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5628138								
WG3644498-6 DUP		**WG3644498-5**						
Antimony (Sb)		0.10	0.10		ug/g	2.8	30	25-OCT-21
Arsenic (As)		1.98	1.91		ug/g	3.2	30	25-OCT-21
Barium (Ba)		49.7	47.3		ug/g	4.9	40	25-OCT-21
Beryllium (Be)		0.19	0.20		ug/g	7.2	30	25-OCT-21
Bismuth (Bi)		<0.20	<0.20	RPD-NA	ug/g	N/A	30	25-OCT-21
Boron (B)		<5.0	<5.0	RPD-NA	ug/g	N/A	30	25-OCT-21
Cadmium (Cd)		0.411	0.378		ug/g	8.5	30	25-OCT-21
Calcium (Ca)		4560	4660		ug/g	2.2	30	25-OCT-21
Chromium (Cr)		34.4	32.6		ug/g	5.3	30	25-OCT-21
Cobalt (Co)		7.03	6.60		ug/g	6.2	30	25-OCT-21
Copper (Cu)		13.9	12.9		ug/g	7.5	30	25-OCT-21
Iron (Fe)		9690	9320		ug/g	4.0	30	25-OCT-21
Lead (Pb)		7.52	7.18		ug/g	4.6	40	25-OCT-21
Lithium (Li)		10.2	10.4		ug/g	2.3	30	25-OCT-21
Magnesium (Mg)		2990	2820		ug/g	5.6	30	25-OCT-21
Manganese (Mn)		224	213		ug/g	5.1	30	25-OCT-21
Molybdenum (Mo)		0.29	0.30		ug/g	2.3	40	25-OCT-21
Nickel (Ni)		18.3	17.2		ug/g	6.3	30	25-OCT-21
Phosphorus (P)		578	512		ug/g	12	30	25-OCT-21
Potassium (K)		380	370		ug/g	3.0	40	25-OCT-21
Selenium (Se)		0.42	0.41		ug/g	1.7	30	25-OCT-21
Silver (Ag)		<0.10	<0.10	RPD-NA	ug/g	N/A	40	25-OCT-21
Sodium (Na)		118	117		ug/g	0.5	40	25-OCT-21
Strontium (Sr)		11.4	11.8		ug/g	3.5	40	25-OCT-21
Sulfur (S)		<1000	<1000	RPD-NA	ug/g	N/A	30	25-OCT-21
Thallium (Tl)		0.110	0.107		ug/g	2.3	30	25-OCT-21
Tin (Sn)		<2.0	<2.0	RPD-NA	ug/g	N/A	40	25-OCT-21
Titanium (Ti)		531	545		ug/g	2.6	40	25-OCT-21
Tungsten (W)		<0.50	<0.50	RPD-NA	ug/g	N/A	30	25-OCT-21
Uranium (U)		0.727	0.687		ug/g	5.7	30	25-OCT-21
Vanadium (V)		19.2	18.6		ug/g	3.0	30	25-OCT-21
Zinc (Zn)		67.7	64.4		ug/g	4.9	30	25-OCT-21
Zirconium (Zr)		1.0	1.0		ug/g			25-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5628138								
WG3644498-6 DUP		**WG3644498-5**						
Zirconium (Zr)		1.0	1.0		ug/g	1.9	30	25-OCT-21
WG3644498-4 LCS								
Aluminum (Al)			108.1		%		80-120	25-OCT-21
Antimony (Sb)			106.1		%		80-120	25-OCT-21
Arsenic (As)			109.0		%		80-120	25-OCT-21
Barium (Ba)			112.8		%		80-120	25-OCT-21
Beryllium (Be)			105.6		%		80-120	25-OCT-21
Bismuth (Bi)			99.0		%		80-120	25-OCT-21
Boron (B)			99.2		%		80-120	25-OCT-21
Cadmium (Cd)			103.6		%		80-120	25-OCT-21
Calcium (Ca)			102.0		%		80-120	25-OCT-21
Chromium (Cr)			106.3		%		80-120	25-OCT-21
Cobalt (Co)			107.0		%		80-120	25-OCT-21
Copper (Cu)			105.7		%		80-120	25-OCT-21
Iron (Fe)			104.4		%		80-120	25-OCT-21
Lead (Pb)			102.8		%		80-120	25-OCT-21
Lithium (Li)			96.0		%		80-120	25-OCT-21
Magnesium (Mg)			117.2		%		80-120	25-OCT-21
Manganese (Mn)			106.6		%		80-120	25-OCT-21
Molybdenum (Mo)			106.4		%		80-120	25-OCT-21
Nickel (Ni)			106.2		%		80-120	25-OCT-21
Phosphorus (P)			114.2		%		80-120	25-OCT-21
Potassium (K)			107.5		%		80-120	25-OCT-21
Selenium (Se)			108.9		%		80-120	25-OCT-21
Silver (Ag)			94.4		%		80-120	25-OCT-21
Sodium (Na)			103.2		%		80-120	25-OCT-21
Strontium (Sr)			107.9		%		80-120	25-OCT-21
Sulfur (S)			106.9		%		80-120	25-OCT-21
Thallium (Tl)			100.9		%		80-120	25-OCT-21
Tin (Sn)			106.0		%		80-120	25-OCT-21
Titanium (Ti)			108.1		%		80-120	25-OCT-21
Tungsten (W)			98.4		%		80-120	25-OCT-21
Uranium (U)			97.7		%		80-120	25-OCT-21
Vanadium (V)			107.6		%		80-120	25-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5628138								
WG3644498-4 LCS								
Zinc (Zn)			99.8		%		80-120	25-OCT-21
Zirconium (Zr)			102.3		%		80-120	25-OCT-21
WG3644498-1 MB								
Aluminum (Al)			<50		mg/kg		50	25-OCT-21
Antimony (Sb)			<0.10		mg/kg		0.1	25-OCT-21
Arsenic (As)			<0.10		mg/kg		0.1	25-OCT-21
Barium (Ba)			<0.50		mg/kg		0.5	25-OCT-21
Beryllium (Be)			<0.10		mg/kg		0.1	25-OCT-21
Bismuth (Bi)			<0.20		mg/kg		0.2	25-OCT-21
Boron (B)			<5.0		mg/kg		5	25-OCT-21
Cadmium (Cd)			<0.020		mg/kg		0.02	25-OCT-21
Calcium (Ca)			<50		mg/kg		50	25-OCT-21
Chromium (Cr)			<0.50		mg/kg		0.5	25-OCT-21
Cobalt (Co)			<0.10		mg/kg		0.1	25-OCT-21
Copper (Cu)			<0.50		mg/kg		0.5	25-OCT-21
Iron (Fe)			<50		mg/kg		50	25-OCT-21
Lead (Pb)			<0.50		mg/kg		0.5	25-OCT-21
Lithium (Li)			<2.0		mg/kg		2	25-OCT-21
Magnesium (Mg)			<20		mg/kg		20	25-OCT-21
Manganese (Mn)			<1.0		mg/kg		1	25-OCT-21
Molybdenum (Mo)			<0.10		mg/kg		0.1	25-OCT-21
Nickel (Ni)			<0.50		mg/kg		0.5	25-OCT-21
Phosphorus (P)			<50		mg/kg		50	25-OCT-21
Potassium (K)			<100		mg/kg		100	25-OCT-21
Selenium (Se)			<0.20		mg/kg		0.2	25-OCT-21
Silver (Ag)			<0.10		mg/kg		0.1	25-OCT-21
Sodium (Na)			<50		mg/kg		50	25-OCT-21
Strontium (Sr)			<0.50		mg/kg		0.5	25-OCT-21
Sulfur (S)			<1000		mg/kg		1000	25-OCT-21
Thallium (Tl)			<0.050		mg/kg		0.05	25-OCT-21
Tin (Sn)			<2.0		mg/kg		2	25-OCT-21
Titanium (Ti)			<1.0		mg/kg		1	25-OCT-21
Tungsten (W)			<0.50		mg/kg		0.5	25-OCT-21
Uranium (U)			<0.050		mg/kg		0.05	25-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5628138								
WG3644498-1 MB								
Vanadium (V)			<0.20		mg/kg		0.2	25-OCT-21
Zinc (Zn)			<2.0		mg/kg		2	25-OCT-21
Zirconium (Zr)			<1.0		mg/kg		1	25-OCT-21
MOISTURE-WT	**Soil**							
Batch R5614025								
WG3633062-3 DUP		**L2647897-1**						
% Moisture		82.6	82.2		%	0.6	20	08-OCT-21
WG3633062-2 LCS								
% Moisture			99.5		%		90-110	08-OCT-21
WG3633062-1 MB								
% Moisture			<0.25		%		0.25	08-OCT-21
Batch R5614911								
WG3634630-3 DUP		**L2648161-18**						
% Moisture		72.7	74.0		%	1.7	20	09-OCT-21
WG3634630-2 LCS								
% Moisture			99.5		%		90-110	09-OCT-21
WG3634630-1 MB								
% Moisture			<0.25		%		0.25	09-OCT-21
Batch R5615082								
WG3634866-3 DUP		**L2643829-18**						
% Moisture		19.2	21.4		%	11	20	09-OCT-21
WG3634866-2 LCS								
% Moisture			101.0		%		90-110	09-OCT-21
WG3634866-1 MB								
% Moisture			<0.25		%		0.25	09-OCT-21
Batch R5623898								
WG3639481-3 DUP		**L2645184-13**						
% Moisture		10.7	10.8		%	1.4	20	19-OCT-21
WG3639481-2 LCS								
% Moisture			97.3		%		90-110	19-OCT-21
WG3639481-1 MB								
% Moisture			<0.25		%		0.25	19-OCT-21
Batch R5626261								
WG3642465-3 DUP		**L2652044-2**						
% Moisture		8.76	9.23		%	5.3	20	22-OCT-21
WG3642465-2 LCS								

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MOISTURE-WT	**Soil**							
Batch R5626261								
WG3642465-2 LCS								
% Moisture			101.0		%		90-110	22-OCT-21
WG3642465-1 MB								
% Moisture			<0.25		%		0.25	22-OCT-21
Batch R5626550								
WG3642699-3 DUP		**L2647897-28**						
% Moisture		79.2	82.7		%	4.3	20	22-OCT-21
WG3642699-2 LCS								
% Moisture			99.5		%		90-110	22-OCT-21
WG3642699-1 MB								
% Moisture			<0.25		%		0.25	22-OCT-21
PAH-CCME-SQGL-WT	**Soil**							
Batch R5616732								
WG3636177-3 DUP		**WG3636177-5**						
1-Methylnaphthalene		<0.0050	<0.0050	RPD-NA	ug/g	N/A	50	13-OCT-21
2-Methylnaphthalene		<0.0050	<0.0050	RPD-NA	ug/g	N/A	50	13-OCT-21
Acenaphthene		<0.0050	<0.0050	RPD-NA	ug/g	N/A	50	13-OCT-21
Acenaphthylene		<0.0050	<0.0050	RPD-NA	ug/g	N/A	50	13-OCT-21
Acridine		<0.010	<0.010	RPD-NA	ug/g	N/A	50	13-OCT-21
Anthracene		<0.0040	<0.0040	RPD-NA	ug/g	N/A	50	13-OCT-21
Benzo(a)anthracene		<0.010	<0.010	RPD-NA	ug/g	N/A	50	13-OCT-21
Benzo(a)pyrene		<0.0050	0.0117	DUP-H	ug/g	N/A	50	13-OCT-21
Benzo(b&j)fluoranthene		<0.010	0.015	RPD-NA	ug/g	N/A	50	13-OCT-21
Benzo(g,h,i)perylene		<0.010	<0.010	RPD-NA	ug/g	N/A	50	13-OCT-21
Benzo(k)fluoranthene		<0.010	<0.010	RPD-NA	ug/g	N/A	50	13-OCT-21
Chrysene		<0.010	0.012	RPD-NA	ug/g	N/A	50	13-OCT-21
Dibenz(a,h)anthracene		<0.0050	<0.0050	RPD-NA	ug/g	N/A	50	13-OCT-21
Fluoroanthene		<0.0050	0.0126	DUP-H	ug/g	N/A	50	13-OCT-21
Fluorene		<0.0050	<0.0050	RPD-NA	ug/g	N/A	50	13-OCT-21
Indeno(1,2,3-cd)pyrene		<0.010	<0.010	RPD-NA	ug/g	N/A	50	13-OCT-21
Naphthalene		<0.0050	<0.0050	RPD-NA	ug/g	N/A	50	13-OCT-21
Phenanthrene		<0.0050	<0.0050	RPD-NA	ug/g	N/A	50	13-OCT-21
Pyrene		<0.0050	0.0116	DUP-H	ug/g	N/A	50	13-OCT-21
Quinoline		<0.0050	<0.0050	RPD-NA	ug/g	N/A	50	13-OCT-21
WG3636177-2 LCS								

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-CCME-SQGL-WT	**Soil**							
Batch R5616732								
WG3636177-2 LCS								
1-Methylnaphthalene			96.2		%		50-140	13-OCT-21
2-Methylnaphthalene			92.5		%		50-140	13-OCT-21
Acenaphthene			92.1		%		50-140	13-OCT-21
Acenaphthylene			89.8		%		50-140	13-OCT-21
Acridine			93.0		%		50-140	13-OCT-21
Anthracene			85.1		%		50-140	13-OCT-21
Benzo(a)anthracene			99.1		%		50-140	13-OCT-21
Benzo(a)pyrene			82.7		%		50-140	13-OCT-21
Benzo(b&j)fluoranthene			89.6		%		50-150	13-OCT-21
Benzo(g,h,i)perylene			93.6		%		50-140	13-OCT-21
Benzo(k)fluoranthene			93.3		%		50-140	13-OCT-21
Chrysene			99.4		%		50-140	13-OCT-21
Dibenz(a,h)anthracene			97.2		%		50-140	13-OCT-21
Fluoroanthene			95.9		%		50-140	13-OCT-21
Fluorene			91.5		%		50-140	13-OCT-21
Indeno(1,2,3-cd)pyrene			94.8		%		50-140	13-OCT-21
Naphthalene			89.3		%		50-140	13-OCT-21
Phenanthrene			95.0		%		50-140	13-OCT-21
Pyrene			95.7		%		50-140	13-OCT-21
Quinoline			80.6		%		50-140	13-OCT-21
WG3636177-1 MB								
1-Methylnaphthalene			<0.0050		ug/g		0.005	13-OCT-21
2-Methylnaphthalene			<0.0050		ug/g		0.005	13-OCT-21
Acenaphthene			<0.0050		ug/g		0.005	13-OCT-21
Acenaphthylene			<0.0050		ug/g		0.005	13-OCT-21
Acridine			<0.010		ug/g		0.01	13-OCT-21
Anthracene			<0.0040		ug/g		0.004	13-OCT-21
Benzo(a)anthracene			<0.010		ug/g		0.01	13-OCT-21
Benzo(a)pyrene			<0.0050		ug/g		0.005	13-OCT-21
Benzo(b&j)fluoranthene			<0.010		ug/g		0.01	13-OCT-21
Benzo(g,h,i)perylene			<0.010		ug/g		0.01	13-OCT-21
Benzo(k)fluoranthene			<0.010		ug/g		0.01	13-OCT-21
Chrysene			<0.010		ug/g		0.01	13-OCT-21
Dibenz(a,h)anthracene			<0.0050		ug/g		0.005	13-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-CCME-SQGL-WT	**Soil**							
Batch R5616732								
WG3636177-1 MB								
Fluoroanthene			<0.0050		ug/g		0.005	13-OCT-21
Fluorene			<0.0050		ug/g		0.005	13-OCT-21
Indeno(1,2,3-cd)pyrene			<0.010		ug/g		0.01	13-OCT-21
Naphthalene			<0.0050		ug/g		0.005	13-OCT-21
Phenanthrene			<0.0050		ug/g		0.005	13-OCT-21
Pyrene			<0.0050		ug/g		0.005	13-OCT-21
Quinoline			<0.0050		ug/g		0.005	13-OCT-21
Surrogate: 2-Fluorobiphenyl			85.4		%		60-140	13-OCT-21
Surrogate: d14-Terphenyl			90.4		%		60-140	13-OCT-21
WG3636177-4 MS		**WG3636177-5**						
1-Methylnaphthalene			93.9		%		50-150	13-OCT-21
2-Methylnaphthalene			90.4		%		50-150	13-OCT-21
Acenaphthene			90.8		%		50-150	13-OCT-21
Acenaphthylene			85.9		%		50-150	13-OCT-21
Acridine			98.1		%		50-150	13-OCT-21
Anthracene			83.7		%		50-150	13-OCT-21
Benzo(a)anthracene			97.6		%		50-150	13-OCT-21
Benzo(a)pyrene			79.9		%		50-150	13-OCT-21
Benzo(b&j)fluoranthene			88.1		%		50-150	13-OCT-21
Benzo(g,h,i)perylene			89.5		%		50-150	13-OCT-21
Benzo(k)fluoranthene			89.7		%		50-150	13-OCT-21
Chrysene			95.5		%		50-150	13-OCT-21
Dibenz(a,h)anthracene			93.1		%		50-150	13-OCT-21
Fluoroanthene			94.1		%		50-150	13-OCT-21
Fluorene			91.8		%		50-150	13-OCT-21
Indeno(1,2,3-cd)pyrene			91.0		%		50-150	13-OCT-21
Naphthalene			86.9		%		50-150	13-OCT-21
Phenanthrene			92.5		%		50-150	13-OCT-21
Pyrene			92.4		%		50-150	13-OCT-21
Quinoline			89.6		%		50-150	13-OCT-21
Batch R5618524								
WG3636178-3 DUP		**WG3636178-5**						
1-Methylnaphthalene		0.064	0.054		ug/g	15	50	15-OCT-21
2-Methylnaphthalene		0.082	0.051		ug/g	47	50	15-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-CCME-SQGL-WT	**Soil**							
Batch R5618524								
WG3636178-3 DUP		**WG3636178-5**						
Acenaphthene		0.125	0.171		ug/g	31	50	15-OCT-21
Acenaphthylene		0.526	0.800		ug/g	41	50	15-OCT-21
Acridine		<0.050	<0.050	RPD-NA	ug/g	N/A	50	15-OCT-21
Anthracene		0.687	0.640		ug/g	7.1	50	15-OCT-21
Benzo(a)anthracene		1.51	1.92		ug/g	24	50	15-OCT-21
Benzo(a)pyrene		1.71	2.30		ug/g	29	50	15-OCT-21
Benzo(b&j)fluoranthene		1.44	1.91		ug/g	28	50	15-OCT-21
Benzo(g,h,i)perylene		0.998	1.31		ug/g	27	50	15-OCT-21
Benzo(k)fluoranthene		0.465	0.598		ug/g	25	50	15-OCT-21
Chrysene		1.43	1.80		ug/g	23	50	15-OCT-21
Dibenz(a,h)anthracene		0.230	0.324		ug/g	34	50	15-OCT-21
Fluoroanthene		1.53	1.77		ug/g	15	50	15-OCT-21
Fluorene		0.114	0.170		ug/g	40	50	15-OCT-21
Indeno(1,2,3-cd)pyrene		0.772	1.04		ug/g	30	50	15-OCT-21
Naphthalene		0.105	0.072		ug/g	37	50	15-OCT-21
Phenanthrene		0.499	0.647		ug/g	26	50	15-OCT-21
Pyrene		2.29	2.68		ug/g	16	50	15-OCT-21
Quinoline		<0.025	<0.025	RPD-NA	ug/g	N/A	50	15-OCT-21
WG3636178-2 LCS								
1-Methylnaphthalene			97.9		%		50-140	15-OCT-21
2-Methylnaphthalene			95.6		%		50-140	15-OCT-21
Acenaphthene			94.4		%		50-140	15-OCT-21
Acenaphthylene			92.8		%		50-140	15-OCT-21
Acridine			92.9		%		50-140	15-OCT-21
Anthracene			87.0		%		50-140	15-OCT-21
Benzo(a)anthracene			105.7		%		50-140	15-OCT-21
Benzo(a)pyrene			84.2		%		50-140	15-OCT-21
Benzo(b&j)fluoranthene			96.3		%		50-150	15-OCT-21
Benzo(g,h,i)perylene			101.2		%		50-140	15-OCT-21
Benzo(k)fluoranthene			86.4		%		50-140	15-OCT-21
Chrysene			101.2		%		50-140	15-OCT-21
Dibenz(a,h)anthracene			104.0		%		50-140	15-OCT-21
Fluoroanthene			99.4		%		50-140	15-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-CCME-SQGL-WT	**Soil**							
Batch R5618524								
WG3636178-2 LCS								
Fluorene			92.6		%		50-140	15-OCT-21
Indeno(1,2,3-cd)pyrene			110.0		%		50-140	15-OCT-21
Naphthalene			93.3		%		50-140	15-OCT-21
Phenanthrene			97.7		%		50-140	15-OCT-21
Pyrene			96.6		%		50-140	15-OCT-21
Quinoline			82.1		%		50-140	15-OCT-21
WG3636178-1 MB								
1-Methylnaphthalene			<0.0050		ug/g		0.005	15-OCT-21
2-Methylnaphthalene			<0.0050		ug/g		0.005	15-OCT-21
Acenaphthene			<0.0050		ug/g		0.005	15-OCT-21
Acenaphthylene			<0.0050		ug/g		0.005	15-OCT-21
Acridine			<0.010		ug/g		0.01	15-OCT-21
Anthracene			<0.0040		ug/g		0.004	15-OCT-21
Benzo(a)anthracene			<0.010		ug/g		0.01	15-OCT-21
Benzo(a)pyrene			<0.0050		ug/g		0.005	15-OCT-21
Benzo(b&j)fluoranthene			<0.010		ug/g		0.01	15-OCT-21
Benzo(g,h,i)perylene			<0.010		ug/g		0.01	15-OCT-21
Benzo(k)fluoranthene			<0.010		ug/g		0.01	15-OCT-21
Chrysene			<0.010		ug/g		0.01	15-OCT-21
Dibenz(a,h)anthracene			<0.0050		ug/g		0.005	15-OCT-21
Fluoroanthene			<0.0050		ug/g		0.005	15-OCT-21
Fluorene			<0.0050		ug/g		0.005	15-OCT-21
Indeno(1,2,3-cd)pyrene			<0.010		ug/g		0.01	15-OCT-21
Naphthalene			<0.0050		ug/g		0.005	15-OCT-21
Phenanthrene			<0.0050		ug/g		0.005	15-OCT-21
Pyrene			<0.0050		ug/g		0.005	15-OCT-21
Quinoline			<0.0050		ug/g		0.005	15-OCT-21
Surrogate: 2-Fluorobiphenyl			79.2		%		60-140	15-OCT-21
Surrogate: d14-Terphenyl			85.2		%		60-140	15-OCT-21
WG3636178-4 MS		**WG3636178-5**						
1-Methylnaphthalene			91.0		%		50-150	15-OCT-21
2-Methylnaphthalene			89.0		%		50-150	15-OCT-21
Acenaphthene			91.3		%		50-150	15-OCT-21
Acenaphthylene			68.5		%		50-150	15-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-CCME-SQGL-WT	**Soil**							
Batch R5618524								
WG3636178-4 MS		**WG3636178-5**						
Acridine			81.7		%		50-150	15-OCT-21
Anthracene			71.5		%		50-150	15-OCT-21
Benzo(a)anthracene			100.9		%		50-150	15-OCT-21
Benzo(a)pyrene			76.1		%		50-150	15-OCT-21
Benzo(b&j)fluoranthene			74.8		%		50-150	15-OCT-21
Benzo(g,h,i)perylene			82.3		%		50-150	15-OCT-21
Benzo(k)fluoranthene			84.5		%		50-150	15-OCT-21
Chrysene			87.5		%		50-150	15-OCT-21
Dibenz(a,h)anthracene			82.6		%		50-150	15-OCT-21
Fluoroanthene			96.9		%		50-150	15-OCT-21
Fluorene			94.4		%		50-150	15-OCT-21
Indeno(1,2,3-cd)pyrene			93.9		%		50-150	15-OCT-21
Naphthalene			85.2		%		50-150	15-OCT-21
Phenanthrene			93.9		%		50-150	15-OCT-21
Pyrene			90.7		%		50-150	15-OCT-21
Quinoline			88.6		%		50-150	15-OCT-21
Batch R5619618								
WG3637599-15 DUP		**WG3637599-17**						
1-Methylnaphthalene		0.0098	0.0092		ug/g	6.2	50	15-OCT-21
2-Methylnaphthalene		0.0159	0.0142		ug/g	11	50	15-OCT-21
Acenaphthene		<0.0050	<0.0050	RPD-NA	ug/g	N/A	50	15-OCT-21
Acenaphthylene		<0.0050	<0.0050	RPD-NA	ug/g	N/A	50	15-OCT-21
Acridine		<0.010	<0.010	RPD-NA	ug/g	N/A	50	15-OCT-21
Anthracene		<0.0040	<0.0040	RPD-NA	ug/g	N/A	50	15-OCT-21
Benzo(a)anthracene		<0.010	0.010	RPD-NA	ug/g	N/A	50	15-OCT-21
Benzo(a)pyrene		0.0089	0.0107		ug/g	18	50	15-OCT-21
Benzo(b&j)fluoranthene		0.018	0.019		ug/g	8.0	50	15-OCT-21
Benzo(g,h,i)perylene		<0.010	<0.010	RPD-NA	ug/g	N/A	50	15-OCT-21
Benzo(k)fluoranthene		<0.010	<0.010	RPD-NA	ug/g	N/A	50	15-OCT-21
Chrysene		0.015	0.016		ug/g	9.3	50	15-OCT-21
Dibenz(a,h)anthracene		<0.0050	<0.0050	RPD-NA	ug/g	N/A	50	15-OCT-21
Fluoroanthene		0.0126	0.0154		ug/g	21	50	15-OCT-21
Fluorene		<0.0050	<0.0050	RPD-NA	ug/g	N/A	50	15-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-CCME-SQGL-WT	**Soil**							
Batch R5619618								
WG3637599-15 DUP		**WG3637599-17**						
Indeno(1,2,3-cd)pyrene		<0.010	<0.010	RPD-NA	ug/g	N/A	50	15-OCT-21
Naphthalene		0.0104	0.0093		ug/g	11	50	15-OCT-21
Phenanthrene		0.0135	0.0146		ug/g	8.0	50	15-OCT-21
Pyrene		0.0111	0.0142		ug/g	25	50	15-OCT-21
Quinoline		<0.0050	<0.0050	RPD-NA	ug/g	N/A	50	15-OCT-21
WG3637599-14 LCS								
1-Methylnaphthalene			102.4		%		50-140	15-OCT-21
2-Methylnaphthalene			98.2		%		50-140	15-OCT-21
Acenaphthene			97.3		%		50-140	15-OCT-21
Acenaphthylene			95.8		%		50-140	15-OCT-21
Acridine			98.8		%		50-140	15-OCT-21
Anthracene			89.8		%		50-140	15-OCT-21
Benzo(a)anthracene			104.3		%		50-140	15-OCT-21
Benzo(a)pyrene			87.2		%		50-140	15-OCT-21
Benzo(b&j)fluoranthene			93.4		%		50-150	15-OCT-21
Benzo(g,h,i)perylene			86.7		%		50-140	15-OCT-21
Benzo(k)fluoranthene			100.8		%		50-140	15-OCT-21
Chrysene			104.9		%		50-140	15-OCT-21
Dibenz(a,h)anthracene			93.1		%		50-140	15-OCT-21
Fluoroanthene			100.1		%		50-140	15-OCT-21
Fluorene			96.0		%		50-140	15-OCT-21
Indeno(1,2,3-cd)pyrene			96.2		%		50-140	15-OCT-21
Naphthalene			94.1		%		50-140	15-OCT-21
Phenanthrene			98.9		%		50-140	15-OCT-21
Pyrene			100.2		%		50-140	15-OCT-21
Quinoline			84.4		%		50-140	15-OCT-21
WG3637599-13 MB								
1-Methylnaphthalene			<0.0050		ug/g		0.005	15-OCT-21
2-Methylnaphthalene			<0.0050		ug/g		0.005	15-OCT-21
Acenaphthene			<0.0050		ug/g		0.005	15-OCT-21
Acenaphthylene			<0.0050		ug/g		0.005	15-OCT-21
Acridine			<0.010		ug/g		0.01	15-OCT-21
Anthracene			<0.0040		ug/g		0.004	15-OCT-21
Benzo(a)anthracene			<0.010		ug/g		0.01	15-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-CCME-SQGL-WT	**Soil**							
Batch R5619618								
WG3637599-13 MB								
Benzo(a)pyrene			<0.0050		ug/g		0.005	15-OCT-21
Benzo(b&j)fluoranthene			<0.010		ug/g		0.01	15-OCT-21
Benzo(g,h,i)perylene			<0.010		ug/g		0.01	15-OCT-21
Benzo(k)fluoranthene			<0.010		ug/g		0.01	15-OCT-21
Chrysene			<0.010		ug/g		0.01	15-OCT-21
Dibenz(a,h)anthracene			<0.0050		ug/g		0.005	15-OCT-21
Fluoroanthene			<0.0050		ug/g		0.005	15-OCT-21
Fluorene			<0.0050		ug/g		0.005	15-OCT-21
Indeno(1,2,3-cd)pyrene			<0.010		ug/g		0.01	15-OCT-21
Naphthalene			<0.0050		ug/g		0.005	15-OCT-21
Phenanthrene			<0.0050		ug/g		0.005	15-OCT-21
Pyrene			<0.0050		ug/g		0.005	15-OCT-21
Quinoline			<0.0050		ug/g		0.005	15-OCT-21
Surrogate: 2-Fluorobiphenyl			91.0		%		60-140	15-OCT-21
Surrogate: d14-Terphenyl			96.8		%		60-140	15-OCT-21
WG3637599-16 MS		**WG3637599-17**						
1-Methylnaphthalene			102.4		%		50-150	15-OCT-21
2-Methylnaphthalene			97.6		%		50-150	15-OCT-21
Acenaphthene			98.4		%		50-150	15-OCT-21
Acenaphthylene			94.4		%		50-150	15-OCT-21
Acridine			96.1		%		50-150	15-OCT-21
Anthracene			89.7		%		50-150	15-OCT-21
Benzo(a)anthracene			106.2		%		50-150	15-OCT-21
Benzo(a)pyrene			91.1		%		50-150	15-OCT-21
Benzo(b&j)fluoranthene			100.3		%		50-150	15-OCT-21
Benzo(g,h,i)perylene			87.0		%		50-150	15-OCT-21
Benzo(k)fluoranthene			108.3		%		50-150	15-OCT-21
Chrysene			104.9		%		50-150	15-OCT-21
Dibenz(a,h)anthracene			98.3		%		50-150	15-OCT-21
Fluoroanthene			101.8		%		50-150	15-OCT-21
Fluorene			96.9		%		50-150	15-OCT-21
Indeno(1,2,3-cd)pyrene			98.8		%		50-150	15-OCT-21
Naphthalene			93.4		%		50-150	15-OCT-21
Phenanthrene			99.2		%		50-150	15-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-CCME-SQGL-WT	**Soil**							
Batch R5619618								
WG3637599-16 MS		**WG3637599-17**						
Pyrene			101.3		%		50-150	15-OCT-21
Quinoline			86.6		%		50-150	15-OCT-21
Batch R5625547								
WG3640266-3 DUP		**WG3640266-5**						
1-Methylnaphthalene		0.050	0.047		ug/g	7.3	50	20-OCT-21
2-Methylnaphthalene		0.070	0.064		ug/g	8.6	50	20-OCT-21
Acenaphthene		0.091	0.083		ug/g	9.4	50	20-OCT-21
Acenaphthylene		0.775	0.753		ug/g	3.0	50	20-OCT-21
Acridine		0.075	0.074		ug/g	1.5	50	20-OCT-21
Anthracene		0.319	0.342		ug/g	6.7	50	20-OCT-21
Benzo(a)anthracene		0.956	0.941		ug/g	1.5	50	20-OCT-21
Benzo(a)pyrene		1.47	1.42		ug/g	3.8	50	20-OCT-21
Benzo(b&j)fluoranthene		1.32	1.33		ug/g	1.0	50	20-OCT-21
Benzo(g,h,i)perylene		0.787	0.767		ug/g	2.6	50	20-OCT-21
Benzo(k)fluoranthene		0.480	0.473		ug/g	1.4	50	20-OCT-21
Chrysene		1.10	1.14		ug/g	3.1	50	20-OCT-21
Dibenz(a,h)anthracene		0.205	0.200		ug/g	2.6	50	20-OCT-21
Fluoroanthene		1.07	1.14		ug/g	6.0	50	20-OCT-21
Fluorene		0.135	0.130		ug/g	3.6	50	20-OCT-21
Indeno(1,2,3-cd)pyrene		0.752	0.739		ug/g	1.8	50	20-OCT-21
Naphthalene		0.075	0.065		ug/g	14	50	20-OCT-21
Phenanthrene		0.468	0.491		ug/g	4.9	50	20-OCT-21
Pyrene		1.85	1.88		ug/g	1.6	50	20-OCT-21
Quinoline		<0.02	0.010		ug/g	5.6	50	20-OCT-21
WG3640266-2 LCS								
1-Methylnaphthalene			97.4		%		50-140	20-OCT-21
2-Methylnaphthalene			92.3		%		50-140	20-OCT-21
Acenaphthene			90.5		%		50-140	20-OCT-21
Acenaphthylene			83.5		%		50-140	20-OCT-21
Acridine			87.9		%		50-140	20-OCT-21
Anthracene			81.6		%		50-140	20-OCT-21
Benzo(a)anthracene			92.0		%		50-140	20-OCT-21
Benzo(a)pyrene			82.2		%		50-140	20-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-CCME-SQGL-WT	**Soil**							
Batch R5625547								
WG3640266-2 LCS								
Benzo(b&j)fluoranthene			94.9		%		50-150	20-OCT-21
Benzo(g,h,i)perylene			79.3		%		50-140	20-OCT-21
Benzo(k)fluoranthene			98.1		%		50-140	20-OCT-21
Chrysene			102.5		%		50-140	20-OCT-21
Dibenz(a,h)anthracene			86.5		%		50-140	20-OCT-21
Fluoroanthene			93.9		%		50-140	20-OCT-21
Fluorene			87.4		%		50-140	20-OCT-21
Indeno(1,2,3-cd)pyrene			82.6		%		50-140	20-OCT-21
Naphthalene			89.0		%		50-140	20-OCT-21
Phenanthrene			94.4		%		50-140	20-OCT-21
Pyrene			93.4		%		50-140	20-OCT-21
Quinoline			79.3		%		50-140	20-OCT-21
WG3640266-1 MB								
1-Methylnaphthalene			<0.0050		ug/g		0.005	20-OCT-21
2-Methylnaphthalene			<0.0050		ug/g		0.005	20-OCT-21
Acenaphthene			<0.0050		ug/g		0.005	20-OCT-21
Acenaphthylene			<0.0050		ug/g		0.005	20-OCT-21
Acridine			<0.010		ug/g		0.01	20-OCT-21
Anthracene			<0.0040		ug/g		0.004	20-OCT-21
Benzo(a)anthracene			<0.010		ug/g		0.01	20-OCT-21
Benzo(a)pyrene			<0.0050		ug/g		0.005	20-OCT-21
Benzo(b&j)fluoranthene			<0.010		ug/g		0.01	20-OCT-21
Benzo(g,h,i)perylene			<0.010		ug/g		0.01	20-OCT-21
Benzo(k)fluoranthene			<0.010		ug/g		0.01	20-OCT-21
Chrysene			<0.010		ug/g		0.01	20-OCT-21
Dibenz(a,h)anthracene			<0.0050		ug/g		0.005	20-OCT-21
Fluoroanthene			<0.0050		ug/g		0.005	20-OCT-21
Fluorene			<0.0050		ug/g		0.005	20-OCT-21
Indeno(1,2,3-cd)pyrene			<0.010		ug/g		0.01	20-OCT-21
Naphthalene			<0.0050		ug/g		0.005	20-OCT-21
Phenanthrene			<0.0050		ug/g		0.005	20-OCT-21
Pyrene			<0.0050		ug/g		0.005	20-OCT-21
Quinoline			<0.0050		ug/g		0.005	20-OCT-21
Surrogate: 2-Fluorobiphenyl			90.3		%		60-140	20-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-CCME-SQGL-WT	**Soil**							
Batch R5625547								
WG3640266-1 MB								
Surrogate: d14-Terphenyl			92.8		%		60-140	20-OCT-21
WG3640266-4 MS		**WG3640266-5**						
1-Methylnaphthalene			95.0		%		50-150	20-OCT-21
2-Methylnaphthalene			91.8		%		50-150	20-OCT-21
Acenaphthene			92.9		%		50-150	20-OCT-21
Acenaphthylene			52.1		%		50-150	20-OCT-21
Acridine			93.1		%		50-150	20-OCT-21
Anthracene			78.3		%		50-150	20-OCT-21
Benzo(a)anthracene			93.5		%		50-150	20-OCT-21
Benzo(a)pyrene			N/A	MS-B	%		-	20-OCT-21
Benzo(b&j)fluoranthene			N/A	MS-B	%		-	20-OCT-21
Benzo(g,h,i)perylene			49.7	MES	%		50-150	20-OCT-21
Benzo(k)fluoranthene			86.9		%		50-150	20-OCT-21
Chrysene			94.2		%		50-150	20-OCT-21
Dibenz(a,h)anthracene			63.1		%		50-150	20-OCT-21
Fluoroanthene			93.3		%		50-150	20-OCT-21
Fluorene			96.7		%		50-150	20-OCT-21
Indeno(1,2,3-cd)pyrene			63.0		%		50-150	20-OCT-21
Naphthalene			86.8		%		50-150	20-OCT-21
Phenanthrene			94.0		%		50-150	20-OCT-21
Pyrene			N/A	MS-B	%		-	20-OCT-21
Quinoline			83.6		%		50-150	20-OCT-21
Batch R5626548								
WG3642511-3 DUP		**WG3642511-5**						
1-Methylnaphthalene		<0.015	<0.015	RPD-NA	ug/g	N/A	50	22-OCT-21
2-Methylnaphthalene		0.022	0.022		ug/g	1.9	50	22-OCT-21
Acenaphthene		0.016	0.017		ug/g	6.9	50	22-OCT-21
Acenaphthylene		0.044	0.049		ug/g	11	50	22-OCT-21
Acridine		<0.030	<0.030	RPD-NA	ug/g	N/A	50	22-OCT-21
Anthracene		0.053	0.054		ug/g	2.8	50	22-OCT-21
Benzo(a)anthracene		0.182	0.184		ug/g	1.1	50	22-OCT-21
Benzo(a)pyrene		0.234	0.237		ug/g	1.1	50	22-OCT-21
Benzo(b&j)fluoranthene		0.343	0.345		ug/g	0.6	50	22-OCT-21
Benzo(g,h,i)perylene		0.230	0.228		ug/g	1.0	50	22-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-CCME-SQGL-WT	**Soil**							
Batch R5626548								
WG3642511-3 DUP		**WG3642511-5**						
Benzo(k)fluoranthene		0.144	0.146		ug/g	1.0	50	22-OCT-21
Chrysene		0.253	0.259		ug/g	2.1	50	22-OCT-21
Dibenz(a,h)anthracene		0.054	0.054		ug/g	0.8	50	22-OCT-21
Fluoroanthene		0.352	0.360		ug/g	2.3	50	22-OCT-21
Fluorene		0.023	0.023		ug/g	0.5	50	22-OCT-21
Indeno(1,2,3-cd)pyrene		0.189	0.182		ug/g	3.6	50	22-OCT-21
Naphthalene		0.019	0.019		ug/g	1.9	50	22-OCT-21
Phenanthrene		0.160	0.166		ug/g	4.1	50	22-OCT-21
Pyrene		0.374	0.383		ug/g	2.4	50	22-OCT-21
Quinoline		<0.015	<0.015	RPD-NA	ug/g	N/A	50	22-OCT-21
WG3642511-2 LCS								
1-Methylnaphthalene			105.0		%		50-140	22-OCT-21
2-Methylnaphthalene			100.1		%		50-140	22-OCT-21
Acenaphthene			98.0		%		50-140	22-OCT-21
Acenaphthylene			93.7		%		50-140	22-OCT-21
Acridine			96.3		%		50-140	22-OCT-21
Anthracene			90.0		%		50-140	22-OCT-21
Benzo(a)anthracene			99.5		%		50-140	22-OCT-21
Benzo(a)pyrene			86.9		%		50-140	22-OCT-21
Benzo(b&j)fluoranthene			90.5		%		50-150	22-OCT-21
Benzo(g,h,i)perylene			93.5		%		50-140	22-OCT-21
Benzo(k)fluoranthene			106.9		%		50-140	22-OCT-21
Chrysene			106.8		%		50-140	22-OCT-21
Dibenz(a,h)anthracene			100.3		%		50-140	22-OCT-21
Fluoroanthene			99.4		%		50-140	22-OCT-21
Fluorene			94.3		%		50-140	22-OCT-21
Indeno(1,2,3-cd)pyrene			93.8		%		50-140	22-OCT-21
Naphthalene			96.3		%		50-140	22-OCT-21
Phenanthrene			101.0		%		50-140	22-OCT-21
Pyrene			99.4		%		50-140	22-OCT-21
Quinoline			84.1		%		50-140	22-OCT-21
WG3642511-1 MB								
1-Methylnaphthalene			<0.0050		ug/g		0.005	22-OCT-21
2-Methylnaphthalene			<0.0050		ug/g		0.005	22-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-CCME-SQGL-WT	**Soil**							
Batch R5626548								
WG3642511-1 MB								
Acenaphthene			<0.0050		ug/g		0.005	22-OCT-21
Acenaphthylene			<0.0050		ug/g		0.005	22-OCT-21
Acridine			<0.010		ug/g		0.01	22-OCT-21
Anthracene			<0.0040		ug/g		0.004	22-OCT-21
Benzo(a)anthracene			<0.010		ug/g		0.01	22-OCT-21
Benzo(a)pyrene			<0.0050		ug/g		0.005	22-OCT-21
Benzo(b&j)fluoranthene			<0.010		ug/g		0.01	22-OCT-21
Benzo(g,h,i)perylene			<0.010		ug/g		0.01	22-OCT-21
Benzo(k)fluoranthene			<0.010		ug/g		0.01	22-OCT-21
Chrysene			<0.010		ug/g		0.01	22-OCT-21
Dibenz(a,h)anthracene			<0.0050		ug/g		0.005	22-OCT-21
Fluoroanthene			<0.0050		ug/g		0.005	22-OCT-21
Fluorene			<0.0050		ug/g		0.005	22-OCT-21
Indeno(1,2,3-cd)pyrene			<0.010		ug/g		0.01	22-OCT-21
Naphthalene			<0.0050		ug/g		0.005	22-OCT-21
Phenanthrene			<0.0050		ug/g		0.005	22-OCT-21
Pyrene			<0.0050		ug/g		0.005	22-OCT-21
Quinoline			<0.0050		ug/g		0.005	22-OCT-21
Surrogate: 2-Fluorobiphenyl			89.7		%		60-140	22-OCT-21
Surrogate: d14-Terphenyl			89.5		%		60-140	22-OCT-21
WG3642511-4 MS		**WG3642511-5**						
1-Methylnaphthalene			100.7		%		50-150	22-OCT-21
2-Methylnaphthalene			96.8		%		50-150	22-OCT-21
Acenaphthene			96.0		%		50-150	22-OCT-21
Acenaphthylene			77.7		%		50-150	22-OCT-21
Acridine			68.3		%		50-150	22-OCT-21
Anthracene			81.0		%		50-150	22-OCT-21
Benzo(a)anthracene			99.8		%		50-150	22-OCT-21
Benzo(a)pyrene			77.3		%		50-150	22-OCT-21
Benzo(b&j)fluoranthene			82.1		%		50-150	22-OCT-21
Benzo(g,h,i)perylene			80.1		%		50-150	22-OCT-21
Benzo(k)fluoranthene			91.5		%		50-150	22-OCT-21
Chrysene			96.1		%		50-150	22-OCT-21
Dibenz(a,h)anthracene			82.7		%		50-150	22-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-CCME-SQGL-WT	**Soil**							
Batch R5626548								
WG3642511-4 MS		**WG3642511-5**						
Fluoroanthene			97.3		%		50-150	22-OCT-21
Fluorene			96.5		%		50-150	22-OCT-21
Indeno(1,2,3-cd)pyrene			80.9		%		50-150	22-OCT-21
Naphthalene			92.2		%		50-150	22-OCT-21
Phenanthrene			97.9		%		50-150	22-OCT-21
Pyrene			96.2		%		50-150	22-OCT-21
Quinoline			84.3		%		50-150	22-OCT-21
PCB9-LOW-WT	**Soil**							
Batch R5620384								
WG3636293-3 DUP		**WG3636293-5**						
Aroclor 1016		<0.0045	<0.0045	RPD-NA	mg/kg	N/A	50	15-OCT-21
Aroclor 1221		<0.0045	<0.0045	RPD-NA	mg/kg	N/A	50	15-OCT-21
Aroclor 1232		<0.0045	<0.0045	RPD-NA	mg/kg	N/A	50	15-OCT-21
Aroclor 1242		<0.0045	<0.0045	RPD-NA	mg/kg	N/A	40	15-OCT-21
Aroclor 1248		<0.0045	<0.0045	RPD-NA	mg/kg	N/A	40	15-OCT-21
Aroclor 1254		0.0733	0.128	DUP-H	mg/kg	55	40	15-OCT-21
Aroclor 1260		0.0713	0.173	DUP-H	mg/kg	83	40	15-OCT-21
Aroclor 1262		<0.0045	<0.0045	RPD-NA	mg/kg	N/A	50	15-OCT-21
Aroclor 1268		<0.0045	<0.0045	RPD-NA	mg/kg	N/A	50	15-OCT-21
WG3636293-2 LCS								
Aroclor 1242			79.8		%		60-140	15-OCT-21
Aroclor 1248			80.1		%		60-140	15-OCT-21
Aroclor 1254			87.2		%		60-140	15-OCT-21
Aroclor 1260			82.8		%		60-140	15-OCT-21
WG3636293-1 MB								
Aroclor 1016			<0.0030		mg/kg		0.003	15-OCT-21
Aroclor 1221			<0.0030		mg/kg		0.003	15-OCT-21
Aroclor 1232			<0.0030		mg/kg		0.003	15-OCT-21
Aroclor 1242			<0.0030		mg/kg		0.003	15-OCT-21
Aroclor 1248			<0.0030		mg/kg		0.003	15-OCT-21
Aroclor 1254			<0.0030		mg/kg		0.003	15-OCT-21
Aroclor 1260			<0.0030		mg/kg		0.003	15-OCT-21
Aroclor 1262			<0.0030		mg/kg		0.003	15-OCT-21
Aroclor 1268			<0.0030		mg/kg		0.003	15-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PCB9-LOW-WT	**Soil**							
Batch R5620384								
WG3636293-1 MB								
Surrogate: d14-Terphenyl			86.1		%		50-140	15-OCT-21
WG3636293-4 MS		**WG3636293-5**						
Aroclor 1242			98.5		%		60-140	15-OCT-21
Aroclor 1254			145.5	MS-B	%		60-140	15-OCT-21
Aroclor 1260			214.8	MS-B	%		60-140	15-OCT-21
Batch R5622261								
WG3636249-3 DUP		**WG3636249-5**						
Aroclor 1016		N/A	<0.014	RPD-NA	mg/kg	N/A	50	18-OCT-21
Aroclor 1221		N/A	<0.014	RPD-NA	mg/kg	N/A	50	18-OCT-21
Aroclor 1232		N/A	<0.014	RPD-NA	mg/kg	N/A	50	18-OCT-21
Aroclor 1242		N/A	<0.014	RPD-NA	mg/kg	N/A	40	18-OCT-21
Aroclor 1248		N/A	<0.014	RPD-NA	mg/kg	N/A	40	18-OCT-21
Aroclor 1254		0.124	0.139		mg/kg	12	40	18-OCT-21
Aroclor 1260		0.160	0.221		mg/kg	32	40	18-OCT-21
Aroclor 1262		<0.014	<0.014	RPD-NA	mg/kg	N/A	50	18-OCT-21
Aroclor 1268		<0.014	<0.014	RPD-NA	mg/kg	N/A	50	18-OCT-21
WG3636249-7 DUP		**WG3636249-6**						
Aroclor 1016		<0.23	<0.23	RPD-NA	mg/kg	N/A	50	18-OCT-21
Aroclor 1221		<0.23	<0.23	RPD-NA	mg/kg	N/A	50	18-OCT-21
Aroclor 1232		<0.23	<0.23	RPD-NA	mg/kg	N/A	50	18-OCT-21
Aroclor 1242		<0.23	<0.23	RPD-NA	mg/kg	N/A	40	18-OCT-21
Aroclor 1248		<0.23	<0.23	RPD-NA	mg/kg	N/A	40	18-OCT-21
WG3636249-2 LCS								
Aroclor 1242			77.6		%		60-140	18-OCT-21
Aroclor 1248			74.8		%		60-140	18-OCT-21
Aroclor 1254			96.5		%		60-140	18-OCT-21
Aroclor 1260			94.3		%		60-140	18-OCT-21
WG3636249-1 MB								
Aroclor 1016			<0.0030		mg/kg		0.003	18-OCT-21
Aroclor 1221			<0.0030		mg/kg		0.003	18-OCT-21
Aroclor 1232			<0.0030		mg/kg		0.003	18-OCT-21
Aroclor 1242			<0.0030		mg/kg		0.003	18-OCT-21
Aroclor 1248			<0.0030		mg/kg		0.003	18-OCT-21
Aroclor 1254			<0.0030		mg/kg		0.003	18-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PCB9-LOW-WT	**Soil**							
Batch R5622261								
WG3636249-1 MB								
Aroclor 1260			<0.0030		mg/kg		0.003	18-OCT-21
Aroclor 1262			<0.0030		mg/kg		0.003	18-OCT-21
Aroclor 1268			<0.0030		mg/kg		0.003	18-OCT-21
Surrogate: d14-Terphenyl			100.6		%		50-140	18-OCT-21
WG3636249-4 MS		**WG3636249-5**						
Aroclor 1254			N/A	MS-B	%		60-140	18-OCT-21
Aroclor 1260			N/A	MS-B	%		60-140	18-OCT-21
WG3636249-8 MS		**WG3636249-6**						
Aroclor 1242			109.8		%		60-140	18-OCT-21
Batch R5623933								
WG3636193-3 DUP		**WG3636193-5**						
Aroclor 1016		<0.045	<0.045	RPD-NA	mg/kg	N/A	50	18-OCT-21
Aroclor 1221		<0.045	<0.045	RPD-NA	mg/kg	N/A	50	18-OCT-21
Aroclor 1232		<0.045	<0.045	RPD-NA	mg/kg	N/A	50	18-OCT-21
Aroclor 1242		<0.045	<0.045	RPD-NA	mg/kg	N/A	40	18-OCT-21
Aroclor 1248		<0.045	<0.045	RPD-NA	mg/kg	N/A	40	18-OCT-21
Aroclor 1254		0.130	0.155		mg/kg	17	40	18-OCT-21
Aroclor 1260		<0.045	<0.045	RPD-NA	mg/kg	N/A	40	18-OCT-21
Aroclor 1262		<0.045	<0.045	RPD-NA	mg/kg	N/A	50	18-OCT-21
Aroclor 1268		<0.045	<0.045	RPD-NA	mg/kg	N/A	50	18-OCT-21
WG3636193-2 LCS								
Aroclor 1242			86.1		%		60-140	18-OCT-21
Aroclor 1248			82.8		%		60-140	18-OCT-21
Aroclor 1254			97.8		%		60-140	18-OCT-21
Aroclor 1260			90.8		%		60-140	18-OCT-21
WG3636193-1 MB								
Aroclor 1016			<0.0030		mg/kg		0.003	18-OCT-21
Aroclor 1221			<0.0030		mg/kg		0.003	18-OCT-21
Aroclor 1232			<0.0030		mg/kg		0.003	18-OCT-21
Aroclor 1242			<0.0030		mg/kg		0.003	18-OCT-21
Aroclor 1248			<0.0030		mg/kg		0.003	18-OCT-21
Aroclor 1254			<0.0030		mg/kg		0.003	18-OCT-21
Aroclor 1260			<0.0030		mg/kg		0.003	18-OCT-21
Aroclor 1262			<0.0030		mg/kg		0.003	18-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PCB9-LOW-WT	**Soil**							
Batch R5623933								
WG3636193-1 MB								
Aroclor 1268			<0.0030		mg/kg		0.003	18-OCT-21
Surrogate: d14-Terphenyl			106.3		%		50-140	18-OCT-21
WG3636193-4 MS		**WG3636193-5**						
Aroclor 1242			93.6		%		60-140	18-OCT-21
Aroclor 1254			117.4		%		60-140	18-OCT-21
Aroclor 1260			98.9		%		60-140	18-OCT-21
Batch R5625841								
WG3640271-3 DUP		**WG3640271-5**						
Aroclor 1016		<0.0060	<0.0060	RPD-NA	mg/kg	N/A	50	21-OCT-21
Aroclor 1221		N/A	<0.0060	RPD-NA	%	N/A	50	21-OCT-21
Aroclor 1232		N/A	<0.0060	RPD-NA	%	N/A	50	21-OCT-21
Aroclor 1242		<0.0350	<0.0330	RPD-NA	mg/kg	N/A	40	21-OCT-21
Aroclor 1248		<0.0060	<0.0060	RPD-NA	mg/kg	N/A	40	21-OCT-21
Aroclor 1254		0.409	0.446		mg/kg	8.9	40	21-OCT-21
Aroclor 1260		0.743	0.803		mg/kg	7.7	40	21-OCT-21
Aroclor 1262		<0.0060	<0.0060	RPD-NA	mg/kg	N/A	50	21-OCT-21
Aroclor 1268		<0.0060	<0.0060	RPD-NA	mg/kg	N/A	50	21-OCT-21
WG3640271-2 LCS								
Aroclor 1242			99.9		%		60-140	21-OCT-21
Aroclor 1248			94.9		%		-	21-OCT-21
Aroclor 1254			108.0		%		60-140	21-OCT-21
Aroclor 1260			108.0		%		60-140	21-OCT-21
WG3640271-1 MB								
Aroclor 1016			<0.0030		mg/kg		0.003	21-OCT-21
Aroclor 1221			<0.0030		mg/kg		0.003	21-OCT-21
Aroclor 1232			<0.0030		mg/kg		0.003	21-OCT-21
Aroclor 1242			<0.0030		mg/kg		0.003	21-OCT-21
Aroclor 1248			<0.0030		mg/kg		0.003	21-OCT-21
Aroclor 1254			<0.0030		mg/kg		0.003	21-OCT-21
Aroclor 1260			<0.0030		mg/kg		0.003	21-OCT-21
Aroclor 1262			<0.0030		mg/kg		0.003	21-OCT-21
Aroclor 1268			<0.0030		mg/kg		0.003	21-OCT-21
Surrogate: d14-Terphenyl			108.6		%		50-140	21-OCT-21
WG3640271-4 MS		**WG3640271-5**						

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PCB9-LOW-WT	**Soil**							
Batch R5625841								
WG3640271-4 MS		**WG3640271-5**						
Aroclor 1242			119.3		%		60-140	21-OCT-21
Aroclor 1254			N/A	MS-B	%		-	21-OCT-21
Aroclor 1260			N/A	MS-B	%		-	21-OCT-21
Batch R5628692								
WG3643398-10 DUP		**WG3643398-9**						
Aroclor 1016		<0.015	<0.015	RPD-NA	mg/kg	N/A	50	26-OCT-21
Aroclor 1221		<0.015	<0.015	RPD-NA	mg/kg	N/A	50	26-OCT-21
Aroclor 1232		<0.015	<0.015	RPD-NA	mg/kg	N/A	50	26-OCT-21
Aroclor 1242		<0.040	<0.040	RPD-NA	mg/kg	N/A	40	26-OCT-21
Aroclor 1248		<0.015	<0.015	RPD-NA	mg/kg	N/A	40	26-OCT-21
Aroclor 1254		0.391	0.350		mg/kg	11	40	26-OCT-21
Aroclor 1260		0.814	0.765		mg/kg	6.2	40	26-OCT-21
Aroclor 1262		<0.015	<0.015	RPD-NA	mg/kg	N/A	50	26-OCT-21
Aroclor 1268		<0.015	<0.015	RPD-NA	mg/kg	N/A	50	26-OCT-21
WG3643398-7 DUP		**WG3643398-6**						
Aroclor 1016		<0.015	<0.015	RPD-NA	mg/kg	N/A	50	26-OCT-21
Aroclor 1221		<0.015	<0.015	RPD-NA	mg/kg	N/A	50	26-OCT-21
Aroclor 1232		<0.015	<0.015	RPD-NA	mg/kg	N/A	50	26-OCT-21
Aroclor 1242		<0.015	<0.015	RPD-NA	mg/kg	N/A	40	26-OCT-21
Aroclor 1248		<0.015	<0.015	RPD-NA	mg/kg	N/A	40	26-OCT-21
Aroclor 1254		<0.015	<0.015	RPD-NA	mg/kg	N/A	40	26-OCT-21
Aroclor 1260		<0.015	<0.015	RPD-NA	mg/kg	N/A	40	26-OCT-21
Aroclor 1262		<0.015	<0.015	RPD-NA	mg/kg	N/A	50	26-OCT-21
Aroclor 1268		<0.015	<0.015	RPD-NA	mg/kg	N/A	50	26-OCT-21
WG3643398-2 LCS								
Aroclor 1242			89.6		%		60-140	26-OCT-21
Aroclor 1248			83.2		%		60-140	26-OCT-21
Aroclor 1254			93.2		%		60-140	26-OCT-21
Aroclor 1260			84.0		%		60-140	26-OCT-21
WG3643398-1 MB								
Aroclor 1016			<0.0030		mg/kg		0.003	26-OCT-21
Aroclor 1221			<0.0030		mg/kg		0.003	26-OCT-21
Aroclor 1232			<0.0030		mg/kg		0.003	26-OCT-21
Aroclor 1242			<0.0030		mg/kg		0.003	26-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PCB9-LOW-WT	**Soil**							
Batch R5628692								
WG3643398-1 MB								
Aroclor 1248			<0.0030		mg/kg		0.003	26-OCT-21
Aroclor 1254			<0.0030		mg/kg		0.003	26-OCT-21
Aroclor 1260			<0.0030		mg/kg		0.003	26-OCT-21
Aroclor 1262			<0.0030		mg/kg		0.003	26-OCT-21
Aroclor 1268			<0.0030		mg/kg		0.003	26-OCT-21
Surrogate: d14-Terphenyl			88.7		%		50-140	26-OCT-21
WG3643398-11 MS		**WG3643398-9**						
Aroclor 1242			87.3		%		60-140	26-OCT-21
Aroclor 1254			N/A	MS-B	%		-	26-OCT-21
Aroclor 1260			N/A	MS-B	%		-	26-OCT-21
WG3643398-8 MS		**WG3643398-6**						
Aroclor 1242			95.8		%		60-140	26-OCT-21
Aroclor 1254			96.9		%		60-140	26-OCT-21
Aroclor 1260			87.7		%		60-140	26-OCT-21
PSA-MUST-SK	**Soil**							
Batch R5616952								
WG3634921-1 DUP		**L2647897-16**						
MUST PSA % > 75um		<1.0	<1.0	RPD-NA	%	N/A	5	12-OCT-21
WG3634921-2 IRM		**2020-PSA_SOIL**						
MUST PSA % > 75um			43.2		%		37.9-47.9	12-OCT-21
Batch R5620016								
WG3636514-1 DUP		**L2647880-2**						
MUST PSA % > 75um		4.2	3.8	J	%	0.4	5	15-OCT-21
WG3636514-2 IRM		**2020-PSA_SOIL**						
MUST PSA % > 75um			44.0		%		37.9-47.9	15-OCT-21
SPECGRAV-CL	**Soil**							
Batch R5629385								
WG3646192-2 DUP		**L2648161-10**						
Specific Gravity		1.05	1.06		kg/L	0.9	20	26-OCT-21
WG3646192-1 IRM		**DI_H2O**						
Specific Gravity			100.0		%		90-110	26-OCT-21
TOC-WT	**Soil**							

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
TOC-WT	**Soil**							
Batch R5616839								
WG3636338-3 CRM		**WT-TOC-CRM**						
Total Organic Carbon			120.3		%		70-130	13-OCT-21
WG3636338-4 DUP		**L2646527-6**						
Total Organic Carbon		6.19	6.26		%	1.1	20	13-OCT-21
Fraction Organic Carbon		0.0619	0.0626		g/g	1.1	25	13-OCT-21
WG3636338-2 LCS								
Total Organic Carbon			99.9		%		80-120	13-OCT-21
WG3636338-1 MB								
Total Organic Carbon			<0.10		%		0.1	13-OCT-21
Fraction Organic Carbon			<0.0010		g/g		0.001	13-OCT-21
Batch R5616841								
WG3636336-3 CRM		**WT-TOC-CRM**						
Total Organic Carbon			118.4		%		70-130	13-OCT-21
WG3636336-4 DUP		**L2647533-10**						
Total Organic Carbon		7.52	7.50		%	0.2	20	13-OCT-21
Fraction Organic Carbon		0.0752	0.0750		g/g	0.2	25	13-OCT-21
WG3636336-2 LCS								
Total Organic Carbon			104.9		%		80-120	13-OCT-21
WG3636336-1 MB								
Total Organic Carbon			<0.10		%		0.1	13-OCT-21
Fraction Organic Carbon			<0.0010		g/g		0.001	13-OCT-21
Batch R5623497								
WG3639563-3 CRM		**WT-TOC-CRM**						
Total Organic Carbon			101.3		%		70-130	18-OCT-21
WG3639563-4 DUP		**L2647497-4**						
Total Organic Carbon		7.52	7.26		%	3.5	20	18-OCT-21
Fraction Organic Carbon		0.0752	0.0726		g/g	3.5	25	18-OCT-21
WG3639563-2 LCS								
Total Organic Carbon			103.4		%		80-120	18-OCT-21
WG3639563-1 MB								
Total Organic Carbon			<0.10		%		0.1	18-OCT-21
Fraction Organic Carbon			<0.0010		g/g		0.001	18-OCT-21
Batch R5624426								
WG3640375-3 CRM		**WT-TOC-CRM**						
Total Organic Carbon			101.4		%		70-130	19-OCT-21
WG3640375-4 DUP		**L2647880-13**						
Total Organic Carbon		9.28	9.03		%	2.7	20	19-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
TOC-WT	**Soil**							
Batch R5624426								
WG3640375-4 DUP		**L2647880-13**						
Fraction Organic Carbon		0.0928	0.0903		g/g	2.7	25	19-OCT-21
WG3640375-2 LCS								
Total Organic Carbon			101.0		%		80-120	19-OCT-21
WG3640375-1 MB								
Total Organic Carbon			<0.10		%		0.1	19-OCT-21
Fraction Organic Carbon			<0.0010		g/g		0.001	19-OCT-21
Batch R5625292								
WG3641334-3 CRM		**WT-TOC-CRM**						
Total Organic Carbon			95.1		%		70-130	20-OCT-21
WG3641334-4 DUP		**L2646527-23**						
Total Organic Carbon		8.94	8.76		%	2.0	20	20-OCT-21
Fraction Organic Carbon		0.0894	0.0876		g/g	2.0	25	20-OCT-21
WG3641334-2 LCS								
Total Organic Carbon			98.3		%		80-120	20-OCT-21
WG3641334-1 MB								
Total Organic Carbon			<0.10		%		0.1	20-OCT-21
Fraction Organic Carbon			<0.0010		g/g		0.001	20-OCT-21
Batch R5628209								
WG3644605-3 CRM		**WT-TOC-CRM**						
Total Organic Carbon			90.4		%		70-130	25-OCT-21
WG3644605-4 DUP		**L2643154-14**						
Total Organic Carbon		0.59	0.66		%	12	20	25-OCT-21
Fraction Organic Carbon		0.0059	0.0066		g/g	12	25	25-OCT-21
WG3644605-2 LCS								
Total Organic Carbon			111.5		%		80-120	25-OCT-21
WG3644605-1 MB								
Total Organic Carbon			<0.10		%		0.1	25-OCT-21
Fraction Organic Carbon			<0.0010		g/g		0.001	25-OCT-21
Batch R5628928								
WG3645442-3 CRM		**WT-TOC-CRM**						
Total Organic Carbon			115.3		%		70-130	26-OCT-21
WG3645442-4 DUP		**L2643154-206**						
Total Organic Carbon		2.39	2.56		%	6.8	20	26-OCT-21
Fraction Organic Carbon		0.0239	0.0256		g/g	6.8	25	26-OCT-21
WG3645442-2 LCS								
Total Organic Carbon			104.5		%		80-120	26-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
TOC-WT	**Soil**							
Batch R5628928								
WG3645442-1 MB								
Total Organic Carbon			<0.10		%		0.1	26-OCT-21
Fraction Organic Carbon			<0.0010		g/g		0.001	26-OCT-21

Quality Control Report

Workorder: L2647897 Report Date: 27-OCT-21

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Legend:

Limit	ALS Control Limit (Data Quality Objectives)
DUP	Duplicate
RPD	Relative Percent Difference
N/A	Not Available
LCS	Laboratory Control Sample
SRM	Standard Reference Material
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ADE	Average Desorption Efficiency
MB	Method Blank
IRM	Internal Reference Material
CRM	Certified Reference Material
CCV	Continuing Calibration Verification
CVS	Calibration Verification Standard
LCSD	Laboratory Control Sample Duplicate

Sample Parameter Qualifier Definitions:

Qualifier	Description
DLHM	Detection Limit Adjusted: Sample has High Moisture Content
DLM	Detection Limit Adjusted due to sample matrix effects (e.g. chemical interference, colour, turbidity).
DUP-H	Duplicate results outside ALS DQO, due to sample heterogeneity.
J	Duplicate results and limits are expressed in terms of absolute difference.
MES	Data Quality Objective was marginally exceeded (by < 10% absolute) for < 10% of analytes in a Multi-Element Scan / Multi-Parameter Scan (considered acceptable as per OMOE & CCME).
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Quality Control Report

Workorder: L2647897 Report Date: 27-OCT-21

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Hold Time Exceedances:

ALS Product Description	Sample ID	Sampling Date	Date Processed	Rec. HT	Actual HT	Units	Qualifier
Polycyclic Aromatic Hydrocarbons							
PAHs in Sediment							
	17	02-OCT-21 10:20	21-OCT-21 12:00	14	19	days	EHT
	28	02-OCT-21	21-OCT-21 12:00	14	19	days	EHT
	33	02-OCT-21	19-OCT-21 01:00	14	17	days	EHT
Polychlorinated Biphenyls							
PCBs to meet CCME Sediment Criteria							
	17	02-OCT-21 10:20	22-OCT-21 11:00	14	20	days	EHT
	28	02-OCT-21	22-OCT-21 11:00	14	20	days	EHT
	33	02-OCT-21	19-OCT-21 01:00	14	17	days	EHT

Legend & Qualifier Definitions:

EHTR-FM: Exceeded ALS recommended hold time prior to sample receipt. Field Measurement recommended.
EHTR: Exceeded ALS recommended hold time prior to sample receipt.
EHTL: Exceeded ALS recommended hold time prior to analysis. Sample was received less than 24 hours prior to expiry.
EHT: Exceeded ALS recommended hold time prior to analysis.
Rec. HT: ALS recommended hold time (see units).

Notes*:
Where actual sampling date is not provided to ALS, the date (& time) of receipt is used for calculation purposes.
Where actual sampling time is not provided to ALS, the earlier of 12 noon on the sampling date or the time (& date) of receipt is used for calculation purposes. Samples for L2647897 were received on 06-OCT-21 09:15.

ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.

ALS www.alsglobal.com

C [barcode] orm

L2647897-COFC

COC Number: 20 - 012

Page 1 of 3

Report To	Contact and company name below will appear on the final report
Company:	Golder Associates Ltd.
Contact:	Jill LaPorte
Phone:	905-723-2727
	Company address below will appear on the final report
Street:	100 Scotia Court
City/Province:	Whitby, Ontario
Postal Code:	L1N 8Y6
Invoice To	Same as Report To ☑ YES ☐ NO
	Copy of Invoice with Report ☑ YES ☐ NO
Company:	Golder Associates Ltd.
Contact:	Accounts Payables

Reports / Recipients

Select Report Format: ☑ PDF ☑ EXCEL ☐ EDD (DIGITAL)
Merge QC/QCI Reports with COA ☑ YES ☐ NO ☐ N/A
☐ Compare Results to Criteria on Report - provide details below if box checked
Select Distribution: ☑ EMAIL ☐ MAIL ☐ FAX
Email 1 or Fax: Jill_LaPorte@golder.com
Email 2: shawn_seguin@golder.com
Email 3:

Invoice Recipients

Select Invoice Distribution: ☑ EMAIL ☐ MAIL ☐ FAX
Email 1 or Fax: Jill_LaPorte@golder.com
Email 2: canadaaccountspayableinvoices@golder.com

Turnaround Time (TAT) Requested

☑ Routine [R] if received by 3pm M-F - no surcharges apply
☐ 4 day [P4] if received by 3pm M-F - 20% rush surcharge minimum
☐ 3 day [P3] if received by 3pm M-F - 25% rush surcharge minimum
☐ 2 day [P2] if received by 3pm M-F - 50% rush surcharge minimum
☐ 1 day [E] if received by 3pm M-F - 100% rush surcharge minimum
Same day [E2] if received by 10am M-S - 200% rush surcharge. Additional fees may apply to rush requests on weekends, statutory holidays and non-routine tests

AFFIX ALS BARCODE LABEL HERE (ALS use only)

Date and Time Required for all E&P TATs: dd-mmm-yy hh:mm am/pm

For all tests with rush TATs requested, please contact your AM to confirm availability.

Project Information

ALS Account # / Quote #: 15520 / Q86566
Job #: 1783886-8000-8006
PO / AFE:
LSD:

Oil and Gas Required Fields (client use)

AFE/Cost Center: PO#
Major/Minor Code: Routing Code:
Requisitioner:
Location:

ALS Lab Work Order # (ALS use only): L2647897

ALS Contact: Amanda Overholster Sampler:

Analysis Request

Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below

ALS Sample # (ALS use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	NUMBER OF CONTAINERS	HWS-Boron (B-HWS-R511-WT)	Cr3 (CR-CR3-WT)	Cr6 (CR-CR6-IC-WT)	Mercury (HG-200.2-CVAA-WT)	Metals (MET-200.2-CCMS-WT)	PAH (PAH-CCME-SQGL-WT)	MOISTURE-WT	TOC (TOC-WT)	PCB9 (PCB9-LOW-WT)		Specific Gravity (SPECGRAV-CL)	PSA (PSA-MUST-WT-SK)	Atterberg (ATTERBERG-SK)		SAMPLES ON HOLD	EXTENDED STORAGE REQUIRED	SUSPECTED HAZARD (see notes)
	TCAB-SG-005	02-Oct-21	09:30	Sediment	5	✓	✓	✓	✓	✓	✓	✓	✓	✓			✓					
	TCAB-SG-002		10:00	Sediment	3				✓	✓	✓	✓	✓	✓								
	WM-SG-005		10:50	Sediment	3				✓	✓	✓	✓	✓	✓								
	WM-SG-006		11:15	Sediment	4				✓	✓	✓	✓	✓	✓			✓					
	WM-SG-004		11:30	Sediment	3				✓	✓	✓	✓	✓	✓								
	WM-SG-001		12:00	Sediment	3				✓	✓	✓	✓	✓	✓								
	WM-SG-007		13:45	Sediment	3				✓	✓	✓	✓	✓	✓								
	PPOM-SG-001		14:00	Sediment	3				✓	✓	✓	✓	✓	✓								
	PPOM-SG-003		14:30	Sediment	3				✓	✓	✓	✓	✓	✓								
	PPOM-SG-005		14:40	Sediment	3				✓	✓	✓	✓	✓	✓								
	PPOM-SG-006		15:00	Sediment	3				✓	✓	✓	✓	✓	✓								
	DCE-SG-001	02-Oct-21	15:30	Sediment	4				✓	✓	✓	✓	✓	✓			✓					

Drinking Water (DW) Samples[1] (client use)

Are samples taken from a Regulated DW System? ☐ YES ☑ NO
Are samples for human consumption/ use? ☐ YES ☑ NO

Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only)

SAMPLE RECEIPT DETAILS (ALS use only)

Cooling Method: ☐ NONE ☐ ICE ☐ ICE PACKS ☐ FROZEN ☑ COOLING INITIATED
Submission Comments identified on Sample Receipt Notification: ☑ YES ☐ NO
Cooler Custody Seals Intact: ☐ YES ☐ N/A Sample Custody Seals Intact: ☐ YES ☐ N/A

INITIAL COOLER TEMPERATURES °C				FINAL COOLER TEMPERATURES °C			
				11.1			

SHIPMENT RELEASE (client use)		
Released by:	Date:	Time:

INITIAL SHIPMENT RECEPTION (ALS use only)		
Received by:	Date:	Time:

FINAL SHIPMENT RECEPTION (ALS use only)		
Received by: UD	Date: 10/07/21	Time: 12:17

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

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AUG 2020 FRONT

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

1. If any water samples are taken from a **Regulated Drinking Water (DW) System**, please submit using an **Authorized DW COC form**.

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L2647897-COFC

st Form

COC Number: 20 - 013

Page 2 of 3

Report To	Contact and company name below will appear on the final report
Company:	Golder Associates Ltd.
Contact:	Jill LaPorte
Phone:	905-723-2727
	Company address below will appear on the final report
Street:	100 Scotia Court
City/Province:	Whitby, Ontario
Postal Code:	L1N 8Y6
Invoice To	Same as Report To ☑ YES ☐ NO
	Copy of Invoice with Report ☑ YES ☐ NO
Company:	Golder Associates Ltd.
Contact:	Accounts Payables

Reports / Recipients

Select Report Format: ☑ PDF ☑ EXCEL ☐ EDD (DIGITAL)
Merge QC/QCI Reports with COA ☑ YES ☐ NO ☐ N/A
☐ Compare Results to Criteria on Report - provide details below if box checked
Select Distribution: ☑ EMAIL ☐ MAIL ☐ FAX
Email 1 or Fax: Jill_LaPorte@golder.com
Email 2: shawn_seguin@golder.com
Email 3:

Invoice Recipients

Select Invoice Distribution: ☑ EMAIL ☐ MAIL ☐ FAX
Email 1 or Fax: Jill_LaPorte@golder.com
Email 2: canadaaccountspayableinvoices@golder.com

Turnaround Time (TAT) Requested

☑ Routine [R] if received by 3pm M-F - no surcharges apply
☐ 4 day [P4] if received by 3pm M-F - 20% rush surcharge minimum
☐ 3 day [P3] if received by 3pm M-F - 25% rush surcharge minimum
☐ 2 day [P2] if received by 3pm M-F - 50% rush surcharge minimum
☐ 1 day [E] if received by 3pm M-F - 100% rush surcharge minimum
☐ Same day [E2] if received by 10am M-S - 200% rush surcharge. Additional fees may apply to rush requests on weekends, statutory holidays and non-routine tests

AFFIX ALS BARCODE LABEL HERE (ALS use only)

Date and Time Required for all E&P TATs: dd-mmm-yy hh:mm am/pm

For all tests with rush TATs requested, please contact your AM to confirm availability.

Project Information

ALS Account # / Quote #: 15520 / Q86566
Job #: 1783886-8000-8006
PO / AFE:
LSD:

Oil and Gas Required Fields (client use)

AFE/Cost Center: PO#
Major/Minor Code: Routing Code:
Requisitioner:
Location:

ALS Lab Work Order # (ALS use only): L2647897

ALS Contact: Amanda Overholster Sampler:

Analysis Request

Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below

ALS Sample # (ALS use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	NUMBER OF CONTAINERS	HWS-Boron (B-HWS-R511-WT)	Cr3 (CR-CR3-WT)	Cr6 (CR-CR6-IC-WT)	Mercury (HG-200.2-CVAA-WT)	Metals (MET-200.2-CCMS-WT)	PAH (PAH-CCME-SQGL-WT)	MOISTURE-WT	TOC (TOC-WT)	PCB9 (PCB9-LOW-WT)		Specific Gravity (SPECGRAV-CL)	PSA (PSA-MUST-WT-SK)	Atterberg (ATTERBERG-SK)		SAMPLES ON HOLD	EXTENDED STORAGE REQUIRED	SUSPECTED HAZARD (see notes)
	PCE-SG-003	02-Oct-21	1615	Sediment	3				✓	✓	✓	✓	✓	✓								
	PCE-SG-002	"	1555	Sediment	3				✓	✓	✓	✓	✓	✓								
	PPOM-SC-004A		1020	Sediment	9	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓				
	PPOM-SC-004B		1020	Sediment	4				✓	✓	✓	✓	✓	✓			✓					
	PPOM-SC-004C		1020	Sediment	3				✓	✓	✓	✓	✓	✓						✓		
	PPOM-SG-004		1020	Sediment	9	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓				
	TCOM-SC-001A		1125	Sediment	7				✓	✓	✓	✓	✓	✓		✓		✓				
	TCOM-SC-001B		1125	Sediment	3				✓	✓	✓	✓	✓	✓								
	TCOM-SG-001		1200	Sediment	7				✓	✓	✓	✓	✓	✓		✓		✓				
	TCOM-SC-009A		1545	Sediment	7				✓	✓	✓	✓	✓	✓		✓		✓				
	TCOM-SC-009B	↓	1545	Sediment	3				✓	✓	✓	✓	✓	✓								
	TCOM-SG-009	02-Oct-21	1610	Sediment	9	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓				

Drinking Water (DW) Samples[1] (client use)

Are samples taken from a Regulated DW System? ☐ YES ☑ NO
Are samples for human consumption/ use? ☐ YES ☑ NO

Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only)

SAMPLE RECEIPT DETAILS (ALS use only)

Cooling Method: ☐ NONE ☐ ICE ☐ ICE PACKS ☐ FROZEN ☑ COOLING INITIATED
Submission Comments identified on Sample Receipt Notification: ☐ YES ☐ NO
Cooler Custody Seals Intact: ☐ YES ☐ N/A Sample Custody Seals Intact: ☐ YES ☐ N/A

INITIAL COOLER TEMPERATURES °C				FINAL COOLER TEMPERATURES °C			
				15.1			

SHIPMENT RELEASE (client use)			INITIAL SHIPMENT RECEPTION (ALS use only)			FINAL SHIPMENT RECEPTION (ALS use only)		
Released by:	Date:	Time:	Received by:	Date:	Time:	Received by: MP	Date: 10/05/21	Time: 17:17

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION WHITE - LABORATORY COPY YELLOW - CLIENT COPY

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Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

1. If any water samples are taken from a Regulated Drinking Water (DW) System, please submit using an Authorized DW COC form.

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L2647897-COFC

t Form

COC Number: 20 - 014

Page 3 of 3

Report To	Contact and company name below will appear on the final report
Company:	Golder Associates Ltd.
Contact:	Jill LaPorte
Phone:	905-723-2727
	Company address below will appear on the final report
Street:	100 Scotia Court
City/Province:	Whitby, Ontario
Postal Code:	L1N 8Y6
Invoice To	Same as Report To ☑ YES ☐ NO
	Copy of Invoice with Report ☑ YES ☐ NO
Company:	Golder Associates Ltd.
Contact:	Accounts Payables

Reports / Recipients

Select Report Format: ☑ PDF ☑ EXCEL ☐ EDD (DIGITAL)

Merge QC/QCI Reports with COA ☑ YES ☐ NO ☐ N/A

☐ Compare Results to Criteria on Report - provide details below if box checked

Select Distribution: ☑ EMAIL ☐ MAIL ☐ FAX

Email 1 or Fax: Jill_LaPorte@golder.com

Email 2: shawn_seguin@golder.com

Email 3:

Invoice Recipients

Select Invoice Distribution: ☑ EMAIL ☐ MAIL ☐ FAX

Email 1 or Fax: Jill_LaPorte@golder.com

Email 2: canadaaccountspayableinvoices@golder.com

Turnaround Time (TAT) Requested

☑ Routine [R] if received by 3pm M-F - no surcharges apply

☐ 4 day [P4] if received by 3pm M-F - 20% rush surcharge minimum

☐ 3 day [P3] if received by 3pm M-F - 25% rush surcharge minimum

☐ 2 day [P2] if received by 3pm M-F - 50% rush surcharge minimum

☐ 1 day [E] if received by 3pm M-F - 100% rush surcharge minimum

☐ Same day [E2] if received by 10am M-S - 200% rush surcharge. Additional fees may apply to rush requests on weekends, statutory holidays and non-routine tests

AFFIX ALS BARCODE LABEL HERE (ALS use only)

Date and Time Required for all E&P TATs: dd-mmm-yy hh:mm am/pm

For all tests with rush TATs requested, please contact your AM to confirm availability.

Project Information

ALS Account # / Quote #: 15520 / Q86566

Job #: 1783886-8000-8006

PO / AFE:

LSD:

Oil and Gas Required Fields (client use)

AFE/Cost Center: PO#

Major/Minor Code: Routing Code:

Requisitioner:

Location:

ALS Lab Work Order # (ALS use only): L2647897

ALS Contact: Amanda Overholster

Sampler:

Analysis Request

Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below

ALS Sample # (ALS use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	NUMBER OF CONTAINERS	HWS-Boron (B-HWS-R511-WT)	Cr3 (CR-CR3-WT)	Cr6 (CR-CR6-IC-WT)	Mercury (HG-200.2-CVAA-WT)	Metals (MET-200.2-CCMS-WT)	PAH (PAH-CCME-SQGL-WT)	MOISTURE-WT	TOC (TOC-WT)	PCB9 (PCB9-LOW-WT)		Specific Gravity (SPECGRAV-CL)	PSA (PSA-MUST-WT-SK)	Atterberg (ATTERBERG-SK)		SAMPLES ON HOLD	EXTENDED STORAGE REQUIRED	SUSPECTED HAZARD (see notes)
	PPOM-SC-002A	02-OCT-21	1410	Sediment	9	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓				
	PPOM-SC-002B	02-OCT-21	1410	Sediment	3				✓	✓	✓	✓	✓	✓								
	PPOM-SG-002	02-OCT-21	1440	Sediment	9	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓				
				Sediment																		
				Sediment																		
				Sediment																		
				Sediment																		
				Sediment																		
				Sediment																		
				Sediment																		
				Sediment																		
				Sediment																		

Drinking Water (DW) Samples[1] (client use)

Are samples taken from a Regulated DW System?

☐ YES ☑ NO

Are samples for human consumption/ use?

☐ YES ☑ NO

Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only)

SAMPLE RECEIPT DETAILS (ALS use only)

Cooling Method: ☐ NONE ☐ ICE ☐ ICE PACKS ☐ FROZEN ☒ COOLING INITIATED

Submission Comments identified on Sample Receipt Notification: ☐ YES ☐ NO

Cooler Custody Seals Intact: ☐ YES ☐ N/A Sample Custody Seals Intact: ☐ YES ☐ N/A

INITIAL COOLER TEMPERATURES °C				FINAL COOLER TEMPERATURES °C			
				15.1			

SHIPMENT RELEASE (client use)			INITIAL SHIPMENT RECEPTION (ALS use only)			FINAL SHIPMENT RECEPTION (ALS use only)		
Released by:	Date:	Time:	Received by:	Date:	Time:	Received by:	Date:	Time:
							10/05/21	17:17

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

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Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

1. If any water samples are taken from a **Regulated Drinking Water (DW) System**, please submit using an **Authorized DW COC form.**

GOLDER ASSOCIATES LTD (Whitby)
ATTN: Jill LaPorte
100 Scotia Court
Whitby ON L1N 8Y6

Date Received: 06-OCT-21
Report Date: 13-OCT-21 12:19 (MT)
Version: FINAL

Client Phone: 905-723-2727

Certificate of Analysis

Lab Work Order #: L2647929

Project P.O. #: NOT SUBMITTED
Job Reference: 1783886-8000
C of C Numbers:
Legal Site Desc:

Amanda Overholster
Account Manager

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647929-1 TCAB-SG-005 Sampled By: CLIENT on 02-OCT-21 @ 09:30 Matrix: SOIL							
Sample Preparation							
Initial pH	5.08		0.10	pH units		08-OCT-21	R5614248
Final pH	5.65		0.10	pH units		08-OCT-21	R5614248
TCLP Extractables							
Acenaphthene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Acenaphthylene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Anthracene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Benzo(a)anthracene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Benzo(a)pyrene	<0.0010		0.0010	mg/L	08-OCT-21	13-OCT-21	R5616357
Benzo(b&j)fluoranthene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Benzo(g,h,i)perylene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Benzo(k)fluoranthene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Chrysene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Dibenz(a,h)anthracene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Fluoranthene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Fluorene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Indeno(1,2,3-cd)pyrene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Naphthalene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Phenanthrene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Pyrene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Surrogate: Chrysene d12	80.5		60-130	%	08-OCT-21	13-OCT-21	R5616357
Surrogate: Naphthalene d8	78.8		50-130	%	08-OCT-21	13-OCT-21	R5616357
Surrogate: Phenanthrene d10	92.4		60-130	%	08-OCT-21	13-OCT-21	R5616357
Quinoline	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
TCLP Metals							
Arsenic (As)	<0.050		0.050	mg/L		12-OCT-21	R5616110
Barium (Ba)	0.84		0.50	mg/L		12-OCT-21	R5616110
Boron (B)	<2.5		2.5	mg/L		12-OCT-21	R5616110
Cadmium (Cd)	<0.0050		0.0050	mg/L		12-OCT-21	R5616110
Chromium (Cr)	<0.050		0.050	mg/L		12-OCT-21	R5616110
Lead (Pb)	<0.025		0.025	mg/L		12-OCT-21	R5616110
Mercury (Hg)	<0.00010		0.00010	mg/L		08-OCT-21	R5614607
Selenium (Se)	<0.025		0.025	mg/L		12-OCT-21	R5616110
Silver (Ag)	<0.0050		0.0050	mg/L		12-OCT-21	R5616110
Uranium (U)	<0.25		0.25	mg/L		12-OCT-21	R5616110
L2647929-2 PPOM-SG-004 Sampled By: CLIENT on 02-OCT-21 @ 10:20 Matrix: SOIL							
Sample Preparation							
Initial pH	5.05		0.10	pH units		08-OCT-21	R5614248
Final pH	4.98		0.10	pH units		08-OCT-21	R5614248
TCLP Extractables							
Acenaphthene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647929-2 PPOM-SG-004 Sampled By: CLIENT on 02-OCT-21 @ 10:20 Matrix: SOIL							
TCLP Extractables							
Acenaphthylene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Anthracene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Benzo(a)anthracene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Benzo(a)pyrene	<0.0010		0.0010	mg/L	08-OCT-21	13-OCT-21	R5616357
Benzo(b&j)fluoranthene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Benzo(g,h,i)perylene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Benzo(k)fluoranthene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Chrysene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Dibenz(a,h)anthracene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Fluoranthene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Fluorene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Indeno(1,2,3-cd)pyrene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Naphthalene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Phenanthrene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Pyrene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Surrogate: Chrysene d12	80.7		60-130	%	08-OCT-21	13-OCT-21	R5616357
Surrogate: Naphthalene d8	87.1		50-130	%	08-OCT-21	13-OCT-21	R5616357
Surrogate: Phenanthrene d10	96.5		60-130	%	08-OCT-21	13-OCT-21	R5616357
Quinoline	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
TCLP Metals							
Arsenic (As)	<0.050		0.050	mg/L		12-OCT-21	R5616110
Barium (Ba)	1.17		0.50	mg/L		12-OCT-21	R5616110
Boron (B)	<2.5		2.5	mg/L		12-OCT-21	R5616110
Cadmium (Cd)	<0.0050		0.0050	mg/L		12-OCT-21	R5616110
Chromium (Cr)	<0.050		0.050	mg/L		12-OCT-21	R5616110
Lead (Pb)	0.087		0.025	mg/L		12-OCT-21	R5616110
Mercury (Hg)	<0.00010		0.00010	mg/L		08-OCT-21	R5614607
Selenium (Se)	<0.025		0.025	mg/L		12-OCT-21	R5616110
Silver (Ag)	<0.0050		0.0050	mg/L		12-OCT-21	R5616110
Uranium (U)	<0.25		0.25	mg/L		12-OCT-21	R5616110
L2647929-3 PPOM-SC-004A Sampled By: CLIENT on 02-OCT-21 @ 10:20 Matrix: SOIL							
Sample Preparation							
Initial pH	5.05		0.10	pH units		08-OCT-21	R5614248
Final pH	4.91		0.10	pH units		08-OCT-21	R5614248
TCLP Extractables							
Acenaphthene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Acenaphthylene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Anthracene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Benzo(a)anthracene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Benzo(a)pyrene	<0.0010		0.0010	mg/L	08-OCT-21	13-OCT-21	R5616357

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647929-3 PPOM-SC-004A Sampled By: CLIENT on 02-OCT-21 @ 10:20 Matrix: SOIL							
TCLP Extractables							
Benzo(b&j)fluoranthene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Benzo(g,h,i)perylene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Benzo(k)fluoranthene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Chrysene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Dibenz(a,h)anthracene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Fluoranthene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Fluorene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Indeno(1,2,3-cd)pyrene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Naphthalene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Phenanthrene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Pyrene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Surrogate: Chrysene d12	81.2		60-130	%	08-OCT-21	13-OCT-21	R5616357
Surrogate: Naphthalene d8	76.8		50-130	%	08-OCT-21	13-OCT-21	R5616357
Surrogate: Phenanthrene d10	98.1		60-130	%	08-OCT-21	13-OCT-21	R5616357
Quinoline	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
TCLP Metals							
Arsenic (As)	<0.050		0.050	mg/L		12-OCT-21	R5616110
Barium (Ba)	1.33		0.50	mg/L		12-OCT-21	R5616110
Boron (B)	<2.5		2.5	mg/L		12-OCT-21	R5616110
Cadmium (Cd)	<0.0050		0.0050	mg/L		12-OCT-21	R5616110
Chromium (Cr)	<0.050		0.050	mg/L		12-OCT-21	R5616110
Lead (Pb)	0.125		0.025	mg/L		12-OCT-21	R5616110
Mercury (Hg)	<0.00010		0.00010	mg/L		08-OCT-21	R5614607
Selenium (Se)	<0.025		0.025	mg/L		12-OCT-21	R5616110
Silver (Ag)	<0.0050		0.0050	mg/L		12-OCT-21	R5616110
Uranium (U)	<0.25		0.25	mg/L		12-OCT-21	R5616110
L2647929-4 TCOM-SG-009 Sampled By: CLIENT on 02-OCT-21 @ 16:10 Matrix: SOIL							
Sample Preparation							
Initial pH	5.05		0.10	pH units		08-OCT-21	R5614248
Final pH	4.80		0.10	pH units		08-OCT-21	R5614248
TCLP Extractables							
Acenaphthene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Acenaphthylene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Anthracene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Benzo(a)anthracene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Benzo(a)pyrene	<0.0010		0.0010	mg/L	08-OCT-21	13-OCT-21	R5616357
Benzo(b&j)fluoranthene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Benzo(g,h,i)perylene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Benzo(k)fluoranthene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Chrysene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647929-4 TCOM-SG-009 Sampled By: CLIENT on 02-OCT-21 @ 16:10 Matrix: SOIL							
TCLP Extractables							
Dibenz(a,h)anthracene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Fluoranthene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Fluorene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Indeno(1,2,3-cd)pyrene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Naphthalene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Phenanthrene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Pyrene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Surrogate: Chrysene d12	80.7		60-130	%	08-OCT-21	13-OCT-21	R5616357
Surrogate: Naphthalene d8	75.9		50-130	%	08-OCT-21	13-OCT-21	R5616357
Surrogate: Phenanthrene d10	89.0		60-130	%	08-OCT-21	13-OCT-21	R5616357
Quinoline	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
TCLP Metals							
Arsenic (As)	<0.050		0.050	mg/L		12-OCT-21	R5616110
Barium (Ba)	1.30		0.50	mg/L		12-OCT-21	R5616110
Boron (B)	<2.5		2.5	mg/L		12-OCT-21	R5616110
Cadmium (Cd)	<0.0050		0.0050	mg/L		12-OCT-21	R5616110
Chromium (Cr)	<0.050		0.050	mg/L		12-OCT-21	R5616110
Lead (Pb)	0.087		0.025	mg/L		12-OCT-21	R5616110
Mercury (Hg)	<0.00010		0.00010	mg/L		08-OCT-21	R5614607
Selenium (Se)	<0.025		0.025	mg/L		12-OCT-21	R5616110
Silver (Ag)	<0.0050		0.0050	mg/L		12-OCT-21	R5616110
Uranium (U)	<0.25		0.25	mg/L		12-OCT-21	R5616110
L2647929-5 PPOM-SC-002A Sampled By: CLIENT on 02-OCT-21 @ 14:10 Matrix: SOIL							
Sample Preparation							
Initial pH	5.08		0.10	pH units		08-OCT-21	R5614248
Final pH	5.87		0.10	pH units		08-OCT-21	R5614248
TCLP Extractables							
Acenaphthene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Acenaphthylene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Anthracene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Benzo(a)anthracene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Benzo(a)pyrene	<0.0010		0.0010	mg/L	08-OCT-21	13-OCT-21	R5616357
Benzo(b&j)fluoranthene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Benzo(g,h,i)perylene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Benzo(k)fluoranthene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Chrysene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Dibenz(a,h)anthracene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Fluoranthene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Fluorene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Indeno(1,2,3-cd)pyrene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647929-5 PPOM-SC-002A Sampled By: CLIENT on 02-OCT-21 @ 14:10 Matrix: SOIL							
TCLP Extractables							
Naphthalene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Phenanthrene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Pyrene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Surrogate: Chrysene d12	79.8		60-130	%	08-OCT-21	13-OCT-21	R5616357
Surrogate: Naphthalene d8	70.7		50-130	%	08-OCT-21	13-OCT-21	R5616357
Surrogate: Phenanthrene d10	96.9		60-130	%	08-OCT-21	13-OCT-21	R5616357
Quinoline	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
TCLP Metals							
Arsenic (As)	<0.050		0.050	mg/L		12-OCT-21	R5616110
Barium (Ba)	1.18		0.50	mg/L		12-OCT-21	R5616110
Boron (B)	<2.5		2.5	mg/L		12-OCT-21	R5616110
Cadmium (Cd)	<0.0050		0.0050	mg/L		12-OCT-21	R5616110
Chromium (Cr)	<0.050		0.050	mg/L		12-OCT-21	R5616110
Lead (Pb)	<0.025		0.025	mg/L		12-OCT-21	R5616110
Mercury (Hg)	<0.00010		0.00010	mg/L		08-OCT-21	R5614607
Selenium (Se)	<0.025		0.025	mg/L		12-OCT-21	R5616110
Silver (Ag)	<0.0050		0.0050	mg/L		12-OCT-21	R5616110
Uranium (U)	<0.25		0.25	mg/L		12-OCT-21	R5616110
L2647929-6 PPOM-SG-002 Sampled By: CLIENT on 02-OCT-21 @ 14:40 Matrix: SOIL							
Sample Preparation							
Initial pH	5.04		0.10	pH units		08-OCT-21	R5614248
Final pH	5.83		0.10	pH units		08-OCT-21	R5614248
TCLP Extractables							
Acenaphthene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Acenaphthylene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Anthracene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Benzo(a)anthracene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Benzo(a)pyrene	<0.0010		0.0010	mg/L	08-OCT-21	13-OCT-21	R5616357
Benzo(b&j)fluoranthene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Benzo(g,h,i)perylene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Benzo(k)fluoranthene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Chrysene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Dibenz(a,h)anthracene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Fluoranthene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Fluorene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Indeno(1,2,3-cd)pyrene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Naphthalene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Phenanthrene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Pyrene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Surrogate: Chrysene d12	88.3		60-130	%	08-OCT-21	13-OCT-21	R5616357

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2647929-6 PPOM-SG-002 Sampled By: CLIENT on 02-OCT-21 @ 14:40 Matrix: SOIL							
TCLP Extractables							
Surrogate: Naphthalene d8	82.2		50-130	%	08-OCT-21	13-OCT-21	R5616357
Surrogate: Phenanthrene d10	101.8		60-130	%	08-OCT-21	13-OCT-21	R5616357
Quinoline	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
TCLP Metals							
Arsenic (As)	<0.050		0.050	mg/L		12-OCT-21	R5616110
Barium (Ba)	1.09		0.50	mg/L		12-OCT-21	R5616110
Boron (B)	<2.5		2.5	mg/L		12-OCT-21	R5616110
Cadmium (Cd)	<0.0050		0.0050	mg/L		12-OCT-21	R5616110
Chromium (Cr)	<0.050		0.050	mg/L		12-OCT-21	R5616110
Lead (Pb)	<0.025		0.025	mg/L		12-OCT-21	R5616110
Mercury (Hg)	<0.00010		0.00010	mg/L		08-OCT-21	R5614607
Selenium (Se)	<0.025		0.025	mg/L		12-OCT-21	R5616110
Silver (Ag)	<0.0050		0.0050	mg/L		12-OCT-21	R5616110
Uranium (U)	<0.25		0.25	mg/L		12-OCT-21	R5616110

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
HG-TCLP-WT	Waste	Mercury (CVAA) for O.Reg 347	EPA 1631E

This analysis is carried out in accordance with the extraction procedure outlined in "Test Methods for Evaluating Solid Waste - Physical/Chemical Methods Volume 1C" SW-846 EPA Method 1311, published by the United States Environmental Protection Agency (EPA). In summary, the sample is extracted at a 20:1 liquid to solids ratio for 16 to 20 hours using either extraction fluid #1 (glacial acetic acid, water and sodium hydroxide) or extraction fluid #2 (glacial acetic acid), depending on the pH of the original sample. The extract is then filtered through a 0.6 to 0.8 micron glass fibre filter and analysed using atomic absorption spectrophotometry (EPA 1631E).

LEACH-TCLP-WT	Waste	Leachate Procedure for Reg 347	EPA 1311

Inorganic and Semi-Volatile Organic contaminants are leached from waste samples in strict accordance with US EPA Method 1311, "Toxicity Characteristic Leaching Procedure" (TCLP). Test results are reported in leachate concentration units (normally mg/L).

MET-TCLP-WT	Waste	O.Reg 347 TCLP Leachable Metals	EPA 6020B

This analysis is carried out in accordance with the extraction procedure outlined in "Test Methods for Evaluating Solid Waste - Physical/Chemical Methods Volume 1C" SW-846 EPA Method 1311, published by the United States Environmental Protection Agency (EPA). In summary, the sample is extracted at a 20:1 liquid to solids ratio for 16 to 20 hours using either extraction fluid #1 (glacial acetic acid, water and sodium hydroxide) or extraction fluid #2 (glacial acetic acid), depending on the pH of the original sample. The extract is then filtered through a 0.6 to 0.8 micron glass fibre filter. Instrumental analysis of the digested extract is by collision cell inductively coupled plasma - mass spectrometry (modifed from EPA Method 6020B).

PAH-TCLP-WT	Waste	PAH for O. Reg 347	SW846 8270 (PAH)

Samples are leached according to TCLP protocol and then the aqueous leachate is extracted and the resulting extracts are analyzed on GC/MSD. Depending on the analytical GC/MS column used benzo(j)fluoranthene may chromatographically co-elute with benzo(b)fluoranthene or benzo(k)fluoranthene.

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
WT	ALS ENVIRONMENTAL - WATERLOO, ONTARIO, CANADA

Chain of Custody Numbers:

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.
mg/kg - milligrams per kilogram based on dry weight of sample
mg/kg wwt - milligrams per kilogram based on wet weight of sample
mg/kg lwt - milligrams per kilogram based on lipid weight of sample
mg/L - unit of concentration based on volume, parts per million.
< - Less than.
D.L. - The reporting limit.
N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.
UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.
Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.

Quality Control Report

Workorder: L2647929 Report Date: 13-OCT-21

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
HG-TCLP-WT	**Waste**							
Batch R5614607								
WG3634327-3 DUP		**L2647061-6**						
Mercury (Hg)		<0.00010	<0.00010	RPD-NA	mg/L	N/A	50	08-OCT-21
WG3634327-2 LCS								
Mercury (Hg)			93.8		%		70-130	08-OCT-21
WG3634327-1 MB								
Mercury (Hg)			<0.00010		mg/L		0.0001	08-OCT-21
WG3634327-4 MS		**L2647061-6**						
Mercury (Hg)			96.0		%		50-140	08-OCT-21
MET-TCLP-WT	**Waste**							
Batch R5616110								
WG3635515-4 DUP		**WG3635515-3**						
Silver (Ag)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	12-OCT-21
Arsenic (As)		<0.050	<0.050	RPD-NA	mg/L	N/A	50	12-OCT-21
Boron (B)		<2.5	<2.5	RPD-NA	mg/L	N/A	50	12-OCT-21
Barium (Ba)		<0.50	<0.50	RPD-NA	mg/L	N/A	50	12-OCT-21
Cadmium (Cd)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	12-OCT-21
Chromium (Cr)		<0.050	<0.050	RPD-NA	mg/L	N/A	50	12-OCT-21
Lead (Pb)		<0.025	<0.025	RPD-NA	mg/L	N/A	50	12-OCT-21
Selenium (Se)		<0.025	<0.025	RPD-NA	mg/L	N/A	50	12-OCT-21
Uranium (U)		<0.25	<0.25	RPD-NA	mg/L	N/A	50	12-OCT-21
WG3635515-2 LCS								
Silver (Ag)			107.8		%		70-130	12-OCT-21
Arsenic (As)			104.5		%		70-130	12-OCT-21
Boron (B)			98.1		%		70-130	12-OCT-21
Barium (Ba)			104.8		%		70-130	12-OCT-21
Cadmium (Cd)			104.6		%		70-130	12-OCT-21
Chromium (Cr)			103.0		%		70-130	12-OCT-21
Lead (Pb)			109.2		%		70-130	12-OCT-21
Selenium (Se)			105.3		%		70-130	12-OCT-21
Uranium (U)			113.7		%		70-130	12-OCT-21
WG3635515-1 MB								
Silver (Ag)			<0.0050		mg/L		0.005	12-OCT-21
Arsenic (As)			<0.050		mg/L		0.05	12-OCT-21
Boron (B)			<2.5		mg/L		2.5	12-OCT-21
Barium (Ba)			<0.50		mg/L		0.5	12-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-TCLP-WT	**Waste**							
Batch R5616110								
WG3635515-1 MB								
Cadmium (Cd)			<0.0050		mg/L		0.005	12-OCT-21
Chromium (Cr)			<0.050		mg/L		0.05	12-OCT-21
Lead (Pb)			<0.025		mg/L		0.025	12-OCT-21
Selenium (Se)			<0.025		mg/L		0.025	12-OCT-21
Uranium (U)			<0.25		mg/L		0.25	12-OCT-21
WG3635515-5 MS		**WG3635515-3**						
Silver (Ag)			131.8		%		50-140	12-OCT-21
Arsenic (As)			113.4		%		50-140	12-OCT-21
Boron (B)			109.1		%		50-140	12-OCT-21
Barium (Ba)			105.0		%		50-140	12-OCT-21
Cadmium (Cd)			109.9		%		50-140	12-OCT-21
Chromium (Cr)			107.3		%		50-140	12-OCT-21
Lead (Pb)			110.2		%		50-140	12-OCT-21
Selenium (Se)			119.9		%		50-140	12-OCT-21
Uranium (U)			112.1		%		50-140	12-OCT-21
PAH-TCLP-WT	**Waste**							
Batch R5616357								
WG3634488-5 DUP		**WG3634488-4**						
Acenaphthene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	13-OCT-21
Acenaphthylene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	13-OCT-21
Anthracene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	13-OCT-21
Benzo(a)anthracene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	13-OCT-21
Benzo(a)pyrene		<0.0010	<0.0010	RPD-NA	mg/L	N/A	50	13-OCT-21
Benzo(b&j)fluoranthene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	13-OCT-21
Benzo(g,h,i)perylene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	13-OCT-21
Benzo(k)fluoranthene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	13-OCT-21
Chrysene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	13-OCT-21
Dibenz(a,h)anthracene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	13-OCT-21
Fluoranthene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	13-OCT-21
Fluorene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	13-OCT-21
Indeno(1,2,3-cd)pyrene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	13-OCT-21
Naphthalene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	13-OCT-21
Phenanthrene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	13-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-TCLP-WT	**Waste**							
Batch R5616357								
WG3634488-5 DUP		**WG3634488-4**						
Pyrene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	13-OCT-21
Quinoline		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	13-OCT-21
WG3634488-2 LCS								
Acenaphthene			93.5		%		50-130	13-OCT-21
Acenaphthylene			91.7		%		50-130	13-OCT-21
Anthracene			87.2		%		50-130	13-OCT-21
Benzo(a)anthracene			103.4		%		50-140	13-OCT-21
Benzo(a)pyrene			91.8		%		60-140	13-OCT-21
Benzo(b&j)fluoranthene			92.8		%		50-130	13-OCT-21
Benzo(g,h,i)perylene			110.4		%		50-140	13-OCT-21
Benzo(k)fluoranthene			92.9		%		50-150	13-OCT-21
Chrysene			101.4		%		50-140	13-OCT-21
Dibenz(a,h)anthracene			119.1		%		50-140	13-OCT-21
Fluoranthene			108.8		%		50-130	13-OCT-21
Fluorene			97.0		%		50-130	13-OCT-21
Indeno(1,2,3-cd)pyrene			112.4		%		50-140	13-OCT-21
Naphthalene			74.2		%		50-130	13-OCT-21
Phenanthrene			97.8		%		50-130	13-OCT-21
Pyrene			96.9		%		50-140	13-OCT-21
Quinoline			124.7		%		50-130	13-OCT-21
WG3634488-1 MB								
Acenaphthene			<0.0050		mg/L		0.005	13-OCT-21
Acenaphthylene			<0.0050		mg/L		0.005	13-OCT-21
Anthracene			<0.0050		mg/L		0.005	13-OCT-21
Benzo(a)anthracene			<0.0050		mg/L		0.005	13-OCT-21
Benzo(a)pyrene			<0.0010		mg/L		0.001	13-OCT-21
Benzo(b&j)fluoranthene			<0.0050		mg/L		0.005	13-OCT-21
Benzo(g,h,i)perylene			<0.0050		mg/L		0.005	13-OCT-21
Benzo(k)fluoranthene			<0.0050		mg/L		0.005	13-OCT-21
Chrysene			<0.0050		mg/L		0.005	13-OCT-21
Dibenz(a,h)anthracene			<0.0050		mg/L		0.005	13-OCT-21
Fluoranthene			<0.0050		mg/L		0.005	13-OCT-21
Fluorene			<0.0050		mg/L		0.005	13-OCT-21
Indeno(1,2,3-cd)pyrene			<0.0050		mg/L		0.005	13-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-TCLP-WT	**Waste**							
Batch R5616357								
WG3634488-1 MB								
Naphthalene			<0.0050		mg/L		0.005	13-OCT-21
Phenanthrene			<0.0050		mg/L		0.005	13-OCT-21
Pyrene			<0.0050		mg/L		0.005	13-OCT-21
Quinoline			<0.0050		mg/L		0.005	13-OCT-21
Surrogate: Naphthalene d8			83.4		%		50-130	13-OCT-21
Surrogate: Phenanthrene d10			99.3		%		60-130	13-OCT-21
Surrogate: Chrysene d12			81.5		%		60-130	13-OCT-21
WG3634488-3 MB								
Acenaphthene			<0.0050		mg/L		0.005	13-OCT-21
Acenaphthylene			<0.0050		mg/L		0.005	13-OCT-21
Anthracene			<0.0050		mg/L		0.005	13-OCT-21
Benzo(a)anthracene			<0.0050		mg/L		0.005	13-OCT-21
Benzo(a)pyrene			<0.0010		mg/L		0.001	13-OCT-21
Benzo(b&j)fluoranthene			<0.0050		mg/L		0.005	13-OCT-21
Benzo(g,h,i)perylene			<0.0050		mg/L		0.005	13-OCT-21
Benzo(k)fluoranthene			<0.0050		mg/L		0.005	13-OCT-21
Chrysene			<0.0050		mg/L		0.005	13-OCT-21
Dibenz(a,h)anthracene			<0.0050		mg/L		0.005	13-OCT-21
Fluoranthene			<0.0050		mg/L		0.005	13-OCT-21
Fluorene			<0.0050		mg/L		0.005	13-OCT-21
Indeno(1,2,3-cd)pyrene			<0.0050		mg/L		0.005	13-OCT-21
Naphthalene			<0.0050		mg/L		0.005	13-OCT-21
Phenanthrene			<0.0050		mg/L		0.005	13-OCT-21
Pyrene			<0.0050		mg/L		0.005	13-OCT-21
Quinoline			<0.0050		mg/L		0.005	13-OCT-21
Surrogate: Naphthalene d8			76.5		%		50-130	13-OCT-21
Surrogate: Phenanthrene d10			93.4		%		60-130	13-OCT-21
Surrogate: Chrysene d12			87.3		%		60-130	13-OCT-21
WG3634488-6 MS		**WG3634488-4**						
Acenaphthene			91.3		%		50-140	13-OCT-21
Acenaphthylene			88.7		%		50-140	13-OCT-21
Anthracene			92.5		%		50-150	13-OCT-21
Benzo(a)anthracene			98.7		%		50-140	13-OCT-21
Benzo(a)pyrene			85.0		%		50-140	13-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-TCLP-WT	**Waste**							
Batch R5616357								
WG3634488-6 MS		**WG3634488-4**						
Benzo(b&j)fluoranthene			92.8		%		50-150	13-OCT-21
Benzo(g,h,i)perylene			112.0		%		50-140	13-OCT-21
Benzo(k)fluoranthene			89.2		%		50-150	13-OCT-21
Chrysene			89.5		%		50-140	13-OCT-21
Dibenz(a,h)anthracene			113.3		%		50-140	13-OCT-21
Fluoranthene			105.1		%		50-140	13-OCT-21
Fluorene			97.3		%		50-140	13-OCT-21
Indeno(1,2,3-cd)pyrene			116.3		%		50-140	13-OCT-21
Naphthalene			75.4		%		50-140	13-OCT-21
Phenanthrene			104.2		%		50-150	13-OCT-21
Pyrene			98.0		%		50-150	13-OCT-21
Quinoline			122.6		%		50-150	13-OCT-21

Quality Control Report

Workorder: L2647929 Report Date: 13-OCT-21

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Legend:

Limit	ALS Control Limit (Data Quality Objectives)
DUP	Duplicate
RPD	Relative Percent Difference
N/A	Not Available
LCS	Laboratory Control Sample
SRM	Standard Reference Material
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ADE	Average Desorption Efficiency
MB	Method Blank
IRM	Internal Reference Material
CRM	Certified Reference Material
CCV	Continuing Calibration Verification
CVS	Calibration Verification Standard
LCSD	Laboratory Control Sample Duplicate

Sample Parameter Qualifier Definitions:

Qualifier	Description
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Hold Time Exceedances:

All test results reported with this submission were conducted within ALS recommended hold times.

ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.

www.alsglobal.com

L2647929-COFC

t Form

COC Number: 20 - 015

Page 1 of 1

Report To	Contact and company name below will appear on the final report
Company:	Golder Associates Ltd.
Contact:	Jill LaPorte
Phone:	905-723-2727
	Company address below will appear on the final report
Street:	100 Scotia Court
City/Province:	Whitby, Ontario
Postal Code:	L1N 8Y6
Invoice To	Same as Report To ☐ YES ☑ NO
	Copy of Invoice with Report ☑ YES ☐ NO
Company:	Golder Associates Ltd.
Contact:	Accounts Payable

Reports / Recipients

Select Report Format: ☑ PDF ☑ EXCEL ☐ EDD (DIGITAL)

Merge QC/QCI Reports with COA ☑ YES ☐ NO ☐ N/A

☐ Compare Results to Criteria on Report - provide details below if box checked

Select Distribution: ☑ EMAIL ☐ MAIL ☐ FAX

Email 1 or Fax: Jill_LaPorte@golder.com

Email 2: Shawn_Seguin@golder.com

Email 3:

Invoice Recipients

Select Invoice Distribution: ☑ EMAIL ☐ MAIL ☐ FAX

Email 1 or Fax: Jill_LaPorte@golder.com

Email 2: canadaaccountspayableinvoices@golder.com

Turnaround Time (TAT) Requested

☒ Routine [R] if received by 3pm M-F - no surcharges apply

☐ 4 day [P4] if received by 3pm M-F - 25% rush surcharge minimum

☐ 3 day [P3] if received by 12pm M-F - 50% rush surcharge minimum

☐ 2 day [P2] if received by 12pm M-F - 100% rush surcharge minimum

☐ *1 day [E] if received by 12pm M-F - 200% rush surcharge minimum

*1 day only available for Inorganics, Metals, & VOC

* Same day [E2] unavailable for TCLP/SPLP

AFFIX ALS BARCODE LABEL HERE (ALS use only)

Date and Time Required for all E&P TATs: dd-mmm-yy hh:mm am/pm

For all tests with rush TATs requested, please contact your AM to confirm availability.

Project Information

ALS Account # / Quote #:	15520 / Q86566
Job #:	1783886-8000
PO / AFE:	AD
LSD:	
ALS Lab Work Order # (ALS use only):	L2647929

Oil and Gas Required Fields (client use)

AFE/Cost Center:	PO#
Major/Minor Code:	Routing Code:
Requisitioner:	
Location:	
ALS Contact: Amanda Overholster	Sampler:

Analysis Request

ALS Sample # (ALS use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	NUMBER OF CONTAINERS	TCLP (EPA 1311) PAH (PAH-TCLP-WT)	TCLP (EPA 1311) Metals (MET-TCLP-P-WT)	TCLP (EPA 1311) LEACH (LEACH-TCLP-WT)	MISC	SAMPLES ON HOLD	EXTENDED STORAGE REQUIRED	SUSPECTED HAZARD (see notes)
	TCAB-SG-005	02-OCT-21	0930	SOIL/SOLID	3	✓	✓	✓				
	PPOM-SG-004		1020	SOIL/SOLID	3	✓	✓	✓				
	PPOM-SC-004A		1020	SOIL/SOLID	3	✓	✓	✓				
	TCOM-SG-009		1610	SOIL/SOLID	3	✓	✓	✓				
	PPOM-SC-002A		1410	SOIL/SOLID	3	✓	✓	✓				
	PPOM-SG-002	2-OCT-21	1440	SOIL/SOLID	3	✓	✓	✓				
				SOIL/SOLID								
				SOIL/SOLID								
				SOIL/SOLID								
				SOIL/SOLID								
				SOIL/SOLID								
				SOIL/SOLID								

Limited Sample Size Authorization

If the sample provided contains less than the minimum required weight, the samples may be leached at a lower volume and qualified as Limited Sample Size:

☐ YES ☐ NO

Minimum Sample Size: 1X250 mL - No Headspace

Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only)

Please provide 2X250 mL sample if both mSPLP and TCLP leaching procedures are requested or if Dioxins and Furans are required.

SAMPLE RECEIPT DETAILS (ALS use only)

Cooling Method: ☐ NONE ☐ ICE ☐ ICE PACKS ☐ FROZEN ☒ COOLING INITIATED

Submission Comments identified on Sample Receipt Notification: ☐ YES ☐ NO

Cooler Custody Seals Intact: ☐ YES ☐ N/A Sample Custody Seals Intact: ☐ YES ☐ N/A

INITIAL COOLER TEMPERATURES °C				FINAL COOLER TEMPERATURES °C			
				16.1			

SHIPMENT RELEASE (client use)

Released by:	Date:	Time:

INITIAL SHIPMENT RECEPTION (ALS use only)

Received by:	Date:	Time:

FINAL SHIPMENT RECEPTION (ALS use only)

Received by:	Date:	Time:
LR	10/05/21	17:15

Refer to the Locations Tab for ALS Locations and Sampling Information

AUG 2020 FRONT

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions.

Reg. 406 mSPLP Metals scan includes: Sb,As,Ba,Be,B,Cd,Cr,Co,Cu,Pb,Mo,Ni,Se,Ag,Tl,U,V,Zn. Reg. 347/558 TCLP Metals+Inorganics includes: As,Ba,B,Cd,Cr,Pb,Se,Ag,U,Hg,Fluoride,CN (WAD),Nitrate+Nitrite as N

GOLDER ASSOCIATES LTD (Whitby)
ATTN: Jill LaPorte
100 Scotia Court
Whitby ON L1N 8Y6

Date Received: 06-OCT-21
Report Date: 08-NOV-21 15:16 (MT)
Version: FINAL

Client Phone: 905-723-2727

Certificate of Analysis

Lab Work Order #: L2648161

Project P.O. #: NOT SUBMITTED
Job Reference: 1783886-8000-8006
C of C Numbers:
Legal Site Desc:

Amanda Overholster
Account Manager

[This report shall not be reproduced except in full without the written authority of the Laboratory.]

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2648161-1 PCW-SC-001A Sampled By: CLIENT on 03-OCT-21 @ 12:05 Matrix: SOIL							
Physical Tests							
% Moisture	77.1		0.25	%	07-OCT-21	08-OCT-21	R5614233
Liquid Limit (LL)	78		1	%	15-OCT-21	15-OCT-21	R5619861
Moisture at Plastic Limit	55		1	%	15-OCT-21	15-OCT-21	R5619861
Plasticity Index (PI)	23		1	%	15-OCT-21	15-OCT-21	R5619861
Specific Gravity	1.22		0.010	kg/L		26-OCT-21	R5629385
Particle Size							
General Texture Class	Fine				13-OCT-21	13-OCT-21	R5616863
MUST PSA % > 75um	8.2		1.0	%	13-OCT-21	13-OCT-21	R5616863
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0688		0.0010	g/g	15-OCT-21	15-OCT-21	R5619419
Total Organic Carbon	6.88		0.10	%	15-OCT-21	15-OCT-21	R5619419
Metals							
Aluminum (Al)	19500		50	ug/g	11-OCT-21	12-OCT-21	R5616343
Antimony (Sb)	1.30		0.10	ug/g	11-OCT-21	12-OCT-21	R5616343
Arsenic (As)	7.39		0.10	ug/g	11-OCT-21	12-OCT-21	R5616343
Barium (Ba)	267		0.50	ug/g	11-OCT-21	12-OCT-21	R5616343
Beryllium (Be)	0.66		0.10	ug/g	11-OCT-21	12-OCT-21	R5616343
Bismuth (Bi)	0.31		0.20	ug/g	11-OCT-21	12-OCT-21	R5616343
Boron (B)	8.2		5.0	ug/g	11-OCT-21	12-OCT-21	R5616343
Boron (B), Hot Water Ext.	0.72	FR4	0.10	ug/g	11-OCT-21	12-OCT-21	R5615812
Cadmium (Cd)	0.550		0.020	ug/g	11-OCT-21	12-OCT-21	R5616343
Calcium (Ca)	36900		50	ug/g	11-OCT-21	12-OCT-21	R5616343
Chromium (Cr)	2070	DLHC	10	ug/g	11-OCT-21	12-OCT-21	R5616343
Cobalt (Co)	13.3		0.10	ug/g	11-OCT-21	12-OCT-21	R5616343
Copper (Cu)	36.5		0.50	ug/g	11-OCT-21	12-OCT-21	R5616343
Iron (Fe)	27100		50	ug/g	11-OCT-21	12-OCT-21	R5616343
Lead (Pb)	130		0.50	ug/g	11-OCT-21	12-OCT-21	R5616343
Lithium (Li)	13.5		2.0	ug/g	11-OCT-21	12-OCT-21	R5616343
Magnesium (Mg)	15000		20	ug/g	11-OCT-21	12-OCT-21	R5616343
Manganese (Mn)	581		1.0	ug/g	11-OCT-21	12-OCT-21	R5616343
Mercury (Hg)	0.248	DLM	0.010	ug/g	11-OCT-21	12-OCT-21	R5615544
Molybdenum (Mo)	1.02		0.10	ug/g	11-OCT-21	12-OCT-21	R5616343
Nickel (Ni)	26.0		0.50	ug/g	11-OCT-21	12-OCT-21	R5616343
Phosphorus (P)	1260		50	ug/g	11-OCT-21	12-OCT-21	R5616343
Potassium (K)	4510		100	ug/g	11-OCT-21	12-OCT-21	R5616343
Selenium (Se)	0.56		0.20	ug/g	11-OCT-21	12-OCT-21	R5616343
Silver (Ag)	0.47		0.10	ug/g	11-OCT-21	12-OCT-21	R5616343
Sodium (Na)	621		50	ug/g	11-OCT-21	12-OCT-21	R5616343
Strontium (Sr)	174		0.50	ug/g	11-OCT-21	12-OCT-21	R5616343
Sulfur (S)	3900		1000	ug/g	11-OCT-21	12-OCT-21	R5616343
Thallium (Tl)	0.287		0.050	ug/g	11-OCT-21	12-OCT-21	R5616343
Tin (Sn)	5.5		2.0	ug/g	11-OCT-21	12-OCT-21	R5616343

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2648161-1 PCW-SC-001A Sampled By: CLIENT on 03-OCT-21 @ 12:05 Matrix: SOIL							
Metals							
Titanium (Ti)	1360		1.0	ug/g	11-OCT-21	12-OCT-21	R5616343
Tungsten (W)	<0.50		0.50	ug/g	11-OCT-21	12-OCT-21	R5616343
Uranium (U)	0.796		0.050	ug/g	11-OCT-21	12-OCT-21	R5616343
Vanadium (V)	49.8		0.20	ug/g	11-OCT-21	12-OCT-21	R5616343
Zinc (Zn)	150		2.0	ug/g	11-OCT-21	12-OCT-21	R5616343
Zirconium (Zr)	5.7		1.0	ug/g	11-OCT-21	12-OCT-21	R5616343
Speciated Metals							
Chromium, Trivalent	2050		10	ug/g		14-OCT-21	
Chromium, Hexavalent	22.1	DLHM	0.40	ug/g	12-OCT-21	14-OCT-21	R5617412
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.127	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5617221
Acenaphthylene	1.03	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5617221
Acridine	<0.150	DLM	0.15	ug/g	13-OCT-21	14-OCT-21	R5617221
Anthracene	0.387	DLHM	0.012	ug/g	13-OCT-21	14-OCT-21	R5617221
Benzo(a)anthracene	1.75	R	0.030	ug/g	13-OCT-21	14-OCT-21	R5617221
Benzo(a)pyrene	2.13	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5617221
Benzo(b&j)fluoranthene	1.71	DLHM	0.030	ug/g	13-OCT-21	14-OCT-21	R5617221
Benzo(g,h,i)perylene	1.24	DLHM	0.030	ug/g	13-OCT-21	14-OCT-21	R5617221
Benzo(k)fluoranthene	0.627	DLHM	0.030	ug/g	13-OCT-21	14-OCT-21	R5617221
Chrysene	1.68	DLHM	0.030	ug/g	13-OCT-21	14-OCT-21	R5617221
Dibenz(a,h)anthracene	0.292	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5617221
Fluoroanthene	1.70	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5617221
Fluorene	0.159	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5617221
Indeno(1,2,3-cd)pyrene	0.936	DLHM	0.030	ug/g	13-OCT-21	14-OCT-21	R5617221
1-Methylnaphthalene	0.041	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5617221
2-Methylnaphthalene	0.057	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5617221
Naphthalene	0.049	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5617221
Phenanthrene	0.583	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5617221
Pyrene	2.89	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5617221
Quinoline	<0.015	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5617221
Surrogate: 2-Fluorobiphenyl	87.0		60-140	%	13-OCT-21	14-OCT-21	R5617221
Surrogate: d14-Terphenyl	85.7		60-140	%	13-OCT-21	14-OCT-21	R5617221
B(a)P Total Potency Equivalent	2.96		0.021	ug/g	13-OCT-21	14-OCT-21	R5617221
IACR (CCME)	28.3		0.30		13-OCT-21	14-OCT-21	R5617221
Polychlorinated Biphenyls							
Aroclor 1016	<0.014	DLR	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1221	<0.014	DLR	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1232	<0.014	DLR	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1242	<0.020	DLR	0.020	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1248	<0.014	DLR	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1254	0.629	DLR	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1260	1.02	DLR	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623376

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2648161-1 PCW-SC-001A Sampled By: CLIENT on 03-OCT-21 @ 12:05 Matrix: SOIL							
Polychlorinated Biphenyls							
Aroclor 1262	<0.014	DLR	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1268	<0.014	DLR	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623376
Total Polychlorinated Biphenyls	1.65		0.041	mg/kg	18-OCT-21	18-OCT-21	R5623376
Surrogate: d14-Terphenyl	95.0		50-140	%	18-OCT-21	18-OCT-21	R5623376
L2648161-2 PCW-SC-001B Sampled By: CLIENT on 03-OCT-21 @ 12:05 Matrix: SOIL							
Physical Tests							
% Moisture	86.3		0.25	%	07-OCT-21	08-OCT-21	R5614233
Particle Size							
General Texture Class	Fine				13-OCT-21	13-OCT-21	R5616863
MUST PSA % > 75um	13.9		1.0	%	13-OCT-21	13-OCT-21	R5616863
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.365		0.0010	g/g	15-OCT-21	15-OCT-21	R5619419
Total Organic Carbon	36.5	DLHC	4.7	%	15-OCT-21	15-OCT-21	R5619419
Metals							
Aluminum (Al)	2840	DLM	100	ug/g	12-OCT-21	13-OCT-21	R5616646
Antimony (Sb)	0.47	DLM	0.20	ug/g	12-OCT-21	13-OCT-21	R5616646
Arsenic (As)	5.75	DLM	0.20	ug/g	12-OCT-21	13-OCT-21	R5616646
Barium (Ba)	53.5	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Beryllium (Be)	<0.20	DLM	0.20	ug/g	12-OCT-21	13-OCT-21	R5616646
Bismuth (Bi)	<0.40	DLM	0.40	ug/g	12-OCT-21	13-OCT-21	R5616646
Boron (B)	<10	DLM	10	ug/g	12-OCT-21	13-OCT-21	R5616646
Cadmium (Cd)	0.181	DLM	0.040	ug/g	12-OCT-21	13-OCT-21	R5616646
Calcium (Ca)	14900	DLM	100	ug/g	12-OCT-21	13-OCT-21	R5616646
Chromium (Cr)	501	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Cobalt (Co)	2.78	DLM	0.20	ug/g	12-OCT-21	13-OCT-21	R5616646
Copper (Cu)	7.4	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Iron (Fe)	4940	DLM	100	ug/g	12-OCT-21	13-OCT-21	R5616646
Lead (Pb)	31.2	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Lithium (Li)	<4.0	DLM	4.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Magnesium (Mg)	2280	DLM	40	ug/g	12-OCT-21	13-OCT-21	R5616646
Manganese (Mn)	180	DLM	2.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Mercury (Hg)	0.085	DLM	0.010	ug/g	12-OCT-21	13-OCT-21	R5616461
Molybdenum (Mo)	0.62	DLM	0.20	ug/g	12-OCT-21	13-OCT-21	R5616646
Nickel (Ni)	5.1	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Phosphorus (P)	410	DLM	100	ug/g	12-OCT-21	13-OCT-21	R5616646
Potassium (K)	480	DLM	200	ug/g	12-OCT-21	13-OCT-21	R5616646
Selenium (Se)	0.40	DLM	0.40	ug/g	12-OCT-21	13-OCT-21	R5616646
Silver (Ag)	<0.20	DLM	0.20	ug/g	12-OCT-21	13-OCT-21	R5616646
Sodium (Na)	220	DLM	100	ug/g	12-OCT-21	13-OCT-21	R5616646
Strontium (Sr)	123	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2648161-2 PCW-SC-001B Sampled By: CLIENT on 03-OCT-21 @ 12:05 Matrix: SOIL							
Metals							
Sulfur (S)	4700	DLM	2000	ug/g	12-OCT-21	13-OCT-21	R5616646
Thallium (Tl)	<0.10	DLM	0.10	ug/g	12-OCT-21	13-OCT-21	R5616646
Tin (Sn)	<4.0	DLM	4.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Titanium (Ti)	148	DLM	2.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Tungsten (W)	<1.0	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Uranium (U)	0.29	DLM	0.10	ug/g	12-OCT-21	13-OCT-21	R5616646
Vanadium (V)	7.70	DLM	0.40	ug/g	12-OCT-21	13-OCT-21	R5616646
Zinc (Zn)	28.4	DLM	4.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Zirconium (Zr)	<2.0	DLM	2.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	<0.038	DLHM	0.038	ug/g	13-OCT-21	14-OCT-21	R5617221
Acenaphthylene	0.148	DLHM	0.038	ug/g	13-OCT-21	14-OCT-21	R5617221
Acridine	<0.075	DLHM	0.075	ug/g	13-OCT-21	14-OCT-21	R5617221
Anthracene	0.055	DLHM	0.030	ug/g	13-OCT-21	14-OCT-21	R5617221
Benzo(a)anthracene	0.236	R	0.075	ug/g	13-OCT-21	14-OCT-21	R5617221
Benzo(a)pyrene	0.267	DLHM	0.038	ug/g	13-OCT-21	14-OCT-21	R5617221
Benzo(b&j)fluoranthene	0.225	DLHM	0.075	ug/g	13-OCT-21	14-OCT-21	R5617221
Benzo(g,h,i)perylene	0.153	DLHM	0.075	ug/g	13-OCT-21	14-OCT-21	R5617221
Benzo(k)fluoranthene	0.075	DLHM	0.075	ug/g	13-OCT-21	14-OCT-21	R5617221
Chrysene	0.214	DLHM	0.075	ug/g	13-OCT-21	14-OCT-21	R5617221
Dibenz(a,h)anthracene	0.038	DLHM	0.038	ug/g	13-OCT-21	14-OCT-21	R5617221
Fluoroanthene	0.319	DLHM	0.038	ug/g	13-OCT-21	14-OCT-21	R5617221
Fluorene	0.040	DLHM	0.038	ug/g	13-OCT-21	14-OCT-21	R5617221
Indeno(1,2,3-cd)pyrene	0.132	DLHM	0.075	ug/g	13-OCT-21	14-OCT-21	R5617221
1-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	13-OCT-21	14-OCT-21	R5617221
2-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	13-OCT-21	14-OCT-21	R5617221
Naphthalene	<0.038	DLHM	0.038	ug/g	13-OCT-21	14-OCT-21	R5617221
Phenanthrene	0.098	DLHM	0.038	ug/g	13-OCT-21	14-OCT-21	R5617221
Pyrene	0.493	DLHM	0.038	ug/g	13-OCT-21	14-OCT-21	R5617221
Quinoline	<0.038	DLHM	0.038	ug/g	13-OCT-21	14-OCT-21	R5617221
Surrogate: 2-Fluorobiphenyl	89.5		60-140	%	13-OCT-21	14-OCT-21	R5617221
Surrogate: d14-Terphenyl	87.7		60-140	%	13-OCT-21	14-OCT-21	R5617221
B(a)P Total Potency Equivalent	0.375		0.053	ug/g	13-OCT-21	14-OCT-21	R5617221
IACR (CCME)	3.65		0.75		13-OCT-21	14-OCT-21	R5617221
Polychlorinated Biphenyls							
Aroclor 1016	<0.023	DLR	0.023	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1221	<0.023	DLR	0.023	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1232	<0.023	DLR	0.023	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1242	<0.023	DLR	0.023	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1248	<0.023	DLR	0.023	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1254	0.097	DLR	0.023	mg/kg	18-OCT-21	18-OCT-21	R5623376

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2648161-2 PCW-SC-001B Sampled By: CLIENT on 03-OCT-21 @ 12:05 Matrix: SOIL							
Polychlorinated Biphenyls							
Aroclor 1260	0.161	DLR	0.023	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1262	<0.023	DLR	0.023	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1268	<0.023	DLR	0.023	mg/kg	18-OCT-21	18-OCT-21	R5623376
Total Polychlorinated Biphenyls	0.257		0.068	mg/kg	18-OCT-21	18-OCT-21	R5623376
Surrogate: d14-Terphenyl	89.9		50-140	%	18-OCT-21	18-OCT-21	R5623376
L2648161-3 PCW-SC-001 Sampled By: CLIENT on 03-OCT-21 @ 12:55 Matrix: SOIL							
Physical Tests							
% Moisture	82.1		0.25	%	07-OCT-21	08-OCT-21	R5614233
Liquid Limit (LL)	86		1	%	15-OCT-21	15-OCT-21	R5619861
Moisture at Plastic Limit	79		1	%	15-OCT-21	15-OCT-21	R5619861
Plasticity Index (PI)	7		1	%	15-OCT-21	15-OCT-21	R5619861
Specific Gravity	1.09		0.010	kg/L		26-OCT-21	R5629385
Particle Size							
General Texture Class	Fine				13-OCT-21	13-OCT-21	R5616863
MUST PSA % > 75um	3.8		1.0	%	13-OCT-21	13-OCT-21	R5616863
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0663		0.0010	g/g	20-OCT-21	20-OCT-21	R5625292
Total Organic Carbon	6.63		0.10	%	20-OCT-21	20-OCT-21	R5625292
Metals							
Aluminum (Al)	14200		50	ug/g	11-OCT-21	12-OCT-21	R5616343
Antimony (Sb)	0.83		0.10	ug/g	11-OCT-21	12-OCT-21	R5616343
Arsenic (As)	5.41		0.10	ug/g	11-OCT-21	12-OCT-21	R5616343
Barium (Ba)	231		0.50	ug/g	11-OCT-21	12-OCT-21	R5616343
Beryllium (Be)	0.52		0.10	ug/g	11-OCT-21	12-OCT-21	R5616343
Bismuth (Bi)	0.28		0.20	ug/g	11-OCT-21	12-OCT-21	R5616343
Boron (B)	8.2		5.0	ug/g	11-OCT-21	12-OCT-21	R5616343
Boron (B), Hot Water Ext.	1.01	FR4	0.10	ug/g	11-OCT-21	12-OCT-21	R5615812
Cadmium (Cd)	0.530		0.020	ug/g	11-OCT-21	12-OCT-21	R5616343
Calcium (Ca)	63800		50	ug/g	11-OCT-21	12-OCT-21	R5616343
Chromium (Cr)	1180		0.50	ug/g	11-OCT-21	12-OCT-21	R5616343
Cobalt (Co)	10.7		0.10	ug/g	11-OCT-21	12-OCT-21	R5616343
Copper (Cu)	33.8		0.50	ug/g	11-OCT-21	12-OCT-21	R5616343
Iron (Fe)	22800		50	ug/g	11-OCT-21	12-OCT-21	R5616343
Lead (Pb)	88.4		0.50	ug/g	11-OCT-21	12-OCT-21	R5616343
Lithium (Li)	10.2		2.0	ug/g	11-OCT-21	12-OCT-21	R5616343
Magnesium (Mg)	14000		20	ug/g	11-OCT-21	12-OCT-21	R5616343
Manganese (Mn)	579		1.0	ug/g	11-OCT-21	12-OCT-21	R5616343
Mercury (Hg)	0.192	DLM	0.010	ug/g	11-OCT-21	12-OCT-21	R5615544
Molybdenum (Mo)	0.84		0.10	ug/g	11-OCT-21	12-OCT-21	R5616343
Nickel (Ni)	21.0		0.50	ug/g	11-OCT-21	12-OCT-21	R5616343

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2648161-3 PCW-SC-001 Sampled By: CLIENT on 03-OCT-21 @ 12:55 Matrix: SOIL							
Metals							
Phosphorus (P)	1210		50	ug/g	11-OCT-21	12-OCT-21	R5616343
Potassium (K)	3330		100	ug/g	11-OCT-21	12-OCT-21	R5616343
Selenium (Se)	0.74		0.20	ug/g	11-OCT-21	12-OCT-21	R5616343
Silver (Ag)	0.26		0.10	ug/g	11-OCT-21	12-OCT-21	R5616343
Sodium (Na)	527		50	ug/g	11-OCT-21	12-OCT-21	R5616343
Strontium (Sr)	349		0.50	ug/g	11-OCT-21	12-OCT-21	R5616343
Sulfur (S)	4900		1000	ug/g	11-OCT-21	12-OCT-21	R5616343
Thallium (Tl)	0.236		0.050	ug/g	11-OCT-21	12-OCT-21	R5616343
Tin (Sn)	7.8		2.0	ug/g	11-OCT-21	12-OCT-21	R5616343
Titanium (Ti)	964		1.0	ug/g	11-OCT-21	12-OCT-21	R5616343
Tungsten (W)	<0.50		0.50	ug/g	11-OCT-21	12-OCT-21	R5616343
Uranium (U)	0.624		0.050	ug/g	11-OCT-21	12-OCT-21	R5616343
Vanadium (V)	39.8		0.20	ug/g	11-OCT-21	12-OCT-21	R5616343
Zinc (Zn)	139		2.0	ug/g	11-OCT-21	12-OCT-21	R5616343
Zirconium (Zr)	3.8		1.0	ug/g	11-OCT-21	12-OCT-21	R5616343
Speciated Metals							
Chromium, Trivalent	1170		10	ug/g		14-OCT-21	
Chromium, Hexavalent	10.0	DLHM	1.0	ug/g	12-OCT-21	14-OCT-21	R5617412
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.058	DLHM	0.025	ug/g	13-OCT-21	14-OCT-21	R5617221
Acenaphthylene	0.509	DLHM	0.025	ug/g	13-OCT-21	14-OCT-21	R5617221
Acridine	<0.050	DLHM	0.050	ug/g	13-OCT-21	14-OCT-21	R5617221
Anthracene	0.221	DLHM	0.020	ug/g	13-OCT-21	14-OCT-21	R5617221
Benzo(a)anthracene	1.03	R	0.050	ug/g	13-OCT-21	14-OCT-21	R5617221
Benzo(a)pyrene	1.24	DLHM	0.025	ug/g	13-OCT-21	14-OCT-21	R5617221
Benzo(b&j)fluoranthene	1.12	DLHM	0.050	ug/g	13-OCT-21	14-OCT-21	R5617221
Benzo(g,h,i)perylene	0.785	DLHM	0.050	ug/g	13-OCT-21	14-OCT-21	R5617221
Benzo(k)fluoranthene	0.367	DLHM	0.050	ug/g	13-OCT-21	14-OCT-21	R5617221
Chrysene	0.991	DLHM	0.050	ug/g	13-OCT-21	14-OCT-21	R5617221
Dibenz(a,h)anthracene	0.196	DLHM	0.025	ug/g	13-OCT-21	14-OCT-21	R5617221
Fluoroanthene	0.916	DLHM	0.025	ug/g	13-OCT-21	14-OCT-21	R5617221
Fluorene	0.075	DLHM	0.025	ug/g	13-OCT-21	14-OCT-21	R5617221
Indeno(1,2,3-cd)pyrene	0.630	DLHM	0.050	ug/g	13-OCT-21	14-OCT-21	R5617221
1-Methylnaphthalene	<0.025	DLHM	0.025	ug/g	13-OCT-21	14-OCT-21	R5617221
2-Methylnaphthalene	<0.025	DLHM	0.025	ug/g	13-OCT-21	14-OCT-21	R5617221
Naphthalene	<0.025	DLHM	0.025	ug/g	13-OCT-21	14-OCT-21	R5617221
Phenanthrene	0.336	DLHM	0.025	ug/g	13-OCT-21	14-OCT-21	R5617221
Pyrene	1.32	DLHM	0.025	ug/g	13-OCT-21	14-OCT-21	R5617221
Quinoline	<0.025	DLHM	0.025	ug/g	13-OCT-21	14-OCT-21	R5617221
Surrogate: 2-Fluorobiphenyl	88.5		60-140	%	13-OCT-21	14-OCT-21	R5617221
Surrogate: d14-Terphenyl	83.6		60-140	%	13-OCT-21	14-OCT-21	R5617221

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2648161-3 PCW-SC-001 Sampled By: CLIENT on 03-OCT-21 @ 12:55 Matrix: SOIL							
Polycyclic Aromatic Hydrocarbons							
B(a)P Total Potency Equivalent	1.77		0.036	ug/g	13-OCT-21	14-OCT-21	R5617221
IACR (CCME)	17.4		0.50		13-OCT-21	14-OCT-21	R5617221
Polychlorinated Biphenyls							
Aroclor 1016	<0.023	DLR	0.023	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1221	<0.023	DLR	0.023	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1232	<0.023	DLR	0.023	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1242	<0.025	DLR	0.025	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1248	<0.023	DLR	0.023	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1254	0.199	DLR	0.023	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1260	0.324	DLR	0.023	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1262	<0.023	DLR	0.023	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1268	<0.023	DLR	0.023	mg/kg	18-OCT-21	18-OCT-21	R5623376
Total Polychlorinated Biphenyls	0.523		0.068	mg/kg	18-OCT-21	18-OCT-21	R5623376
Surrogate: d14-Terphenyl	84.5		50-140	%	18-OCT-21	18-OCT-21	R5623376
L2648161-4 DUP-205 Sampled By: CLIENT on 03-OCT-21 Matrix: SOIL							
Physical Tests							
% Moisture	64.6		0.25	%	07-OCT-21	08-OCT-21	R5614233
Liquid Limit (LL)	75		1	%	15-OCT-21	15-OCT-21	R5619861
Moisture at Plastic Limit	58		1	%	15-OCT-21	15-OCT-21	R5619861
Plasticity Index (PI)	17		1	%	15-OCT-21	15-OCT-21	R5619861
Specific Gravity	1.21		0.010	kg/L		07-NOV-21	R5637237
Particle Size							
General Texture Class	Fine				13-OCT-21	13-OCT-21	R5616863
MUST PSA % > 75um	8.7		1.0	%	13-OCT-21	13-OCT-21	R5616863
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0598		0.0010	g/g	15-OCT-21	15-OCT-21	R5619419
Total Organic Carbon	5.98		0.10	%	15-OCT-21	15-OCT-21	R5619419
Metals							
Aluminum (Al)	17900		50	ug/g	11-OCT-21	12-OCT-21	R5616343
Antimony (Sb)	1.31		0.10	ug/g	11-OCT-21	12-OCT-21	R5616343
Arsenic (As)	6.97		0.10	ug/g	11-OCT-21	12-OCT-21	R5616343
Barium (Ba)	264		0.50	ug/g	11-OCT-21	12-OCT-21	R5616343
Beryllium (Be)	0.63		0.10	ug/g	11-OCT-21	12-OCT-21	R5616343
Bismuth (Bi)	0.32		0.20	ug/g	11-OCT-21	12-OCT-21	R5616343
Boron (B)	7.1		5.0	ug/g	11-OCT-21	12-OCT-21	R5616343
Boron (B), Hot Water Ext.	0.71	FR4	0.10	ug/g	11-OCT-21	12-OCT-21	R5615812
Cadmium (Cd)	0.538		0.020	ug/g	11-OCT-21	12-OCT-21	R5616343
Calcium (Ca)	37500		50	ug/g	11-OCT-21	12-OCT-21	R5616343
Chromium (Cr)	2080	DLHC	10	ug/g	11-OCT-21	12-OCT-21	R5616343
Cobalt (Co)	12.8		0.10	ug/g	11-OCT-21	12-OCT-21	R5616343

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2648161-4 DUP-205 Sampled By: CLIENT on 03-OCT-21 Matrix: SOIL							
Metals							
Copper (Cu)	35.5		0.50	ug/g	11-OCT-21	12-OCT-21	R5616343
Iron (Fe)	26800		50	ug/g	11-OCT-21	12-OCT-21	R5616343
Lead (Pb)	128		0.50	ug/g	11-OCT-21	12-OCT-21	R5616343
Lithium (Li)	13.0		2.0	ug/g	11-OCT-21	12-OCT-21	R5616343
Magnesium (Mg)	14400		20	ug/g	11-OCT-21	12-OCT-21	R5616343
Manganese (Mn)	547		1.0	ug/g	11-OCT-21	12-OCT-21	R5616343
Mercury (Hg)	0.224	DLM	0.010	ug/g	11-OCT-21	12-OCT-21	R5615544
Molybdenum (Mo)	1.01		0.10	ug/g	11-OCT-21	12-OCT-21	R5616343
Nickel (Ni)	25.2		0.50	ug/g	11-OCT-21	12-OCT-21	R5616343
Phosphorus (P)	1130		50	ug/g	11-OCT-21	12-OCT-21	R5616343
Potassium (K)	4230		100	ug/g	11-OCT-21	12-OCT-21	R5616343
Selenium (Se)	0.53		0.20	ug/g	11-OCT-21	12-OCT-21	R5616343
Silver (Ag)	0.38		0.10	ug/g	11-OCT-21	12-OCT-21	R5616343
Sodium (Na)	572		50	ug/g	11-OCT-21	12-OCT-21	R5616343
Strontium (Sr)	177		0.50	ug/g	11-OCT-21	12-OCT-21	R5616343
Sulfur (S)	3400		1000	ug/g	11-OCT-21	12-OCT-21	R5616343
Thallium (Tl)	0.282		0.050	ug/g	11-OCT-21	12-OCT-21	R5616343
Tin (Sn)	5.4		2.0	ug/g	11-OCT-21	12-OCT-21	R5616343
Titanium (Ti)	1270		1.0	ug/g	11-OCT-21	12-OCT-21	R5616343
Tungsten (W)	<0.50		0.50	ug/g	11-OCT-21	12-OCT-21	R5616343
Uranium (U)	0.759		0.050	ug/g	11-OCT-21	12-OCT-21	R5616343
Vanadium (V)	47.5		0.20	ug/g	11-OCT-21	12-OCT-21	R5616343
Zinc (Zn)	140		2.0	ug/g	11-OCT-21	12-OCT-21	R5616343
Zirconium (Zr)	5.7		1.0	ug/g	11-OCT-21	12-OCT-21	R5616343
Speciated Metals							
Chromium, Trivalent	2060		10	ug/g		14-OCT-21	
Chromium, Hexavalent	15.7	DLHM	0.40	ug/g	12-OCT-21	14-OCT-21	R5617412
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.072	DLHM	0.010	ug/g	13-OCT-21	14-OCT-21	R5617221
Acenaphthylene	0.523	DLHM	0.010	ug/g	13-OCT-21	14-OCT-21	R5617221
Acridine	<0.090	DLM	0.090	ug/g	13-OCT-21	14-OCT-21	R5617221
Anthracene	0.216	DLHM	0.0080	ug/g	13-OCT-21	14-OCT-21	R5617221
Benzo(a)anthracene	0.933	R	0.020	ug/g	13-OCT-21	14-OCT-21	R5617221
Benzo(a)pyrene	1.15	DLHM	0.010	ug/g	13-OCT-21	14-OCT-21	R5617221
Benzo(b&j)fluoranthene	0.974	DLHM	0.020	ug/g	13-OCT-21	14-OCT-21	R5617221
Benzo(g,h,i)perylene	0.665	DLHM	0.020	ug/g	13-OCT-21	14-OCT-21	R5617221
Benzo(k)fluoranthene	0.300	DLHM	0.020	ug/g	13-OCT-21	14-OCT-21	R5617221
Chrysene	0.880	DLHM	0.020	ug/g	13-OCT-21	14-OCT-21	R5617221
Dibenz(a,h)anthracene	0.169	DLHM	0.010	ug/g	13-OCT-21	14-OCT-21	R5617221
Fluoroanthene	0.935	DLHM	0.010	ug/g	13-OCT-21	14-OCT-21	R5617221
Fluorene	0.084	DLHM	0.010	ug/g	13-OCT-21	14-OCT-21	R5617221

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2648161-4 DUP-205 Sampled By: CLIENT on 03-OCT-21 Matrix: SOIL							
Polycyclic Aromatic Hydrocarbons							
Indeno(1,2,3-cd)pyrene	0.559	DLHM	0.020	ug/g	13-OCT-21	14-OCT-21	R5617221
1-Methylnaphthalene	0.022	DLHM	0.010	ug/g	13-OCT-21	14-OCT-21	R5617221
2-Methylnaphthalene	0.030	DLHM	0.010	ug/g	13-OCT-21	14-OCT-21	R5617221
Naphthalene	0.022	DLHM	0.010	ug/g	13-OCT-21	14-OCT-21	R5617221
Phenanthrene	0.330	DLHM	0.010	ug/g	13-OCT-21	14-OCT-21	R5617221
Pyrene	1.52	DLHM	0.010	ug/g	13-OCT-21	14-OCT-21	R5617221
Quinoline	<0.010	DLHM	0.010	ug/g	13-OCT-21	14-OCT-21	R5617221
Surrogate: 2-Fluorobiphenyl	87.1		60-140	%	13-OCT-21	14-OCT-21	R5617221
Surrogate: d14-Terphenyl	83.4		60-140	%	13-OCT-21	14-OCT-21	R5617221
B(a)P Total Potency Equivalent	1.61		0.020	ug/g	13-OCT-21	14-OCT-21	R5617221
IACR (CCME)	15.4		0.20		13-OCT-21	14-OCT-21	R5617221
Polychlorinated Biphenyls							
Aroclor 1016	<0.0090	DLR	0.0090	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1221	<0.0090	DLR	0.0090	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1232	<0.0090	DLR	0.0090	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1242	0.0165	DLR	0.0090	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1248	<0.0090	DLR	0.0090	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1254	0.386	DLR	0.0090	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1260	0.707	DLR	0.0090	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1262	<0.0090	DLR	0.0090	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1268	<0.0090	DLR	0.0090	mg/kg	18-OCT-21	18-OCT-21	R5623376
Total Polychlorinated Biphenyls	1.11		0.027	mg/kg	18-OCT-21	18-OCT-21	R5623376
Surrogate: d14-Terphenyl	97.8		50-140	%	18-OCT-21	18-OCT-21	R5623376
L2648161-5 PCW-SC-005A Sampled By: CLIENT on 03-OCT-21 @ 14:30 Matrix: SOIL							
Physical Tests							
% Moisture	65.8		0.25	%	07-OCT-21	08-OCT-21	R5614233
Liquid Limit (LL)	76		1	%	15-OCT-21	15-OCT-21	R5619861
Moisture at Plastic Limit	58		1	%	15-OCT-21	15-OCT-21	R5619861
Plasticity Index (PI)	18		1	%	15-OCT-21	15-OCT-21	R5619861
Specific Gravity	1.23		0.010	kg/L		26-OCT-21	R5629385
Particle Size							
General Texture Class	Fine				13-OCT-21	13-OCT-21	R5616863
MUST PSA % > 75um	19.7		1.0	%	13-OCT-21	13-OCT-21	R5616863
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0629		0.0010	g/g	25-OCT-21	25-OCT-21	R5628209
Total Organic Carbon	6.29		0.10	%	25-OCT-21	25-OCT-21	R5628209
Metals							
Aluminum (Al)	17900	DLM	100	ug/g	12-OCT-21	13-OCT-21	R5616646
Antimony (Sb)	2.55	DLM	0.20	ug/g	12-OCT-21	13-OCT-21	R5616646
Arsenic (As)	8.44	DLM	0.20	ug/g	12-OCT-21	13-OCT-21	R5616646

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2648161-5 PCW-SC-005A Sampled By: CLIENT on 03-OCT-21 @ 14:30 Matrix: SOIL							
Metals							
Barium (Ba)	289	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Beryllium (Be)	0.62	DLM	0.20	ug/g	12-OCT-21	13-OCT-21	R5616646
Bismuth (Bi)	<0.40	DLM	0.40	ug/g	12-OCT-21	13-OCT-21	R5616646
Boron (B)	11	DLM	10	ug/g	12-OCT-21	13-OCT-21	R5616646
Cadmium (Cd)	0.605	DLM	0.040	ug/g	12-OCT-21	13-OCT-21	R5616646
Calcium (Ca)	40100	DLM	100	ug/g	12-OCT-21	13-OCT-21	R5616646
Chromium (Cr)	4090	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Cobalt (Co)	14.7	DLM	0.20	ug/g	12-OCT-21	13-OCT-21	R5616646
Copper (Cu)	54.5	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Iron (Fe)	27300	DLM	100	ug/g	12-OCT-21	13-OCT-21	R5616646
Lead (Pb)	215	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Lithium (Li)	13.5	DLM	4.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Magnesium (Mg)	14500	DLM	40	ug/g	12-OCT-21	13-OCT-21	R5616646
Manganese (Mn)	487	DLM	2.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Mercury (Hg)	0.369	DLM	0.010	ug/g	12-OCT-21	13-OCT-21	R5616461
Molybdenum (Mo)	1.78	DLM	0.20	ug/g	12-OCT-21	13-OCT-21	R5616646
Nickel (Ni)	26.5	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Phosphorus (P)	1330	DLM	100	ug/g	12-OCT-21	13-OCT-21	R5616646
Potassium (K)	4270	DLM	200	ug/g	12-OCT-21	13-OCT-21	R5616646
Selenium (Se)	0.62	DLM	0.40	ug/g	12-OCT-21	13-OCT-21	R5616646
Silver (Ag)	0.60	DLM	0.20	ug/g	12-OCT-21	13-OCT-21	R5616646
Sodium (Na)	640	DLM	100	ug/g	12-OCT-21	13-OCT-21	R5616646
Strontium (Sr)	184	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Sulfur (S)	4400	DLM	2000	ug/g	12-OCT-21	13-OCT-21	R5616646
Thallium (Tl)	0.30	DLM	0.10	ug/g	12-OCT-21	13-OCT-21	R5616646
Tin (Sn)	10.3	DLM	4.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Titanium (Ti)	1330	DLM	2.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Tungsten (W)	<1.0	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Uranium (U)	0.68	DLM	0.10	ug/g	12-OCT-21	13-OCT-21	R5616646
Vanadium (V)	48.2	DLM	0.40	ug/g	12-OCT-21	13-OCT-21	R5616646
Zinc (Zn)	181	DLM	4.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Zirconium (Zr)	5.2	DLM	2.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.354	DLHM	0.010	ug/g	13-OCT-21	14-OCT-21	R5617221
Acenaphthylene	1.27	DLHM	0.010	ug/g	13-OCT-21	14-OCT-21	R5617221
Acridine	0.325	AI	0.020	ug/g	13-OCT-21	14-OCT-21	R5617221
Anthracene	0.686	DLHM	0.0080	ug/g	13-OCT-21	14-OCT-21	R5617221
Benzo(a)anthracene	3.56	R	0.020	ug/g	13-OCT-21	14-OCT-21	R5617221
Benzo(a)pyrene	3.39	DLHM	0.010	ug/g	13-OCT-21	14-OCT-21	R5617221
Benzo(b&j)fluoranthene	2.89	DLHM	0.020	ug/g	13-OCT-21	14-OCT-21	R5617221
Benzo(g,h,i)perylene	1.81	DLHM	0.020	ug/g	13-OCT-21	14-OCT-21	R5617221

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2648161-5 PCW-SC-005A Sampled By: CLIENT on 03-OCT-21 @ 14:30 Matrix: SOIL							
Polycyclic Aromatic Hydrocarbons							
Benzo(k)fluoranthene	0.962	DLHM	0.020	ug/g	13-OCT-21	14-OCT-21	R5617221
Chrysene	3.14	DLHM	0.020	ug/g	13-OCT-21	14-OCT-21	R5617221
Dibenz(a,h)anthracene	0.511	DLHM	0.010	ug/g	13-OCT-21	14-OCT-21	R5617221
Fluoroanthene	3.36	DLHM	0.010	ug/g	13-OCT-21	14-OCT-21	R5617221
Fluorene	0.331	DLHM	0.010	ug/g	13-OCT-21	14-OCT-21	R5617221
Indeno(1,2,3-cd)pyrene	1.71	DLHM	0.020	ug/g	13-OCT-21	14-OCT-21	R5617221
1-Methylnaphthalene	0.058	DLHM	0.010	ug/g	13-OCT-21	14-OCT-21	R5617221
2-Methylnaphthalene	0.086	DLHM	0.010	ug/g	13-OCT-21	14-OCT-21	R5617221
Naphthalene	0.099	DLHM	0.010	ug/g	13-OCT-21	14-OCT-21	R5617221
Phenanthrene	1.47	DLHM	0.010	ug/g	13-OCT-21	14-OCT-21	R5617221
Pyrene	5.09	DLHM	0.010	ug/g	13-OCT-21	14-OCT-21	R5617221
Quinoline	<0.010	DLHM	0.010	ug/g	13-OCT-21	14-OCT-21	R5617221
Surrogate: 2-Fluorobiphenyl	100.1		60-140	%	13-OCT-21	14-OCT-21	R5617221
Surrogate: d14-Terphenyl	96.5		60-140	%	13-OCT-21	14-OCT-21	R5617221
B(a)P Total Potency Equivalent	4.86		0.020	ug/g	13-OCT-21	14-OCT-21	R5617221
IACR (CCME)	48.7		0.20		13-OCT-21	14-OCT-21	R5617221
Polychlorinated Biphenyls							
Aroclor 1016	<0.0090	DLR	0.0090	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1221	<0.0090	DLR	0.0090	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1232	<0.0090	DLR	0.0090	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1242	<0.0150	DLR	0.015	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1248	<0.0090	DLR	0.0090	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1254	0.567	DLR	0.0090	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1260	1.34	DLR	0.0090	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1262	<0.0090	DLR	0.0090	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1268	<0.0090	DLR	0.0090	mg/kg	18-OCT-21	18-OCT-21	R5623376
Total Polychlorinated Biphenyls	1.91		0.027	mg/kg	18-OCT-21	18-OCT-21	R5623376
Surrogate: d14-Terphenyl	79.1		50-140	%	18-OCT-21	18-OCT-21	R5623376
L2648161-6 PCW-SC-005B Sampled By: CLIENT on 03-OCT-21 @ 14:30 Matrix: SOIL							
Physical Tests							
% Moisture	84.2		0.25	%	07-OCT-21	08-OCT-21	R5614233
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.289		0.0010	g/g	15-OCT-21	15-OCT-21	R5619419
Total Organic Carbon	28.9	DLHC	4.9	%	15-OCT-21	15-OCT-21	R5619419
Metals							
Aluminum (Al)	5350	DLM	100	ug/g	12-OCT-21	13-OCT-21	R5616646
Antimony (Sb)	2.23	DLM	0.20	ug/g	12-OCT-21	13-OCT-21	R5616646
Arsenic (As)	10.9	DLM	0.20	ug/g	12-OCT-21	13-OCT-21	R5616646
Barium (Ba)	111	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Beryllium (Be)	0.24	DLM	0.20	ug/g	12-OCT-21	13-OCT-21	R5616646

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2648161-6 PCW-SC-005B Sampled By: CLIENT on 03-OCT-21 @ 14:30 Matrix: SOIL							
Metals							
Bismuth (Bi)	<0.40	DLM	0.40	ug/g	12-OCT-21	13-OCT-21	R5616646
Boron (B)	<10	DLM	10	ug/g	12-OCT-21	13-OCT-21	R5616646
Cadmium (Cd)	0.448	DLM	0.040	ug/g	12-OCT-21	13-OCT-21	R5616646
Calcium (Ca)	24300	DLM	100	ug/g	12-OCT-21	13-OCT-21	R5616646
Chromium (Cr)	2410	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Cobalt (Co)	8.71	DLM	0.20	ug/g	12-OCT-21	13-OCT-21	R5616646
Copper (Cu)	25.2	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Iron (Fe)	8130	DLM	100	ug/g	12-OCT-21	13-OCT-21	R5616646
Lead (Pb)	217	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Lithium (Li)	<4.0	DLM	4.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Magnesium (Mg)	3240	DLM	40	ug/g	12-OCT-21	13-OCT-21	R5616646
Manganese (Mn)	159	DLM	2.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Mercury (Hg)	0.365	DLM	0.010	ug/g	12-OCT-21	13-OCT-21	R5616461
Molybdenum (Mo)	1.31	DLM	0.20	ug/g	12-OCT-21	13-OCT-21	R5616646
Nickel (Ni)	10.8	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Phosphorus (P)	950	DLM	100	ug/g	12-OCT-21	13-OCT-21	R5616646
Potassium (K)	1020	DLM	200	ug/g	12-OCT-21	13-OCT-21	R5616646
Selenium (Se)	0.73	DLM	0.40	ug/g	12-OCT-21	13-OCT-21	R5616646
Silver (Ag)	0.35	DLM	0.20	ug/g	12-OCT-21	13-OCT-21	R5616646
Sodium (Na)	310	DLM	100	ug/g	12-OCT-21	13-OCT-21	R5616646
Strontium (Sr)	195	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Sulfur (S)	7600	DLM	2000	ug/g	12-OCT-21	13-OCT-21	R5616646
Thallium (Tl)	0.15	DLM	0.10	ug/g	12-OCT-21	13-OCT-21	R5616646
Tin (Sn)	8.8	DLM	4.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Titanium (Ti)	316	DLM	2.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Tungsten (W)	<1.0	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Uranium (U)	0.59	DLM	0.10	ug/g	12-OCT-21	13-OCT-21	R5616646
Vanadium (V)	14.8	DLM	0.40	ug/g	12-OCT-21	13-OCT-21	R5616646
Zinc (Zn)	111	DLM	4.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Zirconium (Zr)	<2.0	DLM	2.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.338	DLHM	0.025	ug/g	13-OCT-21	14-OCT-21	R5617221
Acenaphthylene	0.946	DLHM	0.025	ug/g	13-OCT-21	14-OCT-21	R5617221
Acridine	0.314	AI	0.050	ug/g	13-OCT-21	14-OCT-21	R5617221
Anthracene	0.515	DLHM	0.020	ug/g	13-OCT-21	14-OCT-21	R5617221
Benzo(a)anthracene	1.87	R	0.050	ug/g	13-OCT-21	14-OCT-21	R5617221
Benzo(a)pyrene	1.93	DLHM	0.025	ug/g	13-OCT-21	14-OCT-21	R5617221
Benzo(b&j)fluoranthene	1.69	DLHM	0.050	ug/g	13-OCT-21	14-OCT-21	R5617221
Benzo(g,h,i)perylene	1.08	DLHM	0.050	ug/g	13-OCT-21	14-OCT-21	R5617221
Benzo(k)fluoranthene	0.482	DLHM	0.050	ug/g	13-OCT-21	14-OCT-21	R5617221
Chrysene	1.74	DLHM	0.050	ug/g	13-OCT-21	14-OCT-21	R5617221

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2648161-6 PCW-SC-005B Sampled By: CLIENT on 03-OCT-21 @ 14:30 Matrix: SOIL							
Polycyclic Aromatic Hydrocarbons							
Dibenz(a,h)anthracene	0.274	DLHM	0.025	ug/g	13-OCT-21	14-OCT-21	R5617221
Fluoroanthene	3.21	DLHM	0.025	ug/g	13-OCT-21	14-OCT-21	R5617221
Fluorene	0.329	DLHM	0.025	ug/g	13-OCT-21	14-OCT-21	R5617221
Indeno(1,2,3-cd)pyrene	0.996	DLHM	0.050	ug/g	13-OCT-21	14-OCT-21	R5617221
1-Methylnaphthalene	0.041	DLHM	0.025	ug/g	13-OCT-21	14-OCT-21	R5617221
2-Methylnaphthalene	0.056	DLHM	0.025	ug/g	13-OCT-21	14-OCT-21	R5617221
Naphthalene	0.052	DLHM	0.025	ug/g	13-OCT-21	14-OCT-21	R5617221
Phenanthrene	2.26	DLHM	0.025	ug/g	13-OCT-21	14-OCT-21	R5617221
Pyrene	4.31	DLHM	0.025	ug/g	13-OCT-21	14-OCT-21	R5617221
Quinoline	<0.025	DLHM	0.025	ug/g	13-OCT-21	14-OCT-21	R5617221
Surrogate: 2-Fluorobiphenyl	89.9		60-140	%	13-OCT-21	14-OCT-21	R5617221
Surrogate: d14-Terphenyl	87.4		60-140	%	13-OCT-21	14-OCT-21	R5617221
B(a)P Total Potency Equivalent	2.74		0.036	ug/g	13-OCT-21	14-OCT-21	R5617221
IACR (CCME)	27.0		0.50		13-OCT-21	14-OCT-21	R5617221
Polychlorinated Biphenyls							
Aroclor 1016	<0.015	DLR	0.015	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1221	<0.015	DLR	0.015	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1232	<0.015	DLR	0.015	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1242	<0.020	DLR	0.020	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1248	<0.015	DLR	0.015	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1254	0.382	DLR	0.015	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1260	0.995	DLR	0.015	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1262	<0.015	DLR	0.015	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1268	<0.015	DLR	0.015	mg/kg	18-OCT-21	18-OCT-21	R5623376
Total Polychlorinated Biphenyls	1.38		0.045	mg/kg	18-OCT-21	18-OCT-21	R5623376
Surrogate: d14-Terphenyl	138.8		50-140	%	18-OCT-21	18-OCT-21	R5623376
L2648161-7 PCW-SG-005 Sampled By: CLIENT on 03-OCT-21 @ 15:20 Matrix: SOIL							
Physical Tests							
% Moisture	86.2		0.25	%	07-OCT-21	08-OCT-21	R5614233
Liquid Limit (LL)	114		1	%	13-OCT-21	13-OCT-21	R5616797
Moisture at Plastic Limit	93		1	%	13-OCT-21	13-OCT-21	R5616797
Plasticity Index (PI)	21		1	%	13-OCT-21	13-OCT-21	R5616797
Specific Gravity	1.07		0.010	kg/L		26-OCT-21	R5629385
Particle Size							
General Texture Class	Fine				13-OCT-21	13-OCT-21	R5616863
MUST PSA % > 75um	16.6		1.0	%	13-OCT-21	13-OCT-21	R5616863
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0774		0.0010	g/g	20-OCT-21	20-OCT-21	R5625292
Total Organic Carbon	7.74		0.10	%	20-OCT-21	20-OCT-21	R5625292
Metals							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2648161-7 PCW-SG-005 Sampled By: CLIENT on 03-OCT-21 @ 15:20 Matrix: SOIL							
Metals							
Aluminum (Al)	14800	DLM	100	ug/g	12-OCT-21	13-OCT-21	R5616646
Antimony (Sb)	1.57	DLM	0.20	ug/g	12-OCT-21	13-OCT-21	R5616646
Arsenic (As)	7.05	DLM	0.20	ug/g	12-OCT-21	13-OCT-21	R5616646
Barium (Ba)	237	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Beryllium (Be)	0.56	DLM	0.20	ug/g	12-OCT-21	13-OCT-21	R5616646
Bismuth (Bi)	<0.40	DLM	0.40	ug/g	12-OCT-21	13-OCT-21	R5616646
Boron (B)	13	DLM	10	ug/g	12-OCT-21	13-OCT-21	R5616646
Cadmium (Cd)	0.690	DLM	0.040	ug/g	12-OCT-21	13-OCT-21	R5616646
Calcium (Ca)	42700	DLM	100	ug/g	12-OCT-21	13-OCT-21	R5616646
Chromium (Cr)	2650	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Cobalt (Co)	13.5	DLM	0.20	ug/g	12-OCT-21	13-OCT-21	R5616646
Copper (Cu)	47.7	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Iron (Fe)	24500	DLM	100	ug/g	12-OCT-21	13-OCT-21	R5616646
Lead (Pb)	160	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Lithium (Li)	11.3	DLM	4.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Magnesium (Mg)	13200	DLM	40	ug/g	12-OCT-21	13-OCT-21	R5616646
Manganese (Mn)	501	DLM	2.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Mercury (Hg)	0.369	DLM	0.010	ug/g	12-OCT-21	13-OCT-21	R5616461
Molybdenum (Mo)	1.36	DLM	0.20	ug/g	12-OCT-21	13-OCT-21	R5616646
Nickel (Ni)	22.8	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Phosphorus (P)	1580	DLM	100	ug/g	12-OCT-21	13-OCT-21	R5616646
Potassium (K)	3800	DLM	200	ug/g	12-OCT-21	13-OCT-21	R5616646
Selenium (Se)	0.86	DLM	0.40	ug/g	12-OCT-21	13-OCT-21	R5616646
Silver (Ag)	0.37	DLM	0.20	ug/g	12-OCT-21	13-OCT-21	R5616646
Sodium (Na)	580	DLM	100	ug/g	12-OCT-21	13-OCT-21	R5616646
Strontium (Sr)	250	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Sulfur (S)	7200	DLM	2000	ug/g	12-OCT-21	13-OCT-21	R5616646
Thallium (Tl)	0.28	DLM	0.10	ug/g	12-OCT-21	13-OCT-21	R5616646
Tin (Sn)	9.7	DLM	4.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Titanium (Ti)	1000	DLM	2.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Tungsten (W)	<1.0	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Uranium (U)	0.66	DLM	0.10	ug/g	12-OCT-21	13-OCT-21	R5616646
Vanadium (V)	40.9	DLM	0.40	ug/g	12-OCT-21	13-OCT-21	R5616646
Zinc (Zn)	205	DLM	4.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Zirconium (Zr)	4.0	DLM	2.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.179	DLHM	0.038	ug/g	13-OCT-21	14-OCT-21	R5617221
Acenaphthylene	1.76	DLHM	0.038	ug/g	13-OCT-21	14-OCT-21	R5617221
Acridine	<0.180	DLM	0.18	ug/g	13-OCT-21	14-OCT-21	R5617221
Anthracene	0.667	DLHM	0.030	ug/g	13-OCT-21	14-OCT-21	R5617221
Benzo(a)anthracene	3.27	R	0.075	ug/g	13-OCT-21	14-OCT-21	R5617221

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2648161-7 PCW-SG-005 Sampled By: CLIENT on 03-OCT-21 @ 15:20 Matrix: SOIL							
Polycyclic Aromatic Hydrocarbons							
Benzo(a)pyrene	4.54	DLHM	0.038	ug/g	13-OCT-21	14-OCT-21	R5617221
Benzo(b&j)fluoranthene	4.24	DLHM	0.075	ug/g	13-OCT-21	14-OCT-21	R5617221
Benzo(g,h,i)perylene	2.92	DLHM	0.075	ug/g	13-OCT-21	14-OCT-21	R5617221
Benzo(k)fluoranthene	1.23	DLHM	0.075	ug/g	13-OCT-21	14-OCT-21	R5617221
Chrysene	3.21	DLHM	0.075	ug/g	13-OCT-21	14-OCT-21	R5617221
Dibenz(a,h)anthracene	0.795	DLHM	0.038	ug/g	13-OCT-21	14-OCT-21	R5617221
Fluoroanthene	2.74	DLHM	0.038	ug/g	13-OCT-21	14-OCT-21	R5617221
Fluorene	0.282	DLHM	0.038	ug/g	13-OCT-21	14-OCT-21	R5617221
Indeno(1,2,3-cd)pyrene	2.85	DLHM	0.075	ug/g	13-OCT-21	14-OCT-21	R5617221
1-Methylnaphthalene	0.042	DLHM	0.038	ug/g	13-OCT-21	14-OCT-21	R5617221
2-Methylnaphthalene	0.050	DLHM	0.038	ug/g	13-OCT-21	14-OCT-21	R5617221
Naphthalene	0.064	DLHM	0.038	ug/g	13-OCT-21	14-OCT-21	R5617221
Phenanthrene	0.985	DLHM	0.038	ug/g	13-OCT-21	14-OCT-21	R5617221
Pyrene	4.09	DLHM	0.038	ug/g	13-OCT-21	14-OCT-21	R5617221
Quinoline	<0.038	DLHM	0.038	ug/g	13-OCT-21	14-OCT-21	R5617221
Surrogate: 2-Fluorobiphenyl	89.9		60-140	%	13-OCT-21	14-OCT-21	R5617221
Surrogate: d14-Terphenyl	86.1		60-140	%	13-OCT-21	14-OCT-21	R5617221
B(a)P Total Potency Equivalent	6.55		0.053	ug/g	13-OCT-21	14-OCT-21	R5617221
IACR (CCME)	62.8		0.75		13-OCT-21	14-OCT-21	R5617221
Polychlorinated Biphenyls							
Aroclor 1016	<0.034	DLR	0.034	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1221	<0.034	DLR	0.034	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1232	<0.034	DLR	0.034	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1242	<0.034	DLR	0.034	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1248	<0.034	DLR	0.034	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1254	0.340	DLR	0.034	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1260	0.657	DLR	0.034	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1262	<0.034	DLR	0.034	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1268	<0.034	DLR	0.034	mg/kg	18-OCT-21	18-OCT-21	R5623376
Total Polychlorinated Biphenyls	1.00		0.10	mg/kg	18-OCT-21	18-OCT-21	R5623376
Surrogate: d14-Terphenyl	85.7		50-140	%	18-OCT-21	18-OCT-21	R5623376
L2648161-8 PCW-SC-007A Sampled By: CLIENT on 03-OCT-21 @ 16:05 Matrix: SOIL							
Physical Tests							
% Moisture	76.8		0.25	%	07-OCT-21	08-OCT-21	R5614787
Liquid Limit (LL)	116		1	%	13-OCT-21	13-OCT-21	R5616797
Moisture at Plastic Limit	105		1	%	13-OCT-21	13-OCT-21	R5616797
Plasticity Index (PI)	11		1	%	13-OCT-21	13-OCT-21	R5616797
Specific Gravity	1.09		0.010	kg/L		26-OCT-21	R5629385
Particle Size							
General Texture Class	Fine				13-OCT-21	13-OCT-21	R5616863

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2648161-8 PCW-SC-007A Sampled By: CLIENT on 03-OCT-21 @ 16:05 Matrix: SOIL							
Particle Size							
MUST PSA % > 75um	13.0		1.0	%	13-OCT-21	13-OCT-21	R5616863
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.126		0.0010	g/g	20-OCT-21	20-OCT-21	R5625292
Total Organic Carbon	12.6		0.10	%	20-OCT-21	20-OCT-21	R5625292
Metals							
Aluminum (Al)	13100		50	ug/g	11-OCT-21	12-OCT-21	R5616343
Antimony (Sb)	7.48		0.10	ug/g	11-OCT-21	12-OCT-21	R5616343
Arsenic (As)	17.2		0.10	ug/g	11-OCT-21	12-OCT-21	R5616343
Barium (Ba)	341		0.50	ug/g	11-OCT-21	12-OCT-21	R5616343
Beryllium (Be)	0.50		0.10	ug/g	11-OCT-21	12-OCT-21	R5616343
Bismuth (Bi)	1.05		0.20	ug/g	11-OCT-21	12-OCT-21	R5616343
Boron (B)	8.4		5.0	ug/g	11-OCT-21	12-OCT-21	R5616343
Boron (B), Hot Water Ext.	0.83	FR4	0.10	ug/g	11-OCT-21	12-OCT-21	R5615812
Cadmium (Cd)	1.65		0.020	ug/g	11-OCT-21	12-OCT-21	R5616343
Calcium (Ca)	44400		50	ug/g	11-OCT-21	12-OCT-21	R5616343
Chromium (Cr)	9810	DLHC	10	ug/g	11-OCT-21	12-OCT-21	R5616343
Cobalt (Co)	16.3		0.10	ug/g	11-OCT-21	12-OCT-21	R5616343
Copper (Cu)	68.2		0.50	ug/g	11-OCT-21	12-OCT-21	R5616343
Iron (Fe)	20800		50	ug/g	11-OCT-21	12-OCT-21	R5616343
Lead (Pb)	483		0.50	ug/g	11-OCT-21	12-OCT-21	R5616343
Lithium (Li)	8.4		2.0	ug/g	11-OCT-21	12-OCT-21	R5616343
Magnesium (Mg)	9540		20	ug/g	11-OCT-21	12-OCT-21	R5616343
Manganese (Mn)	443		1.0	ug/g	11-OCT-21	12-OCT-21	R5616343
Mercury (Hg)	0.683	DLM	0.010	ug/g	11-OCT-21	12-OCT-21	R5615544
Molybdenum (Mo)	2.51		0.10	ug/g	11-OCT-21	12-OCT-21	R5616343
Nickel (Ni)	23.1		0.50	ug/g	11-OCT-21	12-OCT-21	R5616343
Phosphorus (P)	2090		50	ug/g	11-OCT-21	12-OCT-21	R5616343
Potassium (K)	2520		100	ug/g	11-OCT-21	12-OCT-21	R5616343
Selenium (Se)	1.02		0.20	ug/g	11-OCT-21	12-OCT-21	R5616343
Silver (Ag)	1.09		0.10	ug/g	11-OCT-21	12-OCT-21	R5616343
Sodium (Na)	458		50	ug/g	11-OCT-21	12-OCT-21	R5616343
Strontium (Sr)	264		0.50	ug/g	11-OCT-21	12-OCT-21	R5616343
Sulfur (S)	8900		1000	ug/g	11-OCT-21	12-OCT-21	R5616343
Thallium (Tl)	0.332		0.050	ug/g	11-OCT-21	12-OCT-21	R5616343
Tin (Sn)	28.9		2.0	ug/g	11-OCT-21	12-OCT-21	R5616343
Titanium (Ti)	781		1.0	ug/g	11-OCT-21	12-OCT-21	R5616343
Tungsten (W)	<0.50		0.50	ug/g	11-OCT-21	12-OCT-21	R5616343
Uranium (U)	0.780		0.050	ug/g	11-OCT-21	12-OCT-21	R5616343
Vanadium (V)	33.7		0.20	ug/g	11-OCT-21	12-OCT-21	R5616343
Zinc (Zn)	318		2.0	ug/g	11-OCT-21	12-OCT-21	R5616343
Zirconium (Zr)	2.8		1.0	ug/g	11-OCT-21	12-OCT-21	R5616343
Speciated Metals							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2648161-8 PCW-SC-007A Sampled By: CLIENT on 03-OCT-21 @ 16:05 Matrix: SOIL							
Speciated Metals							
Chromium, Trivalent	9740		10	ug/g		14-OCT-21	
Chromium, Hexavalent	70.2	DLHM	0.40	ug/g	12-OCT-21	14-OCT-21	R5617412
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.518	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5617221
Acenaphthylene	1.65	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5617221
Acridine	0.740	AI	0.030	ug/g	13-OCT-21	14-OCT-21	R5617221
Anthracene	0.768	DLHM	0.012	ug/g	13-OCT-21	14-OCT-21	R5617221
Benzo(a)anthracene	3.30	R	0.030	ug/g	13-OCT-21	14-OCT-21	R5617221
Benzo(a)pyrene	3.40	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5617221
Benzo(b&j)fluoranthene	2.72	DLHM	0.030	ug/g	13-OCT-21	14-OCT-21	R5617221
Benzo(g,h,i)perylene	1.92	DLHM	0.030	ug/g	13-OCT-21	14-OCT-21	R5617221
Benzo(k)fluoranthene	0.892	DLHM	0.030	ug/g	13-OCT-21	14-OCT-21	R5617221
Chrysene	2.93	DLHM	0.030	ug/g	13-OCT-21	14-OCT-21	R5617221
Dibenz(a,h)anthracene	0.477	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5617221
Fluoroanthene	4.15	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5617221
Fluorene	0.387	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5617221
Indeno(1,2,3-cd)pyrene	1.62	DLHM	0.030	ug/g	13-OCT-21	14-OCT-21	R5617221
1-Methylnaphthalene	<0.110	DLQ	0.11	ug/g	13-OCT-21	14-OCT-21	R5617221
2-Methylnaphthalene	0.130	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5617221
Naphthalene	0.149	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5617221
Phenanthrene	2.18	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5617221
Pyrene	6.66	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5617221
Quinoline	<0.020	DLM	0.020	ug/g	13-OCT-21	14-OCT-21	R5617221
Surrogate: 2-Fluorobiphenyl	88.8		60-140	%	13-OCT-21	14-OCT-21	R5617221
Surrogate: d14-Terphenyl	86.4		60-140	%	13-OCT-21	14-OCT-21	R5617221
B(a)P Total Potency Equivalent	4.77		0.021	ug/g	13-OCT-21	14-OCT-21	R5617221
IACR (CCME)	46.1		0.30		13-OCT-21	14-OCT-21	R5617221
Polychlorinated Biphenyls							
Aroclor 1016	<0.014	DLR	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1221	<0.014	DLR	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1232	<0.014	DLR	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1242	<0.070	DLR	0.070	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1248	<0.014	DLR	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1254	1.35	DLR	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1260	3.22	DLR	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1262	<0.014	DLR	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1268	<0.014	DLR	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623376
Total Polychlorinated Biphenyls	4.57		0.041	mg/kg	18-OCT-21	18-OCT-21	R5623376
Surrogate: d14-Terphenyl	87.8		50-140	%	18-OCT-21	18-OCT-21	R5623376
L2648161-9 PCW-SC-007B Sampled By: CLIENT on 03-OCT-21 @ 16:05 Matrix: SOIL							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2648161-9 PCW-SC-007B Sampled By: CLIENT on 03-OCT-21 @ 16:05 Matrix: SOIL							
Physical Tests							
% Moisture	86.2		0.25	%	07-OCT-21	08-OCT-21	R5614787
Particle Size							
General Texture Class	Fine				13-OCT-21	13-OCT-21	R5616863
MUST PSA % > 75um	1.9		1.0	%	13-OCT-21	13-OCT-21	R5616863
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.304		0.0010	g/g	15-OCT-21	15-OCT-21	R5619419
Total Organic Carbon	30.4	DLHC	4.9	%	15-OCT-21	15-OCT-21	R5619419
Metals							
Aluminum (Al)	6960		50	ug/g	11-OCT-21	12-OCT-21	R5616343
Antimony (Sb)	10.4		0.10	ug/g	11-OCT-21	12-OCT-21	R5616343
Arsenic (As)	20.3		0.10	ug/g	11-OCT-21	12-OCT-21	R5616343
Barium (Ba)	188		0.50	ug/g	11-OCT-21	12-OCT-21	R5616343
Beryllium (Be)	0.28		0.10	ug/g	11-OCT-21	12-OCT-21	R5616343
Bismuth (Bi)	1.29		0.20	ug/g	11-OCT-21	12-OCT-21	R5616343
Boron (B)	8.0		5.0	ug/g	11-OCT-21	12-OCT-21	R5616343
Boron (B), Hot Water Ext.	0.78	FR4	0.10	ug/g	11-OCT-21	12-OCT-21	R5615812
Cadmium (Cd)	1.75		0.020	ug/g	11-OCT-21	12-OCT-21	R5616343
Calcium (Ca)	17500		50	ug/g	11-OCT-21	12-OCT-21	R5616343
Chromium (Cr)	8540	DLHC	10	ug/g	11-OCT-21	12-OCT-21	R5616343
Cobalt (Co)	11.9		0.10	ug/g	11-OCT-21	12-OCT-21	R5616343
Copper (Cu)	36.3		0.50	ug/g	11-OCT-21	12-OCT-21	R5616343
Iron (Fe)	11800		50	ug/g	11-OCT-21	12-OCT-21	R5616343
Lead (Pb)	438		0.50	ug/g	11-OCT-21	12-OCT-21	R5616343
Lithium (Li)	2.6		2.0	ug/g	11-OCT-21	12-OCT-21	R5616343
Magnesium (Mg)	2760		20	ug/g	11-OCT-21	12-OCT-21	R5616343
Manganese (Mn)	173		1.0	ug/g	11-OCT-21	12-OCT-21	R5616343
Mercury (Hg)	0.852	DLM	0.010	ug/g	11-OCT-21	12-OCT-21	R5615544
Molybdenum (Mo)	1.09		0.10	ug/g	11-OCT-21	12-OCT-21	R5616343
Nickel (Ni)	16.4		0.50	ug/g	11-OCT-21	12-OCT-21	R5616343
Phosphorus (P)	1300		50	ug/g	11-OCT-21	12-OCT-21	R5616343
Potassium (K)	900		100	ug/g	11-OCT-21	12-OCT-21	R5616343
Selenium (Se)	1.29		0.20	ug/g	11-OCT-21	12-OCT-21	R5616343
Silver (Ag)	0.50		0.10	ug/g	11-OCT-21	12-OCT-21	R5616343
Sodium (Na)	262		50	ug/g	11-OCT-21	12-OCT-21	R5616343
Strontium (Sr)	245		0.50	ug/g	11-OCT-21	12-OCT-21	R5616343
Sulfur (S)	13100		1000	ug/g	11-OCT-21	12-OCT-21	R5616343
Thallium (Tl)	0.256		0.050	ug/g	11-OCT-21	12-OCT-21	R5616343
Tin (Sn)	22.2		2.0	ug/g	11-OCT-21	12-OCT-21	R5616343
Titanium (Ti)	341		1.0	ug/g	11-OCT-21	12-OCT-21	R5616343
Tungsten (W)	<0.50		0.50	ug/g	11-OCT-21	12-OCT-21	R5616343
Uranium (U)	1.00		0.050	ug/g	11-OCT-21	12-OCT-21	R5616343
Vanadium (V)	19.0		0.20	ug/g	11-OCT-21	12-OCT-21	R5616343

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2648161-9 PCW-SC-007B Sampled By: CLIENT on 03-OCT-21 @ 16:05 Matrix: SOIL							
Metals							
Zinc (Zn)	214		2.0	ug/g	11-OCT-21	12-OCT-21	R5616343
Zirconium (Zr)	2.3		1.0	ug/g	11-OCT-21	12-OCT-21	R5616343
Speciated Metals							
Chromium, Trivalent	8120		25	ug/g		18-OCT-21	
Chromium, Hexavalent	423	DLHM	25	ug/g	14-OCT-21	15-OCT-21	R5622298
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.263	DLHM	0.038	ug/g	13-OCT-21	14-OCT-21	R5617221
Acenaphthylene	0.625	DLHM	0.038	ug/g	13-OCT-21	14-OCT-21	R5617221
Acridine	0.549	AI	0.075	ug/g	13-OCT-21	14-OCT-21	R5617221
Anthracene	0.361	DLHM	0.030	ug/g	13-OCT-21	14-OCT-21	R5617221
Benzo(a)anthracene	2.15	R	0.075	ug/g	13-OCT-21	14-OCT-21	R5617221
Benzo(a)pyrene	1.93	DLHM	0.038	ug/g	13-OCT-21	14-OCT-21	R5617221
Benzo(b&j)fluoranthene	1.71	DLHM	0.075	ug/g	13-OCT-21	14-OCT-21	R5617221
Benzo(g,h,i)perylene	1.07	DLHM	0.075	ug/g	13-OCT-21	14-OCT-21	R5617221
Benzo(k)fluoranthene	0.542	DLHM	0.075	ug/g	13-OCT-21	14-OCT-21	R5617221
Chrysene	2.14	DLHM	0.075	ug/g	13-OCT-21	14-OCT-21	R5617221
Dibenz(a,h)anthracene	0.268	DLHM	0.038	ug/g	13-OCT-21	14-OCT-21	R5617221
Fluoroanthene	3.01	DLHM	0.038	ug/g	13-OCT-21	14-OCT-21	R5617221
Fluorene	0.155	DLHM	0.038	ug/g	13-OCT-21	14-OCT-21	R5617221
Indeno(1,2,3-cd)pyrene	0.921	DLHM	0.075	ug/g	13-OCT-21	14-OCT-21	R5617221
1-Methylnaphthalene	0.038	DLHM	0.038	ug/g	13-OCT-21	14-OCT-21	R5617221
2-Methylnaphthalene	0.058	DLHM	0.038	ug/g	13-OCT-21	14-OCT-21	R5617221
Naphthalene	0.062	DLHM	0.038	ug/g	13-OCT-21	14-OCT-21	R5617221
Phenanthrene	1.61	DLHM	0.038	ug/g	13-OCT-21	14-OCT-21	R5617221
Pyrene	5.59	DLHM	0.038	ug/g	13-OCT-21	14-OCT-21	R5617221
Quinoline	<0.038	DLHM	0.038	ug/g	13-OCT-21	14-OCT-21	R5617221
Surrogate: 2-Fluorobiphenyl	89.5		60-140	%	13-OCT-21	14-OCT-21	R5617221
Surrogate: d14-Terphenyl	85.2		60-140	%	13-OCT-21	14-OCT-21	R5617221
B(a)P Total Potency Equivalent	2.77		0.053	ug/g	13-OCT-21	14-OCT-21	R5617221
IACR (CCME)	28.5		0.75		13-OCT-21	14-OCT-21	R5617221
Polychlorinated Biphenyls							
Aroclor 1016	<0.034	DLR	0.034	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1221	<0.034	DLR	0.034	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1232	<0.034	DLR	0.034	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1242	<0.034	DLR	0.034	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1248	<0.034	DLR	0.034	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1254	<0.0750	DLR	0.075	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1260	0.203	PRAR	0.034	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1262	<0.034	DLR	0.034	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1268	<0.034	DLR	0.034	mg/kg	18-OCT-21	18-OCT-21	R5623376
Total Polychlorinated Biphenyls	0.203		0.10	mg/kg	18-OCT-21	18-OCT-21	R5623376
Surrogate: d14-Terphenyl	83.7		50-140	%	18-OCT-21	18-OCT-21	R5623376

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2648161-9 PCW-SC-007B Sampled By: CLIENT on 03-OCT-21 @ 16:05 Matrix: SOIL							
Polychlorinated Biphenyls							
L2648161-10 PCW-SG-007 Sampled By: CLIENT on 03-OCT-21 @ 16:45 Matrix: SOIL							
Physical Tests							
% Moisture	85.5		0.25	%	08-OCT-21	09-OCT-21	R5614942
Liquid Limit (LL)	136		1	%	13-OCT-21	13-OCT-21	R5616797
Moisture at Plastic Limit	127		1	%	13-OCT-21	13-OCT-21	R5616797
Plasticity Index (PI)	10		1	%	13-OCT-21	13-OCT-21	R5616797
Specific Gravity	1.05		0.010	kg/L		26-OCT-21	R5629385
Particle Size							
General Texture Class	Fine				13-OCT-21	13-OCT-21	R5616863
MUST PSA % > 75um	5.0		1.0	%	13-OCT-21	13-OCT-21	R5616863
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.136		0.0010	g/g	15-OCT-21	15-OCT-21	R5619419
Total Organic Carbon	13.6		0.10	%	15-OCT-21	15-OCT-21	R5619419
Metals							
Aluminum (Al)	10900		50	ug/g	11-OCT-21	12-OCT-21	R5616343
Antimony (Sb)	2.93		0.10	ug/g	11-OCT-21	12-OCT-21	R5616343
Arsenic (As)	8.11		0.10	ug/g	11-OCT-21	12-OCT-21	R5616343
Barium (Ba)	257		0.50	ug/g	11-OCT-21	12-OCT-21	R5616343
Beryllium (Be)	0.50		0.10	ug/g	11-OCT-21	12-OCT-21	R5616343
Bismuth (Bi)	0.81		0.20	ug/g	11-OCT-21	12-OCT-21	R5616343
Boron (B)	11.5		5.0	ug/g	11-OCT-21	12-OCT-21	R5616343
Boron (B), Hot Water Ext.	1.41	FR4	0.10	ug/g	11-OCT-21	12-OCT-21	R5615812
Cadmium (Cd)	1.09		0.020	ug/g	11-OCT-21	12-OCT-21	R5616343
Calcium (Ca)	42600		50	ug/g	11-OCT-21	12-OCT-21	R5616343
Chromium (Cr)	5290	DLHC	10	ug/g	11-OCT-21	12-OCT-21	R5616343
Cobalt (Co)	12.5		0.10	ug/g	11-OCT-21	12-OCT-21	R5616343
Copper (Cu)	58.0		0.50	ug/g	11-OCT-21	12-OCT-21	R5616343
Iron (Fe)	21200		50	ug/g	11-OCT-21	12-OCT-21	R5616343
Lead (Pb)	259		0.50	ug/g	11-OCT-21	12-OCT-21	R5616343
Lithium (Li)	8.0		2.0	ug/g	11-OCT-21	12-OCT-21	R5616343
Magnesium (Mg)	10800		20	ug/g	11-OCT-21	12-OCT-21	R5616343
Manganese (Mn)	492		1.0	ug/g	11-OCT-21	12-OCT-21	R5616343
Mercury (Hg)	0.481	DLM	0.010	ug/g	11-OCT-21	12-OCT-21	R5615544
Molybdenum (Mo)	2.26		0.10	ug/g	11-OCT-21	12-OCT-21	R5616343
Nickel (Ni)	21.2		0.50	ug/g	11-OCT-21	12-OCT-21	R5616343
Phosphorus (P)	1790		50	ug/g	11-OCT-21	12-OCT-21	R5616343
Potassium (K)	2390		100	ug/g	11-OCT-21	12-OCT-21	R5616343
Selenium (Se)	1.19		0.20	ug/g	11-OCT-21	12-OCT-21	R5616343
Silver (Ag)	0.74		0.10	ug/g	11-OCT-21	12-OCT-21	R5616343
Sodium (Na)	466		50	ug/g	11-OCT-21	12-OCT-21	R5616343

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2648161-10 PCW-SG-007 Sampled By: CLIENT on 03-OCT-21 @ 16:45 Matrix: SOIL							
Metals							
Strontium (Sr)	294		0.50	ug/g	11-OCT-21	12-OCT-21	R5616343
Sulfur (S)	9100		1000	ug/g	11-OCT-21	12-OCT-21	R5616343
Thallium (Tl)	0.299		0.050	ug/g	11-OCT-21	12-OCT-21	R5616343
Tin (Sn)	12.2		2.0	ug/g	11-OCT-21	12-OCT-21	R5616343
Titanium (Ti)	676		1.0	ug/g	11-OCT-21	12-OCT-21	R5616343
Tungsten (W)	0.94		0.50	ug/g	11-OCT-21	12-OCT-21	R5616343
Uranium (U)	0.694		0.050	ug/g	11-OCT-21	12-OCT-21	R5616343
Vanadium (V)	33.0		0.20	ug/g	11-OCT-21	12-OCT-21	R5616343
Zinc (Zn)	282		2.0	ug/g	11-OCT-21	12-OCT-21	R5616343
Zirconium (Zr)	3.1		1.0	ug/g	11-OCT-21	12-OCT-21	R5616343
Speciated Metals							
Chromium, Trivalent	5250		10	ug/g		14-OCT-21	
Chromium, Hexavalent	36.7	DLHM	1.0	ug/g	12-OCT-21	14-OCT-21	R5617412
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.182	DLHM	0.038	ug/g	13-OCT-21	14-OCT-21	R5617221
Acenaphthylene	1.47	DLHM	0.038	ug/g	13-OCT-21	14-OCT-21	R5617221
Acridine	<0.190	DLM	0.19	ug/g	13-OCT-21	14-OCT-21	R5617221
Anthracene	0.491	DLHM	0.030	ug/g	13-OCT-21	14-OCT-21	R5617221
Benzo(a)anthracene	2.07	R	0.075	ug/g	13-OCT-21	14-OCT-21	R5617221
Benzo(a)pyrene	2.76	DLHM	0.038	ug/g	13-OCT-21	14-OCT-21	R5617221
Benzo(b&j)fluoranthene	2.32	DLHM	0.075	ug/g	13-OCT-21	14-OCT-21	R5617221
Benzo(g,h,i)perylene	1.78	DLHM	0.075	ug/g	13-OCT-21	14-OCT-21	R5617221
Benzo(k)fluoranthene	0.757	DLHM	0.075	ug/g	13-OCT-21	14-OCT-21	R5617221
Chrysene	1.95	DLHM	0.075	ug/g	13-OCT-21	14-OCT-21	R5617221
Dibenz(a,h)anthracene	0.435	DLHM	0.038	ug/g	13-OCT-21	14-OCT-21	R5617221
Fluoroanthene	2.02	DLHM	0.038	ug/g	13-OCT-21	14-OCT-21	R5617221
Fluorene	0.226	DLHM	0.038	ug/g	13-OCT-21	14-OCT-21	R5617221
Indeno(1,2,3-cd)pyrene	1.55	DLHM	0.075	ug/g	13-OCT-21	14-OCT-21	R5617221
1-Methylnaphthalene	0.052	DLHM	0.038	ug/g	13-OCT-21	14-OCT-21	R5617221
2-Methylnaphthalene	0.058	DLHM	0.038	ug/g	13-OCT-21	14-OCT-21	R5617221
Naphthalene	0.058	DLHM	0.038	ug/g	13-OCT-21	14-OCT-21	R5617221
Phenanthrene	0.846	DLHM	0.038	ug/g	13-OCT-21	14-OCT-21	R5617221
Pyrene	2.84	DLHM	0.038	ug/g	13-OCT-21	14-OCT-21	R5617221
Quinoline	<0.038	DLHM	0.038	ug/g	13-OCT-21	14-OCT-21	R5617221
Surrogate: 2-Fluorobiphenyl	89.5		60-140	%	13-OCT-21	14-OCT-21	R5617221
Surrogate: d14-Terphenyl	82.3		60-140	%	13-OCT-21	14-OCT-21	R5617221
B(a)P Total Potency Equivalent	3.90		0.053	ug/g	13-OCT-21	14-OCT-21	R5617221
IACR (CCME)	36.6		0.75		13-OCT-21	14-OCT-21	R5617221
Polychlorinated Biphenyls							
Aroclor 1016	<0.034	DLR	0.034	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1221	<0.034	DLR	0.034	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1232	<0.034	DLR	0.034	mg/kg	18-OCT-21	18-OCT-21	R5623376

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2648161-10 PCW-SG-007 Sampled By: CLIENT on 03-OCT-21 @ 16:45 Matrix: SOIL							
Polychlorinated Biphenyls							
Aroclor 1242	<0.0450	DLR	0.045	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1248	<0.034	DLR	0.034	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1254	0.440	DLR	0.034	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1260	1.02	DLR	0.034	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1262	<0.034	DLR	0.034	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1268	<0.034	DLR	0.034	mg/kg	18-OCT-21	18-OCT-21	R5623376
Total Polychlorinated Biphenyls	1.46		0.10	mg/kg	18-OCT-21	18-OCT-21	R5623376
Surrogate: d14-Terphenyl	89.2		50-140	%	18-OCT-21	18-OCT-21	R5623376
L2648161-11 PCE-SC-011 Sampled By: CLIENT on 03-OCT-21 @ 16:45 Matrix: SOIL							
Physical Tests							
% Moisture	71.9		0.25	%	08-OCT-21	09-OCT-21	R5614911
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0801		0.0010	g/g	15-OCT-21	15-OCT-21	R5619438
Total Organic Carbon	8.01		0.10	%	15-OCT-21	15-OCT-21	R5619438
Metals							
Aluminum (Al)	14600	DLM	100	ug/g	12-OCT-21	13-OCT-21	R5616646
Antimony (Sb)	1.15	DLM	0.20	ug/g	12-OCT-21	13-OCT-21	R5616646
Arsenic (As)	5.90	DLM	0.20	ug/g	12-OCT-21	13-OCT-21	R5616646
Barium (Ba)	244	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Beryllium (Be)	0.52	DLM	0.20	ug/g	12-OCT-21	13-OCT-21	R5616646
Bismuth (Bi)	<0.40	DLM	0.40	ug/g	12-OCT-21	13-OCT-21	R5616646
Boron (B)	11	DLM	10	ug/g	12-OCT-21	13-OCT-21	R5616646
Cadmium (Cd)	0.640	DLM	0.040	ug/g	12-OCT-21	13-OCT-21	R5616646
Calcium (Ca)	102000	DLM	100	ug/g	12-OCT-21	13-OCT-21	R5616646
Chromium (Cr)	1170	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Cobalt (Co)	11.0	DLM	0.20	ug/g	12-OCT-21	13-OCT-21	R5616646
Copper (Cu)	40.3	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Iron (Fe)	24000	DLM	100	ug/g	12-OCT-21	13-OCT-21	R5616646
Lead (Pb)	106	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Lithium (Li)	11.3	DLM	4.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Magnesium (Mg)	12900	DLM	40	ug/g	12-OCT-21	13-OCT-21	R5616646
Manganese (Mn)	723	DLM	2.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Mercury (Hg)	0.285	DLM	0.010	ug/g	12-OCT-21	13-OCT-21	R5616461
Molybdenum (Mo)	0.89	DLM	0.20	ug/g	12-OCT-21	13-OCT-21	R5616646
Nickel (Ni)	21.7	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Phosphorus (P)	1210	DLM	100	ug/g	12-OCT-21	13-OCT-21	R5616646
Potassium (K)	3350	DLM	200	ug/g	12-OCT-21	13-OCT-21	R5616646
Selenium (Se)	1.05	DLM	0.40	ug/g	12-OCT-21	13-OCT-21	R5616646
Silver (Ag)	0.31	DLM	0.20	ug/g	12-OCT-21	13-OCT-21	R5616646
Sodium (Na)	600	DLM	100	ug/g	12-OCT-21	13-OCT-21	R5616646

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2648161-11 PCE-SC-011 Sampled By: CLIENT on 03-OCT-21 @ 16:45 Matrix: SOIL							
Metals							
Strontium (Sr)	636	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Sulfur (S)	6400	DLM	2000	ug/g	12-OCT-21	13-OCT-21	R5616646
Thallium (Tl)	0.24	DLM	0.10	ug/g	12-OCT-21	13-OCT-21	R5616646
Tin (Sn)	4.1	DLM	4.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Titanium (Ti)	877	DLM	2.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Tungsten (W)	<1.0	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Uranium (U)	0.62	DLM	0.10	ug/g	12-OCT-21	13-OCT-21	R5616646
Vanadium (V)	40.1	DLM	0.40	ug/g	12-OCT-21	13-OCT-21	R5616646
Zinc (Zn)	158	DLM	4.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Zirconium (Zr)	3.3	DLM	2.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.031	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5617221
Acenaphthylene	0.232	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5617221
Acridine	<0.030	DLHM	0.030	ug/g	13-OCT-21	14-OCT-21	R5617221
Anthracene	0.081	DLHM	0.012	ug/g	13-OCT-21	14-OCT-21	R5617221
Benzo(a)anthracene	0.412	R	0.030	ug/g	13-OCT-21	14-OCT-21	R5617221
Benzo(a)pyrene	0.573	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5617221
Benzo(b&j)fluoranthene	0.554	DLHM	0.030	ug/g	13-OCT-21	14-OCT-21	R5617221
Benzo(g,h,i)perylene	0.395	DLHM	0.030	ug/g	13-OCT-21	14-OCT-21	R5617221
Benzo(k)fluoranthene	0.164	DLHM	0.030	ug/g	13-OCT-21	14-OCT-21	R5617221
Chrysene	0.439	DLHM	0.030	ug/g	13-OCT-21	14-OCT-21	R5617221
Dibenz(a,h)anthracene	0.095	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5617221
Fluoroanthene	0.418	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5617221
Fluorene	0.040	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5617221
Indeno(1,2,3-cd)pyrene	0.314	DLHM	0.030	ug/g	13-OCT-21	14-OCT-21	R5617221
1-Methylnaphthalene	<0.015	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5617221
2-Methylnaphthalene	<0.015	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5617221
Naphthalene	<0.015	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5617221
Phenanthrene	0.143	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5617221
Pyrene	0.620	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5617221
Quinoline	<0.015	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5617221
Surrogate: 2-Fluorobiphenyl	90.3		60-140	%	13-OCT-21	14-OCT-21	R5617221
Surrogate: d14-Terphenyl	85.0		60-140	%	13-OCT-21	14-OCT-21	R5617221
B(a)P Total Potency Equivalent	0.821		0.021	ug/g	13-OCT-21	14-OCT-21	R5617221
IACR (CCME)	8.08		0.30		13-OCT-21	14-OCT-21	R5617221
Polychlorinated Biphenyls							
Aroclor 1016	<0.014	DLR	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1221	<0.014	DLR	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1232	<0.014	DLR	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1242	<0.014	DLR	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1248	<0.014	DLR	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623376

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2648161-11 PCE-SC-011 Sampled By: CLIENT on 03-OCT-21 @ 16:45 Matrix: SOIL							
Polychlorinated Biphenyls							
Aroclor 1254	0.093	DLR	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1260	0.147	DLR	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1262	<0.014	DLR	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1268	<0.014	DLR	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623376
Total Polychlorinated Biphenyls	0.240		0.041	mg/kg	18-OCT-21	18-OCT-21	R5623376
Surrogate: d14-Terphenyl	81.4		50-140	%	18-OCT-21	18-OCT-21	R5623376
L2648161-12 DUP-006 Sampled By: CLIENT on 03-OCT-21 Matrix: SOIL							
Physical Tests							
% Moisture	75.4		0.25	%	08-OCT-21	09-OCT-21	R5614911
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0812		0.0010	g/g	15-OCT-21	15-OCT-21	R5619438
Total Organic Carbon	8.12		0.10	%	15-OCT-21	15-OCT-21	R5619438
Metals							
Aluminum (Al)	15300	DLM	100	ug/g	12-OCT-21	13-OCT-21	R5616646
Antimony (Sb)	1.17	DLM	0.20	ug/g	12-OCT-21	13-OCT-21	R5616646
Arsenic (As)	6.07	DLM	0.20	ug/g	12-OCT-21	13-OCT-21	R5616646
Barium (Ba)	254	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Beryllium (Be)	0.63	DLM	0.20	ug/g	12-OCT-21	13-OCT-21	R5616646
Bismuth (Bi)	<0.40	DLM	0.40	ug/g	12-OCT-21	13-OCT-21	R5616646
Boron (B)	11	DLM	10	ug/g	12-OCT-21	13-OCT-21	R5616646
Cadmium (Cd)	0.668	DLM	0.040	ug/g	12-OCT-21	13-OCT-21	R5616646
Calcium (Ca)	111000	DLM	100	ug/g	12-OCT-21	13-OCT-21	R5616646
Chromium (Cr)	1190	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Cobalt (Co)	11.2	DLM	0.20	ug/g	12-OCT-21	13-OCT-21	R5616646
Copper (Cu)	42.5	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Iron (Fe)	25000	DLM	100	ug/g	12-OCT-21	13-OCT-21	R5616646
Lead (Pb)	111	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Lithium (Li)	12.4	DLM	4.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Magnesium (Mg)	13100	DLM	40	ug/g	12-OCT-21	13-OCT-21	R5616646
Manganese (Mn)	761	DLM	2.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Mercury (Hg)	0.249	DLM	0.010	ug/g	12-OCT-21	13-OCT-21	R5616461
Molybdenum (Mo)	0.93	DLM	0.20	ug/g	12-OCT-21	13-OCT-21	R5616646
Nickel (Ni)	22.5	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Phosphorus (P)	1160	DLM	100	ug/g	12-OCT-21	13-OCT-21	R5616646
Potassium (K)	3350	DLM	200	ug/g	12-OCT-21	13-OCT-21	R5616646
Selenium (Se)	0.98	DLM	0.40	ug/g	12-OCT-21	13-OCT-21	R5616646
Silver (Ag)	0.34	DLM	0.20	ug/g	12-OCT-21	13-OCT-21	R5616646
Sodium (Na)	600	DLM	100	ug/g	12-OCT-21	13-OCT-21	R5616646
Strontium (Sr)	670	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Sulfur (S)	6800	DLM	2000	ug/g	12-OCT-21	13-OCT-21	R5616646

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2648161-12 DUP-006 Sampled By: CLIENT on 03-OCT-21 Matrix: SOIL							
Metals							
Thallium (Tl)	0.24	DLM	0.10	ug/g	12-OCT-21	13-OCT-21	R5616646
Tin (Sn)	4.3	DLM	4.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Titanium (Ti)	913	DLM	2.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Tungsten (W)	<1.0	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Uranium (U)	0.62	DLM	0.10	ug/g	12-OCT-21	13-OCT-21	R5616646
Vanadium (V)	41.9	DLM	0.40	ug/g	12-OCT-21	13-OCT-21	R5616646
Zinc (Zn)	166	DLM	4.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Zirconium (Zr)	3.2	DLM	2.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.044	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5617221
Acenaphthylene	0.329	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5617221
Acridine	<0.050	DLM	0.050	ug/g	13-OCT-21	14-OCT-21	R5617221
Anthracene	0.125	DLHM	0.012	ug/g	13-OCT-21	14-OCT-21	R5617221
Benzo(a)anthracene	0.660	R	0.030	ug/g	13-OCT-21	14-OCT-21	R5617221
Benzo(a)pyrene	0.873	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5617221
Benzo(b&j)fluoranthene	0.852	DLHM	0.030	ug/g	13-OCT-21	14-OCT-21	R5617221
Benzo(g,h,i)perylene	0.583	DLHM	0.030	ug/g	13-OCT-21	14-OCT-21	R5617221
Benzo(k)fluoranthene	0.244	DLHM	0.030	ug/g	13-OCT-21	14-OCT-21	R5617221
Chrysene	0.689	DLHM	0.030	ug/g	13-OCT-21	14-OCT-21	R5617221
Dibenz(a,h)anthracene	0.142	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5617221
Fluoroanthene	0.650	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5617221
Fluorene	0.060	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5617221
Indeno(1,2,3-cd)pyrene	0.473	DLHM	0.030	ug/g	13-OCT-21	14-OCT-21	R5617221
1-Methylnaphthalene	<0.015	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5617221
2-Methylnaphthalene	0.018	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5617221
Naphthalene	0.019	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5617221
Phenanthrene	0.224	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5617221
Pyrene	0.961	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5617221
Quinoline	<0.015	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5617221
Surrogate: 2-Fluorobiphenyl	90.0		60-140	%	13-OCT-21	14-OCT-21	R5617221
Surrogate: d14-Terphenyl	86.9		60-140	%	13-OCT-21	14-OCT-21	R5617221
B(a)P Total Potency Equivalent	1.25		0.021	ug/g	13-OCT-21	14-OCT-21	R5617221
IACR (CCME)	12.4		0.30		13-OCT-21	14-OCT-21	R5617221
Polychlorinated Biphenyls							
Aroclor 1016	<0.014	DLR	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1221	<0.014	DLR	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1232	<0.014	DLR	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1242	<0.020	DLR	0.020	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1248	<0.014	DLR	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1254	0.122	DLR	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1260	0.182	DLR	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623376

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2648161-12 DUP-006 Sampled By: CLIENT on 03-OCT-21 Matrix: SOIL							
Polychlorinated Biphenyls							
Aroclor 1262	<0.014	DLR	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1268	<0.014	DLR	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623376
Total Polychlorinated Biphenyls	0.304		0.041	mg/kg	18-OCT-21	18-OCT-21	R5623376
Surrogate: d14-Terphenyl	86.2		50-140	%	18-OCT-21	18-OCT-21	R5623376
L2648161-13 PCE-SG-010 Sampled By: CLIENT on 03-OCT-21 @ 15:50 Matrix: SOIL							
Physical Tests							
% Moisture	70.1		0.25	%	08-OCT-21	09-OCT-21	R5614911
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0293		0.0010	g/g	19-OCT-21	19-OCT-21	R5624426
Total Organic Carbon	2.93		0.10	%	19-OCT-21	19-OCT-21	R5624426
Metals							
Aluminum (Al)	11300	DLM	100	ug/g	12-OCT-21	13-OCT-21	R5616646
Antimony (Sb)	0.66	DLM	0.20	ug/g	12-OCT-21	13-OCT-21	R5616646
Arsenic (As)	3.45	DLM	0.20	ug/g	12-OCT-21	13-OCT-21	R5616646
Barium (Ba)	144	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Beryllium (Be)	0.45	DLM	0.20	ug/g	12-OCT-21	13-OCT-21	R5616646
Bismuth (Bi)	<0.40	DLM	0.40	ug/g	12-OCT-21	13-OCT-21	R5616646
Boron (B)	<10	DLM	10	ug/g	12-OCT-21	13-OCT-21	R5616646
Cadmium (Cd)	0.281	DLM	0.040	ug/g	12-OCT-21	13-OCT-21	R5616646
Calcium (Ca)	27500	DLM	100	ug/g	12-OCT-21	13-OCT-21	R5616646
Chromium (Cr)	858	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Cobalt (Co)	10.5	DLM	0.20	ug/g	12-OCT-21	13-OCT-21	R5616646
Copper (Cu)	23.8	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Iron (Fe)	19500	DLM	100	ug/g	12-OCT-21	13-OCT-21	R5616646
Lead (Pb)	70.3	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Lithium (Li)	9.6	DLM	4.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Magnesium (Mg)	11900	DLM	40	ug/g	12-OCT-21	13-OCT-21	R5616646
Manganese (Mn)	286	DLM	2.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Mercury (Hg)	0.164	DLM	0.010	ug/g	12-OCT-21	13-OCT-21	R5616461
Molybdenum (Mo)	0.61	DLM	0.20	ug/g	12-OCT-21	13-OCT-21	R5616646
Nickel (Ni)	17.4	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Phosphorus (P)	970	DLM	100	ug/g	12-OCT-21	13-OCT-21	R5616646
Potassium (K)	2900	DLM	200	ug/g	12-OCT-21	13-OCT-21	R5616646
Selenium (Se)	<0.40	DLM	0.40	ug/g	12-OCT-21	13-OCT-21	R5616646
Silver (Ag)	<0.20	DLM	0.20	ug/g	12-OCT-21	13-OCT-21	R5616646
Sodium (Na)	410	DLM	100	ug/g	12-OCT-21	13-OCT-21	R5616646
Strontium (Sr)	113	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Sulfur (S)	2600	DLM	2000	ug/g	12-OCT-21	13-OCT-21	R5616646
Thallium (Tl)	0.21	DLM	0.10	ug/g	12-OCT-21	13-OCT-21	R5616646
Tin (Sn)	4.7	DLM	4.0	ug/g	12-OCT-21	13-OCT-21	R5616646

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2648161-13 PCE-SG-010 Sampled By: CLIENT on 03-OCT-21 @ 15:50 Matrix: SOIL							
Metals							
Titanium (Ti)	860	DLM	2.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Tungsten (W)	<1.0	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Uranium (U)	0.55	DLM	0.10	ug/g	12-OCT-21	13-OCT-21	R5616646
Vanadium (V)	30.2	DLM	0.40	ug/g	12-OCT-21	13-OCT-21	R5616646
Zinc (Zn)	110	DLM	4.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Zirconium (Zr)	3.2	DLM	2.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.163	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5617221
Acenaphthylene	0.987	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5617221
Acridine	0.119	AI	0.030	ug/g	13-OCT-21	14-OCT-21	R5617221
Anthracene	0.798	DLHM	0.012	ug/g	13-OCT-21	14-OCT-21	R5617221
Benzo(a)anthracene	2.64	R	0.030	ug/g	13-OCT-21	14-OCT-21	R5617221
Benzo(a)pyrene	2.82	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5617221
Benzo(b&j)fluoranthene	2.45	DLHM	0.030	ug/g	13-OCT-21	14-OCT-21	R5617221
Benzo(g,h,i)perylene	1.58	DLHM	0.030	ug/g	13-OCT-21	14-OCT-21	R5617221
Benzo(k)fluoranthene	0.805	DLHM	0.030	ug/g	13-OCT-21	14-OCT-21	R5617221
Chrysene	2.30	DLHM	0.030	ug/g	13-OCT-21	14-OCT-21	R5617221
Dibenz(a,h)anthracene	0.440	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5617221
Fluoroanthene	2.53	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5617221
Fluorene	0.260	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5617221
Indeno(1,2,3-cd)pyrene	1.32	DLHM	0.030	ug/g	13-OCT-21	14-OCT-21	R5617221
1-Methylnaphthalene	0.059	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5617221
2-Methylnaphthalene	0.060	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5617221
Naphthalene	0.061	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5617221
Phenanthrene	1.21	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5617221
Pyrene	2.97	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5617221
Quinoline	<0.015	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5617221
Surrogate: 2-Fluorobiphenyl	88.6		60-140	%	13-OCT-21	14-OCT-21	R5617221
Surrogate: d14-Terphenyl	83.6		60-140	%	13-OCT-21	14-OCT-21	R5617221
B(a)P Total Potency Equivalent	4.02		0.021	ug/g	13-OCT-21	14-OCT-21	R5617221
IACR (CCME)	39.7		0.30		13-OCT-21	14-OCT-21	R5617221
Polychlorinated Biphenyls							
Aroclor 1016	<0.014	DLR	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1221	<0.014	DLR	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1232	<0.014	DLR	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1242	<0.014	DLR	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1248	<0.014	DLR	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1254	0.077	DLR	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1260	0.131	DLR	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1262	<0.014	DLR	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1268	<0.014	DLR	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623376

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2648161-13 PCE-SG-010 Sampled By: CLIENT on 03-OCT-21 @ 15:50 Matrix: SOIL							
Polychlorinated Biphenyls							
Total Polychlorinated Biphenyls	0.208		0.041	mg/kg	18-OCT-21	18-OCT-21	R5623376
Surrogate: d14-Terphenyl	73.3		50-140	%	18-OCT-21	18-OCT-21	R5623376
L2648161-14 PCE-SG-009 Sampled By: CLIENT on 03-OCT-21 @ 15:25 Matrix: SOIL							
Physical Tests							
% Moisture	77.2		0.25	%	08-OCT-21	09-OCT-21	R5614911
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0579		0.0010	g/g	20-OCT-21	20-OCT-21	R5625292
Total Organic Carbon	5.79		0.10	%	20-OCT-21	20-OCT-21	R5625292
Metals							
Aluminum (Al)	9920	DLM	100	ug/g	12-OCT-21	13-OCT-21	R5616646
Antimony (Sb)	0.54	DLM	0.20	ug/g	12-OCT-21	13-OCT-21	R5616646
Arsenic (As)	2.98	DLM	0.20	ug/g	12-OCT-21	13-OCT-21	R5616646
Barium (Ba)	135	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Beryllium (Be)	0.39	DLM	0.20	ug/g	12-OCT-21	13-OCT-21	R5616646
Bismuth (Bi)	<0.40	DLM	0.40	ug/g	12-OCT-21	13-OCT-21	R5616646
Boron (B)	<10	DLM	10	ug/g	12-OCT-21	13-OCT-21	R5616646
Cadmium (Cd)	0.310	DLM	0.040	ug/g	12-OCT-21	13-OCT-21	R5616646
Calcium (Ca)	33600	DLM	100	ug/g	12-OCT-21	13-OCT-21	R5616646
Chromium (Cr)	775	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Cobalt (Co)	8.72	DLM	0.20	ug/g	12-OCT-21	13-OCT-21	R5616646
Copper (Cu)	26.8	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Iron (Fe)	19100	DLM	100	ug/g	12-OCT-21	13-OCT-21	R5616646
Lead (Pb)	51.8	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Lithium (Li)	8.2	DLM	4.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Magnesium (Mg)	13000	DLM	40	ug/g	12-OCT-21	13-OCT-21	R5616646
Manganese (Mn)	295	DLM	2.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Mercury (Hg)	0.153	DLM	0.010	ug/g	12-OCT-21	13-OCT-21	R5616461
Molybdenum (Mo)	0.65	DLM	0.20	ug/g	12-OCT-21	13-OCT-21	R5616646
Nickel (Ni)	14.7	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Phosphorus (P)	1150	DLM	100	ug/g	12-OCT-21	13-OCT-21	R5616646
Potassium (K)	2370	DLM	200	ug/g	12-OCT-21	13-OCT-21	R5616646
Selenium (Se)	0.40	DLM	0.40	ug/g	12-OCT-21	13-OCT-21	R5616646
Silver (Ag)	<0.20	DLM	0.20	ug/g	12-OCT-21	13-OCT-21	R5616646
Sodium (Na)	400	DLM	100	ug/g	12-OCT-21	13-OCT-21	R5616646
Strontium (Sr)	166	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Sulfur (S)	3300	DLM	2000	ug/g	12-OCT-21	13-OCT-21	R5616646
Thallium (Tl)	0.18	DLM	0.10	ug/g	12-OCT-21	13-OCT-21	R5616646
Tin (Sn)	<4.0	DLM	4.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Titanium (Ti)	751	DLM	2.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Tungsten (W)	<1.0	DLM	1.0	ug/g	12-OCT-21	13-OCT-21	R5616646

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2648161-14 PCE-SG-009 Sampled By: CLIENT on 03-OCT-21 @ 15:25 Matrix: SOIL							
Metals							
Uranium (U)	0.51	DLM	0.10	ug/g	12-OCT-21	13-OCT-21	R5616646
Vanadium (V)	30.2	DLM	0.40	ug/g	12-OCT-21	13-OCT-21	R5616646
Zinc (Zn)	106	DLM	4.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Zirconium (Zr)	2.3	DLM	2.0	ug/g	12-OCT-21	13-OCT-21	R5616646
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.067	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5617221
Acenaphthylene	0.578	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5617221
Acridine	<0.050	DLM	0.050	ug/g	13-OCT-21	14-OCT-21	R5617221
Anthracene	0.297	DLHM	0.012	ug/g	13-OCT-21	14-OCT-21	R5617221
Benzo(a)anthracene	1.32	R	0.030	ug/g	13-OCT-21	14-OCT-21	R5617221
Benzo(a)pyrene	1.57	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5617221
Benzo(b&j)fluoranthene	1.38	DLHM	0.030	ug/g	13-OCT-21	14-OCT-21	R5617221
Benzo(g,h,i)perylene	0.904	DLHM	0.030	ug/g	13-OCT-21	14-OCT-21	R5617221
Benzo(k)fluoranthene	0.404	DLHM	0.030	ug/g	13-OCT-21	14-OCT-21	R5617221
Chrysene	1.21	DLHM	0.030	ug/g	13-OCT-21	14-OCT-21	R5617221
Dibenz(a,h)anthracene	0.241	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5617221
Fluoroanthene	1.26	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5617221
Fluorene	0.109	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5617221
Indeno(1,2,3-cd)pyrene	0.745	DLHM	0.030	ug/g	13-OCT-21	14-OCT-21	R5617221
1-Methylnaphthalene	0.016	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5617221
2-Methylnaphthalene	0.017	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5617221
Naphthalene	0.020	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5617221
Phenanthrene	0.525	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5617221
Pyrene	1.56	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5617221
Quinoline	<0.015	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5617221
Surrogate: 2-Fluorobiphenyl	90.1		60-140	%	13-OCT-21	14-OCT-21	R5617221
Surrogate: d14-Terphenyl	83.9		60-140	%	13-OCT-21	14-OCT-21	R5617221
B(a)P Total Potency Equivalent	2.22		0.021	ug/g	13-OCT-21	14-OCT-21	R5617221
IACR (CCME)	21.4		0.30		13-OCT-21	14-OCT-21	R5617221
Polychlorinated Biphenyls							
Aroclor 1016	<0.014	DLR	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1221	<0.014	DLR	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1232	<0.014	DLR	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1242	<0.020	DLR	0.020	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1248	<0.014	DLR	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1254	0.065	DLR	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1260	0.322	DLR	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1262	<0.014	DLR	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1268	<0.014	DLR	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623376
Total Polychlorinated Biphenyls	0.387		0.041	mg/kg	18-OCT-21	18-OCT-21	R5623376
Surrogate: d14-Terphenyl	81.9		50-140	%	18-OCT-21	18-OCT-21	R5623376

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2648161-15 PCE-SG-005 Sampled By: CLIENT on 03-OCT-21 @ 14:15 Matrix: SOIL							
Physical Tests							
% Moisture	82.0		0.25	%	08-OCT-21	09-OCT-21	R5614942
Particle Size							
General Texture Class	Fine				13-OCT-21	13-OCT-21	R5616863
MUST PSA % > 75um	4.1		1.0	%	13-OCT-21	13-OCT-21	R5616863
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0741		0.0010	g/g	20-OCT-21	20-OCT-21	R5625292
Total Organic Carbon	7.41		0.10	%	20-OCT-21	20-OCT-21	R5625292
Metals							
Aluminum (Al)	15200		50	ug/g	11-OCT-21	12-OCT-21	R5616343
Antimony (Sb)	0.63		0.10	ug/g	11-OCT-21	12-OCT-21	R5616343
Arsenic (As)	4.95		0.10	ug/g	11-OCT-21	12-OCT-21	R5616343
Barium (Ba)	243		0.50	ug/g	11-OCT-21	12-OCT-21	R5616343
Beryllium (Be)	0.54		0.10	ug/g	11-OCT-21	12-OCT-21	R5616343
Bismuth (Bi)	0.21		0.20	ug/g	11-OCT-21	12-OCT-21	R5616343
Boron (B)	7.7		5.0	ug/g	11-OCT-21	12-OCT-21	R5616343
Boron (B), Hot Water Ext.	0.81	FR4	0.10	ug/g	11-OCT-21	12-OCT-21	R5615812
Cadmium (Cd)	0.494		0.020	ug/g	11-OCT-21	12-OCT-21	R5616343
Calcium (Ca)	72200		50	ug/g	11-OCT-21	12-OCT-21	R5616343
Chromium (Cr)	913		0.50	ug/g	11-OCT-21	12-OCT-21	R5616343
Cobalt (Co)	10.0		0.10	ug/g	11-OCT-21	12-OCT-21	R5616343
Copper (Cu)	31.6		0.50	ug/g	11-OCT-21	12-OCT-21	R5616343
Iron (Fe)	22200		50	ug/g	11-OCT-21	12-OCT-21	R5616343
Lead (Pb)	71.2		0.50	ug/g	11-OCT-21	12-OCT-21	R5616343
Lithium (Li)	10.2		2.0	ug/g	11-OCT-21	12-OCT-21	R5616343
Magnesium (Mg)	13300		20	ug/g	11-OCT-21	12-OCT-21	R5616343
Manganese (Mn)	658		1.0	ug/g	11-OCT-21	12-OCT-21	R5616343
Mercury (Hg)	0.153	DLM	0.010	ug/g	11-OCT-21	12-OCT-21	R5615544
Molybdenum (Mo)	0.80		0.10	ug/g	11-OCT-21	12-OCT-21	R5616343
Nickel (Ni)	20.7		0.50	ug/g	11-OCT-21	12-OCT-21	R5616343
Phosphorus (P)	1080		50	ug/g	11-OCT-21	12-OCT-21	R5616343
Potassium (K)	3230		100	ug/g	11-OCT-21	12-OCT-21	R5616343
Selenium (Se)	0.72		0.20	ug/g	11-OCT-21	12-OCT-21	R5616343
Silver (Ag)	0.25		0.10	ug/g	11-OCT-21	12-OCT-21	R5616343
Sodium (Na)	514		50	ug/g	11-OCT-21	12-OCT-21	R5616343
Strontium (Sr)	427		0.50	ug/g	11-OCT-21	12-OCT-21	R5616343
Sulfur (S)	5300		1000	ug/g	11-OCT-21	12-OCT-21	R5616343
Thallium (Tl)	0.223		0.050	ug/g	11-OCT-21	12-OCT-21	R5616343
Tin (Sn)	3.4		2.0	ug/g	11-OCT-21	12-OCT-21	R5616343
Titanium (Ti)	967		1.0	ug/g	11-OCT-21	12-OCT-21	R5616343
Tungsten (W)	<0.50		0.50	ug/g	11-OCT-21	12-OCT-21	R5616343
Uranium (U)	0.661		0.050	ug/g	11-OCT-21	12-OCT-21	R5616343
Vanadium (V)	38.7		0.20	ug/g	11-OCT-21	12-OCT-21	R5616343

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2648161-15 PCE-SG-005 Sampled By: CLIENT on 03-OCT-21 @ 14:15 Matrix: SOIL							
Metals							
Zinc (Zn)	119		2.0	ug/g	11-OCT-21	12-OCT-21	R5616343
Zirconium (Zr)	3.7		1.0	ug/g	11-OCT-21	12-OCT-21	R5616343
Speciated Metals							
Chromium, Trivalent	906		10	ug/g		14-OCT-21	
Chromium, Hexavalent	7.1	DLHM	1.0	ug/g	12-OCT-21	14-OCT-21	R5617412
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.058	DLHM	0.025	ug/g	13-OCT-21	14-OCT-21	R5617221
Acenaphthylene	0.405	DLHM	0.025	ug/g	13-OCT-21	14-OCT-21	R5617221
Acridine	<0.050	DLHM	0.050	ug/g	13-OCT-21	14-OCT-21	R5617221
Anthracene	0.211	DLHM	0.020	ug/g	13-OCT-21	14-OCT-21	R5617221
Benzo(a)anthracene	0.839	R	0.050	ug/g	13-OCT-21	14-OCT-21	R5617221
Benzo(a)pyrene	1.01	DLHM	0.025	ug/g	13-OCT-21	14-OCT-21	R5617221
Benzo(b&j)fluoranthene	0.950	DLHM	0.050	ug/g	13-OCT-21	14-OCT-21	R5617221
Benzo(g,h,i)perylene	0.620	DLHM	0.050	ug/g	13-OCT-21	14-OCT-21	R5617221
Benzo(k)fluoranthene	0.297	DLHM	0.050	ug/g	13-OCT-21	14-OCT-21	R5617221
Chrysene	0.781	DLHM	0.050	ug/g	13-OCT-21	14-OCT-21	R5617221
Dibenz(a,h)anthracene	0.156	DLHM	0.025	ug/g	13-OCT-21	14-OCT-21	R5617221
Fluoroanthene	0.883	DLHM	0.025	ug/g	13-OCT-21	14-OCT-21	R5617221
Fluorene	0.093	DLHM	0.025	ug/g	13-OCT-21	14-OCT-21	R5617221
Indeno(1,2,3-cd)pyrene	0.545	DLHM	0.050	ug/g	13-OCT-21	14-OCT-21	R5617221
1-Methylnaphthalene	<0.025	DLHM	0.025	ug/g	13-OCT-21	14-OCT-21	R5617221
2-Methylnaphthalene	<0.025	DLHM	0.025	ug/g	13-OCT-21	14-OCT-21	R5617221
Naphthalene	<0.025	DLHM	0.025	ug/g	13-OCT-21	14-OCT-21	R5617221
Phenanthrene	0.407	DLHM	0.025	ug/g	13-OCT-21	14-OCT-21	R5617221
Pyrene	1.14	DLHM	0.025	ug/g	13-OCT-21	14-OCT-21	R5617221
Quinoline	<0.025	DLHM	0.025	ug/g	13-OCT-21	14-OCT-21	R5617221
Surrogate: 2-Fluorobiphenyl	91.3		60-140	%	13-OCT-21	14-OCT-21	R5617221
Surrogate: d14-Terphenyl	86.9		60-140	%	13-OCT-21	14-OCT-21	R5617221
B(a)P Total Potency Equivalent	1.45		0.036	ug/g	13-OCT-21	14-OCT-21	R5617221
IACR (CCME)	14.4		0.50		13-OCT-21	14-OCT-21	R5617221
Polychlorinated Biphenyls							
Aroclor 1016	<0.023	DLR	0.023	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1221	<0.023	DLR	0.023	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1232	<0.023	DLR	0.023	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1242	<0.023	DLR	0.023	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1248	<0.023	DLR	0.023	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1254	0.113	DLR	0.023	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1260	0.179	DLR	0.023	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1262	<0.023	DLR	0.023	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1268	<0.023	DLR	0.023	mg/kg	18-OCT-21	18-OCT-21	R5623376
Total Polychlorinated Biphenyls	0.292		0.068	mg/kg	18-OCT-21	18-OCT-21	R5623376
Surrogate: d14-Terphenyl	75.1		50-140	%	18-OCT-21	18-OCT-21	R5623376

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2648161-15 PCE-SG-005 Sampled By: CLIENT on 03-OCT-21 @ 14:15 Matrix: SOIL							
Polychlorinated Biphenyls							
L2648161-16 PCE-SG-008 Sampled By: CLIENT on 03-OCT-21 @ 12:40 Matrix: SOIL							
Physical Tests							
% Moisture	72.0		0.25	%	08-OCT-21	09-OCT-21	R5614911
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0766		0.0010	g/g	20-OCT-21	20-OCT-21	R5625292
Total Organic Carbon	7.66		0.10	%	20-OCT-21	20-OCT-21	R5625292
Metals							
Aluminum (Al)	12900		50	ug/g	13-OCT-21	13-OCT-21	R5617181
Antimony (Sb)	0.80		0.10	ug/g	13-OCT-21	13-OCT-21	R5617181
Arsenic (As)	5.14		0.10	ug/g	13-OCT-21	13-OCT-21	R5617181
Barium (Ba)	202		0.50	ug/g	13-OCT-21	13-OCT-21	R5617181
Beryllium (Be)	0.50		0.10	ug/g	13-OCT-21	13-OCT-21	R5617181
Bismuth (Bi)	0.25		0.20	ug/g	13-OCT-21	13-OCT-21	R5617181
Boron (B)	8.4		5.0	ug/g	13-OCT-21	13-OCT-21	R5617181
Cadmium (Cd)	0.569		0.020	ug/g	13-OCT-21	13-OCT-21	R5617181
Calcium (Ca)	61300		50	ug/g	13-OCT-21	13-OCT-21	R5617181
Chromium (Cr)	1500	DLHC	10	ug/g	13-OCT-21	13-OCT-21	R5617181
Cobalt (Co)	10.4		0.10	ug/g	13-OCT-21	13-OCT-21	R5617181
Copper (Cu)	32.8		0.50	ug/g	13-OCT-21	13-OCT-21	R5617181
Iron (Fe)	21500		50	ug/g	13-OCT-21	13-OCT-21	R5617181
Lead (Pb)	104		0.50	ug/g	13-OCT-21	13-OCT-21	R5617181
Lithium (Li)	9.4		2.0	ug/g	13-OCT-21	13-OCT-21	R5617181
Magnesium (Mg)	13500		20	ug/g	13-OCT-21	13-OCT-21	R5617181
Manganese (Mn)	761		1.0	ug/g	13-OCT-21	13-OCT-21	R5617181
Mercury (Hg)	0.204		0.0050	ug/g	13-OCT-21	14-OCT-21	R5617360
Molybdenum (Mo)	0.87		0.10	ug/g	13-OCT-21	13-OCT-21	R5617181
Nickel (Ni)	19.3		0.50	ug/g	13-OCT-21	13-OCT-21	R5617181
Phosphorus (P)	1330		50	ug/g	13-OCT-21	13-OCT-21	R5617181
Potassium (K)	2760		100	ug/g	13-OCT-21	13-OCT-21	R5617181
Selenium (Se)	0.70		0.20	ug/g	13-OCT-21	13-OCT-21	R5617181
Silver (Ag)	0.30		0.10	ug/g	13-OCT-21	13-OCT-21	R5617181
Sodium (Na)	455		50	ug/g	13-OCT-21	13-OCT-21	R5617181
Strontium (Sr)	353		0.50	ug/g	13-OCT-21	13-OCT-21	R5617181
Sulfur (S)	5900		1000	ug/g	13-OCT-21	13-OCT-21	R5617181
Thallium (Tl)	0.221		0.050	ug/g	13-OCT-21	13-OCT-21	R5617181
Tin (Sn)	5.2		2.0	ug/g	13-OCT-21	13-OCT-21	R5617181
Titanium (Ti)	740		1.0	ug/g	13-OCT-21	13-OCT-21	R5617181
Tungsten (W)	<0.50		0.50	ug/g	13-OCT-21	13-OCT-21	R5617181
Uranium (U)	0.563		0.050	ug/g	13-OCT-21	13-OCT-21	R5617181
Vanadium (V)	33.4		0.20	ug/g	13-OCT-21	13-OCT-21	R5617181

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2648161-16 PCE-SG-008 Sampled By: CLIENT on 03-OCT-21 @ 12:40 Matrix: SOIL							
Metals							
Zinc (Zn)	143		2.0	ug/g	13-OCT-21	13-OCT-21	R5617181
Zirconium (Zr)	3.7		1.0	ug/g	13-OCT-21	13-OCT-21	R5617181
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.044	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5617221
Acenaphthylene	0.443	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5617221
Acridine	<0.050	DLM	0.050	ug/g	13-OCT-21	14-OCT-21	R5617221
Anthracene	0.164	DLHM	0.012	ug/g	13-OCT-21	14-OCT-21	R5617221
Benzo(a)anthracene	0.744	R	0.030	ug/g	13-OCT-21	14-OCT-21	R5617221
Benzo(a)pyrene	0.993	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5617221
Benzo(b&j)fluoranthene	0.807	DLHM	0.030	ug/g	13-OCT-21	14-OCT-21	R5617221
Benzo(g,h,i)perylene	0.584	DLHM	0.030	ug/g	13-OCT-21	14-OCT-21	R5617221
Benzo(k)fluoranthene	0.272	DLHM	0.030	ug/g	13-OCT-21	14-OCT-21	R5617221
Chrysene	0.710	DLHM	0.030	ug/g	13-OCT-21	14-OCT-21	R5617221
Dibenz(a,h)anthracene	0.149	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5617221
Fluoroanthene	0.646	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5617221
Fluorene	0.072	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5617221
Indeno(1,2,3-cd)pyrene	0.478	DLHM	0.030	ug/g	13-OCT-21	14-OCT-21	R5617221
1-Methylnaphthalene	<0.015	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5617221
2-Methylnaphthalene	<0.015	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5617221
Naphthalene	0.020	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5617221
Phenanthrene	0.251	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5617221
Pyrene	0.944	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5617221
Quinoline	<0.015	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5617221
Surrogate: 2-Fluorobiphenyl	89.3		60-140	%	13-OCT-21	14-OCT-21	R5617221
Surrogate: d14-Terphenyl	85.5		60-140	%	13-OCT-21	14-OCT-21	R5617221
B(a)P Total Potency Equivalent	1.39		0.021	ug/g	13-OCT-21	14-OCT-21	R5617221
IACR (CCME)	12.9		0.30		13-OCT-21	14-OCT-21	R5617221
Polychlorinated Biphenyls							
Aroclor 1016	<0.014	DLR	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1221	<0.014	DLR	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1232	<0.014	DLR	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1242	<0.014	DLR	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1248	<0.014	DLR	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1254	0.085	DLR	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1260	0.149	DLR	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1262	<0.014	DLR	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1268	<0.014	DLR	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623376
Total Polychlorinated Biphenyls	0.233		0.041	mg/kg	18-OCT-21	18-OCT-21	R5623376
Surrogate: d14-Terphenyl	76.5		50-140	%	18-OCT-21	18-OCT-21	R5623376
L2648161-17 PCE-SG-007 Sampled By: CLIENT on 03-OCT-21 @ 12:25 Matrix: SOIL							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2648161-17 PCE-SG-007 Sampled By: CLIENT on 03-OCT-21 @ 12:25 Matrix: SOIL							
Physical Tests							
% Moisture	67.2		0.25	%	08-OCT-21	09-OCT-21	R5614911
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0674		0.0010	g/g	15-OCT-21	15-OCT-21	R5619438
Total Organic Carbon	6.74		0.10	%	15-OCT-21	15-OCT-21	R5619438
Metals							
Aluminum (Al)	13700		50	ug/g	13-OCT-21	13-OCT-21	R5617181
Antimony (Sb)	0.73		0.10	ug/g	13-OCT-21	13-OCT-21	R5617181
Arsenic (As)	4.69		0.10	ug/g	13-OCT-21	13-OCT-21	R5617181
Barium (Ba)	195		0.50	ug/g	13-OCT-21	13-OCT-21	R5617181
Beryllium (Be)	0.54		0.10	ug/g	13-OCT-21	13-OCT-21	R5617181
Bismuth (Bi)	0.36		0.20	ug/g	13-OCT-21	13-OCT-21	R5617181
Boron (B)	7.7		5.0	ug/g	13-OCT-21	13-OCT-21	R5617181
Cadmium (Cd)	0.518		0.020	ug/g	13-OCT-21	13-OCT-21	R5617181
Calcium (Ca)	43600		50	ug/g	13-OCT-21	13-OCT-21	R5617181
Chromium (Cr)	1420	DLHC	10	ug/g	13-OCT-21	13-OCT-21	R5617181
Cobalt (Co)	10.6		0.10	ug/g	13-OCT-21	13-OCT-21	R5617181
Copper (Cu)	31.5		0.50	ug/g	13-OCT-21	13-OCT-21	R5617181
Iron (Fe)	21300		50	ug/g	13-OCT-21	13-OCT-21	R5617181
Lead (Pb)	91.4		0.50	ug/g	13-OCT-21	13-OCT-21	R5617181
Lithium (Li)	9.1		2.0	ug/g	13-OCT-21	13-OCT-21	R5617181
Magnesium (Mg)	15300		20	ug/g	13-OCT-21	13-OCT-21	R5617181
Manganese (Mn)	679		1.0	ug/g	13-OCT-21	13-OCT-21	R5617181
Mercury (Hg)	0.181		0.0050	ug/g	13-OCT-21	14-OCT-21	R5617360
Molybdenum (Mo)	0.80		0.10	ug/g	13-OCT-21	13-OCT-21	R5617181
Nickel (Ni)	19.4		0.50	ug/g	13-OCT-21	13-OCT-21	R5617181
Phosphorus (P)	1340		50	ug/g	13-OCT-21	13-OCT-21	R5617181
Potassium (K)	2880		100	ug/g	13-OCT-21	13-OCT-21	R5617181
Selenium (Se)	0.68		0.20	ug/g	13-OCT-21	13-OCT-21	R5617181
Silver (Ag)	0.28		0.10	ug/g	13-OCT-21	13-OCT-21	R5617181
Sodium (Na)	451		50	ug/g	13-OCT-21	13-OCT-21	R5617181
Strontium (Sr)	225		0.50	ug/g	13-OCT-21	13-OCT-21	R5617181
Sulfur (S)	5000		1000	ug/g	13-OCT-21	13-OCT-21	R5617181
Thallium (Tl)	0.235		0.050	ug/g	13-OCT-21	13-OCT-21	R5617181
Tin (Sn)	4.9		2.0	ug/g	13-OCT-21	13-OCT-21	R5617181
Titanium (Ti)	762		1.0	ug/g	13-OCT-21	13-OCT-21	R5617181
Tungsten (W)	<0.50		0.50	ug/g	13-OCT-21	13-OCT-21	R5617181
Uranium (U)	0.542		0.050	ug/g	13-OCT-21	13-OCT-21	R5617181
Vanadium (V)	33.2		0.20	ug/g	13-OCT-21	13-OCT-21	R5617181
Zinc (Zn)	141		2.0	ug/g	13-OCT-21	13-OCT-21	R5617181
Zirconium (Zr)	3.7		1.0	ug/g	13-OCT-21	13-OCT-21	R5617181
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.034	DLHM	0.010	ug/g	13-OCT-21	14-OCT-21	R5617221

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2648161-17 PCE-SG-007 Sampled By: CLIENT on 03-OCT-21 @ 12:25 Matrix: SOIL							
Polycyclic Aromatic Hydrocarbons							
Acenaphthylene	0.397	DLHM	0.010	ug/g	13-OCT-21	14-OCT-21	R5617221
Acridine	<0.030	DLM	0.030	ug/g	13-OCT-21	14-OCT-21	R5617221
Anthracene	0.169	DLHM	0.0080	ug/g	13-OCT-21	14-OCT-21	R5617221
Benzo(a)anthracene	0.684	R	0.020	ug/g	13-OCT-21	14-OCT-21	R5617221
Benzo(a)pyrene	0.875	DLHM	0.010	ug/g	13-OCT-21	14-OCT-21	R5617221
Benzo(b&j)fluoranthene	0.757	DLHM	0.020	ug/g	13-OCT-21	14-OCT-21	R5617221
Benzo(g,h,i)perylene	0.518	DLHM	0.020	ug/g	13-OCT-21	14-OCT-21	R5617221
Benzo(k)fluoranthene	0.223	DLHM	0.020	ug/g	13-OCT-21	14-OCT-21	R5617221
Chrysene	0.630	DLHM	0.020	ug/g	13-OCT-21	14-OCT-21	R5617221
Dibenz(a,h)anthracene	0.133	DLHM	0.010	ug/g	13-OCT-21	14-OCT-21	R5617221
Fluoroanthene	0.553	DLHM	0.010	ug/g	13-OCT-21	14-OCT-21	R5617221
Fluorene	0.061	DLHM	0.010	ug/g	13-OCT-21	14-OCT-21	R5617221
Indeno(1,2,3-cd)pyrene	0.421	DLHM	0.020	ug/g	13-OCT-21	14-OCT-21	R5617221
1-Methylnaphthalene	0.014	DLHM	0.010	ug/g	13-OCT-21	14-OCT-21	R5617221
2-Methylnaphthalene	0.016	DLHM	0.010	ug/g	13-OCT-21	14-OCT-21	R5617221
Naphthalene	0.016	DLHM	0.010	ug/g	13-OCT-21	14-OCT-21	R5617221
Phenanthrene	0.195	DLHM	0.010	ug/g	13-OCT-21	14-OCT-21	R5617221
Pyrene	0.794	DLHM	0.010	ug/g	13-OCT-21	14-OCT-21	R5617221
Quinoline	<0.010	DLHM	0.010	ug/g	13-OCT-21	14-OCT-21	R5617221
Surrogate: 2-Fluorobiphenyl	87.6		60-140	%	13-OCT-21	14-OCT-21	R5617221
Surrogate: d14-Terphenyl	83.1		60-140	%	13-OCT-21	14-OCT-21	R5617221
B(a)P Total Potency Equivalent	1.23		0.020	ug/g	13-OCT-21	14-OCT-21	R5617221
IACR (CCME)	11.7		0.20		13-OCT-21	14-OCT-21	R5617221
Polychlorinated Biphenyls							
Aroclor 1016	<0.0090	DLR	0.0090	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1221	<0.0090	DLR	0.0090	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1232	<0.0090	DLR	0.0090	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1242	<0.010	DLR	0.010	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1248	<0.0090	DLR	0.0090	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1254	0.0712	DLR	0.0090	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1260	0.104	DLR	0.0090	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1262	<0.0090	DLR	0.0090	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1268	<0.0090	DLR	0.0090	mg/kg	18-OCT-21	18-OCT-21	R5623376
Total Polychlorinated Biphenyls	0.18		0.027	mg/kg	18-OCT-21	18-OCT-21	R5623376
Surrogate: d14-Terphenyl	85.1		50-140	%	18-OCT-21	18-OCT-21	R5623376
L2648161-18 PCE-SG-006 Sampled By: CLIENT on 03-OCT-21 @ 12:00 Matrix: SOIL							
Physical Tests							
% Moisture	72.7		0.25	%	08-OCT-21	09-OCT-21	R5614911
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0624		0.0010	g/g	15-OCT-21	15-OCT-21	R5619438

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2648161-18 PCE-SG-006 Sampled By: CLIENT on 03-OCT-21 @ 12:00 Matrix: SOIL							
Organic / Inorganic Carbon							
Total Organic Carbon	6.24		0.10	%	15-OCT-21	15-OCT-21	R5619438
Metals							
Aluminum (Al)	13100		50	ug/g	13-OCT-21	13-OCT-21	R5617181
Antimony (Sb)	2.14		0.10	ug/g	13-OCT-21	13-OCT-21	R5617181
Arsenic (As)	5.85		0.10	ug/g	13-OCT-21	13-OCT-21	R5617181
Barium (Ba)	193		0.50	ug/g	13-OCT-21	13-OCT-21	R5617181
Beryllium (Be)	0.53		0.10	ug/g	13-OCT-21	13-OCT-21	R5617181
Bismuth (Bi)	0.20		0.20	ug/g	13-OCT-21	13-OCT-21	R5617181
Boron (B)	8.9		5.0	ug/g	13-OCT-21	13-OCT-21	R5617181
Cadmium (Cd)	0.466		0.020	ug/g	13-OCT-21	13-OCT-21	R5617181
Calcium (Ca)	38500		50	ug/g	13-OCT-21	13-OCT-21	R5617181
Chromium (Cr)	938	DLHC	10	ug/g	13-OCT-21	13-OCT-21	R5617181
Cobalt (Co)	11.6		0.10	ug/g	13-OCT-21	13-OCT-21	R5617181
Copper (Cu)	53.6		0.50	ug/g	13-OCT-21	13-OCT-21	R5617181
Iron (Fe)	25100		50	ug/g	13-OCT-21	13-OCT-21	R5617181
Lead (Pb)	115		0.50	ug/g	13-OCT-21	13-OCT-21	R5617181
Lithium (Li)	9.8		2.0	ug/g	13-OCT-21	13-OCT-21	R5617181
Magnesium (Mg)	15200		20	ug/g	13-OCT-21	13-OCT-21	R5617181
Manganese (Mn)	418		1.0	ug/g	13-OCT-21	13-OCT-21	R5617181
Mercury (Hg)	0.157		0.0050	ug/g	13-OCT-21	14-OCT-21	R5617360
Molybdenum (Mo)	1.02		0.10	ug/g	13-OCT-21	13-OCT-21	R5617181
Nickel (Ni)	20.8		0.50	ug/g	13-OCT-21	13-OCT-21	R5617181
Phosphorus (P)	1390		50	ug/g	13-OCT-21	13-OCT-21	R5617181
Potassium (K)	2950		100	ug/g	13-OCT-21	13-OCT-21	R5617181
Selenium (Se)	0.59		0.20	ug/g	13-OCT-21	13-OCT-21	R5617181
Silver (Ag)	0.22		0.10	ug/g	13-OCT-21	13-OCT-21	R5617181
Sodium (Na)	488		50	ug/g	13-OCT-21	13-OCT-21	R5617181
Strontium (Sr)	173		0.50	ug/g	13-OCT-21	13-OCT-21	R5617181
Sulfur (S)	4400		1000	ug/g	13-OCT-21	13-OCT-21	R5617181
Thallium (Tl)	0.252		0.050	ug/g	13-OCT-21	13-OCT-21	R5617181
Tin (Sn)	14.7		2.0	ug/g	13-OCT-21	13-OCT-21	R5617181
Titanium (Ti)	862		1.0	ug/g	13-OCT-21	13-OCT-21	R5617181
Tungsten (W)	0.59		0.50	ug/g	13-OCT-21	13-OCT-21	R5617181
Uranium (U)	0.611		0.050	ug/g	13-OCT-21	13-OCT-21	R5617181
Vanadium (V)	36.9		0.20	ug/g	13-OCT-21	13-OCT-21	R5617181
Zinc (Zn)	192		2.0	ug/g	13-OCT-21	13-OCT-21	R5617181
Zirconium (Zr)	4.0		1.0	ug/g	13-OCT-21	13-OCT-21	R5617181
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.294	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5617221
Acenaphthylene	0.741	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5617221
Acridine	0.150	AI	0.030	ug/g	13-OCT-21	14-OCT-21	R5617221

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2648161-18 PCE-SG-006 Sampled By: CLIENT on 03-OCT-21 @ 12:00 Matrix: SOIL							
Polycyclic Aromatic Hydrocarbons							
Anthracene	0.851	DLHM	0.012	ug/g	13-OCT-21	14-OCT-21	R5617221
Benzo(a)anthracene	2.87	R	0.030	ug/g	13-OCT-21	14-OCT-21	R5617221
Benzo(a)pyrene	2.77	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5617221
Benzo(b&j)fluoranthene	2.62	DLHM	0.030	ug/g	13-OCT-21	14-OCT-21	R5617221
Benzo(g,h,i)perylene	1.56	DLHM	0.030	ug/g	13-OCT-21	14-OCT-21	R5617221
Benzo(k)fluoranthene	0.812	DLHM	0.030	ug/g	13-OCT-21	14-OCT-21	R5617221
Chrysene	2.51	DLHM	0.030	ug/g	13-OCT-21	14-OCT-21	R5617221
Dibenz(a,h)anthracene	0.460	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5617221
Fluoroanthene	3.74	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5617221
Fluorene	0.363	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5617221
Indeno(1,2,3-cd)pyrene	1.37	DLHM	0.030	ug/g	13-OCT-21	14-OCT-21	R5617221
1-Methylnaphthalene	0.046	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5617221
2-Methylnaphthalene	0.051	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5617221
Naphthalene	0.089	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5617221
Phenanthrene	2.04	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5617221
Pyrene	3.90	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5617221
Quinoline	<0.015	DLHM	0.015	ug/g	13-OCT-21	14-OCT-21	R5617221
Surrogate: 2-Fluorobiphenyl	88.8		60-140	%	13-OCT-21	14-OCT-21	R5617221
Surrogate: d14-Terphenyl	84.9		60-140	%	13-OCT-21	14-OCT-21	R5617221
B(a)P Total Potency Equivalent	4.04		0.021	ug/g	13-OCT-21	14-OCT-21	R5617221
IACR (CCME)	41.6		0.30		13-OCT-21	14-OCT-21	R5617221
Polychlorinated Biphenyls							
Aroclor 1016	<0.014	DLR	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1221	<0.014	DLR	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1232	<0.014	DLR	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1242	<0.220	DLR	0.22	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1248	<0.014	DLR	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1254	0.262	DLR	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1260	0.179	DLR	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1262	<0.014	DLR	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1268	<0.014	DLR	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623376
Total Polychlorinated Biphenyls	0.441		0.041	mg/kg	18-OCT-21	18-OCT-21	R5623376
Surrogate: d14-Terphenyl	77.2		50-140	%	18-OCT-21	18-OCT-21	R5623376
L2648161-19 PCE-SG-004 Sampled By: CLIENT on 03-OCT-21 @ 11:40 Matrix: SOIL							
Physical Tests							
% Moisture	83.2		0.25	%	13-OCT-21	14-OCT-21	R5616948
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0938		0.0010	g/g	15-OCT-21	15-OCT-21	R5619438
Total Organic Carbon	9.38		0.10	%	15-OCT-21	15-OCT-21	R5619438
Metals							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2648161-19 PCE-SG-004 Sampled By: CLIENT on 03-OCT-21 @ 11:40 Matrix: SOIL							
Metals							
Aluminum (Al)	14800		50	ug/g	13-OCT-21	13-OCT-21	R5617181
Antimony (Sb)	0.83		0.10	ug/g	13-OCT-21	13-OCT-21	R5617181
Arsenic (As)	6.39		0.10	ug/g	13-OCT-21	13-OCT-21	R5617181
Barium (Ba)	246		0.50	ug/g	13-OCT-21	13-OCT-21	R5617181
Beryllium (Be)	0.58		0.10	ug/g	13-OCT-21	13-OCT-21	R5617181
Bismuth (Bi)	0.29		0.20	ug/g	13-OCT-21	13-OCT-21	R5617181
Boron (B)	8.4		5.0	ug/g	13-OCT-21	13-OCT-21	R5617181
Cadmium (Cd)	0.616		0.020	ug/g	13-OCT-21	13-OCT-21	R5617181
Calcium (Ca)	80000		50	ug/g	13-OCT-21	13-OCT-21	R5617181
Chromium (Cr)	941	DLHC	10	ug/g	13-OCT-21	13-OCT-21	R5617181
Cobalt (Co)	11.5		0.10	ug/g	13-OCT-21	13-OCT-21	R5617181
Copper (Cu)	38.5		0.50	ug/g	13-OCT-21	13-OCT-21	R5617181
Iron (Fe)	24400		50	ug/g	13-OCT-21	13-OCT-21	R5617181
Lead (Pb)	98.1		0.50	ug/g	13-OCT-21	13-OCT-21	R5617181
Lithium (Li)	10.4		2.0	ug/g	13-OCT-21	13-OCT-21	R5617181
Magnesium (Mg)	14300		20	ug/g	13-OCT-21	13-OCT-21	R5617181
Manganese (Mn)	786		1.0	ug/g	13-OCT-21	13-OCT-21	R5617181
Mercury (Hg)	0.155		0.0050	ug/g	13-OCT-21	14-OCT-21	R5617360
Molybdenum (Mo)	1.02		0.10	ug/g	13-OCT-21	13-OCT-21	R5617181
Nickel (Ni)	22.7		0.50	ug/g	13-OCT-21	13-OCT-21	R5617181
Phosphorus (P)	1380		50	ug/g	13-OCT-21	13-OCT-21	R5617181
Potassium (K)	3480		100	ug/g	13-OCT-21	13-OCT-21	R5617181
Selenium (Se)	0.88		0.20	ug/g	13-OCT-21	13-OCT-21	R5617181
Silver (Ag)	0.32		0.10	ug/g	13-OCT-21	13-OCT-21	R5617181
Sodium (Na)	574		50	ug/g	13-OCT-21	13-OCT-21	R5617181
Strontium (Sr)	500		0.50	ug/g	13-OCT-21	13-OCT-21	R5617181
Sulfur (S)	7700		1000	ug/g	13-OCT-21	13-OCT-21	R5617181
Thallium (Tl)	0.242		0.050	ug/g	13-OCT-21	13-OCT-21	R5617181
Tin (Sn)	4.4		2.0	ug/g	13-OCT-21	13-OCT-21	R5617181
Titanium (Ti)	849		1.0	ug/g	13-OCT-21	13-OCT-21	R5617181
Tungsten (W)	<0.50		0.50	ug/g	13-OCT-21	13-OCT-21	R5617181
Uranium (U)	0.762		0.050	ug/g	13-OCT-21	13-OCT-21	R5617181
Vanadium (V)	40.2		0.20	ug/g	13-OCT-21	13-OCT-21	R5617181
Zinc (Zn)	145		2.0	ug/g	13-OCT-21	13-OCT-21	R5617181
Zirconium (Zr)	4.7		1.0	ug/g	13-OCT-21	13-OCT-21	R5617181
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.041	DLHM	0.025	ug/g	13-OCT-21	14-OCT-21	R5617221
Acenaphthylene	0.338	DLHM	0.025	ug/g	13-OCT-21	14-OCT-21	R5617221
Acridine	<0.050	DLHM	0.050	ug/g	13-OCT-21	14-OCT-21	R5617221
Anthracene	0.123	DLHM	0.020	ug/g	13-OCT-21	14-OCT-21	R5617221
Benzo(a)anthracene	0.573	R	0.050	ug/g	13-OCT-21	14-OCT-21	R5617221

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2648161-19 PCE-SG-004 Sampled By: CLIENT on 03-OCT-21 @ 11:40 Matrix: SOIL							
Polycyclic Aromatic Hydrocarbons							
Benzo(a)pyrene	0.764	DLHM	0.025	ug/g	13-OCT-21	14-OCT-21	R5617221
Benzo(b&j)fluoranthene	0.721	DLHM	0.050	ug/g	13-OCT-21	14-OCT-21	R5617221
Benzo(g,h,i)perylene	0.501	DLHM	0.050	ug/g	13-OCT-21	14-OCT-21	R5617221
Benzo(k)fluoranthene	0.220	DLHM	0.050	ug/g	13-OCT-21	14-OCT-21	R5617221
Chrysene	0.566	DLHM	0.050	ug/g	13-OCT-21	14-OCT-21	R5617221
Dibenz(a,h)anthracene	0.123	DLHM	0.025	ug/g	13-OCT-21	14-OCT-21	R5617221
Fluoroanthene	0.540	DLHM	0.025	ug/g	13-OCT-21	14-OCT-21	R5617221
Fluorene	0.052	DLHM	0.025	ug/g	13-OCT-21	14-OCT-21	R5617221
Indeno(1,2,3-cd)pyrene	0.403	DLHM	0.050	ug/g	13-OCT-21	14-OCT-21	R5617221
1-Methylnaphthalene	<0.025	DLHM	0.025	ug/g	13-OCT-21	14-OCT-21	R5617221
2-Methylnaphthalene	<0.025	DLHM	0.025	ug/g	13-OCT-21	14-OCT-21	R5617221
Naphthalene	<0.025	DLHM	0.025	ug/g	13-OCT-21	14-OCT-21	R5617221
Phenanthrene	0.191	DLHM	0.025	ug/g	13-OCT-21	14-OCT-21	R5617221
Pyrene	0.812	DLHM	0.025	ug/g	13-OCT-21	14-OCT-21	R5617221
Quinoline	<0.025	DLHM	0.025	ug/g	13-OCT-21	14-OCT-21	R5617221
Surrogate: 2-Fluorobiphenyl	88.9		60-140	%	13-OCT-21	14-OCT-21	R5617221
Surrogate: d14-Terphenyl	85.4		60-140	%	13-OCT-21	14-OCT-21	R5617221
B(a)P Total Potency Equivalent	1.09		0.036	ug/g	13-OCT-21	14-OCT-21	R5617221
IACR (CCME)	10.7		0.50		13-OCT-21	14-OCT-21	R5617221
Polychlorinated Biphenyls							
Aroclor 1016	<0.023	DLR	0.023	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1221	<0.023	DLR	0.023	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1232	<0.023	DLR	0.023	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1242	<0.023	DLR	0.023	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1248	<0.023	DLR	0.023	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1254	0.171	DLR	0.023	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1260	0.247	DLR	0.023	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1262	<0.023	DLR	0.023	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1268	<0.023	DLR	0.023	mg/kg	18-OCT-21	18-OCT-21	R5623376
Total Polychlorinated Biphenyls	0.417		0.068	mg/kg	18-OCT-21	18-OCT-21	R5623376
Surrogate: d14-Terphenyl	83.8		50-140	%	18-OCT-21	18-OCT-21	R5623376
L2648161-20 DUP-005 Sampled By: CLIENT on 03-OCT-21 Matrix: SOIL							
Physical Tests							
% Moisture	66.1		0.25	%	13-OCT-21	14-OCT-21	R5616948
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0281		0.0010	g/g	19-OCT-21	19-OCT-21	R5624426
Total Organic Carbon	2.81		0.10	%	19-OCT-21	19-OCT-21	R5624426
Metals							
Aluminum (Al)	15900		50	ug/g	13-OCT-21	13-OCT-21	R5617181
Antimony (Sb)	0.66		0.10	ug/g	13-OCT-21	13-OCT-21	R5617181

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2648161-20 DUP-005 Sampled By: CLIENT on 03-OCT-21 Matrix: SOIL							
Metals							
Arsenic (As)	5.09		0.10	ug/g	13-OCT-21	13-OCT-21	R5617181
Barium (Ba)	212		0.50	ug/g	13-OCT-21	13-OCT-21	R5617181
Beryllium (Be)	0.56		0.10	ug/g	13-OCT-21	13-OCT-21	R5617181
Bismuth (Bi)	<0.20		0.20	ug/g	13-OCT-21	13-OCT-21	R5617181
Boron (B)	8.0		5.0	ug/g	13-OCT-21	13-OCT-21	R5617181
Cadmium (Cd)	0.361		0.020	ug/g	13-OCT-21	13-OCT-21	R5617181
Calcium (Ca)	37100		50	ug/g	13-OCT-21	13-OCT-21	R5617181
Chromium (Cr)	739	DLHC	10	ug/g	13-OCT-21	13-OCT-21	R5617181
Cobalt (Co)	13.3		0.10	ug/g	13-OCT-21	13-OCT-21	R5617181
Copper (Cu)	35.1		0.50	ug/g	13-OCT-21	13-OCT-21	R5617181
Iron (Fe)	25900		50	ug/g	13-OCT-21	13-OCT-21	R5617181
Lead (Pb)	97.8		0.50	ug/g	13-OCT-21	13-OCT-21	R5617181
Lithium (Li)	11.2		2.0	ug/g	13-OCT-21	13-OCT-21	R5617181
Magnesium (Mg)	16300		20	ug/g	13-OCT-21	13-OCT-21	R5617181
Manganese (Mn)	428		1.0	ug/g	13-OCT-21	13-OCT-21	R5617181
Mercury (Hg)	0.169		0.0050	ug/g	13-OCT-21	14-OCT-21	R5617360
Molybdenum (Mo)	0.73		0.10	ug/g	13-OCT-21	13-OCT-21	R5617181
Nickel (Ni)	23.2		0.50	ug/g	13-OCT-21	13-OCT-21	R5617181
Phosphorus (P)	1340		50	ug/g	13-OCT-21	13-OCT-21	R5617181
Potassium (K)	3820		100	ug/g	13-OCT-21	13-OCT-21	R5617181
Selenium (Se)	0.48		0.20	ug/g	13-OCT-21	13-OCT-21	R5617181
Silver (Ag)	0.16		0.10	ug/g	13-OCT-21	13-OCT-21	R5617181
Sodium (Na)	517		50	ug/g	13-OCT-21	13-OCT-21	R5617181
Strontium (Sr)	150		0.50	ug/g	13-OCT-21	13-OCT-21	R5617181
Sulfur (S)	3600		1000	ug/g	13-OCT-21	13-OCT-21	R5617181
Thallium (Tl)	0.263		0.050	ug/g	13-OCT-21	13-OCT-21	R5617181
Tin (Sn)	6.4		2.0	ug/g	13-OCT-21	13-OCT-21	R5617181
Titanium (Ti)	1030		1.0	ug/g	13-OCT-21	13-OCT-21	R5617181
Tungsten (W)	<0.50		0.50	ug/g	13-OCT-21	13-OCT-21	R5617181
Uranium (U)	0.555		0.050	ug/g	13-OCT-21	13-OCT-21	R5617181
Vanadium (V)	39.1		0.20	ug/g	13-OCT-21	13-OCT-21	R5617181
Zinc (Zn)	145		2.0	ug/g	13-OCT-21	13-OCT-21	R5617181
Zirconium (Zr)	4.6		1.0	ug/g	13-OCT-21	13-OCT-21	R5617181
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.088	DLHM	0.010	ug/g	13-OCT-21	14-OCT-21	R5617221
Acenaphthylene	0.886	DLHM	0.010	ug/g	13-OCT-21	14-OCT-21	R5617221
Acridine	<0.060	DLM	0.060	ug/g	13-OCT-21	14-OCT-21	R5617221
Anthracene	0.479	DLHM	0.0080	ug/g	13-OCT-21	14-OCT-21	R5617221
Benzo(a)anthracene	2.17	R	0.020	ug/g	13-OCT-21	14-OCT-21	R5617221
Benzo(a)pyrene	2.44	DLHM	0.010	ug/g	13-OCT-21	14-OCT-21	R5617221
Benzo(b&j)fluoranthene	2.08	DLHM	0.020	ug/g	13-OCT-21	14-OCT-21	R5617221

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2648161-20 DUP-005 Sampled By: CLIENT on 03-OCT-21 Matrix: SOIL							
Polycyclic Aromatic Hydrocarbons							
Benzo(g,h,i)perylene	1.35	DLHM	0.020	ug/g	13-OCT-21	14-OCT-21	R5617221
Benzo(k)fluoranthene	0.700	DLHM	0.020	ug/g	13-OCT-21	14-OCT-21	R5617221
Chrysene	1.89	DLHM	0.020	ug/g	13-OCT-21	14-OCT-21	R5617221
Dibenz(a,h)anthracene	0.366	DLHM	0.010	ug/g	13-OCT-21	14-OCT-21	R5617221
Fluoroanthene	1.87	DLHM	0.010	ug/g	13-OCT-21	14-OCT-21	R5617221
Fluorene	0.135	DLHM	0.010	ug/g	13-OCT-21	14-OCT-21	R5617221
Indeno(1,2,3-cd)pyrene	1.26	DLHM	0.020	ug/g	13-OCT-21	14-OCT-21	R5617221
1-Methylnaphthalene	0.024	DLHM	0.010	ug/g	13-OCT-21	14-OCT-21	R5617221
2-Methylnaphthalene	0.028	DLHM	0.010	ug/g	13-OCT-21	14-OCT-21	R5617221
Naphthalene	0.026	DLHM	0.010	ug/g	13-OCT-21	14-OCT-21	R5617221
Phenanthrene	0.658	DLHM	0.010	ug/g	13-OCT-21	14-OCT-21	R5617221
Pyrene	2.42	DLHM	0.010	ug/g	13-OCT-21	14-OCT-21	R5617221
Quinoline	<0.010	DLHM	0.010	ug/g	13-OCT-21	14-OCT-21	R5617221
Surrogate: 2-Fluorobiphenyl	88.6		60-140	%	13-OCT-21	14-OCT-21	R5617221
Surrogate: d14-Terphenyl	82.0		60-140	%	13-OCT-21	14-OCT-21	R5617221
B(a)P Total Potency Equivalent	3.46		0.020	ug/g	13-OCT-21	14-OCT-21	R5617221
IACR (CCME)	33.7		0.20		13-OCT-21	14-OCT-21	R5617221
Polychlorinated Biphenyls							
Aroclor 1016	<0.0090	DLR	0.0090	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1221	<0.0090	DLR	0.0090	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1232	<0.0090	DLR	0.0090	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1242	<0.0090	DLR	0.0090	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1248	<0.0090	DLR	0.0090	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1254	0.0869	DLR	0.0090	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1260	0.102	DLR	0.0090	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1262	<0.0090	DLR	0.0090	mg/kg	18-OCT-21	18-OCT-21	R5623376
Aroclor 1268	<0.0090	DLR	0.0090	mg/kg	18-OCT-21	18-OCT-21	R5623376
Total Polychlorinated Biphenyls	0.189		0.027	mg/kg	18-OCT-21	18-OCT-21	R5623376
Surrogate: d14-Terphenyl	68.6		50-140	%	18-OCT-21	18-OCT-21	R5623376
L2648161-21 DUP-004 Sampled By: CLIENT on 03-OCT-21 Matrix: SOIL							
Physical Tests							
% Moisture	82.5		0.25	%	08-OCT-21	09-OCT-21	R5614942
Particle Size							
General Texture Class	Fine				13-OCT-21	13-OCT-21	R5616863
MUST PSA % > 75um	4.2		1.0	%	13-OCT-21	13-OCT-21	R5616863
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0761		0.0010	g/g	15-OCT-21	15-OCT-21	R5619438
Total Organic Carbon	7.61		0.10	%	15-OCT-21	15-OCT-21	R5619438
Metals							
Aluminum (Al)	15500		50	ug/g	11-OCT-21	12-OCT-21	R5616343

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2648161-21 DUP-004 Sampled By: CLIENT on 03-OCT-21 Matrix: SOIL							
Metals							
Antimony (Sb)	0.69		0.10	ug/g	11-OCT-21	12-OCT-21	R5616343
Arsenic (As)	5.03		0.10	ug/g	11-OCT-21	12-OCT-21	R5616343
Barium (Ba)	241		0.50	ug/g	11-OCT-21	12-OCT-21	R5616343
Beryllium (Be)	0.58		0.10	ug/g	11-OCT-21	12-OCT-21	R5616343
Bismuth (Bi)	0.23		0.20	ug/g	11-OCT-21	12-OCT-21	R5616343
Boron (B)	8.8		5.0	ug/g	11-OCT-21	12-OCT-21	R5616343
Boron (B), Hot Water Ext.	1.00	FR4	0.10	ug/g	11-OCT-21	12-OCT-21	R5615812
Cadmium (Cd)	0.490		0.020	ug/g	11-OCT-21	12-OCT-21	R5616343
Calcium (Ca)	69900		50	ug/g	11-OCT-21	12-OCT-21	R5616343
Chromium (Cr)	885		0.50	ug/g	11-OCT-21	12-OCT-21	R5616343
Cobalt (Co)	10.4		0.10	ug/g	11-OCT-21	12-OCT-21	R5616343
Copper (Cu)	32.4		0.50	ug/g	11-OCT-21	12-OCT-21	R5616343
Iron (Fe)	23500		50	ug/g	11-OCT-21	12-OCT-21	R5616343
Lead (Pb)	71.4		0.50	ug/g	11-OCT-21	12-OCT-21	R5616343
Lithium (Li)	10.9		2.0	ug/g	11-OCT-21	12-OCT-21	R5616343
Magnesium (Mg)	13400		20	ug/g	11-OCT-21	12-OCT-21	R5616343
Manganese (Mn)	670		1.0	ug/g	11-OCT-21	12-OCT-21	R5616343
Mercury (Hg)	0.154	DLM	0.010	ug/g	11-OCT-21	12-OCT-21	R5615544
Molybdenum (Mo)	0.84		0.10	ug/g	11-OCT-21	12-OCT-21	R5616343
Nickel (Ni)	21.6		0.50	ug/g	11-OCT-21	12-OCT-21	R5616343
Phosphorus (P)	1090		50	ug/g	11-OCT-21	12-OCT-21	R5616343
Potassium (K)	3550		100	ug/g	11-OCT-21	12-OCT-21	R5616343
Selenium (Se)	0.74		0.20	ug/g	11-OCT-21	12-OCT-21	R5616343
Silver (Ag)	0.26		0.10	ug/g	11-OCT-21	12-OCT-21	R5616343
Sodium (Na)	527		50	ug/g	11-OCT-21	12-OCT-21	R5616343
Strontium (Sr)	434		0.50	ug/g	11-OCT-21	12-OCT-21	R5616343
Sulfur (S)	5200		1000	ug/g	11-OCT-21	12-OCT-21	R5616343
Thallium (Tl)	0.234		0.050	ug/g	11-OCT-21	12-OCT-21	R5616343
Tin (Sn)	3.6		2.0	ug/g	11-OCT-21	12-OCT-21	R5616343
Titanium (Ti)	1030		1.0	ug/g	11-OCT-21	12-OCT-21	R5616343
Tungsten (W)	<0.50		0.50	ug/g	11-OCT-21	12-OCT-21	R5616343
Uranium (U)	0.703		0.050	ug/g	11-OCT-21	12-OCT-21	R5616343
Vanadium (V)	41.6		0.20	ug/g	11-OCT-21	12-OCT-21	R5616343
Zinc (Zn)	125		2.0	ug/g	11-OCT-21	12-OCT-21	R5616343
Zirconium (Zr)	4.3		1.0	ug/g	11-OCT-21	12-OCT-21	R5616343
Speciated Metals							
Chromium, Trivalent	878		10	ug/g		14-OCT-21	
Chromium, Hexavalent	7.3	DLHM	1.0	ug/g	12-OCT-21	14-OCT-21	R5617412
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.048	DLHM	0.025	ug/g	13-OCT-21	14-OCT-21	R5616732
Acenaphthylene	0.402	DLHM	0.025	ug/g	13-OCT-21	14-OCT-21	R5616732

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2648161-21 DUP-004 Sampled By: CLIENT on 03-OCT-21 Matrix: SOIL							
Polycyclic Aromatic Hydrocarbons							
Acridine	<0.050	DLHM	0.050	ug/g	13-OCT-21	14-OCT-21	R5616732
Anthracene	0.213	DLHM	0.020	ug/g	13-OCT-21	14-OCT-21	R5616732
Benzo(a)anthracene	0.705	R	0.050	ug/g	13-OCT-21	14-OCT-21	R5616732
Benzo(a)pyrene	0.981	DLHM	0.025	ug/g	13-OCT-21	14-OCT-21	R5616732
Benzo(b&j)fluoranthene	0.865	DLHM	0.050	ug/g	13-OCT-21	14-OCT-21	R5616732
Benzo(g,h,i)perylene	0.616	DLHM	0.050	ug/g	13-OCT-21	14-OCT-21	R5616732
Benzo(k)fluoranthene	0.349	DLHM	0.050	ug/g	13-OCT-21	14-OCT-21	R5616732
Chrysene	0.780	DLHM	0.050	ug/g	13-OCT-21	14-OCT-21	R5616732
Dibenz(a,h)anthracene	0.147	DLHM	0.025	ug/g	13-OCT-21	14-OCT-21	R5616732
Fluoroanthene	0.683	DLHM	0.025	ug/g	13-OCT-21	14-OCT-21	R5616732
Fluorene	0.069	DLHM	0.025	ug/g	13-OCT-21	14-OCT-21	R5616732
Indeno(1,2,3-cd)pyrene	0.459	DLHM	0.050	ug/g	13-OCT-21	14-OCT-21	R5616732
1-Methylnaphthalene	<0.025	DLHM	0.025	ug/g	13-OCT-21	14-OCT-21	R5616732
2-Methylnaphthalene	0.028	DLHM	0.025	ug/g	13-OCT-21	14-OCT-21	R5616732
Naphthalene	0.029	DLHM	0.025	ug/g	13-OCT-21	14-OCT-21	R5616732
Phenanthrene	0.251	DLHM	0.025	ug/g	13-OCT-21	14-OCT-21	R5616732
Pyrene	1.02	DLHM	0.025	ug/g	13-OCT-21	14-OCT-21	R5616732
Quinoline	<0.025	DLHM	0.025	ug/g	13-OCT-21	14-OCT-21	R5616732
Surrogate: 2-Fluorobiphenyl	84.9		60-140	%	13-OCT-21	14-OCT-21	R5616732
Surrogate: d14-Terphenyl	86.5		60-140	%	13-OCT-21	14-OCT-21	R5616732
B(a)P Total Potency Equivalent	1.38		0.036	ug/g	13-OCT-21	14-OCT-21	R5616732
IACR (CCME)	13.6		0.50		13-OCT-21	14-OCT-21	R5616732
Polychlorinated Biphenyls							
Aroclor 1016	<0.015	DLM	0.015	mg/kg	18-OCT-21	18-OCT-21	R5623933
Aroclor 1221	<0.015	DLM	0.015	mg/kg	18-OCT-21	18-OCT-21	R5623933
Aroclor 1232	<0.015	DLM	0.015	mg/kg	18-OCT-21	18-OCT-21	R5623933
Aroclor 1242	<0.015	DLM	0.015	mg/kg	18-OCT-21	18-OCT-21	R5623933
Aroclor 1248	<0.015	DLM	0.015	mg/kg	18-OCT-21	18-OCT-21	R5623933
Aroclor 1254	0.157	DLHM	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623933
Aroclor 1260	0.239	DLHM	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623933
Aroclor 1262	<0.014	DLHM	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623933
Aroclor 1268	<0.014	DLHM	0.014	mg/kg	18-OCT-21	18-OCT-21	R5623933
Total Polychlorinated Biphenyls	0.396		0.041	mg/kg	18-OCT-21	18-OCT-21	R5623933
Surrogate: d14-Terphenyl	89.3		50-140	%	18-OCT-21	18-OCT-21	R5623933

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Reference Information

QC Samples with Qualifiers & Comments:

QC Type Description	Parameter	Qualifier	Applies to Sample Number(s)
Duplicate	Benzo(a)pyrene	DUP-H	L2648161-21
Duplicate	Fluoroanthene	DUP-H	L2648161-21
Duplicate	Pyrene	DUP-H	L2648161-21
Matrix Spike	Benzo(a)anthracene	MS-B	L2648161-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -20, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Benzo(a)pyrene	MS-B	L2648161-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -20, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Pyrene	MS-B	L2648161-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -20, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Aroclor 1260	MS-B	L2648161-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -20, -3, -4, -5, -6, -7, -8, -9

Sample Parameter Qualifier key listed:

Qualifier	Description
AI	Analytical interferences may be present. Result may be biased high.
DLHC	Detection Limit Raised: Dilution required due to high concentration of test analyte(s).
DLHM	Detection Limit Adjusted: Sample has High Moisture Content
DLM	Detection Limit Adjusted due to sample matrix effects (e.g. chemical interference, colour, turbidity).
DLQ	Detection Limit raised due to co-eluting interference. GCMS qualifier ion ratio did not meet acceptance criteria.
DLR	Detection Limit Raised due to required dilution, limited sample amount, and/or high moisture content (soil samples)
DUP-H	Duplicate results outside ALS DQO, due to sample heterogeneity.
FR4	As per applicable reference method(s), soil:water ratio for Fixed Ratio Leach was modified to 1:4 due to high soil organic content.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
PRAR	PCB Pattern Most Closely Resembles Aroclor Reported
R	The ion abundance ratio(s) did not meet the acceptance criteria. Value is an estimated maximum.

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
ATTERBERG-SK	Soil	Atterberg limits	CARTER CSSS 58

The liquid limit (or upper plastic limit) is the point at which the soil becomes semifluid, like softened butter. In operational terms, the liquid limit is defined as the water content at which a trapezoidal groove cut in moist soil is closed after 25 taps on a hard rubber plate (ASTM D-18, 1958).

The plastic limit (or lower plastic limit) is defined as the water content at which soil begins to crumble on being rolled into a thread 1/8 inch (or 3 mm) in diameter. It represents the lowest water content at which soil can be deformed readily without cracking.

The plastic index (which is the difference between the liquid and plastic limits) gives an indication of the "clayeyness" or plasticity of a clay and is employed in engineering classification systems for soils.

This method is equivalent to ASTM D4318-10.

B-HWS-R511-WT	Soil	Boron-HWE-O.Reg 153/04 (July 2011)	HW EXTR, EPA 6010B

A dried solid sample is extracted with calcium chloride, the sample undergoes a heating process. After cooling the sample is filtered and analyzed by ICP/OES.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011 and as of November 30, 2020), unless a subset of the Analytical Test Group (ATG) has been requested (the Protocol states that all analytes in an ATG must be reported).

CR-CR3-WT	Soil	Trivalent Chromium in Soil Calculation	BC WLAP LAB MANUAL / EPA 3060A & 7196A

This analysis is carried out using the method "Trivalent Chromium in Solids", as published in the BC WLAP Laboratory Methods Manual (2003). Chromium (III) is determined by subtraction of chromium (VI) from total chromium. Chromium (VI) is determined by the alkaline leach method, and total chromium is determined using CSR Analytical Method 8 "Strong Acid Leachable Metals (SALM) in Soil", BC Ministry of Environment, Lands and Parks, 26 June 2001. All results are reported as milligrams per dry kilogram of sediment/soil.

CR-CR6-IC-WT	Soil	Hexavalent Chromium in Soil	SW846 3060A/7199

This analysis is carried out using procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846, Method 7199, published by the United States Environmental Protection Agency (EPA). The procedure involves analysis for chromium (VI) by ion chromatography using diphenylcarbazide in a sulphuric acid solution.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

Reference Information

HG-200.2-CVAA-WT	Soil	Mercury in Soil by CVAAS	EPA 200.2/1631E (mod)

Soil samples are digested with nitric and hydrochloric acids, followed by analysis by CVAAS.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

MET-200.2-CCMS-WT	Soil	Metals in Soil by CRC ICPMS	EPA 200.2/6020B (mod)

Soil/sediment is dried, disaggregated, and sieved (2 mm). For tests intended to support Ontario regulations, the <2mm fraction is ground to pass through a 0.355 mm sieve. Strong Acid Leachable Metals in the <2mm fraction are solubilized by heated digestion with nitric and hydrochloric acids. Instrumental analysis is by Collision / Reaction Cell ICPMS.

Limitations: This method is intended to liberate environmentally available metals. Silicate minerals are not solubilized. Some metals may be only partially recovered (matrix dependent), including Al, Ba, Be, Cr, S, Sr, Ti, Tl, V, W, and Zr. Elemental Sulfur may be poorly recovered by this method. Volatile forms of sulfur (e.g. sulfide, H2S) may be excluded if lost during sampling, storage, or digestion.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011), unless a subset of the Analytical Test Group (ATG) has been requested (the Protocol states that all analytes in an ATG must be reported).

MOISTURE-WT	Soil	% Moisture	CCME PHC in Soil - Tier 1 (mod)

PAH-CCME-SQGL-WT	Soil	PAHs in Sediment	SW846 8270

The procedure uses a mechanical shaking technique to extract a representative sub-sample with a mixture of methanol and toluene. The extract is analyzed by GC/MSD. Depending on the analytical GC/MS column used benzo(j)fluoranthene may chromatographically co-elute with benzo(b)fluoranthene or benzo(k)fluoranthene.

PCB9-LOW-WT	Soil	PCBs to meet CCME Sediment Criteria	SW846 8270

A representative sub-sample of a soil sample is mixed with methanol and extracted with toluene using a shaker technique. An aliquot of the separated toluene is analyzed by GC/MSD.

PSA-MUST-SK	Soil	% Particles > 75um (Coarse/Fine)	ASTM D6913

An air-dried sample is reduced to < 2 mm size and mixed with a dispersing agent (Calgon solution). The sample is washed through a 200 mesh (75 µm) sieve. The retained mass of sample is used to determine % sand fraction.

Reference: ASTM D422-63

SPECGRAV-CL	Soil	Specific Gravity	ASTM D 5057

A portion of sample is weighed in a container that is calibrated for volume. Specific Gravity is reported as the mass of sample per mass of an equal volume of pure water, where the density of pure water is taken to be 1.00 g/mL.

TOC-WT	Soil	TOC & FOC in Solids	CARTER 21.3.2

Soil is treated with excess acidic dichromate, which reacts with the organic carbon, oxidizing it to CO2. The residual dichromate is titrated with ferrous ammonium sulphate and TOC calculated by difference.

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
SK	ALS ENVIRONMENTAL - SASKATOON, SASKATCHEWAN, CANADA
WT	ALS ENVIRONMENTAL - WATERLOO, ONTARIO, CANADA
CL	ALS ENVIRONMENTAL - CALGARY, ALBERTA, CANADA

Chain of Custody Numbers:

Reference Information

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.
mg/kg - milligrams per kilogram based on dry weight of sample
mg/kg wwt - milligrams per kilogram based on wet weight of sample
mg/kg lwt - milligrams per kilogram based on lipid weight of sample
mg/L - unit of concentration based on volume, parts per million.
< - Less than.
D.L. - The reporting limit.
N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.
UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.
Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
ATTERBERG-SK	**Soil**							
Batch R5616797								
WG3634788-1 DUP		**L2648161-8**						
Liquid Limit (LL)		116	116		%	0.1	20	13-OCT-21
Moisture at Plastic Limit		105	104		%	1.1	20	13-OCT-21
Plasticity Index (PI)		11	12		%	9.3	20	13-OCT-21
WG3634788-2 IRM		**ATB-1_SOIL**						
Liquid Limit (LL)			110.6		%		80-120	13-OCT-21
Moisture at Plastic Limit			116.3		%		80-120	13-OCT-21
Plasticity Index (PI)			101.6		%		80-120	13-OCT-21
Batch R5619861								
WG3634787-1 DUP		**L2648161-1**						
Liquid Limit (LL)		78	78		%	0.2	20	15-OCT-21
Moisture at Plastic Limit		55	56		%	1.7	20	15-OCT-21
Plasticity Index (PI)		23	23		%	3.4	20	15-OCT-21
WG3634787-2 IRM		**ATB-1_SOIL**						
Liquid Limit (LL)			107.5		%		80-120	15-OCT-21
Moisture at Plastic Limit			112.4		%		80-120	15-OCT-21
Plasticity Index (PI)			99.6		%		80-120	15-OCT-21
B-HWS-R511-WT	**Soil**							
Batch R5615812								
WG3635407-4 DUP		**L2648582-2**						
Boron (B), Hot Water Ext.		<0.10	<0.10	RPD-NA	ug/g	N/A	30	12-OCT-21
WG3635407-2 IRM		**WT SAR4**						
Boron (B), Hot Water Ext.			98.5		%		70-130	12-OCT-21
WG3635407-3 LCS								
Boron (B), Hot Water Ext.			106.0		%		70-130	12-OCT-21
WG3635407-1 MB								
Boron (B), Hot Water Ext.			<0.10		ug/g		0.1	12-OCT-21
CR-CR6-IC-WT	**Soil**							
Batch R5617412								
WG3635408-4 CRM		**WT-SQC012**						
Chromium, Hexavalent			81.8		%		70-130	14-OCT-21
WG3635408-3 DUP		**L2649250-1**						
Chromium, Hexavalent		<0.20	<0.20	RPD-NA	ug/g	N/A	35	14-OCT-21
WG3635408-2 LCS								
Chromium, Hexavalent			94.2		%		80-120	14-OCT-21
WG3635408-1 MB								
							0.2	

Quality Control Report

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CR-CR6-IC-WT	**Soil**							
Batch R5617412								
WG3635408-1 MB								
Chromium, Hexavalent			<0.20		ug/g		0.2	14-OCT-21
Batch R5622298								
WG3637237-4 CRM		**WT-SQC012**						
Chromium, Hexavalent			79.3		%		70-130	15-OCT-21
WG3637237-3 DUP		**L2648161-9**						
Chromium, Hexavalent		423	454		ug/g	7.0	35	15-OCT-21
WG3637237-2 LCS								
Chromium, Hexavalent			96.3		%		80-120	15-OCT-21
WG3637237-1 MB								
Chromium, Hexavalent			<0.20		ug/g		0.2	15-OCT-21
HG-200.2-CVAA-WT	**Soil**							
Batch R5615544								
WG3635380-2 CRM		**WT-SS-2**						
Mercury (Hg)			97.0		%		70-130	12-OCT-21
WG3635380-6 DUP		**WG3635380-5**						
Mercury (Hg)		0.0104	0.0101		ug/g	3.2	40	12-OCT-21
WG3635380-3 LCS								
Mercury (Hg)			104.0		%		80-120	12-OCT-21
WG3635380-1 MB								
Mercury (Hg)			<0.0050		mg/kg		0.005	12-OCT-21
Batch R5616461								
WG3635707-2 CRM		**WT-SS-2**						
Mercury (Hg)			111.8		%		70-130	13-OCT-21
WG3635707-6 DUP		**WG3635707-5**						
Mercury (Hg)		0.295	0.252		ug/g	15	40	13-OCT-21
WG3635707-3 LCS								
Mercury (Hg)			114.0		%		80-120	13-OCT-21
WG3635707-1 MB								
Mercury (Hg)			<0.0050		mg/kg		0.005	13-OCT-21
Batch R5617360								
WG3636284-2 CRM		**WT-SS-2**						
Mercury (Hg)			106.1		%		70-130	14-OCT-21
WG3636284-6 DUP		**WG3636284-5**						
Mercury (Hg)		0.204	0.206		ug/g	1.1	40	14-OCT-21
WG3636284-3 LCS								
Mercury (Hg)			106.0		%		80-120	14-OCT-21

Quality Control Report

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
HG-200.2-CVAA-WT	**Soil**							
Batch R5617360								
WG3636284-1 MB								
Mercury (Hg)			<0.0050		mg/kg		0.005	14-OCT-21
MET-200.2-CCMS-WT	**Soil**							
Batch R5616343								
WG3635380-2 CRM		**WT-SS-2**						
Aluminum (Al)			100.0		%		70-130	12-OCT-21
Antimony (Sb)			81.8		%		70-130	12-OCT-21
Arsenic (As)			100.7		%		70-130	12-OCT-21
Barium (Ba)			110.8		%		70-130	12-OCT-21
Beryllium (Be)			88.4		%		70-130	12-OCT-21
Bismuth (Bi)			0.15		mg/kg		0-0.34	12-OCT-21
Boron (B)			7.2		mg/kg		3.5-13.5	12-OCT-21
Cadmium (Cd)			92.1		%		70-130	12-OCT-21
Calcium (Ca)			92.3		%		70-130	12-OCT-21
Chromium (Cr)			98.3		%		70-130	12-OCT-21
Cobalt (Co)			97.3		%		70-130	12-OCT-21
Copper (Cu)			97.3		%		70-130	12-OCT-21
Iron (Fe)			99.5		%		70-130	12-OCT-21
Lead (Pb)			87.7		%		70-130	12-OCT-21
Lithium (Li)			82.4		%		70-130	12-OCT-21
Magnesium (Mg)			104.5		%		70-130	12-OCT-21
Manganese (Mn)			106.4		%		70-130	12-OCT-21
Molybdenum (Mo)			93.0		%		70-130	12-OCT-21
Nickel (Ni)			99.9		%		70-130	12-OCT-21
Phosphorus (P)			100.2		%		70-130	12-OCT-21
Potassium (K)			95.6		%		70-130	12-OCT-21
Selenium (Se)			0.13		mg/kg		0-0.34	12-OCT-21
Silver (Ag)			101.4		%		70-130	12-OCT-21
Sodium (Na)			97.4		%		70-130	12-OCT-21
Strontium (Sr)			89.4		%		70-130	12-OCT-21
Thallium (Tl)			0.073		mg/kg		0.029-0.129	12-OCT-21
Tin (Sn)			84.7		%		70-130	12-OCT-21
Titanium (Ti)			95.6		%		70-130	12-OCT-21
Uranium (U)			90.1		%		70-130	12-OCT-21

Quality Control Report

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100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5616343								
WG3635380-2 CRM		**WT-SS-2**						
Vanadium (V)			98.2		%		70-130	12-OCT-21
Zinc (Zn)			94.6		%		70-130	12-OCT-21
Zirconium (Zr)			87.6		%		70-130	12-OCT-21
WG3635380-6 DUP		**WG3635380-5**						
Aluminum (Al)		13400	14300		ug/g	6.6	40	12-OCT-21
Antimony (Sb)		<0.10	<0.10	RPD-NA	ug/g	N/A	30	12-OCT-21
Arsenic (As)		4.59	4.63		ug/g	1.0	30	12-OCT-21
Barium (Ba)		60.9	63.7		ug/g	4.4	40	12-OCT-21
Beryllium (Be)		0.52	0.50		ug/g	4.9	30	12-OCT-21
Bismuth (Bi)		<0.20	<0.20	RPD-NA	ug/g	N/A	30	12-OCT-21
Boron (B)		13.9	13.5		ug/g	2.9	30	12-OCT-21
Cadmium (Cd)		0.052	0.048		ug/g	6.4	30	12-OCT-21
Calcium (Ca)		125000	122000		ug/g	2.5	30	12-OCT-21
Chromium (Cr)		20.4	21.0		ug/g	2.9	30	12-OCT-21
Cobalt (Co)		9.84	10.1		ug/g	2.3	30	12-OCT-21
Copper (Cu)		17.6	18.1		ug/g	2.9	30	12-OCT-21
Iron (Fe)		22800	22700		ug/g	0.3	30	12-OCT-21
Lead (Pb)		6.05	5.90		ug/g	2.5	40	12-OCT-21
Lithium (Li)		16.6	16.4		ug/g	0.8	30	12-OCT-21
Magnesium (Mg)		15200	15500		ug/g	2.0	30	12-OCT-21
Manganese (Mn)		650	663		ug/g	2.0	30	12-OCT-21
Molybdenum (Mo)		0.29	0.30		ug/g	3.6	40	12-OCT-21
Nickel (Ni)		20.9	21.4		ug/g	2.6	30	12-OCT-21
Phosphorus (P)		701	743		ug/g	5.7	30	12-OCT-21
Potassium (K)		2770	2920		ug/g	5.2	40	12-OCT-21
Selenium (Se)		<0.20	<0.20	RPD-NA	ug/g	N/A	30	12-OCT-21
Silver (Ag)		<0.10	<0.10	RPD-NA	ug/g	N/A	40	12-OCT-21
Sodium (Na)		378	386		ug/g	2.1	40	12-OCT-21
Strontium (Sr)		190	193		ug/g	1.1	40	12-OCT-21
Sulfur (S)		<1000	<1000	RPD-NA	ug/g	N/A	30	12-OCT-21
Thallium (Tl)		0.107	0.105		ug/g	1.6	30	12-OCT-21
Tin (Sn)		<2.0	<2.0	RPD-NA	ug/g	N/A	40	12-OCT-21
Titanium (Ti)		389	383		ug/g	1.5	40	12-OCT-21

Quality Control Report

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100 Scotia Court
Whitby ON L1N 8Y6
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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5616343								
WG3635380-6 DUP		**WG3635380-5**						
Tungsten (W)		<0.50	<0.50	RPD-NA	ug/g	N/A	30	12-OCT-21
Uranium (U)		0.519	0.501		ug/g	3.7	30	12-OCT-21
Vanadium (V)		28.8	29.3		ug/g	1.7	30	12-OCT-21
Zinc (Zn)		39.6	40.1		ug/g	1.2	30	12-OCT-21
Zirconium (Zr)		7.5	7.4		ug/g	1.5	30	12-OCT-21
WG3635380-4 LCS								
Aluminum (Al)			101.8		%		80-120	12-OCT-21
Antimony (Sb)			105.8		%		80-120	12-OCT-21
Arsenic (As)			102.6		%		80-120	12-OCT-21
Barium (Ba)			104.6		%		80-120	12-OCT-21
Beryllium (Be)			100.6		%		80-120	12-OCT-21
Bismuth (Bi)			101.8		%		80-120	12-OCT-21
Boron (B)			97.5		%		80-120	12-OCT-21
Cadmium (Cd)			99.2		%		80-120	12-OCT-21
Calcium (Ca)			105.8		%		80-120	12-OCT-21
Chromium (Cr)			99.3		%		80-120	12-OCT-21
Cobalt (Co)			99.3		%		80-120	12-OCT-21
Copper (Cu)			97.4		%		80-120	12-OCT-21
Iron (Fe)			104.2		%		80-120	12-OCT-21
Lead (Pb)			102.8		%		80-120	12-OCT-21
Lithium (Li)			90.2		%		80-120	12-OCT-21
Magnesium (Mg)			103.7		%		80-120	12-OCT-21
Manganese (Mn)			99.7		%		80-120	12-OCT-21
Molybdenum (Mo)			110.3		%		80-120	12-OCT-21
Nickel (Ni)			98.5		%		80-120	12-OCT-21
Phosphorus (P)			107.9		%		80-120	12-OCT-21
Potassium (K)			109.1		%		80-120	12-OCT-21
Selenium (Se)			98.6		%		80-120	12-OCT-21
Silver (Ag)			96.0		%		80-120	12-OCT-21
Sodium (Na)			104.2		%		80-120	12-OCT-21
Strontium (Sr)			113.8		%		80-120	12-OCT-21
Sulfur (S)			95.3		%		80-120	12-OCT-21
Thallium (Tl)			101.8		%		80-120	12-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5616343								
WG3635380-4 LCS								
Tin (Sn)			102.9		%		80-120	12-OCT-21
Titanium (Ti)			100.4		%		80-120	12-OCT-21
Tungsten (W)			102.2		%		80-120	12-OCT-21
Uranium (U)			100.9		%		80-120	12-OCT-21
Vanadium (V)			102.2		%		80-120	12-OCT-21
Zinc (Zn)			94.2		%		80-120	12-OCT-21
Zirconium (Zr)			106.8		%		80-120	12-OCT-21
WG3635380-1 MB								
Aluminum (Al)			<50		mg/kg		50	12-OCT-21
Antimony (Sb)			<0.10		mg/kg		0.1	12-OCT-21
Arsenic (As)			<0.10		mg/kg		0.1	12-OCT-21
Barium (Ba)			<0.50		mg/kg		0.5	12-OCT-21
Beryllium (Be)			<0.10		mg/kg		0.1	12-OCT-21
Bismuth (Bi)			<0.20		mg/kg		0.2	12-OCT-21
Boron (B)			<5.0		mg/kg		5	12-OCT-21
Cadmium (Cd)			<0.020		mg/kg		0.02	12-OCT-21
Calcium (Ca)			<50		mg/kg		50	12-OCT-21
Chromium (Cr)			<0.50		mg/kg		0.5	12-OCT-21
Cobalt (Co)			<0.10		mg/kg		0.1	12-OCT-21
Copper (Cu)			<0.50		mg/kg		0.5	12-OCT-21
Iron (Fe)			<50		mg/kg		50	12-OCT-21
Lead (Pb)			<0.50		mg/kg		0.5	12-OCT-21
Lithium (Li)			<2.0		mg/kg		2	12-OCT-21
Magnesium (Mg)			<20		mg/kg		20	12-OCT-21
Manganese (Mn)			<1.0		mg/kg		1	12-OCT-21
Molybdenum (Mo)			<0.10		mg/kg		0.1	12-OCT-21
Nickel (Ni)			<0.50		mg/kg		0.5	12-OCT-21
Phosphorus (P)			<50		mg/kg		50	12-OCT-21
Potassium (K)			<100		mg/kg		100	12-OCT-21
Selenium (Se)			<0.20		mg/kg		0.2	12-OCT-21
Silver (Ag)			<0.10		mg/kg		0.1	12-OCT-21
Sodium (Na)			<50		mg/kg		50	12-OCT-21
Strontium (Sr)			<0.50		mg/kg		0.5	12-OCT-21
Sulfur (S)			<1000		mg/kg		1000	12-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5616343								
WG3635380-1 MB								
Thallium (Tl)			<0.050		mg/kg		0.05	12-OCT-21
Tin (Sn)			<2.0		mg/kg		2	12-OCT-21
Titanium (Ti)			<1.0		mg/kg		1	12-OCT-21
Tungsten (W)			<0.50		mg/kg		0.5	12-OCT-21
Uranium (U)			<0.050		mg/kg		0.05	12-OCT-21
Vanadium (V)			<0.20		mg/kg		0.2	12-OCT-21
Zinc (Zn)			<2.0		mg/kg		2	12-OCT-21
Zirconium (Zr)			<1.0		mg/kg		1	12-OCT-21
Batch R5616646								
WG3635707-2 CRM		**WT-SS-2**						
Aluminum (Al)			104.1		%		70-130	13-OCT-21
Antimony (Sb)			90.7		%		70-130	13-OCT-21
Arsenic (As)			96.8		%		70-130	13-OCT-21
Barium (Ba)			103.9		%		70-130	13-OCT-21
Beryllium (Be)			104.8		%		70-130	13-OCT-21
Bismuth (Bi)			0.14		mg/kg		0-0.34	13-OCT-21
Boron (B)			9.0		mg/kg		3.5-13.5	13-OCT-21
Cadmium (Cd)			94.1		%		70-130	13-OCT-21
Calcium (Ca)			101.5		%		70-130	13-OCT-21
Chromium (Cr)			97.9		%		70-130	13-OCT-21
Cobalt (Co)			99.0		%		70-130	13-OCT-21
Copper (Cu)			98.9		%		70-130	13-OCT-21
Iron (Fe)			99.2		%		70-130	13-OCT-21
Lead (Pb)			96.8		%		70-130	13-OCT-21
Lithium (Li)			98.7		%		70-130	13-OCT-21
Magnesium (Mg)			103.5		%		70-130	13-OCT-21
Manganese (Mn)			98.9		%		70-130	13-OCT-21
Molybdenum (Mo)			97.6		%		70-130	13-OCT-21
Nickel (Ni)			100.9		%		70-130	13-OCT-21
Phosphorus (P)			101.9		%		70-130	13-OCT-21
Potassium (K)			98.7		%		70-130	13-OCT-21
Selenium (Se)			0.12		mg/kg		0-0.34	13-OCT-21
Silver (Ag)			100.8		%		70-130	13-OCT-21
Sodium (Na)			98.3		%		70-130	13-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5616646								
WG3635707-2 CRM		**WT-SS-2**						
Strontium (Sr)			96.2		%		70-130	13-OCT-21
Thallium (Tl)			0.075		mg/kg		0.029-0.129	13-OCT-21
Tin (Sn)			92.9		%		70-130	13-OCT-21
Titanium (Ti)			101.2		%		70-130	13-OCT-21
Uranium (U)			95.3		%		70-130	13-OCT-21
Vanadium (V)			101.2		%		70-130	13-OCT-21
Zinc (Zn)			93.8		%		70-130	13-OCT-21
Zirconium (Zr)			96.6		%		70-130	13-OCT-21
WG3635707-6 DUP		**WG3635707-5**						
Aluminum (Al)		13500	14100		ug/g	4.6	40	13-OCT-21
Antimony (Sb)		3.42	3.44		ug/g	0.6	30	13-OCT-21
Arsenic (As)		7.07	7.30		ug/g	3.1	30	13-OCT-21
Barium (Ba)		331	359		ug/g	8.2	40	13-OCT-21
Beryllium (Be)		0.58	0.65		ug/g	11	30	13-OCT-21
Bismuth (Bi)		0.65	0.63		ug/g	3.2	30	13-OCT-21
Boron (B)		16	16		ug/g	2.5	30	13-OCT-21
Cadmium (Cd)		1.32	1.38		ug/g	4.3	30	13-OCT-21
Calcium (Ca)		169000	173000		ug/g	2.2	30	13-OCT-21
Chromium (Cr)		3890	4040		ug/g	3.7	30	13-OCT-21
Cobalt (Co)		11.6	12.5		ug/g	7.4	30	13-OCT-21
Copper (Cu)		69.7	76.5		ug/g	9.3	30	13-OCT-21
Iron (Fe)		24800	26300		ug/g	6.1	30	13-OCT-21
Lead (Pb)		263	276		ug/g	4.7	40	13-OCT-21
Lithium (Li)		15.2	15.6		ug/g	2.8	30	13-OCT-21
Magnesium (Mg)		15300	16700		ug/g	8.7	30	13-OCT-21
Manganese (Mn)		803	893		ug/g	11	30	13-OCT-21
Molybdenum (Mo)		1.94	2.12		ug/g	8.7	40	13-OCT-21
Nickel (Ni)		23.4	25.0		ug/g	6.6	30	13-OCT-21
Phosphorus (P)		1810	1940		ug/g	7.3	30	13-OCT-21
Potassium (K)		3160	3270		ug/g	3.3	40	13-OCT-21
Selenium (Se)		1.15	1.27		ug/g	9.9	30	13-OCT-21
Silver (Ag)		0.58	0.63		ug/g	8.4	40	13-OCT-21
Sodium (Na)		610	640		ug/g	5.1	40	13-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5616646								
WG3635707-6 DUP		**WG3635707-5**						
Strontium (Sr)		917	939		ug/g	2.3	40	13-OCT-21
Sulfur (S)		7400	8100		ug/g	9.9	30	13-OCT-21
Thallium (Tl)		0.29	0.29		ug/g	0.1	30	13-OCT-21
Tin (Sn)		8.2	9.0		ug/g	8.8	40	13-OCT-21
Titanium (Ti)		711	732		ug/g	2.9	40	13-OCT-21
Tungsten (W)		2.7	2.7		ug/g	0.3	30	13-OCT-21
Uranium (U)		0.64	0.63		ug/g	1.3	30	13-OCT-21
Vanadium (V)		42.7	44.9		ug/g	5.0	30	13-OCT-21
Zinc (Zn)		305	319		ug/g	4.4	30	13-OCT-21
Zirconium (Zr)		2.3	2.2		ug/g	4.3	30	13-OCT-21
WG3635707-4 LCS								
Aluminum (Al)			106.4		%		80-120	13-OCT-21
Antimony (Sb)			104.5		%		80-120	13-OCT-21
Arsenic (As)			109.4		%		80-120	13-OCT-21
Barium (Ba)			109.0		%		80-120	13-OCT-21
Beryllium (Be)			100.6		%		80-120	13-OCT-21
Bismuth (Bi)			103.9		%		80-120	13-OCT-21
Boron (B)			97.9		%		80-120	13-OCT-21
Cadmium (Cd)			97.8		%		80-120	13-OCT-21
Calcium (Ca)			102.9		%		80-120	13-OCT-21
Chromium (Cr)			105.2		%		80-120	13-OCT-21
Cobalt (Co)			103.1		%		80-120	13-OCT-21
Copper (Cu)			101.7		%		80-120	13-OCT-21
Iron (Fe)			106.4		%		80-120	13-OCT-21
Lead (Pb)			101.9		%		80-120	13-OCT-21
Lithium (Li)			98.9		%		80-120	13-OCT-21
Magnesium (Mg)			107.0		%		80-120	13-OCT-21
Manganese (Mn)			105.3		%		80-120	13-OCT-21
Molybdenum (Mo)			105.3		%		80-120	13-OCT-21
Nickel (Ni)			101.5		%		80-120	13-OCT-21
Phosphorus (P)			112.9		%		80-120	13-OCT-21
Potassium (K)			103.2		%		80-120	13-OCT-21
Selenium (Se)			102.5		%		80-120	13-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5616646								
WG3635707-4 LCS								
Silver (Ag)			94.8		%		80-120	13-OCT-21
Sodium (Na)			105.2		%		80-120	13-OCT-21
Strontium (Sr)			105.3		%		80-120	13-OCT-21
Sulfur (S)			101.4		%		80-120	13-OCT-21
Thallium (Tl)			102.9		%		80-120	13-OCT-21
Tin (Sn)			100.4		%		80-120	13-OCT-21
Titanium (Ti)			106.2		%		80-120	13-OCT-21
Tungsten (W)			105.3		%		80-120	13-OCT-21
Uranium (U)			103.1		%		80-120	13-OCT-21
Vanadium (V)			107.5		%		80-120	13-OCT-21
Zinc (Zn)			98.1		%		80-120	13-OCT-21
Zirconium (Zr)			101.5		%		80-120	13-OCT-21
WG3635707-1 MB								
Aluminum (Al)			<50		mg/kg		50	13-OCT-21
Antimony (Sb)			<0.10		mg/kg		0.1	13-OCT-21
Arsenic (As)			<0.10		mg/kg		0.1	13-OCT-21
Barium (Ba)			<0.50		mg/kg		0.5	13-OCT-21
Beryllium (Be)			<0.10		mg/kg		0.1	13-OCT-21
Bismuth (Bi)			<0.20		mg/kg		0.2	13-OCT-21
Boron (B)			<5.0		mg/kg		5	13-OCT-21
Cadmium (Cd)			<0.020		mg/kg		0.02	13-OCT-21
Calcium (Ca)			<50		mg/kg		50	13-OCT-21
Chromium (Cr)			<0.50		mg/kg		0.5	13-OCT-21
Cobalt (Co)			<0.10		mg/kg		0.1	13-OCT-21
Copper (Cu)			<0.50		mg/kg		0.5	13-OCT-21
Iron (Fe)			<50		mg/kg		50	13-OCT-21
Lead (Pb)			<0.50		mg/kg		0.5	13-OCT-21
Lithium (Li)			<2.0		mg/kg		2	13-OCT-21
Magnesium (Mg)			<20		mg/kg		20	13-OCT-21
Manganese (Mn)			<1.0		mg/kg		1	13-OCT-21
Molybdenum (Mo)			<0.10		mg/kg		0.1	13-OCT-21
Nickel (Ni)			<0.50		mg/kg		0.5	13-OCT-21
Phosphorus (P)			<50		mg/kg		50	13-OCT-21
Potassium (K)			<100		mg/kg		100	13-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5616646								
WG3635707-1 MB								
Selenium (Se)			<0.20		mg/kg		0.2	13-OCT-21
Silver (Ag)			<0.10		mg/kg		0.1	13-OCT-21
Sodium (Na)			<50		mg/kg		50	13-OCT-21
Strontium (Sr)			<0.50		mg/kg		0.5	13-OCT-21
Sulfur (S)			<1000		mg/kg		1000	13-OCT-21
Thallium (Tl)			<0.050		mg/kg		0.05	13-OCT-21
Tin (Sn)			<2.0		mg/kg		2	13-OCT-21
Titanium (Ti)			<1.0		mg/kg		1	13-OCT-21
Tungsten (W)			<0.50		mg/kg		0.5	13-OCT-21
Uranium (U)			<0.050		mg/kg		0.05	13-OCT-21
Vanadium (V)			<0.20		mg/kg		0.2	13-OCT-21
Zinc (Zn)			<2.0		mg/kg		2	13-OCT-21
Zirconium (Zr)			<1.0		mg/kg		1	13-OCT-21
Batch R5617181								
WG3636284-2 CRM		**WT-SS-2**						
Aluminum (Al)			123.8		%		70-130	13-OCT-21
Antimony (Sb)			115.9		%		70-130	13-OCT-21
Arsenic (As)			117.3		%		70-130	13-OCT-21
Barium (Ba)			125.2		%		70-130	13-OCT-21
Beryllium (Be)			107.8		%		70-130	13-OCT-21
Bismuth (Bi)			0.19		mg/kg		0-0.34	13-OCT-21
Boron (B)			9.1		mg/kg		3.5-13.5	13-OCT-21
Cadmium (Cd)			119.0		%		70-130	13-OCT-21
Calcium (Ca)			111.3		%		70-130	13-OCT-21
Chromium (Cr)			117.8		%		70-130	13-OCT-21
Cobalt (Co)			115.5		%		70-130	13-OCT-21
Copper (Cu)			117.4		%		70-130	13-OCT-21
Iron (Fe)			117.5		%		70-130	13-OCT-21
Lead (Pb)			106.3		%		70-130	13-OCT-21
Lithium (Li)			96.8		%		70-130	13-OCT-21
Magnesium (Mg)			125.5		%		70-130	13-OCT-21
Manganese (Mn)			124.4		%		70-130	13-OCT-21
Molybdenum (Mo)			114.1		%		70-130	13-OCT-21
Nickel (Ni)			115.8		%		70-130	13-OCT-21

Quality Control Report

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100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5617181								
WG3636284-2 CRM		**WT-SS-2**						
Phosphorus (P)			123.6		%		70-130	13-OCT-21
Potassium (K)			115.9		%		70-130	13-OCT-21
Selenium (Se)			0.15		mg/kg		0-0.34	13-OCT-21
Silver (Ag)			112.7		%		70-130	13-OCT-21
Sodium (Na)			117.5		%		70-130	13-OCT-21
Strontium (Sr)			111.8		%		70-130	13-OCT-21
Thallium (Tl)			0.080		mg/kg		0.029-0.129	13-OCT-21
Tin (Sn)			106.6		%		70-130	13-OCT-21
Titanium (Ti)			116.0		%		70-130	13-OCT-21
Uranium (U)			117.2		%		70-130	13-OCT-21
Vanadium (V)			117.5		%		70-130	13-OCT-21
Zinc (Zn)			110.0		%		70-130	13-OCT-21
Zirconium (Zr)			113.8		%		70-130	13-OCT-21
WG3636284-6 DUP		**WG3636284-5**						
Aluminum (Al)		12900	14300		ug/g	9.6	40	13-OCT-21
Antimony (Sb)		0.80	0.85		ug/g	5.8	30	13-OCT-21
Arsenic (As)		5.14	5.90		ug/g	14	30	13-OCT-21
Barium (Ba)		202	227		ug/g	12	40	13-OCT-21
Beryllium (Be)		0.50	0.56		ug/g	12	30	13-OCT-21
Bismuth (Bi)		0.25	0.28		ug/g	13	30	13-OCT-21
Boron (B)		8.4	8.5		ug/g	0.6	30	13-OCT-21
Cadmium (Cd)		0.569	0.613		ug/g	7.4	30	13-OCT-21
Calcium (Ca)		61300	63800		ug/g	4.0	30	13-OCT-21
Chromium (Cr)		1500	1450		ug/g	3.9	30	13-OCT-21
Cobalt (Co)		10.4	11.6		ug/g	11	30	13-OCT-21
Copper (Cu)		32.8	36.5		ug/g	11	30	13-OCT-21
Iron (Fe)		21500	23600		ug/g	9.4	30	13-OCT-21
Lead (Pb)		104	117		ug/g	11	40	13-OCT-21
Lithium (Li)		9.4	9.8		ug/g	3.5	30	13-OCT-21
Magnesium (Mg)		13500	15000		ug/g	10	30	13-OCT-21
Manganese (Mn)		761	842		ug/g	10	30	13-OCT-21
Molybdenum (Mo)		0.87	0.90		ug/g	4.2	40	13-OCT-21
Nickel (Ni)		19.3	21.2		ug/g	9.4	30	13-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5617181								
WG3636284-6 DUP		**WG3636284-5**						
Phosphorus (P)		1330	1430		ug/g	7.2	30	13-OCT-21
Potassium (K)		2760	3130		ug/g	12	40	13-OCT-21
Selenium (Se)		0.70	0.79		ug/g	12	30	13-OCT-21
Silver (Ag)		0.30	0.40		ug/g	27	40	13-OCT-21
Sodium (Na)		455	503		ug/g	10	40	13-OCT-21
Strontium (Sr)		353	377		ug/g	6.8	40	13-OCT-21
Sulfur (S)		5900	6400		ug/g	8.7	30	13-OCT-21
Thallium (Tl)		0.221	0.255		ug/g	14	30	13-OCT-21
Tin (Sn)		5.2	6.8		ug/g	26	40	13-OCT-21
Titanium (Ti)		740	779		ug/g	5.1	40	13-OCT-21
Tungsten (W)		<0.50	<0.50	RPD-NA	ug/g	N/A	30	13-OCT-21
Uranium (U)		0.563	0.633		ug/g	12	30	13-OCT-21
Vanadium (V)		33.4	36.9		ug/g	9.9	30	13-OCT-21
Zinc (Zn)		143	158		ug/g	9.9	30	13-OCT-21
Zirconium (Zr)		3.7	4.1		ug/g	9.2	30	13-OCT-21
WG3636284-4 LCS								
Aluminum (Al)			100.5		%		80-120	13-OCT-21
Antimony (Sb)			99.4		%		80-120	13-OCT-21
Arsenic (As)			101.5		%		80-120	13-OCT-21
Barium (Ba)			101.1		%		80-120	13-OCT-21
Beryllium (Be)			92.4		%		80-120	13-OCT-21
Bismuth (Bi)			92.9		%		80-120	13-OCT-21
Boron (B)			88.1		%		80-120	13-OCT-21
Cadmium (Cd)			95.4		%		80-120	13-OCT-21
Calcium (Ca)			96.0		%		80-120	13-OCT-21
Chromium (Cr)			99.0		%		80-120	13-OCT-21
Cobalt (Co)			99.2		%		80-120	13-OCT-21
Copper (Cu)			96.8		%		80-120	13-OCT-21
Iron (Fe)			99.0		%		80-120	13-OCT-21
Lead (Pb)			96.1		%		80-120	13-OCT-21
Lithium (Li)			81.7		%		80-120	13-OCT-21
Magnesium (Mg)			108.4		%		80-120	13-OCT-21
Manganese (Mn)			99.0		%		80-120	13-OCT-21

Quality Control Report

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100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5617181								
WG3636284-4 LCS								
Molybdenum (Mo)			96.9		%		80-120	13-OCT-21
Nickel (Ni)			96.4		%		80-120	13-OCT-21
Phosphorus (P)			108.4		%		80-120	13-OCT-21
Potassium (K)			103.7		%		80-120	13-OCT-21
Selenium (Se)			98.2		%		80-120	13-OCT-21
Silver (Ag)			86.5		%		80-120	13-OCT-21
Sodium (Na)			103.6		%		80-120	13-OCT-21
Strontium (Sr)			103.5		%		80-120	13-OCT-21
Sulfur (S)			96.4		%		80-120	13-OCT-21
Thallium (Tl)			94.5		%		80-120	13-OCT-21
Tin (Sn)			96.5		%		80-120	13-OCT-21
Titanium (Ti)			100.3		%		80-120	13-OCT-21
Tungsten (W)			90.8		%		80-120	13-OCT-21
Uranium (U)			91.5		%		80-120	13-OCT-21
Vanadium (V)			101.7		%		80-120	13-OCT-21
Zinc (Zn)			92.9		%		80-120	13-OCT-21
Zirconium (Zr)			93.9		%		80-120	13-OCT-21
WG3636284-1 MB								
Aluminum (Al)			<50		mg/kg		50	13-OCT-21
Antimony (Sb)			<0.10		mg/kg		0.1	13-OCT-21
Arsenic (As)			<0.10		mg/kg		0.1	13-OCT-21
Barium (Ba)			<0.50		mg/kg		0.5	13-OCT-21
Beryllium (Be)			<0.10		mg/kg		0.1	13-OCT-21
Bismuth (Bi)			<0.20		mg/kg		0.2	13-OCT-21
Boron (B)			<5.0		mg/kg		5	13-OCT-21
Cadmium (Cd)			<0.020		mg/kg		0.02	13-OCT-21
Calcium (Ca)			<50		mg/kg		50	13-OCT-21
Chromium (Cr)			<0.50		mg/kg		0.5	13-OCT-21
Cobalt (Co)			<0.10		mg/kg		0.1	13-OCT-21
Copper (Cu)			<0.50		mg/kg		0.5	13-OCT-21
Iron (Fe)			<50		mg/kg		50	13-OCT-21
Lead (Pb)			<0.50		mg/kg		0.5	13-OCT-21
Lithium (Li)			<2.0		mg/kg		2	13-OCT-21
Magnesium (Mg)			<20		mg/kg		20	13-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5617181								
WG3636284-1 MB								
Manganese (Mn)			<1.0		mg/kg		1	13-OCT-21
Molybdenum (Mo)			<0.10		mg/kg		0.1	13-OCT-21
Nickel (Ni)			<0.50		mg/kg		0.5	13-OCT-21
Phosphorus (P)			<50		mg/kg		50	13-OCT-21
Potassium (K)			<100		mg/kg		100	13-OCT-21
Selenium (Se)			<0.20		mg/kg		0.2	13-OCT-21
Silver (Ag)			<0.10		mg/kg		0.1	13-OCT-21
Sodium (Na)			<50		mg/kg		50	13-OCT-21
Strontium (Sr)			<0.50		mg/kg		0.5	13-OCT-21
Sulfur (S)			<1000		mg/kg		1000	13-OCT-21
Thallium (Tl)			<0.050		mg/kg		0.05	13-OCT-21
Tin (Sn)			<2.0		mg/kg		2	13-OCT-21
Titanium (Ti)			<1.0		mg/kg		1	13-OCT-21
Tungsten (W)			<0.50		mg/kg		0.5	13-OCT-21
Uranium (U)			<0.050		mg/kg		0.05	13-OCT-21
Vanadium (V)			<0.20		mg/kg		0.2	13-OCT-21
Zinc (Zn)			<2.0		mg/kg		2	13-OCT-21
Zirconium (Zr)			<1.0		mg/kg		1	13-OCT-21
MOISTURE-WT	**Soil**							
Batch R5614233								
WG3633468-3 DUP		**L2648075-1**						
% Moisture		97.3	97.3		%	0.0	20	08-OCT-21
WG3633468-2 LCS								
% Moisture			99.6		%		90-110	08-OCT-21
WG3633468-1 MB								
% Moisture			<0.25		%		0.25	08-OCT-21
Batch R5614787								
WG3633674-3 DUP		**L2646580-20**						
% Moisture		18.5	16.9		%	9.4	20	08-OCT-21
WG3633674-2 LCS								
% Moisture			99.4		%		90-110	08-OCT-21
WG3633674-1 MB								
% Moisture			<0.25		%		0.25	08-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MOISTURE-WT	**Soil**							
Batch R5614911								
WG3634630-3 DUP		**L2648161-18**						
% Moisture		72.7	74.0		%	1.7	20	09-OCT-21
WG3634630-2 LCS								
% Moisture			99.5		%		90-110	09-OCT-21
WG3634630-1 MB								
% Moisture			<0.25		%		0.25	09-OCT-21
Batch R5614942								
WG3634256-9 DUP		**L2648161-10**						
% Moisture		85.5	84.9		%	0.8	20	09-OCT-21
WG3634256-8 LCS								
% Moisture			99.7		%		90-110	09-OCT-21
WG3634256-7 MB								
% Moisture			<0.25		%		0.25	09-OCT-21
Batch R5616948								
WG3636415-3 DUP		**L2649385-1**						
% Moisture		32.3	31.4		%	2.7	20	14-OCT-21
WG3636415-2 LCS								
% Moisture			100.0		%		90-110	14-OCT-21
WG3636415-1 MB								
% Moisture			<0.25		%		0.25	14-OCT-21
PAH-CCME-SQGL-WT	**Soil**							
Batch R5616732								
WG3636177-3 DUP		**WG3636177-5**						
1-Methylnaphthalene		<0.0050	<0.0050	RPD-NA	ug/g	N/A	50	13-OCT-21
2-Methylnaphthalene		<0.0050	<0.0050	RPD-NA	ug/g	N/A	50	13-OCT-21
Acenaphthene		<0.0050	<0.0050	RPD-NA	ug/g	N/A	50	13-OCT-21
Acenaphthylene		<0.0050	<0.0050	RPD-NA	ug/g	N/A	50	13-OCT-21
Acridine		<0.010	<0.010	RPD-NA	ug/g	N/A	50	13-OCT-21
Anthracene		<0.0040	<0.0040	RPD-NA	ug/g	N/A	50	13-OCT-21
Benzo(a)anthracene		<0.010	<0.010	RPD-NA	ug/g	N/A	50	13-OCT-21
Benzo(a)pyrene		<0.0050	0.0117	DUP-H	ug/g	N/A	50	13-OCT-21
Benzo(b&j)fluoranthene		<0.010	0.015	RPD-NA	ug/g	N/A	50	13-OCT-21
Benzo(g,h,i)perylene		<0.010	<0.010	RPD-NA	ug/g	N/A	50	13-OCT-21
Benzo(k)fluoranthene		<0.010	<0.010	RPD-NA	ug/g	N/A	50	13-OCT-21
Chrysene		<0.010	0.012	RPD-NA	ug/g	N/A	50	13-OCT-21
Dibenz(a,h)anthracene		<0.0050	<0.0050	RPD-NA	ug/g	N/A	50	13-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-CCME-SQGL-WT	**Soil**							
Batch R5616732								
WG3636177-3 DUP		**WG3636177-5**						
Fluoroanthene		<0.0050	0.0126	DUP-H	ug/g	N/A	50	13-OCT-21
Fluorene		<0.0050	<0.0050	RPD-NA	ug/g	N/A	50	13-OCT-21
Indeno(1,2,3-cd)pyrene		<0.010	<0.010	RPD-NA	ug/g	N/A	50	13-OCT-21
Naphthalene		<0.0050	<0.0050	RPD-NA	ug/g	N/A	50	13-OCT-21
Phenanthrene		<0.0050	<0.0050	RPD-NA	ug/g	N/A	50	13-OCT-21
Pyrene		<0.0050	0.0116	DUP-H	ug/g	N/A	50	13-OCT-21
Quinoline		<0.0050	<0.0050	RPD-NA	ug/g	N/A	50	13-OCT-21
WG3636177-2 LCS								
1-Methylnaphthalene			96.2		%		50-140	13-OCT-21
2-Methylnaphthalene			92.5		%		50-140	13-OCT-21
Acenaphthene			92.1		%		50-140	13-OCT-21
Acenaphthylene			89.8		%		50-140	13-OCT-21
Acridine			93.0		%		50-140	13-OCT-21
Anthracene			85.1		%		50-140	13-OCT-21
Benzo(a)anthracene			99.1		%		50-140	13-OCT-21
Benzo(a)pyrene			82.7		%		50-140	13-OCT-21
Benzo(b&j)fluoranthene			89.6		%		50-150	13-OCT-21
Benzo(g,h,i)perylene			93.6		%		50-140	13-OCT-21
Benzo(k)fluoranthene			93.3		%		50-140	13-OCT-21
Chrysene			99.4		%		50-140	13-OCT-21
Dibenz(a,h)anthracene			97.2		%		50-140	13-OCT-21
Fluoroanthene			95.9		%		50-140	13-OCT-21
Fluorene			91.5		%		50-140	13-OCT-21
Indeno(1,2,3-cd)pyrene			94.8		%		50-140	13-OCT-21
Naphthalene			89.3		%		50-140	13-OCT-21
Phenanthrene			95.0		%		50-140	13-OCT-21
Pyrene			95.7		%		50-140	13-OCT-21
Quinoline			80.6		%		50-140	13-OCT-21
WG3636177-1 MB								
1-Methylnaphthalene			<0.0050		ug/g		0.005	13-OCT-21
2-Methylnaphthalene			<0.0050		ug/g		0.005	13-OCT-21
Acenaphthene			<0.0050		ug/g		0.005	13-OCT-21
Acenaphthylene			<0.0050		ug/g		0.005	13-OCT-21
Acridine			<0.010		ug/g		0.01	13-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-CCME-SQGL-WT	**Soil**							
Batch R5616732								
WG3636177-1 MB								
Anthracene			<0.0040		ug/g		0.004	13-OCT-21
Benzo(a)anthracene			<0.010		ug/g		0.01	13-OCT-21
Benzo(a)pyrene			<0.0050		ug/g		0.005	13-OCT-21
Benzo(b&j)fluoranthene			<0.010		ug/g		0.01	13-OCT-21
Benzo(g,h,i)perylene			<0.010		ug/g		0.01	13-OCT-21
Benzo(k)fluoranthene			<0.010		ug/g		0.01	13-OCT-21
Chrysene			<0.010		ug/g		0.01	13-OCT-21
Dibenz(a,h)anthracene			<0.0050		ug/g		0.005	13-OCT-21
Fluoroanthene			<0.0050		ug/g		0.005	13-OCT-21
Fluorene			<0.0050		ug/g		0.005	13-OCT-21
Indeno(1,2,3-cd)pyrene			<0.010		ug/g		0.01	13-OCT-21
Naphthalene			<0.0050		ug/g		0.005	13-OCT-21
Phenanthrene			<0.0050		ug/g		0.005	13-OCT-21
Pyrene			<0.0050		ug/g		0.005	13-OCT-21
Quinoline			<0.0050		ug/g		0.005	13-OCT-21
Surrogate: 2-Fluorobiphenyl			85.4		%		60-140	13-OCT-21
Surrogate: d14-Terphenyl			90.4		%		60-140	13-OCT-21
WG3636177-4 MS		**WG3636177-5**						
1-Methylnaphthalene			93.9		%		50-150	13-OCT-21
2-Methylnaphthalene			90.4		%		50-150	13-OCT-21
Acenaphthene			90.8		%		50-150	13-OCT-21
Acenaphthylene			85.9		%		50-150	13-OCT-21
Acridine			98.1		%		50-150	13-OCT-21
Anthracene			83.7		%		50-150	13-OCT-21
Benzo(a)anthracene			97.6		%		50-150	13-OCT-21
Benzo(a)pyrene			79.9		%		50-150	13-OCT-21
Benzo(b&j)fluoranthene			88.1		%		50-150	13-OCT-21
Benzo(g,h,i)perylene			89.5		%		50-150	13-OCT-21
Benzo(k)fluoranthene			89.7		%		50-150	13-OCT-21
Chrysene			95.5		%		50-150	13-OCT-21
Dibenz(a,h)anthracene			93.1		%		50-150	13-OCT-21
Fluoroanthene			94.1		%		50-150	13-OCT-21
Fluorene			91.8		%		50-150	13-OCT-21
Indeno(1,2,3-cd)pyrene			91.0		%		50-150	13-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-CCME-SQGL-WT	**Soil**							
Batch R5616732								
WG3636177-4 MS		**WG3636177-5**						
Naphthalene			86.9		%		50-150	13-OCT-21
Phenanthrene			92.5		%		50-150	13-OCT-21
Pyrene			92.4		%		50-150	13-OCT-21
Quinoline			89.6		%		50-150	13-OCT-21
Batch R5617221								
WG3636176-3 DUP		**WG3636176-5**						
1-Methylnaphthalene		0.041	0.039		ug/g	5.7	50	14-OCT-21
2-Methylnaphthalene		0.057	0.056		ug/g	1.2	50	14-OCT-21
Acenaphthene		0.127	0.132		ug/g	3.8	50	14-OCT-21
Acenaphthylene		1.03	0.956		ug/g	7.2	50	14-OCT-21
Acridine		<0.150	<0.170		ug/g	15	50	14-OCT-21
Anthracene		0.387	0.323		ug/g	18	50	14-OCT-21
Benzo(a)anthracene		1.75	1.66		ug/g	5.2	50	14-OCT-21
Benzo(a)pyrene		2.13	1.97		ug/g	7.8	50	14-OCT-21
Benzo(b&j)fluoranthene		1.71	1.60		ug/g	6.8	50	14-OCT-21
Benzo(g,h,i)perylene		1.24	1.14		ug/g	8.4	50	14-OCT-21
Benzo(k)fluoranthene		0.627	0.473		ug/g	28	50	14-OCT-21
Chrysene		1.68	1.49		ug/g	12	50	14-OCT-21
Dibenz(a,h)anthracene		0.292	0.283		ug/g	2.8	50	14-OCT-21
Fluoroanthene		1.70	1.68		ug/g	1.1	50	14-OCT-21
Fluorene		0.159	0.147		ug/g	7.7	50	14-OCT-21
Indeno(1,2,3-cd)pyrene		0.936	0.876		ug/g	6.7	50	14-OCT-21
Naphthalene		0.049	0.050		ug/g	2.3	50	14-OCT-21
Phenanthrene		0.583	0.589		ug/g	1.1	50	14-OCT-21
Pyrene		2.89	2.77		ug/g	4.4	50	14-OCT-21
Quinoline		<0.015	<0.015	RPD-NA	ug/g	N/A	50	14-OCT-21
WG3636176-2 LCS								
1-Methylnaphthalene			95.4		%		50-140	14-OCT-21
2-Methylnaphthalene			92.8		%		50-140	14-OCT-21
Acenaphthene			93.3		%		50-140	14-OCT-21
Acenaphthylene			96.3		%		50-140	14-OCT-21
Acridine			90.0		%		50-140	14-OCT-21
Anthracene			86.3		%		50-140	14-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-CCME-SQGL-WT	**Soil**							
Batch R5617221								
WG3636176-2 LCS								
Benzo(a)anthracene			105.8		%		50-140	14-OCT-21
Benzo(a)pyrene			82.7		%		50-140	14-OCT-21
Benzo(b&j)fluoranthene			79.9		%		50-150	14-OCT-21
Benzo(g,h,i)perylene			92.4		%		50-140	14-OCT-21
Benzo(k)fluoranthene			92.1		%		50-140	14-OCT-21
Chrysene			96.0		%		50-140	14-OCT-21
Dibenz(a,h)anthracene			96.2		%		50-140	14-OCT-21
Fluoroanthene			95.0		%		50-140	14-OCT-21
Fluorene			94.3		%		50-140	14-OCT-21
Indeno(1,2,3-cd)pyrene			99.1		%		50-140	14-OCT-21
Naphthalene			88.8		%		50-140	14-OCT-21
Phenanthrene			91.5		%		50-140	14-OCT-21
Pyrene			92.3		%		50-140	14-OCT-21
Quinoline			81.6		%		50-140	14-OCT-21
WG3636176-1 MB								
1-Methylnaphthalene			<0.0050		ug/g		0.005	14-OCT-21
2-Methylnaphthalene			<0.0050		ug/g		0.005	14-OCT-21
Acenaphthene			<0.0050		ug/g		0.005	14-OCT-21
Acenaphthylene			<0.0050		ug/g		0.005	14-OCT-21
Acridine			<0.010		ug/g		0.01	14-OCT-21
Anthracene			<0.0040		ug/g		0.004	14-OCT-21
Benzo(a)anthracene			<0.010		ug/g		0.01	14-OCT-21
Benzo(a)pyrene			<0.0050		ug/g		0.005	14-OCT-21
Benzo(b&j)fluoranthene			<0.010		ug/g		0.01	14-OCT-21
Benzo(g,h,i)perylene			<0.010		ug/g		0.01	14-OCT-21
Benzo(k)fluoranthene			<0.010		ug/g		0.01	14-OCT-21
Chrysene			<0.010		ug/g		0.01	14-OCT-21
Dibenz(a,h)anthracene			<0.0050		ug/g		0.005	14-OCT-21
Fluoroanthene			<0.0050		ug/g		0.005	14-OCT-21
Fluorene			<0.0050		ug/g		0.005	14-OCT-21
Indeno(1,2,3-cd)pyrene			<0.010		ug/g		0.01	14-OCT-21
Naphthalene			<0.0050		ug/g		0.005	14-OCT-21
Phenanthrene			<0.0050		ug/g		0.005	14-OCT-21
Pyrene			<0.0050		ug/g		0.005	14-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-CCME-SQGL-WT	**Soil**							
Batch R5617221								
WG3636176-1 MB								
Quinoline			<0.0050		ug/g		0.005	14-OCT-21
Surrogate: 2-Fluorobiphenyl			88.4		%		60-140	14-OCT-21
Surrogate: d14-Terphenyl			91.2		%		60-140	14-OCT-21
WG3636176-4 MS		**WG3636176-5**						
1-Methylnaphthalene			97.3		%		50-150	14-OCT-21
2-Methylnaphthalene			95.5		%		50-150	14-OCT-21
Acenaphthene			95.7		%		50-150	14-OCT-21
Acenaphthylene			56.8		%		50-150	14-OCT-21
Acridine			91.5		%		50-150	14-OCT-21
Anthracene			86.8		%		50-150	14-OCT-21
Benzo(a)anthracene			N/A	MS-B	%		-	14-OCT-21
Benzo(a)pyrene			N/A	MS-B	%		-	14-OCT-21
Benzo(b&j)fluoranthene			71.8		%		50-150	14-OCT-21
Benzo(g,h,i)perylene			81.9		%		50-150	14-OCT-21
Benzo(k)fluoranthene			79.0		%		50-150	14-OCT-21
Chrysene			88.8		%		50-150	14-OCT-21
Dibenz(a,h)anthracene			82.5		%		50-150	14-OCT-21
Fluoroanthene			107.1		%		50-150	14-OCT-21
Fluorene			103.9		%		50-150	14-OCT-21
Indeno(1,2,3-cd)pyrene			93.2		%		50-150	14-OCT-21
Naphthalene			88.5		%		50-150	14-OCT-21
Phenanthrene			96.1		%		50-150	14-OCT-21
Pyrene			N/A	MS-B	%		-	14-OCT-21
Quinoline			88.6		%		50-150	14-OCT-21
PCB9-LOW-WT	**Soil**							
Batch R5623376								
WG3638108-3 DUP		**WG3638108-5**						
Aroclor 1016		<0.023	<0.023	RPD-NA	mg/kg	N/A	50	18-OCT-21
Aroclor 1221		<0.023	<0.023	RPD-NA	mg/kg	N/A	50	18-OCT-21
Aroclor 1232		<0.023	<0.023	RPD-NA	mg/kg	N/A	50	18-OCT-21
Aroclor 1242		<0.023	<0.023	RPD-NA	mg/kg	N/A	40	18-OCT-21
Aroclor 1248		<0.023	<0.023	RPD-NA	mg/kg	N/A	40	18-OCT-21
Aroclor 1254		0.097	0.113		mg/kg	15	40	18-OCT-21
Aroclor 1260		0.161	0.221		mg/kg	31	40	18-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PCB9-LOW-WT	**Soil**							
Batch R5623376								
WG3638108-3 DUP		**WG3638108-5**						
Aroclor 1262		<0.023	<0.023	RPD-NA	mg/kg	N/A	50	18-OCT-21
Aroclor 1268		<0.023	<0.023	RPD-NA	mg/kg	N/A	50	18-OCT-21
WG3638108-2 LCS								
Aroclor 1242			84.9		%		60-140	18-OCT-21
Aroclor 1248			116.2		%		-	18-OCT-21
Aroclor 1254			112.0		%		60-140	18-OCT-21
Aroclor 1260			113.9		%		60-140	18-OCT-21
WG3638108-1 MB								
Aroclor 1016			<0.0030		mg/kg		0.003	18-OCT-21
Aroclor 1221			<0.0030		mg/kg		0.003	18-OCT-21
Aroclor 1232			<0.0030		mg/kg		0.003	18-OCT-21
Aroclor 1242			<0.0030		mg/kg		0.003	18-OCT-21
Aroclor 1248			<0.0030		mg/kg		0.003	18-OCT-21
Aroclor 1254			<0.0030		mg/kg		0.003	18-OCT-21
Aroclor 1260			<0.0030		mg/kg		0.003	18-OCT-21
Aroclor 1262			<0.0030		mg/kg		0.003	18-OCT-21
Aroclor 1268			<0.0030		mg/kg		0.003	18-OCT-21
Surrogate: d14-Terphenyl			113.0		%		50-140	18-OCT-21
WG3638108-4 MS		**WG3638108-5**						
Aroclor 1242			120.8		%		60-140	18-OCT-21
Aroclor 1254			130.5		%		60-140	18-OCT-21
Aroclor 1260			N/A	MS-B	%		-	18-OCT-21
Batch R5623933								
WG3636193-3 DUP		**WG3636193-5**						
Aroclor 1016		<0.045	<0.045	RPD-NA	mg/kg	N/A	50	18-OCT-21
Aroclor 1221		<0.045	<0.045	RPD-NA	mg/kg	N/A	50	18-OCT-21
Aroclor 1232		<0.045	<0.045	RPD-NA	mg/kg	N/A	50	18-OCT-21
Aroclor 1242		<0.045	<0.045	RPD-NA	mg/kg	N/A	40	18-OCT-21
Aroclor 1248		<0.045	<0.045	RPD-NA	mg/kg	N/A	40	18-OCT-21
Aroclor 1254		0.130	0.155		mg/kg	17	40	18-OCT-21
Aroclor 1260		<0.045	<0.045	RPD-NA	mg/kg	N/A	40	18-OCT-21
Aroclor 1262		<0.045	<0.045	RPD-NA	mg/kg	N/A	50	18-OCT-21
Aroclor 1268		<0.045	<0.045	RPD-NA	mg/kg	N/A	50	18-OCT-21
WG3636193-2 LCS								

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PCB9-LOW-WT	**Soil**							
Batch R5623933								
WG3636193-2 LCS								
Aroclor 1242			86.1		%		60-140	18-OCT-21
Aroclor 1248			82.8		%		60-140	18-OCT-21
Aroclor 1254			97.8		%		60-140	18-OCT-21
Aroclor 1260			90.8		%		60-140	18-OCT-21
WG3636193-1 MB								
Aroclor 1016			<0.0030		mg/kg		0.003	18-OCT-21
Aroclor 1221			<0.0030		mg/kg		0.003	18-OCT-21
Aroclor 1232			<0.0030		mg/kg		0.003	18-OCT-21
Aroclor 1242			<0.0030		mg/kg		0.003	18-OCT-21
Aroclor 1248			<0.0030		mg/kg		0.003	18-OCT-21
Aroclor 1254			<0.0030		mg/kg		0.003	18-OCT-21
Aroclor 1260			<0.0030		mg/kg		0.003	18-OCT-21
Aroclor 1262			<0.0030		mg/kg		0.003	18-OCT-21
Aroclor 1268			<0.0030		mg/kg		0.003	18-OCT-21
Surrogate: d14-Terphenyl			106.3		%		50-140	18-OCT-21
WG3636193-4 MS		**WG3636193-5**						
Aroclor 1242			93.6		%		60-140	18-OCT-21
Aroclor 1254			117.4		%		60-140	18-OCT-21
Aroclor 1260			98.9		%		60-140	18-OCT-21
PSA-MUST-SK	**Soil**							
Batch R5616863								
WG3634922-1 DUP		**L2648161-7**						
MUST PSA % > 75um		16.6	18.6	J	%	2.0	5	13-OCT-21
WG3634922-2 IRM		**2020-PSA_SOIL**						
MUST PSA % > 75um			43.9		%		37.9-47.9	13-OCT-21
SPECGRAV-CL	**Soil**							
Batch R5629385								
WG3646192-2 DUP		**L2648161-10**						
Specific Gravity		1.05	1.06		kg/L	0.9	20	26-OCT-21
WG3646192-1 IRM		**DI_H2O**						
Specific Gravity			100.0		%		90-110	26-OCT-21
Batch R5637237								
WG3653838-2 DUP		**L2648161-4**						
Specific Gravity		1.21	1.22		kg/L	0.8	20	07-NOV-21
WG3653838-1 IRM		**DI_H2O**						

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
SPECGRAV-CL	**Soil**							
Batch R5637237								
WG3653838-1 IRM		**DI_H2O**						
Specific Gravity			101.0		%		90-110	07-NOV-21
TOC-WT	**Soil**							
Batch R5619419								
WG3638222-3 CRM		**WT-TOC-CRM**						
Total Organic Carbon			109.5		%		70-130	15-OCT-21
WG3638222-4 DUP		**L2646527-14**						
Total Organic Carbon		12.8	12.8		%	0.1	20	15-OCT-21
Fraction Organic Carbon		0.128	0.128		g/g	0.1	25	15-OCT-21
WG3638222-2 LCS								
Total Organic Carbon			98.7		%		80-120	15-OCT-21
WG3638222-1 MB								
Total Organic Carbon			<0.10		%		0.1	15-OCT-21
Fraction Organic Carbon			<0.0010		g/g		0.001	15-OCT-21
Batch R5619438								
WG3638227-3 CRM		**WT-TOC-CRM**						
Total Organic Carbon			105.3		%		70-130	15-OCT-21
WG3638227-4 DUP		**L2648161-11**						
Total Organic Carbon		8.01	7.94		%	0.9	20	15-OCT-21
Fraction Organic Carbon		0.0801	0.0794		g/g	0.9	25	15-OCT-21
WG3638227-2 LCS								
Total Organic Carbon			106.4		%		80-120	15-OCT-21
WG3638227-1 MB								
Total Organic Carbon			<0.10		%		0.1	15-OCT-21
Fraction Organic Carbon			<0.0010		g/g		0.001	15-OCT-21
Batch R5624426								
WG3640375-3 CRM		**WT-TOC-CRM**						
Total Organic Carbon			101.4		%		70-130	19-OCT-21
WG3640375-4 DUP		**L2647880-13**						
Total Organic Carbon		9.28	9.03		%	2.7	20	19-OCT-21
Fraction Organic Carbon		0.0928	0.0903		g/g	2.7	25	19-OCT-21
WG3640375-2 LCS								
Total Organic Carbon			101.0		%		80-120	19-OCT-21
WG3640375-1 MB								
Total Organic Carbon			<0.10		%		0.1	19-OCT-21
Fraction Organic Carbon			<0.0010		g/g		0.001	19-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
TOC-WT	**Soil**							
Batch R5625292								
WG3641334-3 CRM		**WT-TOC-CRM**						
Total Organic Carbon			95.1		%		70-130	20-OCT-21
WG3641334-4 DUP		**L2646527-23**						
Total Organic Carbon		8.94	8.76		%	2.0	20	20-OCT-21
Fraction Organic Carbon		0.0894	0.0876		g/g	2.0	25	20-OCT-21
WG3641334-2 LCS								
Total Organic Carbon			98.3		%		80-120	20-OCT-21
WG3641334-1 MB								
Total Organic Carbon			<0.10		%		0.1	20-OCT-21
Fraction Organic Carbon			<0.0010		g/g		0.001	20-OCT-21
Batch R5628209								
WG3644605-3 CRM		**WT-TOC-CRM**						
Total Organic Carbon			90.4		%		70-130	25-OCT-21
WG3644605-4 DUP		**L2643154-14**						
Total Organic Carbon		0.59	0.66		%	12	20	25-OCT-21
Fraction Organic Carbon		0.0059	0.0066		g/g	12	25	25-OCT-21
WG3644605-2 LCS								
Total Organic Carbon			111.5		%		80-120	25-OCT-21
WG3644605-1 MB								
Total Organic Carbon			<0.10		%		0.1	25-OCT-21
Fraction Organic Carbon			<0.0010		g/g		0.001	25-OCT-21

Quality Control Report

Workorder: L2648161 Report Date: 08-NOV-21

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Legend:

Limit	ALS Control Limit (Data Quality Objectives)
DUP	Duplicate
RPD	Relative Percent Difference
N/A	Not Available
LCS	Laboratory Control Sample
SRM	Standard Reference Material
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ADE	Average Desorption Efficiency
MB	Method Blank
IRM	Internal Reference Material
CRM	Certified Reference Material
CCV	Continuing Calibration Verification
CVS	Calibration Verification Standard
LCSD	Laboratory Control Sample Duplicate

Sample Parameter Qualifier Definitions:

Qualifier	Description
DLM	Detection Limit Adjusted due to sample matrix effects (e.g. chemical interference, colour, turbidity).
DUP-H	Duplicate results outside ALS DQO, due to sample heterogeneity.
J	Duplicate results and limits are expressed in terms of absolute difference.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Hold Time Exceedances:

All test results reported with this submission were conducted within ALS recommended hold times.

ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.

Chain of Custody

L2648161-COFC

COC Number: 20-016

Page 1 of 2

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Report To	Contact and company name below will appear on the final report
Company:	Golder Associates Ltd.
Contact:	Jill LaPorte
Phone:	905-723-2727
	Company address below will appear on the final report
Street:	100 Scotia Court
City/Province:	Whitby, Ontario
Postal Code:	L1N 8Y6
Invoice To	Same as Report To ☑ YES ☐ NO
	Copy of Invoice with Report ☑ YES ☐ NO
Company:	Golder Associates Ltd.
Contact:	Accounts Payables

Project Information	
ALS Account # / Quote #:	15520 / Q86586
Job #:	1783886-8000-8006
PO / AFE:	
LSD:	
ALS Lab Work Order # (ALS use only):	L2648161

Select Report Format:	☑ PDF ☑ EXCEL ☐ EDD (DIGITAL)
Merge QC/QCI Reports with COA	☑ YES ☐ NO ☐ N/A
☐ Compare Results to Criteria on Report - provide details below if box checked	
Select Distribution:	☑ EMAIL ☐ MAIL ☐ FAX
Email 1 or Fax	Jill_LaPorte@golder.com
Email 2	shawn_seguin@golder.com
Email 3	

Invoice Recipients	
Select Invoice Distribution:	☑ EMAIL ☐ MAIL ☐ FAX
Email 1 or Fax	Jill_LaPorte@golder.com
Email 2	canadaaccountspayableinvoices@golder.com

Oil and Gas Required Fields (client use)	
AFE/Cost Center:	PO#
Major/Minor Code:	Routing Code:
Requisitioner:	
Location:	
ALS Contact: Amanda Overholster	Sampler:

Time (TAT) Requested

☑ Routine [R] if received by 3pm M-F - no surcharges apply
☐ 4 day [P4] if received by 3pm M-F - 20% rush surcharge minimum
☐ 3 day [P3] if received by 3pm M-F - 25% rush surcharge minimum
☐ 2 day [P2] if received by 3pm M-F - 50% rush surcharge minimum
☐ 1 day [E] if received by 3pm M-F - 100% rush surcharge minimum
☐ Same day [E2] if received by 10am M-S - 200% rush surcharge. Additional fees may apply to rush requests on weekends, statutory holidays and non-routine tests

Date and Time Required for all E&P TATs:

For all tests with rush TATs requested, please contact your AM to confirm availability

AFFIX ALS BARCODE LABEL HERE (ALS use only)

Analysis Request

Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below

ALS Sample # (ALS use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	NUMBER OF CONTAINERS	HWS-Boron (B-HWS-R511-WT)	Cr3 (CR-CR3-WT)	Cr6 (CR-CR6-IC-WT)	Mercury (HG-200.2-CVAA-WT)	Metals (MET-200.2-CCMS-WT)	PAH (PAH-CCME-SOQL-WT)	MOISTURE-WT	TOC (TOC-WT)	PCB9 (PCB9-LOW-WT)		Specific Gravity (SPECGRAV-CL)	PSA (PSA-MUST-WT-SK)	Atterberg (ATTERBERG-SK)		SAMPLES ON HOLD	EXTENDED STORAGE REQUIRED	SUSPECTED HAZARD (see notes)
	PCW-SC-001A	03-OCT-21	1205	Sediment	9	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓				
	PCW-SC-001B		1205	Sediment	4				✓	✓	✓	✓	✓	✓			✓					
	PCW-SG-001		1255	Sediment	9	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓				
	DUP-205			Sediment	9	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓				
	PCW-SC-005A		1430	Sediment	7				✓	✓	✓	✓	✓	✓		✓		✓				
	PCW-SC-005B		1430	Sediment	3				✓	✓	✓	✓	✓	✓								
	PCW-SG-005		1520	Sediment	7				✓	✓	✓	✓	✓	✓		✓		✓				
	PCW-SC-007A		1605	Sediment	9	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓				
	PCW-SC-007B		1605	Sediment	4				✓	✓	✓	✓	✓	✓			✓					
	PCW-SG-007		1645	Sediment	9	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓				
	PCE-SG-011	↓	1645	Sediment	3				✓	✓	✓	✓	✓	✓								
	DUP-006	03-OCT-21		Sediment	3				✓	✓	✓	✓	✓	✓								

Drinking Water (DW) Samples[1] (client use)	Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only)
Are samples taken from a Regulated DW System? ☐ YES ☑ NO	
Are samples for human consumption/ use? ☐ YES ☑ NO	

SAMPLE RECEIPT DETAILS (ALS use only)

Cooling Method: ☐ NONE ☑ ICE ☐ ICE PACKS ☐ FROZEN ☐ COOLING INITIATED

Submission Comments Identified on Sample Receipt Notification: ☐ YES ☐ NO

Cooler Custody Seals Intact: ☐ YES ☐ N/A Sample Custody Seals Intact: ☐ YES ☐ N/A

INITIAL COOLER TEMPERATURES °C				FINAL COOLER TEMPERATURES °C			
				15.9			

SHIPMENT RELEASE (client use)			INITIAL SHIPMENT RECEPTION (ALS use only)			FINAL SHIPMENT RECEPTION (ALS use only)		
Released by:	Date:	Time:	Received by:	Date:	Time:	Received by:	Date:	Time:
	4 OCT, 2021					MP	04/05/21	17:12

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

AUG 2020 FRONT

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

1. If any water samples are taken from a Regulated Drinking Water (DW) System, please submit using an Authorized DW COC form.

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Chain of Custody (C

Canada T

L2648161-COFC

COC Number: 20 - 017

Page 2 of 2

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Report To	Contact and company name below will appear on the final report
Company:	Golder Associates Ltd.
Contact:	Jill LaPorte
Phone:	905-723-2727
	Company address below will appear on the final report
Street:	100 Scotia Court
City/Province:	Whitby, Ontario
Postal Code:	L1N 8Y6
Invoice To	Same as Report To ☐ YES ☐ NO
	Copy of Invoice with Report ☐ YES ☐ NO
Company:	Golder Associates Ltd.
Contact:	Accounts Payables

Project Information

ALS Account # / Quote #:	15520 / Q86566
Job #:	1783886-8000-8006
PO / AFE:	
LSD:	
ALS Lab Work Order # (ALS use only):	L2648161

Reports / Recipients

Select Report Format: ☑ PDF ☑ EXCEL ☐ EDD (DIGITAL)

Merge QC/QCI Reports with COA ☑ YES ☐ NO ☐ N/A

☐ Compare Results to Criteria on Report - provide details below if box checked

Select Distribution: ☑ EMAIL ☐ MAIL ☐ FAX

Email 1 or Fax: Jill_LaPorte@golder.com

Email 2: shawn_seguin@golder.com

Email 3:

Invoice Recipients

Select Invoice Distribution: ☑ EMAIL ☐ MAIL ☐ FAX

Email 1 or Fax: Jill_LaPorte@golder.com

Email 2: canadaaccountspayableinvoices@golder.com

Oil and Gas Required Fields (client use)

AFE/Cost Center:	PO#
Major/Minor Code	Routing Code:
Requisitioner:	
Location:	
ALS Contact: Amanda Overholster	Sampler:

Turnaround Time (TAT) Requested

☑ Routine [R] if received by 3pm M-F - surcharges apply

☐ 4 day [P4] if received by 3pm M-F - 20% rush surcharge minimum

☐ 3 day [P3] if received by 3pm M-F - 25% rush surcharge minimum

☐ 2 day [P2] if received by 3pm M-F - 50% rush surcharge minimum

☐ 1 day [E] if received by 3pm M-F - 100% rush surcharge minimum

☐ Same day [E2] if received by 10am M-S - 200% rush surcharge. Additional fees may apply to rush requests on weekends, statutory holidays and non-routine tests

AFFIX ALS BARCODE LABEL HERE (ALS use only)

Date and Time Required for all E&P TATs:

For all tests with rush TATs requested, please contact your AM to confirm availability.

Analysis Request

ALS Sample # (ALS use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	NUMBER OF CONTAINERS	HWS-Boron (B-HWS-R511-WT)	Cr3 (CR-CR3-WT)	Cr6 (CR-CR6-IC-WT)	Mercury (HG-200.2-CVAA-WT)	Metals (MET-200.2-CCMS-WT)	PAH (PAH-CCME-SQG-WT)	MOISTURE-WT	TOC (TOC-WT)	PCB9 (PCB9-LOW-WT)		Specific Gravity (SPECGRAV-CL)	PSA (PSA-MUST-WT-SK)	Atterberg (ATTERBERG-SK)		SAMPLES ON HOLD	EXTENDED STORAGE REQUIRED	SUSPECTED HAZARD (see notes)
	PCE-SG-010	03-OCT-21	1550	Sediment	3				✓	✓	✓	✓	✓	✓								
	PCE-SG-009		1525	Sediment	3				✓	✓	✓	✓	✓	✓								
	PCE-SG-005		1415	Sediment	5	✓	✓	✓	✓	✓	✓	✓	✓	✓			✓					
	PCE-SG-008		1240	Sediment	3				✓	✓	✓	✓	✓	✓								
	PCE-SG-007		1225	Sediment	3				✓	✓	✓	✓	✓	✓								
	PCE-SG-006		1200	Sediment	3				✓	✓	✓	✓	✓	✓								
	PCE-SG-004		1140	Sediment	3				✓	✓	✓	✓	✓	✓								
	DUP-005			Sediment	3				✓	✓	✓	✓	✓	✓								
	DUP-004	03-OCT-21		Sediment	5	✓	✓	✓	✓	✓	✓	✓	✓	✓			✓					
				Sediment																		
				Sediment																		
				Sediment																		

Drinking Water (DW) Samples[1] (client use)

Are samples taken from a Regulated DW System?

☐ YES ☑ NO

Are samples for human consumption/ use?

☐ YES ☑ NO

Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only)

SAMPLE RECEIPT DETAILS (ALS use only)

Cooling Method: ☐ NONE ☑ ICE ☐ ICE PACKS ☐ FROZEN ☐ COOLING INITIATED

Submission Comments identified on Sample Receipt Notification: ☐ YES ☐ NO

Cooler Custody Seals Intact: ☐ YES ☐ N/A Sample Custody Seals Intact: ☐ YES ☐ N/A

INITIAL COOLER TEMPERATURES °C				FINAL COOLER TEMPERATURES °C			
				15.9			

SHIPMENT RELEASE (client use)

Released by:	Date:	Time:
	4 OCT, 2021	

INITIAL SHIPMENT RECEPTION (ALS use only)

Received by:	Date:	Time:

FINAL SHIPMENT RECEPTION (ALS use only)

Received by:	Date:	Time:
UC	06/04/21	17:17

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

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ALS 2020 FRONT

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

1. If any water samples are taken from a Regulated Drinking Water (DW) System, please submit using an Authorized DW COC form.

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GOLDER ASSOCIATES LTD (Whitby)
ATTN: Jill LaPorte
100 Scotia Court
Whitby ON L1N 8Y6

Date Received: 05-OCT-21
Report Date: 13-OCT-21 11:39 (MT)
Version: FINAL

Client Phone: 905-723-2727

Certificate of Analysis

Lab Work Order #: L2648169

Project P.O. #: NOT SUBMITTED
Job Reference: 1783886-8000-8006
C of C Numbers:
Legal Site Desc:

Amanda Overholster
Account Manager

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2648169-1 PCW-SC-001A Sampled By: CLIENT on 03-OCT-21 @ 12:05 Matrix: SOIL							
Sample Preparation							
Initial pH	5.05		0.10	pH units		08-OCT-21	R5614248
Final pH	5.77		0.10	pH units		08-OCT-21	R5614248
TCLP Extractables							
Acenaphthene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Acenaphthylene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Anthracene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Benzo(a)anthracene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Benzo(a)pyrene	<0.0010		0.0010	mg/L	08-OCT-21	13-OCT-21	R5616357
Benzo(b&j)fluoranthene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Benzo(g,h,i)perylene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Benzo(k)fluoranthene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Chrysene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Dibenz(a,h)anthracene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Fluoranthene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Fluorene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Indeno(1,2,3-cd)pyrene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Naphthalene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Phenanthrene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Pyrene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Surrogate: Chrysene d12	81.1		60-130	%	08-OCT-21	13-OCT-21	R5616357
Surrogate: Naphthalene d8	78.3		50-130	%	08-OCT-21	13-OCT-21	R5616357
Surrogate: Phenanthrene d10	95.7		60-130	%	08-OCT-21	13-OCT-21	R5616357
Quinoline	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
TCLP Metals							
Arsenic (As)	<0.050		0.050	mg/L		12-OCT-21	R5616110
Barium (Ba)	1.04		0.50	mg/L		12-OCT-21	R5616110
Boron (B)	<2.5		2.5	mg/L		12-OCT-21	R5616110
Cadmium (Cd)	<0.0050		0.0050	mg/L		12-OCT-21	R5616110
Chromium (Cr)	<0.050		0.050	mg/L		12-OCT-21	R5616110
Lead (Pb)	<0.025		0.025	mg/L		12-OCT-21	R5616110
Mercury (Hg)	<0.00010		0.00010	mg/L		08-OCT-21	R5614607
Selenium (Se)	<0.025		0.025	mg/L		12-OCT-21	R5616110
Silver (Ag)	<0.0050		0.0050	mg/L		12-OCT-21	R5616110
Uranium (U)	<0.25		0.25	mg/L		12-OCT-21	R5616110
L2648169-2 PCW-SC-001 Sampled By: CLIENT on 03-OCT-21 @ 12:55 Matrix: SOIL							
Sample Preparation							
Initial pH	5.07		0.10	pH units		08-OCT-21	R5614248
Final pH	5.81		0.10	pH units		08-OCT-21	R5614248
TCLP Extractables							
Acenaphthene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2648169-2 PCW-SC-001 Sampled By: CLIENT on 03-OCT-21 @ 12:55 Matrix: SOIL							
TCLP Extractables							
Acenaphthylene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Anthracene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Benzo(a)anthracene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Benzo(a)pyrene	<0.0010		0.0010	mg/L	08-OCT-21	13-OCT-21	R5616357
Benzo(b&j)fluoranthene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Benzo(g,h,i)perylene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Benzo(k)fluoranthene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Chrysene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Dibenz(a,h)anthracene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Fluoranthene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Fluorene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Indeno(1,2,3-cd)pyrene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Naphthalene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Phenanthrene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Pyrene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Surrogate: Chrysene d12	84.6		60-130	%	08-OCT-21	13-OCT-21	R5616357
Surrogate: Naphthalene d8	79.9		50-130	%	08-OCT-21	13-OCT-21	R5616357
Surrogate: Phenanthrene d10	94.7		60-130	%	08-OCT-21	13-OCT-21	R5616357
Quinoline	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
TCLP Metals							
Arsenic (As)	<0.050		0.050	mg/L		12-OCT-21	R5616110
Barium (Ba)	0.86		0.50	mg/L		12-OCT-21	R5616110
Boron (B)	<2.5		2.5	mg/L		12-OCT-21	R5616110
Cadmium (Cd)	<0.0050		0.0050	mg/L		12-OCT-21	R5616110
Chromium (Cr)	<0.050		0.050	mg/L		12-OCT-21	R5616110
Lead (Pb)	<0.025		0.025	mg/L		12-OCT-21	R5616110
Mercury (Hg)	<0.00010		0.00010	mg/L		08-OCT-21	R5614607
Selenium (Se)	<0.025		0.025	mg/L		12-OCT-21	R5616110
Silver (Ag)	<0.0050		0.0050	mg/L		12-OCT-21	R5616110
Uranium (U)	<0.25		0.25	mg/L		12-OCT-21	R5616110
L2648169-3 DUP-205 Sampled By: CLIENT on 03-OCT-21 Matrix: SOIL							
Sample Preparation							
Initial pH	5.00		0.10	pH units		08-OCT-21	R5614248
Final pH	5.74		0.10	pH units		08-OCT-21	R5614248
TCLP Extractables							
Acenaphthene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Acenaphthylene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Anthracene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Benzo(a)anthracene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Benzo(a)pyrene	<0.0010		0.0010	mg/L	08-OCT-21	13-OCT-21	R5616357

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2648169-3 DUP-205 Sampled By: CLIENT on 03-OCT-21 Matrix: SOIL							
TCLP Extractables							
Benzo(b&j)fluoranthene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Benzo(g,h,i)perylene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Benzo(k)fluoranthene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Chrysene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Dibenz(a,h)anthracene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Fluoranthene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Fluorene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Indeno(1,2,3-cd)pyrene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Naphthalene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Phenanthrene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Pyrene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Surrogate: Chrysene d12	80.4		60-130	%	08-OCT-21	13-OCT-21	R5616357
Surrogate: Naphthalene d8	80.8		50-130	%	08-OCT-21	13-OCT-21	R5616357
Surrogate: Phenanthrene d10	97.2		60-130	%	08-OCT-21	13-OCT-21	R5616357
Quinoline	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
TCLP Metals							
Arsenic (As)	<0.050		0.050	mg/L		12-OCT-21	R5616110
Barium (Ba)	1.05		0.50	mg/L		12-OCT-21	R5616110
Boron (B)	<2.5		2.5	mg/L		12-OCT-21	R5616110
Cadmium (Cd)	<0.0050		0.0050	mg/L		12-OCT-21	R5616110
Chromium (Cr)	<0.050		0.050	mg/L		12-OCT-21	R5616110
Lead (Pb)	<0.025		0.025	mg/L		12-OCT-21	R5616110
Mercury (Hg)	<0.00010		0.00010	mg/L		08-OCT-21	R5614607
Selenium (Se)	<0.025		0.025	mg/L		12-OCT-21	R5616110
Silver (Ag)	<0.0050		0.0050	mg/L		12-OCT-21	R5616110
Uranium (U)	<0.25		0.25	mg/L		12-OCT-21	R5616110
L2648169-4 PCW-SC-007A Sampled By: CLIENT on 03-OCT-21 @ 16:05 Matrix: SOIL							
Sample Preparation							
Initial pH	5.04		0.10	pH units		08-OCT-21	R5614248
Final pH	5.77		0.10	pH units		08-OCT-21	R5614248
TCLP Extractables							
Acenaphthene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Acenaphthylene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Anthracene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Benzo(a)anthracene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Benzo(a)pyrene	<0.0010		0.0010	mg/L	08-OCT-21	13-OCT-21	R5616357
Benzo(b&j)fluoranthene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Benzo(g,h,i)perylene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Benzo(k)fluoranthene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Chrysene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2648169-4 PCW-SC-007A Sampled By: CLIENT on 03-OCT-21 @ 16:05 Matrix: SOIL							
TCLP Extractables							
Dibenz(a,h)anthracene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Fluoranthene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Fluorene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Indeno(1,2,3-cd)pyrene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Naphthalene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Phenanthrene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Pyrene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Surrogate: Chrysene d12	87.9		60-130	%	08-OCT-21	13-OCT-21	R5616357
Surrogate: Naphthalene d8	86.8		50-130	%	08-OCT-21	13-OCT-21	R5616357
Surrogate: Phenanthrene d10	100.3		60-130	%	08-OCT-21	13-OCT-21	R5616357
Quinoline	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
TCLP Metals							
Arsenic (As)	<0.050		0.050	mg/L		12-OCT-21	R5616110
Barium (Ba)	0.83		0.50	mg/L		12-OCT-21	R5616110
Boron (B)	<2.5		2.5	mg/L		12-OCT-21	R5616110
Cadmium (Cd)	<0.0050		0.0050	mg/L		12-OCT-21	R5616110
Chromium (Cr)	<0.050		0.050	mg/L		12-OCT-21	R5616110
Lead (Pb)	0.030		0.025	mg/L		12-OCT-21	R5616110
Mercury (Hg)	<0.00010		0.00010	mg/L		08-OCT-21	R5614607
Selenium (Se)	<0.025		0.025	mg/L		12-OCT-21	R5616110
Silver (Ag)	<0.0050		0.0050	mg/L		12-OCT-21	R5616110
Uranium (U)	<0.25		0.25	mg/L		12-OCT-21	R5616110
L2648169-5 PCW-SG-007 Sampled By: CLIENT on 03-OCT-21 @ 16:45 Matrix: SOIL							
Sample Preparation							
Initial pH	5.01		0.10	pH units		08-OCT-21	R5614248
Final pH	5.45		0.10	pH units		08-OCT-21	R5614248
TCLP Extractables							
Acenaphthene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Acenaphthylene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Anthracene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Benzo(a)anthracene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Benzo(a)pyrene	<0.0010		0.0010	mg/L	08-OCT-21	13-OCT-21	R5616357
Benzo(b&j)fluoranthene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Benzo(g,h,i)perylene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Benzo(k)fluoranthene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Chrysene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Dibenz(a,h)anthracene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Fluoranthene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Fluorene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Indeno(1,2,3-cd)pyrene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2648169-5 PCW-SG-007 Sampled By: CLIENT on 03-OCT-21 @ 16:45 Matrix: SOIL							
TCLP Extractables							
Naphthalene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Phenanthrene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Pyrene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Surrogate: Chrysene d12	72.5		60-130	%	08-OCT-21	13-OCT-21	R5616357
Surrogate: Naphthalene d8	77.1		50-130	%	08-OCT-21	13-OCT-21	R5616357
Surrogate: Phenanthrene d10	95.4		60-130	%	08-OCT-21	13-OCT-21	R5616357
Quinoline	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
TCLP Metals							
Arsenic (As)	<0.050		0.050	mg/L		12-OCT-21	R5616110
Barium (Ba)	0.64		0.50	mg/L		12-OCT-21	R5616110
Boron (B)	<2.5		2.5	mg/L		12-OCT-21	R5616110
Cadmium (Cd)	<0.0050		0.0050	mg/L		12-OCT-21	R5616110
Chromium (Cr)	<0.050		0.050	mg/L		12-OCT-21	R5616110
Lead (Pb)	0.025		0.025	mg/L		12-OCT-21	R5616110
Mercury (Hg)	<0.00010		0.00010	mg/L		08-OCT-21	R5614607
Selenium (Se)	<0.025		0.025	mg/L		12-OCT-21	R5616110
Silver (Ag)	<0.0050		0.0050	mg/L		12-OCT-21	R5616110
Uranium (U)	<0.25		0.25	mg/L		12-OCT-21	R5616110
L2648169-6 PCW-SG-005 Sampled By: CLIENT on 03-OCT-21 @ 14:15 Matrix: SOIL							
Sample Preparation							
Initial pH	5.00		0.10	pH units		08-OCT-21	R5614248
Final pH	5.84		0.10	pH units		08-OCT-21	R5614248
TCLP Extractables							
Acenaphthene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Acenaphthylene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Anthracene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Benzo(a)anthracene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Benzo(a)pyrene	<0.0010		0.0010	mg/L	08-OCT-21	13-OCT-21	R5616357
Benzo(b&j)fluoranthene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Benzo(g,h,i)perylene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Benzo(k)fluoranthene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Chrysene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Dibenz(a,h)anthracene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Fluoranthene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Fluorene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Indeno(1,2,3-cd)pyrene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Naphthalene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Phenanthrene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Pyrene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Surrogate: Chrysene d12	92.0		60-130	%	08-OCT-21	13-OCT-21	R5616357

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2648169-6 PCW-SG-005 Sampled By: CLIENT on 03-OCT-21 @ 14:15 Matrix: SOIL							
TCLP Extractables							
Surrogate: Naphthalene d8	88.2		50-130	%	08-OCT-21	13-OCT-21	R5616357
Surrogate: Phenanthrene d10	101.2		60-130	%	08-OCT-21	13-OCT-21	R5616357
Quinoline	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
TCLP Metals							
Arsenic (As)	<0.050		0.050	mg/L		12-OCT-21	R5616110
Barium (Ba)	0.85		0.50	mg/L		12-OCT-21	R5616110
Boron (B)	<2.5		2.5	mg/L		12-OCT-21	R5616110
Cadmium (Cd)	<0.0050		0.0050	mg/L		12-OCT-21	R5616110
Chromium (Cr)	<0.050		0.050	mg/L		12-OCT-21	R5616110
Lead (Pb)	<0.025		0.025	mg/L		12-OCT-21	R5616110
Mercury (Hg)	<0.00010		0.00010	mg/L		08-OCT-21	R5614607
Selenium (Se)	<0.025		0.025	mg/L		12-OCT-21	R5616110
Silver (Ag)	<0.0050		0.0050	mg/L		12-OCT-21	R5616110
Uranium (U)	<0.25		0.25	mg/L		12-OCT-21	R5616110
L2648169-7 DUP-004 Sampled By: CLIENT on 03-OCT-21 Matrix: SOIL							
Sample Preparation							
Initial pH	5.06		0.10	pH units		08-OCT-21	R5614248
Final pH	5.88		0.10	pH units		08-OCT-21	R5614248
TCLP Extractables							
Acenaphthene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Acenaphthylene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Anthracene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Benzo(a)anthracene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Benzo(a)pyrene	<0.0010		0.0010	mg/L	08-OCT-21	13-OCT-21	R5616357
Benzo(b&j)fluoranthene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Benzo(g,h,i)perylene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Benzo(k)fluoranthene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Chrysene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Dibenz(a,h)anthracene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Fluoranthene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Fluorene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Indeno(1,2,3-cd)pyrene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Naphthalene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Phenanthrene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Pyrene	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
Surrogate: Chrysene d12	79.5		60-130	%	08-OCT-21	13-OCT-21	R5616357
Surrogate: Naphthalene d8	77.0		50-130	%	08-OCT-21	13-OCT-21	R5616357
Surrogate: Phenanthrene d10	96.1		60-130	%	08-OCT-21	13-OCT-21	R5616357
Quinoline	<0.0050		0.0050	mg/L	08-OCT-21	13-OCT-21	R5616357
TCLP Metals							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2648169-7 DUP-004 Sampled By: CLIENT on 03-OCT-21 Matrix: SOIL							
TCLP Metals							
Arsenic (As)	<0.050		0.050	mg/L		12-OCT-21	R5616110
Barium (Ba)	0.88		0.50	mg/L		12-OCT-21	R5616110
Boron (B)	<2.5		2.5	mg/L		12-OCT-21	R5616110
Cadmium (Cd)	<0.0050		0.0050	mg/L		12-OCT-21	R5616110
Chromium (Cr)	<0.050		0.050	mg/L		12-OCT-21	R5616110
Lead (Pb)	<0.025		0.025	mg/L		12-OCT-21	R5616110
Mercury (Hg)	<0.00010		0.00010	mg/L		08-OCT-21	R5614607
Selenium (Se)	<0.025		0.025	mg/L		12-OCT-21	R5616110
Silver (Ag)	<0.0050		0.0050	mg/L		12-OCT-21	R5616110
Uranium (U)	<0.25		0.25	mg/L		12-OCT-21	R5616110

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
HG-TCLP-WT	Waste	Mercury (CVAA) for O.Reg 347	EPA 1631E

This analysis is carried out in accordance with the extraction procedure outlined in "Test Methods for Evaluating Solid Waste - Physical/Chemical Methods Volume 1C" SW-846 EPA Method 1311, published by the United States Environmental Protection Agency (EPA). In summary, the sample is extracted at a 20:1 liquid to solids ratio for 16 to 20 hours using either extraction fluid #1 (glacial acetic acid, water and sodium hydroxide) or extraction fluid #2 (glacial acetic acid), depending on the pH of the original sample. The extract is then filtered through a 0.6 to 0.8 micron glass fibre filter and analysed using atomic absorption spectrophotometry (EPA 1631E).

LEACH-TCLP-WT	Waste	Leachate Procedure for Reg 347	EPA 1311

Inorganic and Semi-Volatile Organic contaminants are leached from waste samples in strict accordance with US EPA Method 1311, "Toxicity Characteristic Leaching Procedure" (TCLP). Test results are reported in leachate concentration units (normally mg/L).

MET-TCLP-WT	Waste	O.Reg 347 TCLP Leachable Metals	EPA 6020B

This analysis is carried out in accordance with the extraction procedure outlined in "Test Methods for Evaluating Solid Waste - Physical/Chemical Methods Volume 1C" SW-846 EPA Method 1311, published by the United States Environmental Protection Agency (EPA). In summary, the sample is extracted at a 20:1 liquid to solids ratio for 16 to 20 hours using either extraction fluid #1 (glacial acetic acid, water and sodium hydroxide) or extraction fluid #2 (glacial acetic acid), depending on the pH of the original sample. The extract is then filtered through a 0.6 to 0.8 micron glass fibre filter. Instrumental analysis of the digested extract is by collision cell inductively coupled plasma - mass spectrometry (modifed from EPA Method 6020B).

PAH-TCLP-WT	Waste	PAH for O. Reg 347	SW846 8270 (PAH)

Samples are leached according to TCLP protocol and then the aqueous leachate is extracted and the resulting extracts are analyzed on GC/MSD. Depending on the analytical GC/MS column used benzo(j)fluoranthene may chromatographically co-elute with benzo(b)fluoranthene or benzo(k)fluoranthene.

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
WT	ALS ENVIRONMENTAL - WATERLOO, ONTARIO, CANADA

Chain of Custody Numbers:

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.
mg/kg - milligrams per kilogram based on dry weight of sample
mg/kg wwt - milligrams per kilogram based on wet weight of sample
mg/kg lwt - milligrams per kilogram based on lipid weight of sample
mg/L - unit of concentration based on volume, parts per million.
< - Less than.
D.L. - The reporting limit.
N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.
UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.
Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
HG-TCLP-WT	**Waste**							
Batch R5614607								
WG3634327-3 DUP		**L2647061-6**						
Mercury (Hg)		<0.00010	<0.00010	RPD-NA	mg/L	N/A	50	08-OCT-21
WG3634327-2 LCS								
Mercury (Hg)			93.8		%		70-130	08-OCT-21
WG3634327-1 MB								
Mercury (Hg)			<0.00010		mg/L		0.0001	08-OCT-21
WG3634327-4 MS		**L2647061-6**						
Mercury (Hg)			96.0		%		50-140	08-OCT-21
MET-TCLP-WT	**Waste**							
Batch R5616110								
WG3635515-4 DUP		**WG3635515-3**						
Silver (Ag)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	12-OCT-21
Arsenic (As)		<0.050	<0.050	RPD-NA	mg/L	N/A	50	12-OCT-21
Boron (B)		<2.5	<2.5	RPD-NA	mg/L	N/A	50	12-OCT-21
Barium (Ba)		<0.50	<0.50	RPD-NA	mg/L	N/A	50	12-OCT-21
Cadmium (Cd)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	12-OCT-21
Chromium (Cr)		<0.050	<0.050	RPD-NA	mg/L	N/A	50	12-OCT-21
Lead (Pb)		<0.025	<0.025	RPD-NA	mg/L	N/A	50	12-OCT-21
Selenium (Se)		<0.025	<0.025	RPD-NA	mg/L	N/A	50	12-OCT-21
Uranium (U)		<0.25	<0.25	RPD-NA	mg/L	N/A	50	12-OCT-21
WG3635515-2 LCS								
Silver (Ag)			107.8		%		70-130	12-OCT-21
Arsenic (As)			104.5		%		70-130	12-OCT-21
Boron (B)			98.1		%		70-130	12-OCT-21
Barium (Ba)			104.8		%		70-130	12-OCT-21
Cadmium (Cd)			104.6		%		70-130	12-OCT-21
Chromium (Cr)			103.0		%		70-130	12-OCT-21
Lead (Pb)			109.2		%		70-130	12-OCT-21
Selenium (Se)			105.3		%		70-130	12-OCT-21
Uranium (U)			113.7		%		70-130	12-OCT-21
WG3635515-1 MB								
Silver (Ag)			<0.0050		mg/L		0.005	12-OCT-21
Arsenic (As)			<0.050		mg/L		0.05	12-OCT-21
Boron (B)			<2.5		mg/L		2.5	12-OCT-21
Barium (Ba)			<0.50		mg/L		0.5	12-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-TCLP-WT	**Waste**							
Batch R5616110								
WG3635515-1 MB								
Cadmium (Cd)			<0.0050		mg/L		0.005	12-OCT-21
Chromium (Cr)			<0.050		mg/L		0.05	12-OCT-21
Lead (Pb)			<0.025		mg/L		0.025	12-OCT-21
Selenium (Se)			<0.025		mg/L		0.025	12-OCT-21
Uranium (U)			<0.25		mg/L		0.25	12-OCT-21
WG3635515-5 MS		**WG3635515-3**						
Silver (Ag)			131.8		%		50-140	12-OCT-21
Arsenic (As)			113.4		%		50-140	12-OCT-21
Boron (B)			109.1		%		50-140	12-OCT-21
Barium (Ba)			105.0		%		50-140	12-OCT-21
Cadmium (Cd)			109.9		%		50-140	12-OCT-21
Chromium (Cr)			107.3		%		50-140	12-OCT-21
Lead (Pb)			110.2		%		50-140	12-OCT-21
Selenium (Se)			119.9		%		50-140	12-OCT-21
Uranium (U)			112.1		%		50-140	12-OCT-21
PAH-TCLP-WT	**Waste**							
Batch R5616357								
WG3634488-5 DUP		**WG3634488-4**						
Acenaphthene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	13-OCT-21
Acenaphthylene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	13-OCT-21
Anthracene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	13-OCT-21
Benzo(a)anthracene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	13-OCT-21
Benzo(a)pyrene		<0.0010	<0.0010	RPD-NA	mg/L	N/A	50	13-OCT-21
Benzo(b&j)fluoranthene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	13-OCT-21
Benzo(g,h,i)perylene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	13-OCT-21
Benzo(k)fluoranthene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	13-OCT-21
Chrysene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	13-OCT-21
Dibenz(a,h)anthracene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	13-OCT-21
Fluoranthene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	13-OCT-21
Fluorene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	13-OCT-21
Indeno(1,2,3-cd)pyrene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	13-OCT-21
Naphthalene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	13-OCT-21
Phenanthrene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	13-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-TCLP-WT	**Waste**							
Batch R5616357								
WG3634488-5 DUP		**WG3634488-4**						
Pyrene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	13-OCT-21
Quinoline		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	13-OCT-21
WG3634488-2 LCS								
Acenaphthene			93.5		%		50-130	13-OCT-21
Acenaphthylene			91.7		%		50-130	13-OCT-21
Anthracene			87.2		%		50-130	13-OCT-21
Benzo(a)anthracene			103.4		%		50-140	13-OCT-21
Benzo(a)pyrene			91.8		%		60-140	13-OCT-21
Benzo(b&j)fluoranthene			92.8		%		50-130	13-OCT-21
Benzo(g,h,i)perylene			110.4		%		50-140	13-OCT-21
Benzo(k)fluoranthene			92.9		%		50-150	13-OCT-21
Chrysene			101.4		%		50-140	13-OCT-21
Dibenz(a,h)anthracene			119.1		%		50-140	13-OCT-21
Fluoranthene			108.8		%		50-130	13-OCT-21
Fluorene			97.0		%		50-130	13-OCT-21
Indeno(1,2,3-cd)pyrene			112.4		%		50-140	13-OCT-21
Naphthalene			74.2		%		50-130	13-OCT-21
Phenanthrene			97.8		%		50-130	13-OCT-21
Pyrene			96.9		%		50-140	13-OCT-21
Quinoline			124.7		%		50-130	13-OCT-21
WG3634488-1 MB								
Acenaphthene			<0.0050		mg/L		0.005	13-OCT-21
Acenaphthylene			<0.0050		mg/L		0.005	13-OCT-21
Anthracene			<0.0050		mg/L		0.005	13-OCT-21
Benzo(a)anthracene			<0.0050		mg/L		0.005	13-OCT-21
Benzo(a)pyrene			<0.0010		mg/L		0.001	13-OCT-21
Benzo(b&j)fluoranthene			<0.0050		mg/L		0.005	13-OCT-21
Benzo(g,h,i)perylene			<0.0050		mg/L		0.005	13-OCT-21
Benzo(k)fluoranthene			<0.0050		mg/L		0.005	13-OCT-21
Chrysene			<0.0050		mg/L		0.005	13-OCT-21
Dibenz(a,h)anthracene			<0.0050		mg/L		0.005	13-OCT-21
Fluoranthene			<0.0050		mg/L		0.005	13-OCT-21
Fluorene			<0.0050		mg/L		0.005	13-OCT-21
Indeno(1,2,3-cd)pyrene			<0.0050		mg/L		0.005	13-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-TCLP-WT	**Waste**							
Batch R5616357								
WG3634488-1 MB								
Naphthalene			<0.0050		mg/L		0.005	13-OCT-21
Phenanthrene			<0.0050		mg/L		0.005	13-OCT-21
Pyrene			<0.0050		mg/L		0.005	13-OCT-21
Quinoline			<0.0050		mg/L		0.005	13-OCT-21
Surrogate: Naphthalene d8			83.4		%		50-130	13-OCT-21
Surrogate: Phenanthrene d10			99.3		%		60-130	13-OCT-21
Surrogate: Chrysene d12			81.5		%		60-130	13-OCT-21
WG3634488-3 MB								
Acenaphthene			<0.0050		mg/L		0.005	13-OCT-21
Acenaphthylene			<0.0050		mg/L		0.005	13-OCT-21
Anthracene			<0.0050		mg/L		0.005	13-OCT-21
Benzo(a)anthracene			<0.0050		mg/L		0.005	13-OCT-21
Benzo(a)pyrene			<0.0010		mg/L		0.001	13-OCT-21
Benzo(b&j)fluoranthene			<0.0050		mg/L		0.005	13-OCT-21
Benzo(g,h,i)perylene			<0.0050		mg/L		0.005	13-OCT-21
Benzo(k)fluoranthene			<0.0050		mg/L		0.005	13-OCT-21
Chrysene			<0.0050		mg/L		0.005	13-OCT-21
Dibenz(a,h)anthracene			<0.0050		mg/L		0.005	13-OCT-21
Fluoranthene			<0.0050		mg/L		0.005	13-OCT-21
Fluorene			<0.0050		mg/L		0.005	13-OCT-21
Indeno(1,2,3-cd)pyrene			<0.0050		mg/L		0.005	13-OCT-21
Naphthalene			<0.0050		mg/L		0.005	13-OCT-21
Phenanthrene			<0.0050		mg/L		0.005	13-OCT-21
Pyrene			<0.0050		mg/L		0.005	13-OCT-21
Quinoline			<0.0050		mg/L		0.005	13-OCT-21
Surrogate: Naphthalene d8			76.5		%		50-130	13-OCT-21
Surrogate: Phenanthrene d10			93.4		%		60-130	13-OCT-21
Surrogate: Chrysene d12			87.3		%		60-130	13-OCT-21
WG3634488-6 MS		**WG3634488-4**						
Acenaphthene			91.3		%		50-140	13-OCT-21
Acenaphthylene			88.7		%		50-140	13-OCT-21
Anthracene			92.5		%		50-150	13-OCT-21
Benzo(a)anthracene			98.7		%		50-140	13-OCT-21
Benzo(a)pyrene			85.0		%		50-140	13-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-TCLP-WT	**Waste**							
Batch R5616357								
WG3634488-6 MS		**WG3634488-4**						
Benzo(b&j)fluoranthene			92.8		%		50-150	13-OCT-21
Benzo(g,h,i)perylene			112.0		%		50-140	13-OCT-21
Benzo(k)fluoranthene			89.2		%		50-150	13-OCT-21
Chrysene			89.5		%		50-140	13-OCT-21
Dibenz(a,h)anthracene			113.3		%		50-140	13-OCT-21
Fluoranthene			105.1		%		50-140	13-OCT-21
Fluorene			97.3		%		50-140	13-OCT-21
Indeno(1,2,3-cd)pyrene			116.3		%		50-140	13-OCT-21
Naphthalene			75.4		%		50-140	13-OCT-21
Phenanthrene			104.2		%		50-150	13-OCT-21
Pyrene			98.0		%		50-150	13-OCT-21
Quinoline			122.6		%		50-150	13-OCT-21

Quality Control Report

Workorder: L2648169 Report Date: 13-OCT-21

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Legend:

Limit	ALS Control Limit (Data Quality Objectives)
DUP	Duplicate
RPD	Relative Percent Difference
N/A	Not Available
LCS	Laboratory Control Sample
SRM	Standard Reference Material
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ADE	Average Desorption Efficiency
MB	Method Blank
IRM	Internal Reference Material
CRM	Certified Reference Material
CCV	Continuing Calibration Verification
CVS	Calibration Verification Standard
LCSD	Laboratory Control Sample Duplicate

Sample Parameter Qualifier Definitions:

Qualifier	Description
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Hold Time Exceedances:

All test results reported with this submission were conducted within ALS recommended hold times.

ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.

Chain of C

L2648169-COFC

COC Number: 20 - 018

Page 1 of 1

www.alsglobal.com

Report To	Contact and company name below will appear on the final report
Company:	Golder Associates Ltd.
Contact:	Jill LaPorte
Phone:	905-723-2727
	Company address below will appear on the final report
Street:	100 Scotia Court
City/Province:	Whitby, Ontario
Postal Code:	L1N 8Y6
Invoice To	Same as Report To ☐ YES ☑ NO
	Copy of Invoice with Report ☑ YES ☐ NO
Company:	Golder Associates Ltd.
Contact:	Accounts Payable

Project Information	
ALS Account # / Quote #:	15520 / Q86566
Job #:	1783886-8000-8006
PO / AFE:	
LSD:	
ALS Lab Work Order # (ALS use only):	L2648169

Select Report Format:	☑ PDF ☑ EXCEL ☐ EDD (DIGITAL)
Merge QC/QCI Reports with COA	☑ YES ☐ NO ☐ N/A
☐ Compare Results to Criteria on Report - provide details below if box checked	
Select Distribution:	☑ EMAIL ☐ MAIL ☐ FAX
Email 1 or Fax	Jill_LaPorte@golder.com
Email 2	shawn_sequin@golder.com
Email 3	

Invoice Recipients	
Select Invoice Distribution:	☑ EMAIL ☐ MAIL ☐ FAX
Email 1 or Fax	Jill_LaPorte@golder.com
Email 2	canadaaccountspayableinvoices@golder.com

Oil and Gas Required Fields (client use)		
AFE/Cost Center:		PO#
Major/Minor Code:		Routing Code:
Requisitioner:		
Location:		

ALS Contact: Amanda Overholster | Sampler:

Turnaround Time (TAT) Requested

☒ Routine [R] if received by 3pm M-F - no surcharges apply
☐ 4 day [P4] if received by 3pm M-F - 25% rush surcharge minimum
☐ 3 day [P3] if received by 12pm M-F - 50% rush surcharge minimum
☐ 2 day [P2] if received by 12pm M-F - 100% rush surcharge minimum
☐ *1 day [E] if received by 12pm M-F - 200% rush surcharge minimum
*1 day only available for Inorganics, Metals, & VOC
* Same day [E2] unavailable for TCLP/SPLP

AFFIX ALS BARCODE LABEL HERE (ALS use only)

Date and Time Required for all E&P TATs:

For all tests with rush TATs requested, please contact your AM to confirm availability.

Analysis Request

ALS Sample # (ALS use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	NUMBER OF CONTAINERS	TCLP (EPA 1311) PAH (PAH-TCLP-WT)	TCLP (EPA 1311) Metals (MET-TCLP-P-WT)	TCLP (EPA 1311) LEACH (LEACH-TCLP-WT)	MISC	SAMPLES ON HOLD	EXTENDED STORAGE REQUIRED	SUSPECTED HAZARD (see notes)
	PCW-SC-001A	03-OCT-21	1205	Sediment	3	✓	✓	✓				
	PCW-SG-001		1255	Sediment	3	✓	✓	✓				
	DUP-205			Sediment	3	✓	✓	✓				
	PCW-SC-007A	↓	1605	Sediment	3	✓	✓	✓				
	PCW-SG-007	03-OCT-21	1645	Sediment	3	✓	✓	✓				
	PCE-SG-005	03-OCT-21	1415	Sediment	3	✓	✓	✓				
	DUP-004	03-OCT-21		Sediment	3	✓	✓	✓				
				Sediment								
				Sediment								
				Sediment								
				Sediment								
				Sediment								

Limited Sample Size Authorization	Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only)
If the sample provided contains less than the minimum required weight, the samples may be leached at a lower volume and qualified as Limited Sample Size: ☐ YES ☐ NO	Please provide 2X250 mL sample if both mSPLP and TCLP leaching procedures are requested or if Dioxins and Furans are required.
Minimum Sample Size: 1X250 mL - No Headspace	

SAMPLE RECEIPT DETAILS (ALS use only)

Cooling Method: ☐ NONE ☑ ICE ☐ ICE PACKS ☐ FROZEN ☐ COOLING INITIATED
Submission Comments Identified on Sample Receipt Notification: ☐ YES ☐ NO
Cooler Custody Seals Intact: ☐ YES ☐ N/A Sample Custody Seals Intact: ☐ YES ☐ N/A

INITIAL COOLER TEMPERATURES °C				FINAL COOLER TEMPERATURES °C			
				5.9			

SHIPMENT RELEASE (client use)			INITIAL SHIPMENT RECEPTION (ALS use only)			FINAL SHIPMENT RECEPTION (ALS use only)		
Released by:	Date: 4 OCT, 2021	Time:	Received by:	Date:	Time:	Received by:	Date: 04/05/21	Time: 13:15

Refer to the Locations Tab for ALS Locations and Sampling Information

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions.

Reg. 406 mSPLP Metals scan includes: Sb,As,Ba,Be,B,Cd,Cr,Co,Cu,Pb,Mo,Ni,Se,Ag,Tl,U,V,Zn. Reg. 347/558 TCLP Metals+Inorganics includes: As,Ba,B,Cd,Cr,Pb,Se,Ag,U,Hg,Fluoride,CN (WAD),Nitrate+Nitrite as N

AUG 2020 FRONT

Scanned with CamScanner

GOLDER ASSOCIATES LTD (Whitby)
ATTN: Jill LaPorte
100 Scotia Court
Whitby ON L1N 8Y6

Date Received: 05-OCT-21
Report Date: 19-OCT-21 14:11 (MT)
Version: FINAL

Client Phone: 905-723-2727

Certificate of Analysis

Lab Work Order #: L2648304

Project P.O. #: NOT SUBMITTED
Job Reference: 1783886-8000-8006
C of C Numbers:
Legal Site Desc:

Amanda Overholster
Account Manager

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2648304-1 TCAB-SG-009 Sampled By: CLIENT on 01-OCT-21 @ 11:55 Matrix: SOIL							
Sample Preparation							
Initial pH	7.77		0.10	pH units		16-OCT-21	R5620669
Final pH	5.05		0.10	pH units		16-OCT-21	R5620669
TCLP Extractables							
Acenaphthene	<0.0050		0.0050	mg/L	18-OCT-21	19-OCT-21	R5624387
Acenaphthylene	<0.0050		0.0050	mg/L	18-OCT-21	19-OCT-21	R5624387
Anthracene	<0.0050		0.0050	mg/L	18-OCT-21	19-OCT-21	R5624387
Benzo(a)anthracene	<0.0050		0.0050	mg/L	18-OCT-21	19-OCT-21	R5624387
Benzo(a)pyrene	<0.0010		0.0010	mg/L	18-OCT-21	19-OCT-21	R5624387
Benzo(b&j)fluoranthene	<0.0050		0.0050	mg/L	18-OCT-21	19-OCT-21	R5624387
Benzo(g,h,i)perylene	<0.0050		0.0050	mg/L	18-OCT-21	19-OCT-21	R5624387
Benzo(k)fluoranthene	<0.0050		0.0050	mg/L	18-OCT-21	19-OCT-21	R5624387
Chrysene	<0.0050		0.0050	mg/L	18-OCT-21	19-OCT-21	R5624387
Dibenz(a,h)anthracene	<0.0050		0.0050	mg/L	18-OCT-21	19-OCT-21	R5624387
Fluoranthene	<0.0050		0.0050	mg/L	18-OCT-21	19-OCT-21	R5624387
Fluorene	<0.0050		0.0050	mg/L	18-OCT-21	19-OCT-21	R5624387
Indeno(1,2,3-cd)pyrene	<0.0050		0.0050	mg/L	18-OCT-21	19-OCT-21	R5624387
Naphthalene	<0.0050		0.0050	mg/L	18-OCT-21	19-OCT-21	R5624387
Phenanthrene	<0.0050		0.0050	mg/L	18-OCT-21	19-OCT-21	R5624387
Pyrene	<0.0050		0.0050	mg/L	18-OCT-21	19-OCT-21	R5624387
Surrogate: Chrysene d12	90.6		60-130	%	18-OCT-21	19-OCT-21	R5624387
Surrogate: Naphthalene d8	94.3		50-130	%	18-OCT-21	19-OCT-21	R5624387
Surrogate: Phenanthrene d10	99.2		60-130	%	18-OCT-21	19-OCT-21	R5624387
Quinoline	<0.0050		0.0050	mg/L	18-OCT-21	19-OCT-21	R5624387
TCLP Metals							
Arsenic (As)	<0.050		0.050	mg/L		18-OCT-21	R5622480
Barium (Ba)	0.56		0.50	mg/L		18-OCT-21	R5622480
Boron (B)	<2.5		2.5	mg/L		18-OCT-21	R5622480
Cadmium (Cd)	<0.0050		0.0050	mg/L		18-OCT-21	R5622480
Chromium (Cr)	<0.050		0.050	mg/L		18-OCT-21	R5622480
Lead (Pb)	0.037		0.025	mg/L		18-OCT-21	R5622480
Mercury (Hg)	<0.00010		0.00010	mg/L		18-OCT-21	R5622645
Selenium (Se)	<0.025		0.025	mg/L		18-OCT-21	R5622480
Silver (Ag)	<0.0050		0.0050	mg/L		18-OCT-21	R5622480
Uranium (U)	<0.25		0.25	mg/L		18-OCT-21	R5622480
L2648304-2 TCRC-SG-010 Sampled By: CLIENT on 01-OCT-21 @ 12:00 Matrix: SOIL							
Sample Preparation							
Initial pH	8.28		0.10	pH units		09-OCT-21	R5615005
Final pH	4.89		0.10	pH units		09-OCT-21	R5615005
TCLP Extractables							
Acenaphthene	<0.0050		0.0050	mg/L	12-OCT-21	13-OCT-21	R5616382

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2648304-2 TCRC-SG-010 Sampled By: CLIENT on 01-OCT-21 @ 12:00 Matrix: SOIL							
TCLP Extractables							
Acenaphthylene	<0.0050		0.0050	mg/L	12-OCT-21	13-OCT-21	R5616382
Anthracene	<0.0050		0.0050	mg/L	12-OCT-21	13-OCT-21	R5616382
Benzo(a)anthracene	<0.0050		0.0050	mg/L	12-OCT-21	13-OCT-21	R5616382
Benzo(a)pyrene	<0.0010		0.0010	mg/L	12-OCT-21	13-OCT-21	R5616382
Benzo(b&j)fluoranthene	<0.0050		0.0050	mg/L	12-OCT-21	13-OCT-21	R5616382
Benzo(g,h,i)perylene	<0.0050		0.0050	mg/L	12-OCT-21	13-OCT-21	R5616382
Benzo(k)fluoranthene	<0.0050		0.0050	mg/L	12-OCT-21	13-OCT-21	R5616382
Chrysene	<0.0050		0.0050	mg/L	12-OCT-21	13-OCT-21	R5616382
Dibenz(a,h)anthracene	<0.0050		0.0050	mg/L	12-OCT-21	13-OCT-21	R5616382
Fluoranthene	<0.0050		0.0050	mg/L	12-OCT-21	13-OCT-21	R5616382
Fluorene	<0.0050		0.0050	mg/L	12-OCT-21	13-OCT-21	R5616382
Indeno(1,2,3-cd)pyrene	<0.0050		0.0050	mg/L	12-OCT-21	13-OCT-21	R5616382
Naphthalene	<0.0050		0.0050	mg/L	12-OCT-21	13-OCT-21	R5616382
Phenanthrene	<0.0050		0.0050	mg/L	12-OCT-21	13-OCT-21	R5616382
Pyrene	<0.0050		0.0050	mg/L	12-OCT-21	13-OCT-21	R5616382
Surrogate: Chrysene d12	94.0		60-130	%	12-OCT-21	13-OCT-21	R5616382
Surrogate: Naphthalene d8	87.6		50-130	%	12-OCT-21	13-OCT-21	R5616382
Surrogate: Phenanthrene d10	92.8		60-130	%	12-OCT-21	13-OCT-21	R5616382
Quinoline	<0.0050		0.0050	mg/L	12-OCT-21	13-OCT-21	R5616382
TCLP Metals							
Arsenic (As)	<0.050		0.050	mg/L		12-OCT-21	R5616111
Barium (Ba)	1.30		0.50	mg/L		12-OCT-21	R5616111
Boron (B)	<2.5		2.5	mg/L		12-OCT-21	R5616111
Cadmium (Cd)	<0.0050		0.0050	mg/L		12-OCT-21	R5616111
Chromium (Cr)	<0.050		0.050	mg/L		12-OCT-21	R5616111
Lead (Pb)	0.161		0.025	mg/L		12-OCT-21	R5616111
Mercury (Hg)	<0.00010		0.00010	mg/L		12-OCT-21	R5615755
Selenium (Se)	<0.025		0.025	mg/L		12-OCT-21	R5616111
Silver (Ag)	<0.0050		0.0050	mg/L		12-OCT-21	R5616111
Uranium (U)	<0.25		0.25	mg/L		12-OCT-21	R5616111
L2648304-3 TCRC-SG-010A Sampled By: CLIENT on 01-OCT-21 @ 10:25 Matrix: SOIL							
Sample Preparation							
Initial pH	8.61		0.10	pH units		09-OCT-21	R5615005
Final pH	5.12		0.10	pH units		09-OCT-21	R5615005
TCLP Extractables							
Acenaphthene	<0.0050		0.0050	mg/L	12-OCT-21	13-OCT-21	R5616382
Acenaphthylene	<0.0050		0.0050	mg/L	12-OCT-21	13-OCT-21	R5616382
Anthracene	<0.0050		0.0050	mg/L	12-OCT-21	13-OCT-21	R5616382
Benzo(a)anthracene	<0.0050		0.0050	mg/L	12-OCT-21	13-OCT-21	R5616382
Benzo(a)pyrene	<0.0010		0.0010	mg/L	12-OCT-21	13-OCT-21	R5616382

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2648304-3 TCRC-SG-010A Sampled By: CLIENT on 01-OCT-21 @ 10:25 Matrix: SOIL							
TCLP Extractables							
Benzo(b&j)fluoranthene	<0.0050		0.0050	mg/L	12-OCT-21	13-OCT-21	R5616382
Benzo(g,h,i)perylene	<0.0050		0.0050	mg/L	12-OCT-21	13-OCT-21	R5616382
Benzo(k)fluoranthene	<0.0050		0.0050	mg/L	12-OCT-21	13-OCT-21	R5616382
Chrysene	<0.0050		0.0050	mg/L	12-OCT-21	13-OCT-21	R5616382
Dibenz(a,h)anthracene	<0.0050		0.0050	mg/L	12-OCT-21	13-OCT-21	R5616382
Fluoranthene	<0.0050		0.0050	mg/L	12-OCT-21	13-OCT-21	R5616382
Fluorene	<0.0050		0.0050	mg/L	12-OCT-21	13-OCT-21	R5616382
Indeno(1,2,3-cd)pyrene	<0.0050		0.0050	mg/L	12-OCT-21	13-OCT-21	R5616382
Naphthalene	<0.0050		0.0050	mg/L	12-OCT-21	13-OCT-21	R5616382
Phenanthrene	<0.0050		0.0050	mg/L	12-OCT-21	13-OCT-21	R5616382
Pyrene	<0.0050		0.0050	mg/L	12-OCT-21	13-OCT-21	R5616382
Surrogate: Chrysene d12	93.8		60-130	%	12-OCT-21	13-OCT-21	R5616382
Surrogate: Naphthalene d8	87.6		50-130	%	12-OCT-21	13-OCT-21	R5616382
Surrogate: Phenanthrene d10	91.7		60-130	%	12-OCT-21	13-OCT-21	R5616382
Quinoline	<0.0050		0.0050	mg/L	12-OCT-21	13-OCT-21	R5616382
TCLP Metals							
Arsenic (As)	<0.050		0.050	mg/L		12-OCT-21	R5616111
Barium (Ba)	1.66		0.50	mg/L		12-OCT-21	R5616111
Boron (B)	<2.5		2.5	mg/L		12-OCT-21	R5616111
Cadmium (Cd)	<0.0050		0.0050	mg/L		12-OCT-21	R5616111
Chromium (Cr)	<0.050		0.050	mg/L		12-OCT-21	R5616111
Lead (Pb)	0.046		0.025	mg/L		12-OCT-21	R5616111
Mercury (Hg)	<0.00010		0.00010	mg/L		12-OCT-21	R5615755
Selenium (Se)	<0.025		0.025	mg/L		12-OCT-21	R5616111
Silver (Ag)	<0.0050		0.0050	mg/L		12-OCT-21	R5616111
Uranium (U)	<0.25		0.25	mg/L		12-OCT-21	R5616111

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Reference Information

QC Samples with Qualifiers & Comments:

QC Type Description	Parameter	Qualifier	Applies to Sample Number(s)
Method Blank	Boron (B)	B	L2648304-2, -3

Sample Parameter Qualifier key listed:

Qualifier	Description
B	Method Blank exceeds ALS DQO. Associated sample results which are < Limit of Reporting or > 5 times blank level are considered reliable.

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
HG-TCLP-WT	Waste	Mercury (CVAA) for O.Reg 347	EPA 1631E

This analysis is carried out in accordance with the extraction procedure outlined in "Test Methods for Evaluating Solid Waste - Physical/Chemical Methods Volume 1C" SW-846 EPA Method 1311, published by the United States Environmental Protection Agency (EPA). In summary, the sample is extracted at a 20:1 liquid to solids ratio for 16 to 20 hours using either extraction fluid #1 (glacial acetic acid, water and sodium hydroxide) or extraction fluid #2 (glacial acetic acid), depending on the pH of the original sample. The extract is then filtered through a 0.6 to 0.8 micron glass fibre filter and analysed using atomic absorption spectrophotometry (EPA 1631E).

LEACH-TCLP-WT	Waste	Leachate Procedure for Reg 347	EPA 1311

Inorganic and Semi-Volatile Organic contaminants are leached from waste samples in strict accordance with US EPA Method 1311, "Toxicity Characteristic Leaching Procedure" (TCLP). Test results are reported in leachate concentration units (normally mg/L).

MET-TCLP-WT	Waste	O.Reg 347 TCLP Leachable Metals	EPA 6020B

This analysis is carried out in accordance with the extraction procedure outlined in "Test Methods for Evaluating Solid Waste - Physical/Chemical Methods Volume 1C" SW-846 EPA Method 1311, published by the United States Environmental Protection Agency (EPA). In summary, the sample is extracted at a 20:1 liquid to solids ratio for 16 to 20 hours using either extraction fluid #1 (glacial acetic acid, water and sodium hydroxide) or extraction fluid #2 (glacial acetic acid), depending on the pH of the original sample. The extract is then filtered through a 0.6 to 0.8 micron glass fibre filter. Instrumental analysis of the digested extract is by collision cell inductively coupled plasma - mass spectrometry (modifed from EPA Method 6020B).

PAH-TCLP-WT	Waste	PAH for O. Reg 347	SW846 8270 (PAH)

Samples are leached according to TCLP protocol and then the aqueous leachate is extracted and the resulting extracts are analyzed on GC/MSD. Depending on the analytical GC/MS column used benzo(j)fluoranthene may chromatographically co-elute with benzo(b)fluoranthene or benzo(k)fluoranthene.

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
WT	ALS ENVIRONMENTAL - WATERLOO, ONTARIO, CANADA

Chain of Custody Numbers:

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.
mg/kg - milligrams per kilogram based on dry weight of sample
mg/kg wwt - milligrams per kilogram based on wet weight of sample
mg/kg lwt - milligrams per kilogram based on lipid weight of sample
mg/L - unit of concentration based on volume, parts per million.
< - Less than.
D.L. - The reporting limit.
N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.
UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.
Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
HG-TCLP-WT	**Waste**							
Batch R5615755								
WG3635292-3 DUP		**L2647892-1**						
Mercury (Hg)		<0.00010	<0.00010	RPD-NA	mg/L	N/A	50	12-OCT-21
WG3635292-2 LCS								
Mercury (Hg)			101.0		%		70-130	12-OCT-21
WG3635292-1 MB								
Mercury (Hg)			<0.00010		mg/L		0.0001	12-OCT-21
WG3635292-4 MS		**L2647892-1**						
Mercury (Hg)			102.0		%		50-140	12-OCT-21
Batch R5622645								
WG3639584-3 DUP		**L2650172-6**						
Mercury (Hg)		<0.00010	<0.00010	RPD-NA	mg/L	N/A	50	18-OCT-21
WG3639584-2 LCS								
Mercury (Hg)			93.7		%		70-130	18-OCT-21
WG3639584-1 MB								
Mercury (Hg)			<0.00010		mg/L		0.0001	18-OCT-21
WG3639584-4 MS		**L2650172-6**						
Mercury (Hg)			93.7		%		50-140	18-OCT-21
MET-TCLP-WT	**Waste**							
Batch R5616111								
WG3635516-4 DUP		**WG3635516-3**						
Silver (Ag)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	12-OCT-21
Arsenic (As)		<0.050	<0.050	RPD-NA	mg/L	N/A	50	12-OCT-21
Boron (B)		<2.5	<2.5	RPD-NA	mg/L	N/A	50	12-OCT-21
Barium (Ba)		0.85	0.85		mg/L	0.0	50	12-OCT-21
Cadmium (Cd)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	12-OCT-21
Chromium (Cr)		<0.050	<0.050	RPD-NA	mg/L	N/A	50	12-OCT-21
Lead (Pb)		0.070	0.069		mg/L	2.0	50	12-OCT-21
Selenium (Se)		<0.025	<0.025	RPD-NA	mg/L	N/A	50	12-OCT-21
Uranium (U)		<0.25	<0.25	RPD-NA	mg/L	N/A	50	12-OCT-21
WG3635516-2 LCS								
Silver (Ag)			110.1		%		70-130	12-OCT-21
Arsenic (As)			105.5		%		70-130	12-OCT-21
Boron (B)			99.7		%		70-130	12-OCT-21
Barium (Ba)			106.8		%		70-130	12-OCT-21
Cadmium (Cd)			106.2		%		70-130	12-OCT-21
Chromium (Cr)			103.9		%		70-130	12-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-TCLP-WT	**Waste**							
Batch R5616111								
WG3635516-2 LCS								
Lead (Pb)			109.9		%		70-130	12-OCT-21
Selenium (Se)			103.4		%		70-130	12-OCT-21
Uranium (U)			112.9		%		70-130	12-OCT-21
WG3635516-1 MB								
Silver (Ag)			<0.0050		mg/L		0.005	12-OCT-21
Arsenic (As)			<0.050		mg/L		0.05	12-OCT-21
Boron (B)			3.5	B	mg/L		2.5	12-OCT-21
Barium (Ba)			<0.50		mg/L		0.5	12-OCT-21
Cadmium (Cd)			<0.0050		mg/L		0.005	12-OCT-21
Chromium (Cr)			<0.050		mg/L		0.05	12-OCT-21
Lead (Pb)			<0.025		mg/L		0.025	12-OCT-21
Selenium (Se)			<0.025		mg/L		0.025	12-OCT-21
Uranium (U)			<0.25		mg/L		0.25	12-OCT-21
WG3635516-5 MS		**WG3635516-3**						
Silver (Ag)			129.0		%		50-140	12-OCT-21
Arsenic (As)			105.8		%		50-140	12-OCT-21
Boron (B)			106.0		%		50-140	12-OCT-21
Barium (Ba)			103.0		%		50-140	12-OCT-21
Cadmium (Cd)			104.6		%		50-140	12-OCT-21
Chromium (Cr)			106.4		%		50-140	12-OCT-21
Lead (Pb)			106.2		%		50-140	12-OCT-21
Selenium (Se)			103.4		%		50-140	12-OCT-21
Uranium (U)			110.7		%		50-140	12-OCT-21
Batch R5622480								
WG3639410-4 DUP		**WG3639410-3**						
Silver (Ag)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	18-OCT-21
Arsenic (As)		<0.050	<0.050	RPD-NA	mg/L	N/A	50	18-OCT-21
Boron (B)		<2.5	<2.5	RPD-NA	mg/L	N/A	50	18-OCT-21
Barium (Ba)		0.69	0.72		mg/L	4.3	50	18-OCT-21
Cadmium (Cd)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	18-OCT-21
Chromium (Cr)		<0.050	<0.050	RPD-NA	mg/L	N/A	50	18-OCT-21
Lead (Pb)		<0.025	<0.025	RPD-NA	mg/L	N/A	50	18-OCT-21
Selenium (Se)		<0.025	<0.025	RPD-NA	mg/L	N/A	50	18-OCT-21
Uranium (U)		<0.25	<0.25	RPD-NA	mg/L	N/A	50	18-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-TCLP-WT	**Waste**							
Batch R5622480								
WG3639410-2 LCS								
Silver (Ag)			100.0		%		70-130	18-OCT-21
Arsenic (As)			103.0		%		70-130	18-OCT-21
Boron (B)			96.6		%		70-130	18-OCT-21
Barium (Ba)			102.2		%		70-130	18-OCT-21
Cadmium (Cd)			99.7		%		70-130	18-OCT-21
Chromium (Cr)			103.6		%		70-130	18-OCT-21
Lead (Pb)			100.3		%		70-130	18-OCT-21
Selenium (Se)			101.4		%		70-130	18-OCT-21
Uranium (U)			102.0		%		70-130	18-OCT-21
WG3639410-1 MB								
Silver (Ag)			<0.0050		mg/L		0.005	18-OCT-21
Arsenic (As)			<0.050		mg/L		0.05	18-OCT-21
Boron (B)			<2.5		mg/L		2.5	18-OCT-21
Barium (Ba)			<0.50		mg/L		0.5	18-OCT-21
Cadmium (Cd)			<0.0050		mg/L		0.005	18-OCT-21
Chromium (Cr)			<0.050		mg/L		0.05	18-OCT-21
Lead (Pb)			<0.025		mg/L		0.025	18-OCT-21
Selenium (Se)			<0.025		mg/L		0.025	18-OCT-21
Uranium (U)			<0.25		mg/L		0.25	18-OCT-21
WG3639410-5 MS		**WG3639410-3**						
Silver (Ag)			102.8		%		50-140	18-OCT-21
Arsenic (As)			99.4		%		50-140	18-OCT-21
Boron (B)			93.4		%		50-140	18-OCT-21
Barium (Ba)			101.1		%		50-140	18-OCT-21
Cadmium (Cd)			96.8		%		50-140	18-OCT-21
Chromium (Cr)			98.5		%		50-140	18-OCT-21
Lead (Pb)			96.5		%		50-140	18-OCT-21
Selenium (Se)			103.2		%		50-140	18-OCT-21
Uranium (U)			96.1		%		50-140	18-OCT-21
PAH-TCLP-WT	**Waste**							
Batch R5616382								
WG3635501-5 DUP		**WG3635501-3**						
Acenaphthene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	13-OCT-21
Acenaphthylene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	13-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-TCLP-WT	**Waste**							
Batch R5616382								
WG3635501-5 DUP		**WG3635501-3**						
Anthracene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	13-OCT-21
Benzo(a)anthracene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	13-OCT-21
Benzo(a)pyrene		<0.0010	<0.0010	RPD-NA	mg/L	N/A	50	13-OCT-21
Benzo(b&j)fluoranthene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	13-OCT-21
Benzo(g,h,i)perylene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	13-OCT-21
Benzo(k)fluoranthene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	13-OCT-21
Chrysene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	13-OCT-21
Dibenz(a,h)anthracene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	13-OCT-21
Fluoranthene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	13-OCT-21
Fluorene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	13-OCT-21
Indeno(1,2,3-cd)pyrene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	13-OCT-21
Naphthalene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	13-OCT-21
Phenanthrene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	13-OCT-21
Pyrene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	13-OCT-21
Quinoline		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	13-OCT-21
WG3635501-2 LCS								
Acenaphthene			89.6		%		50-130	13-OCT-21
Acenaphthylene			86.9		%		50-130	13-OCT-21
Anthracene			88.1		%		50-130	13-OCT-21
Benzo(a)anthracene			102.0		%		50-140	13-OCT-21
Benzo(a)pyrene			84.1		%		60-140	13-OCT-21
Benzo(b&j)fluoranthene			91.2		%		50-130	13-OCT-21
Benzo(g,h,i)perylene			96.8		%		50-140	13-OCT-21
Benzo(k)fluoranthene			94.0		%		50-150	13-OCT-21
Chrysene			101.0		%		50-140	13-OCT-21
Dibenz(a,h)anthracene			97.9		%		50-140	13-OCT-21
Fluoranthene			96.2		%		50-130	13-OCT-21
Fluorene			91.5		%		50-130	13-OCT-21
Indeno(1,2,3-cd)pyrene			97.4		%		50-140	13-OCT-21
Naphthalene			76.4		%		50-130	13-OCT-21
Phenanthrene			98.7		%		50-130	13-OCT-21
Pyrene			96.7		%		50-140	13-OCT-21
Quinoline			118.3		%		50-130	13-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-TCLP-WT	**Waste**							
Batch R5616382								
WG3635501-1 MB								
Acenaphthene			<0.0050		mg/L		0.005	13-OCT-21
Acenaphthylene			<0.0050		mg/L		0.005	13-OCT-21
Anthracene			<0.0050		mg/L		0.005	13-OCT-21
Benzo(a)anthracene			<0.0050		mg/L		0.005	13-OCT-21
Benzo(a)pyrene			<0.0010		mg/L		0.001	13-OCT-21
Benzo(b&j)fluoranthene			<0.0050		mg/L		0.005	13-OCT-21
Benzo(g,h,i)perylene			<0.0050		mg/L		0.005	13-OCT-21
Benzo(k)fluoranthene			<0.0050		mg/L		0.005	13-OCT-21
Chrysene			<0.0050		mg/L		0.005	13-OCT-21
Dibenz(a,h)anthracene			<0.0050		mg/L		0.005	13-OCT-21
Fluoranthene			<0.0050		mg/L		0.005	13-OCT-21
Fluorene			<0.0050		mg/L		0.005	13-OCT-21
Indeno(1,2,3-cd)pyrene			<0.0050		mg/L		0.005	13-OCT-21
Naphthalene			<0.0050		mg/L		0.005	13-OCT-21
Phenanthrene			<0.0050		mg/L		0.005	13-OCT-21
Pyrene			<0.0050		mg/L		0.005	13-OCT-21
Quinoline			<0.0050		mg/L		0.005	13-OCT-21
Surrogate: Naphthalene d8			89.0		%		50-130	13-OCT-21
Surrogate: Phenanthrene d10			93.6		%		60-130	13-OCT-21
Surrogate: Chrysene d12			94.7		%		60-130	13-OCT-21
WG3635501-6 MB								
Acenaphthene			<0.0050		mg/L		0.005	13-OCT-21
Acenaphthylene			<0.0050		mg/L		0.005	13-OCT-21
Anthracene			<0.0050		mg/L		0.005	13-OCT-21
Benzo(a)anthracene			<0.0050		mg/L		0.005	13-OCT-21
Benzo(a)pyrene			<0.0010		mg/L		0.001	13-OCT-21
Benzo(b&j)fluoranthene			<0.0050		mg/L		0.005	13-OCT-21
Benzo(g,h,i)perylene			<0.0050		mg/L		0.005	13-OCT-21
Benzo(k)fluoranthene			<0.0050		mg/L		0.005	13-OCT-21
Chrysene			<0.0050		mg/L		0.005	13-OCT-21
Dibenz(a,h)anthracene			<0.0050		mg/L		0.005	13-OCT-21
Fluoranthene			<0.0050		mg/L		0.005	13-OCT-21
Fluorene			<0.0050		mg/L		0.005	13-OCT-21
Indeno(1,2,3-cd)pyrene			<0.0050		mg/L		0.005	13-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-TCLP-WT	**Waste**							
Batch R5616382								
WG3635501-6 MB								
Naphthalene			<0.0050		mg/L		0.005	13-OCT-21
Phenanthrene			<0.0050		mg/L		0.005	13-OCT-21
Pyrene			<0.0050		mg/L		0.005	13-OCT-21
Quinoline			<0.0050		mg/L		0.005	13-OCT-21
Surrogate: Naphthalene d8			89.7		%		50-130	13-OCT-21
Surrogate: Phenanthrene d10			92.8		%		60-130	13-OCT-21
Surrogate: Chrysene d12			94.0		%		60-130	13-OCT-21
WG3635501-4 MS		**WG3635501-3**						
Acenaphthene			90.5		%		50-140	13-OCT-21
Acenaphthylene			87.2		%		50-140	13-OCT-21
Anthracene			88.1		%		50-150	13-OCT-21
Benzo(a)anthracene			102.4		%		50-140	13-OCT-21
Benzo(a)pyrene			84.9		%		50-140	13-OCT-21
Benzo(b&j)fluoranthene			90.7		%		50-150	13-OCT-21
Benzo(g,h,i)perylene			95.5		%		50-140	13-OCT-21
Benzo(k)fluoranthene			95.3		%		50-150	13-OCT-21
Chrysene			102.4		%		50-140	13-OCT-21
Dibenz(a,h)anthracene			93.1		%		50-140	13-OCT-21
Fluoranthene			97.1		%		50-140	13-OCT-21
Fluorene			91.8		%		50-140	13-OCT-21
Indeno(1,2,3-cd)pyrene			95.2		%		50-140	13-OCT-21
Naphthalene			76.4		%		50-140	13-OCT-21
Phenanthrene			98.3		%		50-150	13-OCT-21
Pyrene			97.3		%		50-150	13-OCT-21
Quinoline			116.5		%		50-150	13-OCT-21
Batch R5624387								
WG3639574-5 DUP		**WG3639574-3**						
Acenaphthene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	19-OCT-21
Acenaphthylene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	19-OCT-21
Anthracene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	19-OCT-21
Benzo(a)anthracene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	19-OCT-21
Benzo(a)pyrene		<0.0010	<0.0010	RPD-NA	mg/L	N/A	50	19-OCT-21
Benzo(b&j)fluoranthene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	19-OCT-21
Benzo(g,h,i)perylene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	19-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-TCLP-WT	**Waste**							
Batch R5624387								
WG3639574-5 DUP		**WG3639574-3**						
Benzo(k)fluoranthene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	19-OCT-21
Chrysene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	19-OCT-21
Dibenz(a,h)anthracene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	19-OCT-21
Fluoranthene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	19-OCT-21
Fluorene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	19-OCT-21
Indeno(1,2,3-cd)pyrene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	19-OCT-21
Naphthalene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	19-OCT-21
Phenanthrene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	19-OCT-21
Pyrene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	19-OCT-21
Quinoline		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	19-OCT-21
WG3639574-2 LCS								
Acenaphthene			90.6		%		50-130	19-OCT-21
Acenaphthylene			87.0		%		50-130	19-OCT-21
Anthracene			83.2		%		50-130	19-OCT-21
Benzo(a)anthracene			90.8		%		50-140	19-OCT-21
Benzo(a)pyrene			81.1		%		60-140	19-OCT-21
Benzo(b&j)fluoranthene			89.4		%		50-130	19-OCT-21
Benzo(g,h,i)perylene			98.1		%		50-140	19-OCT-21
Benzo(k)fluoranthene			91.7		%		50-150	19-OCT-21
Chrysene			91.6		%		50-140	19-OCT-21
Dibenz(a,h)anthracene			86.3		%		50-140	19-OCT-21
Fluoranthene			90.6		%		50-130	19-OCT-21
Fluorene			89.8		%		50-130	19-OCT-21
Indeno(1,2,3-cd)pyrene			93.7		%		50-140	19-OCT-21
Naphthalene			80.1		%		50-130	19-OCT-21
Phenanthrene			92.4		%		50-130	19-OCT-21
Pyrene			91.1		%		50-140	19-OCT-21
Quinoline			106.0		%		50-130	19-OCT-21
WG3639574-1 MB								
Acenaphthene			<0.0050		mg/L		0.005	19-OCT-21
Acenaphthylene			<0.0050		mg/L		0.005	19-OCT-21
Anthracene			<0.0050		mg/L		0.005	19-OCT-21
Benzo(a)anthracene			<0.0050		mg/L		0.005	19-OCT-21
Benzo(a)pyrene			<0.0010		mg/L		0.001	19-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-TCLP-WT	**Waste**							
Batch R5624387								
WG3639574-1 MB								
Benzo(b&j)fluoranthene			<0.0050		mg/L		0.005	19-OCT-21
Benzo(g,h,i)perylene			<0.0050		mg/L		0.005	19-OCT-21
Benzo(k)fluoranthene			<0.0050		mg/L		0.005	19-OCT-21
Chrysene			<0.0050		mg/L		0.005	19-OCT-21
Dibenz(a,h)anthracene			<0.0050		mg/L		0.005	19-OCT-21
Fluoranthene			<0.0050		mg/L		0.005	19-OCT-21
Fluorene			<0.0050		mg/L		0.005	19-OCT-21
Indeno(1,2,3-cd)pyrene			<0.0050		mg/L		0.005	19-OCT-21
Naphthalene			<0.0050		mg/L		0.005	19-OCT-21
Phenanthrene			<0.0050		mg/L		0.005	19-OCT-21
Pyrene			<0.0050		mg/L		0.005	19-OCT-21
Quinoline			<0.0050		mg/L		0.005	19-OCT-21
Surrogate: Naphthalene d8			93.9		%		50-130	19-OCT-21
Surrogate: Phenanthrene d10			99.5		%		60-130	19-OCT-21
Surrogate: Chrysene d12			95.2		%		60-130	19-OCT-21
WG3639574-6 MB								
Acenaphthene			<0.0050		mg/L		0.005	19-OCT-21
Acenaphthylene			<0.0050		mg/L		0.005	19-OCT-21
Anthracene			<0.0050		mg/L		0.005	19-OCT-21
Benzo(a)anthracene			<0.0050		mg/L		0.005	19-OCT-21
Benzo(a)pyrene			<0.0010		mg/L		0.001	19-OCT-21
Benzo(b&j)fluoranthene			<0.0050		mg/L		0.005	19-OCT-21
Benzo(g,h,i)perylene			<0.0050		mg/L		0.005	19-OCT-21
Benzo(k)fluoranthene			<0.0050		mg/L		0.005	19-OCT-21
Chrysene			<0.0050		mg/L		0.005	19-OCT-21
Dibenz(a,h)anthracene			<0.0050		mg/L		0.005	19-OCT-21
Fluoranthene			<0.0050		mg/L		0.005	19-OCT-21
Fluorene			<0.0050		mg/L		0.005	19-OCT-21
Indeno(1,2,3-cd)pyrene			<0.0050		mg/L		0.005	19-OCT-21
Naphthalene			<0.0050		mg/L		0.005	19-OCT-21
Phenanthrene			<0.0050		mg/L		0.005	19-OCT-21
Pyrene			<0.0050		mg/L		0.005	19-OCT-21
Quinoline			<0.0050		mg/L		0.005	19-OCT-21
Surrogate: Naphthalene d8			97.9		%		50-130	19-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-TCLP-WT	**Waste**							
Batch R5624387								
WG3639574-6 MB								
Surrogate: Phenanthrene d10			103.9		%		60-130	19-OCT-21
Surrogate: Chrysene d12			99.3		%		60-130	19-OCT-21
WG3639574-4 MS		**WG3639574-3**						
Acenaphthene			89.5		%		50-140	19-OCT-21
Acenaphthylene			86.3		%		50-140	19-OCT-21
Anthracene			81.6		%		50-150	19-OCT-21
Benzo(a)anthracene			89.8		%		50-140	19-OCT-21
Benzo(a)pyrene			79.3		%		50-140	19-OCT-21
Benzo(b&j)fluoranthene			88.5		%		50-150	19-OCT-21
Benzo(g,h,i)perylene			97.4		%		50-140	19-OCT-21
Benzo(k)fluoranthene			90.4		%		50-150	19-OCT-21
Chrysene			90.4		%		50-140	19-OCT-21
Dibenz(a,h)anthracene			84.7		%		50-140	19-OCT-21
Fluoranthene			90.5		%		50-140	19-OCT-21
Fluorene			89.0		%		50-140	19-OCT-21
Indeno(1,2,3-cd)pyrene			92.4		%		50-140	19-OCT-21
Naphthalene			80.7		%		50-140	19-OCT-21
Phenanthrene			91.3		%		50-150	19-OCT-21
Pyrene			91.4		%		50-150	19-OCT-21
Quinoline			111.4		%		50-150	19-OCT-21

Quality Control Report

Workorder: L2648304 Report Date: 19-OCT-21

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Legend:

Limit	ALS Control Limit (Data Quality Objectives)
DUP	Duplicate
RPD	Relative Percent Difference
N/A	Not Available
LCS	Laboratory Control Sample
SRM	Standard Reference Material
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ADE	Average Desorption Efficiency
MB	Method Blank
IRM	Internal Reference Material
CRM	Certified Reference Material
CCV	Continuing Calibration Verification
CVS	Calibration Verification Standard
LCSD	Laboratory Control Sample Duplicate

Sample Parameter Qualifier Definitions:

Qualifier	Description
B	Method Blank exceeds ALS DQO. Associated sample results which are < Limit of Reporting or > 5 times blank level are considered reliable.
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Hold Time Exceedances:

All test results reported with this submission were conducted within ALS recommended hold times.

ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.

ALS www.alsglobal.com

Chain of Cu

L2648304-COFC

COC Number: 20 - 011

Page 1 of 1

Report To	Contact and company name below will appear on the final report
Company:	Golder Associates Ltd.
Contact:	Jill LaPorte
Phone:	905-723-2727
	Company address below will appear on the final report
Street:	100 Scotia Court
City/Province:	Whitby, Ontario
Postal Code:	L1N 8Y6
Invoice To	Same as Report To ☐ YES ☑ NO
	Copy of Invoice with Report ☑ YES ☐ NO
Company:	Golder Associates Ltd.
Contact:	Accounts Payable

Reports / Recipients

Select Report Format: ☑ PDF ☑ EXCEL ☐ EDD (DIGITAL)
Merge QC/QCI Reports with COA ☑ YES ☐ NO ☐ N/A
☐ Compare Results to Criteria on Report - provide details below if box checked
Select Distribution: ☑ EMAIL ☐ MAIL ☐ FAX
Email 1 or Fax: Jill_LaPorte@golder.com
Email 2: shawn_sequin@golder.com
Email 3:

Invoice Recipients

Select Invoice Distribution: ☑ EMAIL ☐ MAIL ☐ FAX
Email 1 or Fax: Jill_LaPorte@golder.com
Email 2: canadaaccountspayableinvoices@golder.com

Oil and Gas Required Fields (client use)

AFE/Cost Center: | PO#
Major/Minor Code: | Routing Code:
Requisitioner:
Location:

Project Information

ALS Account # / Quote #: 15520 / Q86566
Job #: 1783886-8000-8006
PO / AFE:
LSD:
ALS Lab Work Order # (ALS use only): L2648304

ALS Contact: Amanda Overholster | Sampler:

Time (TAT) Requested

☐ Routine [R] if received by 3pm M-F - no surcharges apply
☐ 4 day [P4] if received by 3pm M-F - 25% rush surcharge minimum
☐ 3 day [P3] if received by 12pm M-F - 50% rush surcharge minimum
☐ 2 day [P2] if received by 12pm M-F - 100% rush surcharge minimum
☐ *1 day [E] if received by 12pm M-F - 200% rush surcharge minimum
*1 day only available for Inorganics, Metals, & VOC
* Same day [E2] unavailable for TCLP/SPLP

AFFIX ALS BARCODE LABEL HERE (ALS use only)

Date and Time Required for all E&P TATs:
For all tests with rush TATs requested, please contact your AM to confirm availability.

Analysis Request

ALS Sample # (ALS use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	NUMBER OF CONTAINERS	TCLP (EPA1311): PAH (PAH-TCLP-WT)	TCLP (EPA1311): Metals (MET-TCLP-P-WT)	TCLP (EPA1311): LEACH (LEACH-TCLP-WT)	MISC	SAMPLES ON HOLD	EXTENDED STORAGE REQUIRED	SUSPECTED HAZARD (see notes)
	TCAB-SG-OOA	01-OCT-21	11:55	Sediment	3	✓	✓	✓				
	TCRC-SG-010		1200	Sediment	3	/	/	/				
	TCRC-SC-010A		10:25	Sediment	3	/	/	/				
				Sediment								
				Sediment								
				Sediment								
				Sediment								
				Sediment								
				Sediment								
				Sediment								
				Sediment								
				Sediment								

Limited Sample Size Authorization

If the sample provided contains less than the minimum required weight, the samples may be leached at a lower volume and qualified as Limited Sample Size:
☐ YES ☐ NO
Minimum Sample Size: 1X250 mL - No Headspace

Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only)

Please provide 2X250 mL sample if both mSPLP and TCLP leaching procedures are requested or if Dioxins and Furans are required.

SAMPLE RECEIPT DETAILS (ALS use only)

Cooling Method: ☐ NONE ☑ ICE ☐ ICE PACKS ☐ FROZEN ☐ COOLING INITIATED
Submission Comments identified on Sample Receipt Notification: ☐ YES ☐ NO
Cooler Custody Seals Intact: ☐ YES ☐ N/A | Sample Custody Seals Intact: ☐ YES ☐ N/A

INITIAL COOLER TEMPERATURES °C				FINAL COOLER TEMPERATURES °C			
10.7	4.2	9.8	9.4	13.1			

SHIPMENT RELEASE (client use)

Released by: | Date: 4-OCT-21 | Time:

INITIAL SHIPMENT RECEPTION (ALS use only)

Received by: Karan | Date: 10/5/2021 | Time: 10:46

FINAL SHIPMENT RECEPTION (ALS use only)

Received by: | Date: 10/05/21 | Time: 17:1X

Refer to the Locations Tab for ALS Locations and Sampling Information
Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions.
As Ba B Cd Cr Pb Se An U He Fluoride,CN (WAD),Nitrate+Nitrite as N

Scanned with CamScanner

GOLDER ASSOCIATES LTD (Whitby)
ATTN: Jill LaPorte
100 Scotia Court
Whitby ON L1N 8Y6

Date Received: 08-OCT-21
Report Date: 22-OCT-21 13:11 (MT)
Version: FINAL

Client Phone: 905-723-2727

Certificate of Analysis

Lab Work Order #: L2650174

Project P.O. #: NOT SUBMITTED
Job Reference: 1783886-8000-8006
C of C Numbers:
Legal Site Desc:

Amanda Overholster
Account Manager

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650174-1 TC1-SG-006 Sampled By: CLIENT on 06-OCT-21 @ 15:50 Matrix: SEDIMENT							
Physical Tests							
% Moisture	84.5		0.25	%	14-OCT-21	15-OCT-21	R5617415
Particle Size							
General Texture Class	Fine				18-OCT-21	18-OCT-21	R5623956
MUST PSA % > 75um	<1.0		1.0	%	18-OCT-21	18-OCT-21	R5623956
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0750		0.0010	g/g	20-OCT-21	20-OCT-21	R5625269
Total Organic Carbon	7.50		0.10	%	20-OCT-21	20-OCT-21	R5625269
Metals							
Aluminum (Al)	18700		50	ug/g	18-OCT-21	19-OCT-21	R5624603
Antimony (Sb)	0.70		0.10	ug/g	18-OCT-21	19-OCT-21	R5624603
Arsenic (As)	7.29		0.10	ug/g	18-OCT-21	19-OCT-21	R5624603
Barium (Ba)	287		0.50	ug/g	18-OCT-21	19-OCT-21	R5624603
Beryllium (Be)	0.73		0.10	ug/g	18-OCT-21	19-OCT-21	R5624603
Bismuth (Bi)	0.40		0.20	ug/g	18-OCT-21	19-OCT-21	R5624603
Boron (B)	11.4		5.0	ug/g	18-OCT-21	19-OCT-21	R5624603
Cadmium (Cd)	0.776		0.020	ug/g	18-OCT-21	19-OCT-21	R5624603
Calcium (Ca)	85700		50	ug/g	18-OCT-21	19-OCT-21	R5624603
Chromium (Cr)	928		0.50	ug/g	18-OCT-21	19-OCT-21	R5624603
Cobalt (Co)	13.2		0.10	ug/g	18-OCT-21	19-OCT-21	R5624603
Copper (Cu)	42.8		0.50	ug/g	18-OCT-21	19-OCT-21	R5624603
Iron (Fe)	29300		50	ug/g	18-OCT-21	19-OCT-21	R5624603
Lead (Pb)	112		0.50	ug/g	18-OCT-21	19-OCT-21	R5624603
Lithium (Li)	17.2		2.0	ug/g	18-OCT-21	19-OCT-21	R5624603
Magnesium (Mg)	15200		20	ug/g	18-OCT-21	19-OCT-21	R5624603
Manganese (Mn)	954		1.0	ug/g	18-OCT-21	19-OCT-21	R5624603
Mercury (Hg)	0.229		0.0050	ug/g	18-OCT-21	19-OCT-21	R5624427
Molybdenum (Mo)	1.17		0.10	ug/g	18-OCT-21	19-OCT-21	R5624603
Nickel (Ni)	28.2		0.50	ug/g	18-OCT-21	19-OCT-21	R5624603
Phosphorus (P)	1270		50	ug/g	18-OCT-21	19-OCT-21	R5624603
Potassium (K)	4280		100	ug/g	18-OCT-21	19-OCT-21	R5624603
Selenium (Se)	1.19		0.20	ug/g	18-OCT-21	19-OCT-21	R5624603
Silver (Ag)	0.46		0.10	ug/g	18-OCT-21	19-OCT-21	R5624603
Sodium (Na)	776		50	ug/g	18-OCT-21	19-OCT-21	R5624603
Strontium (Sr)	528		0.50	ug/g	18-OCT-21	19-OCT-21	R5624603
Sulfur (S)	9800		1000	ug/g	18-OCT-21	19-OCT-21	R5624603
Thallium (Tl)	0.282		0.050	ug/g	18-OCT-21	19-OCT-21	R5624603
Tin (Sn)	4.4		2.0	ug/g	18-OCT-21	19-OCT-21	R5624603
Titanium (Ti)	1130		1.0	ug/g	18-OCT-21	19-OCT-21	R5624603
Tungsten (W)	<0.50		0.50	ug/g	18-OCT-21	19-OCT-21	R5624603
Uranium (U)	0.815		0.050	ug/g	18-OCT-21	19-OCT-21	R5624603
Vanadium (V)	47.5		0.20	ug/g	18-OCT-21	19-OCT-21	R5624603
Zinc (Zn)	171		2.0	ug/g	18-OCT-21	19-OCT-21	R5624603

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650174-1 TC1-SG-006 Sampled By: CLIENT on 06-OCT-21 @ 15:50 Matrix: SEDIMENT							
Metals							
Zirconium (Zr)	4.3		1.0	ug/g	18-OCT-21	19-OCT-21	R5624603
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.031	DLHM	0.025	ug/g	19-OCT-21	20-OCT-21	R5624927
Acenaphthylene	0.200	DLHM	0.025	ug/g	19-OCT-21	20-OCT-21	R5624927
Acridine	<0.050	DLHM	0.050	ug/g	19-OCT-21	20-OCT-21	R5624927
Anthracene	0.077	DLHM	0.020	ug/g	19-OCT-21	20-OCT-21	R5624927
Benzo(a)anthracene	0.285	R	0.050	ug/g	19-OCT-21	20-OCT-21	R5624927
Benzo(a)pyrene	0.505	DLHM	0.025	ug/g	19-OCT-21	20-OCT-21	R5624927
Benzo(b&j)fluoranthene	0.492	DLHM	0.050	ug/g	19-OCT-21	20-OCT-21	R5624927
Benzo(g,h,i)perylene	0.386	DLHM	0.050	ug/g	19-OCT-21	20-OCT-21	R5624927
Benzo(k)fluoranthene	0.212	DLHM	0.050	ug/g	19-OCT-21	20-OCT-21	R5624927
Chrysene	0.419	DLHM	0.050	ug/g	19-OCT-21	20-OCT-21	R5624927
Dibenz(a,h)anthracene	<0.170	RRR	0.17	ug/g	19-OCT-21	20-OCT-21	R5624927
Fluoroanthene	0.364	DLHM	0.025	ug/g	19-OCT-21	20-OCT-21	R5624927
Fluorene	0.039	DLHM	0.025	ug/g	19-OCT-21	20-OCT-21	R5624927
Indeno(1,2,3-cd)pyrene	0.283	DLHM	0.050	ug/g	19-OCT-21	20-OCT-21	R5624927
1-Methylnaphthalene	<0.025	DLHM	0.025	ug/g	19-OCT-21	20-OCT-21	R5624927
2-Methylnaphthalene	<0.025	DLHM	0.025	ug/g	19-OCT-21	20-OCT-21	R5624927
Naphthalene	<0.025	DLHM	0.025	ug/g	19-OCT-21	20-OCT-21	R5624927
Phenanthrene	0.158	DLHM	0.025	ug/g	19-OCT-21	20-OCT-21	R5624927
Pyrene	0.513	DLHM	0.025	ug/g	19-OCT-21	20-OCT-21	R5624927
Quinoline	<0.025	DLHM	0.025	ug/g	19-OCT-21	20-OCT-21	R5624927
Surrogate: 2-Fluorobiphenyl	87.1		60-140	%	19-OCT-21	20-OCT-21	R5624927
Surrogate: d14-Terphenyl	86.7		60-140	%	19-OCT-21	20-OCT-21	R5624927
B(a)P Total Potency Equivalent	0.724		0.036	ug/g	19-OCT-21	20-OCT-21	R5624927
IACR (CCME)	7.35		0.50		19-OCT-21	20-OCT-21	R5624927
Polychlorinated Biphenyls							
Aroclor 1016	<0.024	DLR	0.024	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1221	<0.024	DLR	0.024	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1232	<0.024	DLR	0.024	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1242	<0.024	DLR	0.024	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1248	<0.024	DLR	0.024	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1254	0.112	DLR	0.024	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1260	0.227	DLR	0.024	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1262	<0.024	DLR	0.024	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1268	<0.024	DLR	0.024	mg/kg	21-OCT-21	21-OCT-21	R5626110
Total Polychlorinated Biphenyls	0.339		0.072	mg/kg	21-OCT-21	21-OCT-21	R5626110
Surrogate: d14-Terphenyl	90.1		50-140	%	21-OCT-21	21-OCT-21	R5626110
Report Remarks : RRR; The Reporting Limit has been adjusted based on compound recovey in sample matrix spike.							
L2650174-2 TC1-SG-007 Sampled By: CLIENT on 06-OCT-21 @ 16:10 Matrix: SEDIMENT							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650174-2 TC1-SG-007 Sampled By: CLIENT on 06-OCT-21 @ 16:10 Matrix: SEDIMENT							
Physical Tests							
% Moisture	85.7		0.25	%	14-OCT-21	15-OCT-21	R5617415
Particle Size							
General Texture Class	Fine				18-OCT-21	18-OCT-21	R5623956
MUST PSA % > 75um	<1.0		1.0	%	18-OCT-21	18-OCT-21	R5623956
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0831		0.0010	g/g	20-OCT-21	20-OCT-21	R5625269
Total Organic Carbon	8.31		0.10	%	20-OCT-21	20-OCT-21	R5625269
Metals							
Aluminum (Al)	17900	DLHC	1000	ug/g	18-OCT-21	20-OCT-21	R5624998
Antimony (Sb)	<2.0	DLHC	2.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Arsenic (As)	5.6	DLHC	2.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Barium (Ba)	236	DLHC	10	ug/g	18-OCT-21	20-OCT-21	R5624998
Beryllium (Be)	<2.0	DLHC	2.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Bismuth (Bi)	<4.0	DLHC	4.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Boron (B)	<100	DLHC	100	ug/g	18-OCT-21	20-OCT-21	R5624998
Cadmium (Cd)	0.69	DLHC	0.40	ug/g	18-OCT-21	20-OCT-21	R5624998
Calcium (Ca)	37000	DLHC	1000	ug/g	18-OCT-21	20-OCT-21	R5624998
Chromium (Cr)	816	DLHC	10	ug/g	18-OCT-21	20-OCT-21	R5624998
Cobalt (Co)	12.6	DLHC	2.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Copper (Cu)	40	DLHC	10	ug/g	18-OCT-21	20-OCT-21	R5624998
Iron (Fe)	28100	DLHC	1000	ug/g	18-OCT-21	20-OCT-21	R5624998
Lead (Pb)	93	DLHC	10	ug/g	18-OCT-21	20-OCT-21	R5624998
Lithium (Li)	<40	DLHC	40	ug/g	18-OCT-21	20-OCT-21	R5624998
Magnesium (Mg)	13200	DLHC	400	ug/g	18-OCT-21	20-OCT-21	R5624998
Manganese (Mn)	833	DLHC	20	ug/g	18-OCT-21	20-OCT-21	R5624998
Mercury (Hg)	0.235		0.0050	ug/g	18-OCT-21	20-OCT-21	R5624985
Molybdenum (Mo)	<2.0	DLHC	2.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Nickel (Ni)	27	DLHC	10	ug/g	18-OCT-21	20-OCT-21	R5624998
Phosphorus (P)	1000	DLHC	1000	ug/g	18-OCT-21	20-OCT-21	R5624998
Potassium (K)	3700	DLHC	2000	ug/g	18-OCT-21	20-OCT-21	R5624998
Selenium (Se)	<4.0	DLHC	4.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Silver (Ag)	<2.0	DLHC	2.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Sodium (Na)	<1000	DLHC	1000	ug/g	18-OCT-21	20-OCT-21	R5624998
Strontium (Sr)	197	DLHC	10	ug/g	18-OCT-21	20-OCT-21	R5624998
Sulfur (S)	<20000	DLHC	20000	ug/g	18-OCT-21	20-OCT-21	R5624998
Thallium (Tl)	<1.0	DLHC	1.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Tin (Sn)	<40	DLHC	40	ug/g	18-OCT-21	20-OCT-21	R5624998
Titanium (Ti)	1040	DLHC	20	ug/g	18-OCT-21	20-OCT-21	R5624998
Tungsten (W)	<10	DLHC	10	ug/g	18-OCT-21	20-OCT-21	R5624998
Uranium (U)	<1.0	DLHC	1.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Vanadium (V)	44.2	DLHC	4.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Zinc (Zn)	151	DLHC	40	ug/g	18-OCT-21	20-OCT-21	R5624998

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650174-2 TC1-SG-007 Sampled By: CLIENT on 06-OCT-21 @ 16:10 Matrix: SEDIMENT							
Metals							
Zirconium (Zr)	<20	DLHC	20	ug/g	18-OCT-21	20-OCT-21	R5624998
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	<0.038	DLHM	0.038	ug/g	19-OCT-21	20-OCT-21	R5624927
Acenaphthylene	0.300	DLHM	0.038	ug/g	19-OCT-21	20-OCT-21	R5624927
Acridine	<0.075	DLHM	0.075	ug/g	19-OCT-21	20-OCT-21	R5624927
Anthracene	0.125	DLHM	0.030	ug/g	19-OCT-21	20-OCT-21	R5624927
Benzo(a)anthracene	0.498	R	0.075	ug/g	19-OCT-21	20-OCT-21	R5624927
Benzo(a)pyrene	0.806	DLHM	0.038	ug/g	19-OCT-21	20-OCT-21	R5624927
Benzo(b&j)fluoranthene	0.730	DLHM	0.075	ug/g	19-OCT-21	20-OCT-21	R5624927
Benzo(g,h,i)perylene	0.550	DLHM	0.075	ug/g	19-OCT-21	20-OCT-21	R5624927
Benzo(k)fluoranthene	0.341	DLHM	0.075	ug/g	19-OCT-21	20-OCT-21	R5624927
Chrysene	0.631	DLHM	0.075	ug/g	19-OCT-21	20-OCT-21	R5624927
Dibenz(a,h)anthracene	<0.260	RRR	0.26	ug/g	19-OCT-21	20-OCT-21	R5624927
Fluoroanthene	0.546	DLHM	0.038	ug/g	19-OCT-21	20-OCT-21	R5624927
Fluorene	0.056	DLHM	0.038	ug/g	19-OCT-21	20-OCT-21	R5624927
Indeno(1,2,3-cd)pyrene	0.398	DLHM	0.075	ug/g	19-OCT-21	20-OCT-21	R5624927
1-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	19-OCT-21	20-OCT-21	R5624927
2-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	19-OCT-21	20-OCT-21	R5624927
Naphthalene	<0.038	DLHM	0.038	ug/g	19-OCT-21	20-OCT-21	R5624927
Phenanthrene	0.226	DLHM	0.038	ug/g	19-OCT-21	20-OCT-21	R5624927
Pyrene	0.782	DLHM	0.038	ug/g	19-OCT-21	20-OCT-21	R5624927
Quinoline	<0.038	DLHM	0.038	ug/g	19-OCT-21	20-OCT-21	R5624927
Surrogate: 2-Fluorobiphenyl	96.7		60-140	%	19-OCT-21	20-OCT-21	R5624927
Surrogate: d14-Terphenyl	96.4		60-140	%	19-OCT-21	20-OCT-21	R5624927
B(a)P Total Potency Equivalent	1.14		0.053	ug/g	19-OCT-21	20-OCT-21	R5624927
IACR (CCME)	11.5		0.75		19-OCT-21	20-OCT-21	R5624927
Polychlorinated Biphenyls							
Aroclor 1016	<0.036	DLR	0.036	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1221	<0.036	DLR	0.036	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1232	<0.036	DLR	0.036	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1242	<0.036	DLR	0.036	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1248	<0.036	DLR	0.036	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1254	0.113	DLR	0.036	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1260	0.240	DLR	0.036	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1262	<0.036	DLR	0.036	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1268	<0.036	DLR	0.036	mg/kg	21-OCT-21	21-OCT-21	R5626110
Total Polychlorinated Biphenyls	0.35		0.11	mg/kg	21-OCT-21	21-OCT-21	R5626110
Surrogate: d14-Terphenyl	84.5		50-140	%	21-OCT-21	21-OCT-21	R5626110
Report Remarks : RRR; The Reporting Limit has been adjusted based on compound recovey in sample matrix spike.							
L2650174-3 TC5-SG-006 Sampled By: CLIENT on 06-OCT-21 @ 17:15 Matrix: SEDIMENT							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650174-3 TC5-SG-006 Sampled By: CLIENT on 06-OCT-21 @ 17:15 Matrix: SEDIMENT							
Physical Tests							
% Moisture	83.0		0.25	%	14-OCT-21	15-OCT-21	R5617415
Particle Size							
General Texture Class	Fine				18-OCT-21	18-OCT-21	R5623956
MUST PSA % > 75um	4.9		1.0	%	18-OCT-21	18-OCT-21	R5623956
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0926		0.0010	g/g	20-OCT-21	20-OCT-21	R5625269
Total Organic Carbon	9.26		0.10	%	20-OCT-21	20-OCT-21	R5625269
Metals							
Aluminum (Al)	23000		50	ug/g	18-OCT-21	20-OCT-21	R5624998
Antimony (Sb)	0.94		0.10	ug/g	18-OCT-21	20-OCT-21	R5624998
Arsenic (As)	11.3		0.10	ug/g	18-OCT-21	20-OCT-21	R5624998
Barium (Ba)	267		0.50	ug/g	18-OCT-21	20-OCT-21	R5624998
Beryllium (Be)	0.83		0.10	ug/g	18-OCT-21	20-OCT-21	R5624998
Bismuth (Bi)	0.38		0.20	ug/g	18-OCT-21	20-OCT-21	R5624998
Boron (B)	10.7		5.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Cadmium (Cd)	0.965		0.020	ug/g	18-OCT-21	20-OCT-21	R5624998
Calcium (Ca)	28700		50	ug/g	18-OCT-21	20-OCT-21	R5624998
Chromium (Cr)	231		0.50	ug/g	18-OCT-21	20-OCT-21	R5624998
Cobalt (Co)	14.9		0.10	ug/g	18-OCT-21	20-OCT-21	R5624998
Copper (Cu)	44.9		0.50	ug/g	18-OCT-21	20-OCT-21	R5624998
Iron (Fe)	32900		50	ug/g	18-OCT-21	20-OCT-21	R5624998
Lead (Pb)	104		0.50	ug/g	18-OCT-21	20-OCT-21	R5624998
Lithium (Li)	21.0		2.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Magnesium (Mg)	12300		20	ug/g	18-OCT-21	20-OCT-21	R5624998
Manganese (Mn)	1230		1.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Mercury (Hg)	0.264		0.0050	ug/g	18-OCT-21	20-OCT-21	R5624985
Molybdenum (Mo)	1.16		0.10	ug/g	18-OCT-21	20-OCT-21	R5624998
Nickel (Ni)	33.9		0.50	ug/g	18-OCT-21	20-OCT-21	R5624998
Phosphorus (P)	1040		50	ug/g	18-OCT-21	20-OCT-21	R5624998
Potassium (K)	4440		100	ug/g	18-OCT-21	20-OCT-21	R5624998
Selenium (Se)	1.46		0.20	ug/g	18-OCT-21	20-OCT-21	R5624998
Silver (Ag)	0.50		0.10	ug/g	18-OCT-21	20-OCT-21	R5624998
Sodium (Na)	609		50	ug/g	18-OCT-21	20-OCT-21	R5624998
Strontium (Sr)	161		0.50	ug/g	18-OCT-21	20-OCT-21	R5624998
Sulfur (S)	10900		1000	ug/g	18-OCT-21	20-OCT-21	R5624998
Thallium (Tl)	0.321		0.050	ug/g	18-OCT-21	20-OCT-21	R5624998
Tin (Sn)	4.9		2.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Titanium (Ti)	1310		1.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Tungsten (W)	<0.50		0.50	ug/g	18-OCT-21	20-OCT-21	R5624998
Uranium (U)	1.09		0.050	ug/g	18-OCT-21	20-OCT-21	R5624998
Vanadium (V)	51.5		0.20	ug/g	18-OCT-21	20-OCT-21	R5624998
Zinc (Zn)	165		2.0	ug/g	18-OCT-21	20-OCT-21	R5624998

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650174-3 TC5-SG-006 Sampled By: CLIENT on 06-OCT-21 @ 17:15 Matrix: SEDIMENT							
Metals							
Zirconium (Zr)	7.3		1.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.205	DLHM	0.025	ug/g	21-OCT-21	22-OCT-21	R5626548
Acenaphthylene	0.958	DLHM	0.025	ug/g	21-OCT-21	22-OCT-21	R5626548
Acridine	<0.080	DLM	0.080	ug/g	21-OCT-21	22-OCT-21	R5626548
Anthracene	0.707	DLHM	0.020	ug/g	21-OCT-21	22-OCT-21	R5626548
Benzo(a)anthracene	2.18	R	0.050	ug/g	21-OCT-21	22-OCT-21	R5626548
Benzo(a)pyrene	2.77	DLHM	0.025	ug/g	21-OCT-21	22-OCT-21	R5626548
Benzo(b&j)fluoranthene	2.19	DLHM	0.050	ug/g	21-OCT-21	22-OCT-21	R5626548
Benzo(g,h,i)perylene	1.57	DLHM	0.050	ug/g	21-OCT-21	22-OCT-21	R5626548
Benzo(k)fluoranthene	0.917	DLHM	0.050	ug/g	21-OCT-21	22-OCT-21	R5626548
Chrysene	2.26	DLHM	0.050	ug/g	21-OCT-21	22-OCT-21	R5626548
Dibenz(a,h)anthracene	0.400	DLHM	0.025	ug/g	21-OCT-21	22-OCT-21	R5626548
Fluoroanthene	2.38	DLHM	0.025	ug/g	21-OCT-21	22-OCT-21	R5626548
Fluorene	0.193	DLHM	0.025	ug/g	21-OCT-21	22-OCT-21	R5626548
Indeno(1,2,3-cd)pyrene	1.17	DLHM	0.050	ug/g	21-OCT-21	22-OCT-21	R5626548
1-Methylnaphthalene	0.054	DLHM	0.025	ug/g	21-OCT-21	22-OCT-21	R5626548
2-Methylnaphthalene	0.046	DLHM	0.025	ug/g	21-OCT-21	22-OCT-21	R5626548
Naphthalene	0.050	DLHM	0.025	ug/g	21-OCT-21	22-OCT-21	R5626548
Phenanthrene	0.860	DLHM	0.025	ug/g	21-OCT-21	22-OCT-21	R5626548
Pyrene	3.59	DLHM	0.025	ug/g	21-OCT-21	22-OCT-21	R5626548
Quinoline	<0.025	DLHM	0.025	ug/g	21-OCT-21	22-OCT-21	R5626548
Surrogate: 2-Fluorobiphenyl	91.0		60-140	%	21-OCT-21	22-OCT-21	R5626548
Surrogate: d14-Terphenyl	87.8		60-140	%	21-OCT-21	22-OCT-21	R5626548
B(a)P Total Potency Equivalent	3.86		0.036	ug/g	21-OCT-21	22-OCT-21	R5626548
IACR (CCME)	37.0		0.50		21-OCT-21	22-OCT-21	R5626548
Polychlorinated Biphenyls							
Aroclor 1016	<0.015	DLHM	0.015	mg/kg	22-OCT-21	22-OCT-21	R5626575
Aroclor 1221	<0.015	DLHM	0.015	mg/kg	22-OCT-21	22-OCT-21	R5626575
Aroclor 1232	<0.015	DLHM	0.015	mg/kg	22-OCT-21	22-OCT-21	R5626575
Aroclor 1242	<0.015	DLHM	0.015	mg/kg	22-OCT-21	22-OCT-21	R5626575
Aroclor 1248	<0.015	DLHM	0.015	mg/kg	22-OCT-21	22-OCT-21	R5626575
Aroclor 1254	0.087	DLHM	0.015	mg/kg	22-OCT-21	22-OCT-21	R5626575
Aroclor 1260	0.049	DLHM	0.015	mg/kg	22-OCT-21	22-OCT-21	R5626575
Aroclor 1262	<0.015	DLHM	0.015	mg/kg	22-OCT-21	22-OCT-21	R5626575
Aroclor 1268	<0.015	DLHM	0.015	mg/kg	22-OCT-21	22-OCT-21	R5626575
Total Polychlorinated Biphenyls	0.137		0.045	mg/kg	22-OCT-21	22-OCT-21	R5626575
Surrogate: d14-Terphenyl	81.3		50-140	%	22-OCT-21	22-OCT-21	R5626575
L2650174-4 TC5-SG-007 Sampled By: CLIENT on 06-OCT-21 @ 13:00 Matrix: SEDIMENT							
Physical Tests							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650174-4 TC5-SG-007 Sampled By: CLIENT on 06-OCT-21 @ 13:00 Matrix: SEDIMENT							
Physical Tests							
% Moisture	86.2		0.25	%	14-OCT-21	15-OCT-21	R5617415
Particle Size							
General Texture Class	Fine				18-OCT-21	18-OCT-21	R5623956
MUST PSA % > 75um	<1.0		1.0	%	18-OCT-21	18-OCT-21	R5623956
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0984		0.0010	g/g	20-OCT-21	20-OCT-21	R5625269
Total Organic Carbon	9.84		0.10	%	20-OCT-21	20-OCT-21	R5625269
Metals							
Aluminum (Al)	24700		50	ug/g	18-OCT-21	20-OCT-21	R5624998
Antimony (Sb)	0.47		0.10	ug/g	18-OCT-21	20-OCT-21	R5624998
Arsenic (As)	5.32		0.10	ug/g	18-OCT-21	20-OCT-21	R5624998
Barium (Ba)	288		0.50	ug/g	18-OCT-21	20-OCT-21	R5624998
Beryllium (Be)	0.87		0.10	ug/g	18-OCT-21	20-OCT-21	R5624998
Bismuth (Bi)	0.25		0.20	ug/g	18-OCT-21	20-OCT-21	R5624998
Boron (B)	11.9		5.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Cadmium (Cd)	0.700		0.020	ug/g	18-OCT-21	20-OCT-21	R5624998
Calcium (Ca)	18100		50	ug/g	18-OCT-21	20-OCT-21	R5624998
Chromium (Cr)	123		0.50	ug/g	18-OCT-21	20-OCT-21	R5624998
Cobalt (Co)	13.9		0.10	ug/g	18-OCT-21	20-OCT-21	R5624998
Copper (Cu)	44.6		0.50	ug/g	18-OCT-21	20-OCT-21	R5624998
Iron (Fe)	32900		50	ug/g	18-OCT-21	20-OCT-21	R5624998
Lead (Pb)	53.0		0.50	ug/g	18-OCT-21	20-OCT-21	R5624998
Lithium (Li)	22.2		2.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Magnesium (Mg)	12200		20	ug/g	18-OCT-21	20-OCT-21	R5624998
Manganese (Mn)	1560		1.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Mercury (Hg)	0.134		0.0050	ug/g	18-OCT-21	20-OCT-21	R5624985
Molybdenum (Mo)	0.97		0.10	ug/g	18-OCT-21	20-OCT-21	R5624998
Nickel (Ni)	33.3		0.50	ug/g	18-OCT-21	20-OCT-21	R5624998
Phosphorus (P)	1100		50	ug/g	18-OCT-21	20-OCT-21	R5624998
Potassium (K)	4650		100	ug/g	18-OCT-21	20-OCT-21	R5624998
Selenium (Se)	1.39		0.20	ug/g	18-OCT-21	20-OCT-21	R5624998
Silver (Ag)	0.31		0.10	ug/g	18-OCT-21	20-OCT-21	R5624998
Sodium (Na)	611		50	ug/g	18-OCT-21	20-OCT-21	R5624998
Strontium (Sr)	108		0.50	ug/g	18-OCT-21	20-OCT-21	R5624998
Sulfur (S)	7400		1000	ug/g	18-OCT-21	20-OCT-21	R5624998
Thallium (Tl)	0.317		0.050	ug/g	18-OCT-21	20-OCT-21	R5624998
Tin (Sn)	2.9		2.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Titanium (Ti)	1290		1.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Tungsten (W)	<0.50		0.50	ug/g	18-OCT-21	20-OCT-21	R5624998
Uranium (U)	0.990		0.050	ug/g	18-OCT-21	20-OCT-21	R5624998
Vanadium (V)	49.0		0.20	ug/g	18-OCT-21	20-OCT-21	R5624998
Zinc (Zn)	156		2.0	ug/g	18-OCT-21	20-OCT-21	R5624998

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650174-4 TC5-SG-007 Sampled By: CLIENT on 06-OCT-21 @ 13:00 Matrix: SEDIMENT							
Metals							
Zirconium (Zr)	6.2		1.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.120	DLHM	0.038	ug/g	19-OCT-21	20-OCT-21	R5624927
Acenaphthylene	0.311	DLHM	0.038	ug/g	19-OCT-21	20-OCT-21	R5624927
Acridine	<0.075	DLHM	0.075	ug/g	19-OCT-21	20-OCT-21	R5624927
Anthracene	0.647	DLHM	0.030	ug/g	19-OCT-21	20-OCT-21	R5624927
Benzo(a)anthracene	0.827	R	0.075	ug/g	19-OCT-21	20-OCT-21	R5624927
Benzo(a)pyrene	0.989	DLHM	0.038	ug/g	19-OCT-21	20-OCT-21	R5624927
Benzo(b&j)fluoranthene	0.782	DLHM	0.075	ug/g	19-OCT-21	20-OCT-21	R5624927
Benzo(g,h,i)perylene	0.526	DLHM	0.075	ug/g	19-OCT-21	20-OCT-21	R5624927
Benzo(k)fluoranthene	0.377	DLHM	0.075	ug/g	19-OCT-21	20-OCT-21	R5624927
Chrysene	1.09	DLHM	0.075	ug/g	19-OCT-21	20-OCT-21	R5624927
Dibenz(a,h)anthracene	<0.260	RRR	0.26	ug/g	19-OCT-21	20-OCT-21	R5624927
Fluoroanthene	1.07	DLHM	0.038	ug/g	19-OCT-21	20-OCT-21	R5624927
Fluorene	0.092	DLHM	0.038	ug/g	19-OCT-21	20-OCT-21	R5624927
Indeno(1,2,3-cd)pyrene	0.378	DLHM	0.075	ug/g	19-OCT-21	20-OCT-21	R5624927
1-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	19-OCT-21	20-OCT-21	R5624927
2-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	19-OCT-21	20-OCT-21	R5624927
Naphthalene	<0.038	DLHM	0.038	ug/g	19-OCT-21	20-OCT-21	R5624927
Phenanthrene	0.440	DLHM	0.038	ug/g	19-OCT-21	20-OCT-21	R5624927
Pyrene	1.51	DLHM	0.038	ug/g	19-OCT-21	20-OCT-21	R5624927
Quinoline	<0.038	DLHM	0.038	ug/g	19-OCT-21	20-OCT-21	R5624927
Surrogate: 2-Fluorobiphenyl	87.7		60-140	%	19-OCT-21	20-OCT-21	R5624927
Surrogate: d14-Terphenyl	79.9		60-140	%	19-OCT-21	20-OCT-21	R5624927
B(a)P Total Potency Equivalent	1.37		0.053	ug/g	19-OCT-21	20-OCT-21	R5624927
IACR (CCME)	13.7		0.75		19-OCT-21	20-OCT-21	R5624927
Polychlorinated Biphenyls							
Aroclor 1016	<0.036	DLR	0.036	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1221	<0.036	DLR	0.036	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1232	<0.036	DLR	0.036	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1242	<0.036	DLR	0.036	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1248	<0.036	DLR	0.036	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1254	0.081	DLR	0.036	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1260	0.160	DLR	0.036	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1262	<0.036	DLR	0.036	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1268	<0.036	DLR	0.036	mg/kg	21-OCT-21	21-OCT-21	R5626110
Total Polychlorinated Biphenyls	0.24		0.11	mg/kg	21-OCT-21	21-OCT-21	R5626110
Surrogate: d14-Terphenyl	91.0		50-140	%	21-OCT-21	21-OCT-21	R5626110
Report Remarks : RRR; The Reporting Limit has been adjusted based on compound recovey in sample matrix spike.							
L2650174-5 TC1-SG-008 Sampled By: CLIENT on 06-OCT-21 @ 16:30 Matrix: SEDIMENT							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650174-5 TC1-SG-008 Sampled By: CLIENT on 06-OCT-21 @ 16:30 Matrix: SEDIMENT							
Physical Tests							
% Moisture	85.3		0.25	%	14-OCT-21	15-OCT-21	R5617857
Particle Size							
General Texture Class	Fine				18-OCT-21	18-OCT-21	R5623956
MUST PSA % > 75um	1.2		1.0	%	18-OCT-21	18-OCT-21	R5623956
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0933		0.0010	g/g	21-OCT-21	21-OCT-21	R5626139
Total Organic Carbon	9.33		0.10	%	21-OCT-21	21-OCT-21	R5626139
Metals							
Aluminum (Al)	17700	DLHC	1000	ug/g	18-OCT-21	20-OCT-21	R5624998
Antimony (Sb)	<2.0	DLHC	2.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Arsenic (As)	4.7	DLHC	2.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Barium (Ba)	241	DLHC	10	ug/g	18-OCT-21	20-OCT-21	R5624998
Beryllium (Be)	<2.0	DLHC	2.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Bismuth (Bi)	<4.0	DLHC	4.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Boron (B)	<100	DLHC	100	ug/g	18-OCT-21	20-OCT-21	R5624998
Cadmium (Cd)	0.70	DLHC	0.40	ug/g	18-OCT-21	20-OCT-21	R5624998
Calcium (Ca)	32400	DLHC	1000	ug/g	18-OCT-21	20-OCT-21	R5624998
Chromium (Cr)	633	DLHC	10	ug/g	18-OCT-21	20-OCT-21	R5624998
Cobalt (Co)	12.0	DLHC	2.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Copper (Cu)	37	DLHC	10	ug/g	18-OCT-21	20-OCT-21	R5624998
Iron (Fe)	27600	DLHC	1000	ug/g	18-OCT-21	20-OCT-21	R5624998
Lead (Pb)	75	DLHC	10	ug/g	18-OCT-21	20-OCT-21	R5624998
Lithium (Li)	<40	DLHC	40	ug/g	18-OCT-21	20-OCT-21	R5624998
Magnesium (Mg)	12200	DLHC	400	ug/g	18-OCT-21	20-OCT-21	R5624998
Manganese (Mn)	827	DLHC	20	ug/g	18-OCT-21	20-OCT-21	R5624998
Mercury (Hg)	0.175		0.0050	ug/g	18-OCT-21	20-OCT-21	R5624985
Molybdenum (Mo)	<2.0	DLHC	2.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Nickel (Ni)	26	DLHC	10	ug/g	18-OCT-21	20-OCT-21	R5624998
Phosphorus (P)	<1000	DLHC	1000	ug/g	18-OCT-21	20-OCT-21	R5624998
Potassium (K)	3500	DLHC	2000	ug/g	18-OCT-21	20-OCT-21	R5624998
Selenium (Se)	<4.0	DLHC	4.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Silver (Ag)	<2.0	DLHC	2.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Sodium (Na)	<1000	DLHC	1000	ug/g	18-OCT-21	20-OCT-21	R5624998
Strontium (Sr)	216	DLHC	10	ug/g	18-OCT-21	20-OCT-21	R5624998
Sulfur (S)	<20000	DLHC	20000	ug/g	18-OCT-21	20-OCT-21	R5624998
Thallium (Tl)	<1.0	DLHC	1.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Tin (Sn)	<40	DLHC	40	ug/g	18-OCT-21	20-OCT-21	R5624998
Titanium (Ti)	985	DLHC	20	ug/g	18-OCT-21	20-OCT-21	R5624998
Tungsten (W)	<10	DLHC	10	ug/g	18-OCT-21	20-OCT-21	R5624998
Uranium (U)	<1.0	DLHC	1.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Vanadium (V)	41.9	DLHC	4.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Zinc (Zn)	142	DLHC	40	ug/g	18-OCT-21	20-OCT-21	R5624998

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650174-5 TC1-SG-008 Sampled By: CLIENT on 06-OCT-21 @ 16:30 Matrix: SEDIMENT							
Metals							
Zirconium (Zr)	<20	DLHC	20	ug/g	18-OCT-21	20-OCT-21	R5624998
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	<0.038	DLHM	0.038	ug/g	19-OCT-21	20-OCT-21	R5624927
Acenaphthylene	0.192	DLHM	0.038	ug/g	19-OCT-21	20-OCT-21	R5624927
Acridine	<0.075	DLHM	0.075	ug/g	19-OCT-21	20-OCT-21	R5624927
Anthracene	0.083	DLHM	0.030	ug/g	19-OCT-21	20-OCT-21	R5624927
Benzo(a)anthracene	0.313	R	0.075	ug/g	19-OCT-21	20-OCT-21	R5624927
Benzo(a)pyrene	0.488	DLHM	0.038	ug/g	19-OCT-21	20-OCT-21	R5624927
Benzo(b&j)fluoranthene	0.484	DLHM	0.075	ug/g	19-OCT-21	20-OCT-21	R5624927
Benzo(g,h,i)perylene	0.313	DLHM	0.075	ug/g	19-OCT-21	20-OCT-21	R5624927
Benzo(k)fluoranthene	0.215	DLHM	0.075	ug/g	19-OCT-21	20-OCT-21	R5624927
Chrysene	0.436	DLHM	0.075	ug/g	19-OCT-21	20-OCT-21	R5624927
Dibenz(a,h)anthracene	<0.150	RRR	0.15	ug/g	19-OCT-21	20-OCT-21	R5624927
Fluoroanthene	0.372	DLHM	0.038	ug/g	19-OCT-21	20-OCT-21	R5624927
Fluorene	0.039	DLHM	0.038	ug/g	19-OCT-21	20-OCT-21	R5624927
Indeno(1,2,3-cd)pyrene	0.220	DLHM	0.075	ug/g	19-OCT-21	20-OCT-21	R5624927
1-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	19-OCT-21	20-OCT-21	R5624927
2-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	19-OCT-21	20-OCT-21	R5624927
Naphthalene	<0.038	DLHM	0.038	ug/g	19-OCT-21	20-OCT-21	R5624927
Phenanthrene	0.156	DLHM	0.038	ug/g	19-OCT-21	20-OCT-21	R5624927
Pyrene	0.529	DLHM	0.038	ug/g	19-OCT-21	20-OCT-21	R5624927
Quinoline	<0.038	DLHM	0.038	ug/g	19-OCT-21	20-OCT-21	R5624927
Surrogate: 2-Fluorobiphenyl	89.1		60-140	%	19-OCT-21	20-OCT-21	R5624927
Surrogate: d14-Terphenyl	78.5		60-140	%	19-OCT-21	20-OCT-21	R5624927
B(a)P Total Potency Equivalent	0.686		0.053	ug/g	19-OCT-21	20-OCT-21	R5624927
IACR (CCME)	7.27		0.75		19-OCT-21	20-OCT-21	R5624927
Polychlorinated Biphenyls							
Aroclor 1016	<0.036	DLR	0.036	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1221	<0.036	DLR	0.036	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1232	<0.036	DLR	0.036	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1242	<0.036	DLR	0.036	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1248	<0.036	DLR	0.036	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1254	0.107	DLR	0.036	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1260	0.191	DLR	0.036	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1262	<0.036	DLR	0.036	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1268	<0.036	DLR	0.036	mg/kg	21-OCT-21	21-OCT-21	R5626110
Total Polychlorinated Biphenyls	0.30		0.11	mg/kg	21-OCT-21	21-OCT-21	R5626110
Surrogate: d14-Terphenyl	89.4		50-140	%	21-OCT-21	21-OCT-21	R5626110
Report Remarks : RRR; The Reporting Limit has been adjusted based on compound recovey in sample matrix spike.							
L2650174-6 PCE-SG-013 Sampled By: CLIENT on 06-OCT-21 @ 14:30 Matrix: SEDIMENT							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650174-6 PCE-SG-013 Sampled By: CLIENT on 06-OCT-21 @ 14:30 Matrix: SEDIMENT							
Physical Tests							
% Moisture	84.3		0.25	%	14-OCT-21	15-OCT-21	R5617857
Particle Size							
General Texture Class	Fine				18-OCT-21	18-OCT-21	R5623956
MUST PSA % > 75um	1.4		1.0	%	18-OCT-21	18-OCT-21	R5623956
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0713		0.0010	g/g	20-OCT-21	20-OCT-21	R5625269
Total Organic Carbon	7.13		0.10	%	20-OCT-21	20-OCT-21	R5625269
Metals							
Aluminum (Al)	14900	DLHC	1000	ug/g	18-OCT-21	20-OCT-21	R5624998
Antimony (Sb)	<2.0	DLHC	2.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Arsenic (As)	5.7	DLHC	2.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Barium (Ba)	234	DLHC	10	ug/g	18-OCT-21	20-OCT-21	R5624998
Beryllium (Be)	<2.0	DLHC	2.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Bismuth (Bi)	<4.0	DLHC	4.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Boron (B)	<100	DLHC	100	ug/g	18-OCT-21	20-OCT-21	R5624998
Cadmium (Cd)	0.46	DLHC	0.40	ug/g	18-OCT-21	20-OCT-21	R5624998
Calcium (Ca)	78000	DLHC	1000	ug/g	18-OCT-21	20-OCT-21	R5624998
Chromium (Cr)	670	DLHC	10	ug/g	18-OCT-21	20-OCT-21	R5624998
Cobalt (Co)	12.1	DLHC	2.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Copper (Cu)	39	DLHC	10	ug/g	18-OCT-21	20-OCT-21	R5624998
Iron (Fe)	26400	DLHC	1000	ug/g	18-OCT-21	20-OCT-21	R5624998
Lead (Pb)	82	DLHC	10	ug/g	18-OCT-21	20-OCT-21	R5624998
Lithium (Li)	<40	DLHC	40	ug/g	18-OCT-21	20-OCT-21	R5624998
Magnesium (Mg)	12700	DLHC	400	ug/g	18-OCT-21	20-OCT-21	R5624998
Manganese (Mn)	724	DLHC	20	ug/g	18-OCT-21	20-OCT-21	R5624998
Mercury (Hg)	0.179		0.0050	ug/g	18-OCT-21	20-OCT-21	R5624985
Molybdenum (Mo)	<2.0	DLHC	2.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Nickel (Ni)	24	DLHC	10	ug/g	18-OCT-21	20-OCT-21	R5624998
Phosphorus (P)	1000	DLHC	1000	ug/g	18-OCT-21	20-OCT-21	R5624998
Potassium (K)	3600	DLHC	2000	ug/g	18-OCT-21	20-OCT-21	R5624998
Selenium (Se)	<4.0	DLHC	4.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Silver (Ag)	<2.0	DLHC	2.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Sodium (Na)	<1000	DLHC	1000	ug/g	18-OCT-21	20-OCT-21	R5624998
Strontium (Sr)	540	DLHC	10	ug/g	18-OCT-21	20-OCT-21	R5624998
Sulfur (S)	<20000	DLHC	20000	ug/g	18-OCT-21	20-OCT-21	R5624998
Thallium (Tl)	<1.0	DLHC	1.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Tin (Sn)	<40	DLHC	40	ug/g	18-OCT-21	20-OCT-21	R5624998
Titanium (Ti)	939	DLHC	20	ug/g	18-OCT-21	20-OCT-21	R5624998
Tungsten (W)	<10	DLHC	10	ug/g	18-OCT-21	20-OCT-21	R5624998
Uranium (U)	<1.0	DLHC	1.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Vanadium (V)	41.9	DLHC	4.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Zinc (Zn)	153	DLHC	40	ug/g	18-OCT-21	20-OCT-21	R5624998

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650174-6 PCE-SG-013 Sampled By: CLIENT on 06-OCT-21 @ 14:30 Matrix: SEDIMENT							
Metals							
Zirconium (Zr)	<20	DLHC	20	ug/g	18-OCT-21	20-OCT-21	R5624998
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.033	DLHM	0.025	ug/g	19-OCT-21	20-OCT-21	R5624927
Acenaphthylene	0.169	DLHM	0.025	ug/g	19-OCT-21	20-OCT-21	R5624927
Acridine	<0.050	DLHM	0.050	ug/g	19-OCT-21	20-OCT-21	R5624927
Anthracene	0.090	DLHM	0.020	ug/g	19-OCT-21	20-OCT-21	R5624927
Benzo(a)anthracene	0.321	R	0.050	ug/g	19-OCT-21	20-OCT-21	R5624927
Benzo(a)pyrene	0.533	DLHM	0.025	ug/g	19-OCT-21	20-OCT-21	R5624927
Benzo(b&j)fluoranthene	0.531	DLHM	0.050	ug/g	19-OCT-21	20-OCT-21	R5624927
Benzo(g,h,i)perylene	0.405	DLHM	0.050	ug/g	19-OCT-21	20-OCT-21	R5624927
Benzo(k)fluoranthene	0.284	DLHM	0.050	ug/g	19-OCT-21	20-OCT-21	R5624927
Chrysene	0.485	DLHM	0.050	ug/g	19-OCT-21	20-OCT-21	R5624927
Dibenz(a,h)anthracene	<0.180	RRR	0.18	ug/g	19-OCT-21	20-OCT-21	R5624927
Fluoroanthene	0.430	DLHM	0.025	ug/g	19-OCT-21	20-OCT-21	R5624927
Fluorene	0.036	DLHM	0.025	ug/g	19-OCT-21	20-OCT-21	R5624927
Indeno(1,2,3-cd)pyrene	0.310	DLHM	0.050	ug/g	19-OCT-21	20-OCT-21	R5624927
1-Methylnaphthalene	<0.025	DLHM	0.025	ug/g	19-OCT-21	20-OCT-21	R5624927
2-Methylnaphthalene	<0.025	DLHM	0.025	ug/g	19-OCT-21	20-OCT-21	R5624927
Naphthalene	<0.025	DLHM	0.025	ug/g	19-OCT-21	20-OCT-21	R5624927
Phenanthrene	0.188	DLHM	0.025	ug/g	19-OCT-21	20-OCT-21	R5624927
Pyrene	0.591	DLHM	0.025	ug/g	19-OCT-21	20-OCT-21	R5624927
Quinoline	<0.025	DLHM	0.025	ug/g	19-OCT-21	20-OCT-21	R5624927
Surrogate: 2-Fluorobiphenyl	82.9		60-140	%	19-OCT-21	20-OCT-21	R5624927
Surrogate: d14-Terphenyl	83.2		60-140	%	19-OCT-21	20-OCT-21	R5624927
B(a)P Total Potency Equivalent	0.773		0.036	ug/g	19-OCT-21	20-OCT-21	R5624927
IACR (CCME)	8.28		0.50		19-OCT-21	20-OCT-21	R5624927
Polychlorinated Biphenyls							
Aroclor 1016	<0.024	DLR	0.024	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1221	<0.024	DLR	0.024	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1232	<0.024	DLR	0.024	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1242	<0.024	DLR	0.024	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1248	<0.024	DLR	0.024	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1254	0.146	DLR	0.024	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1260	0.283	DLR	0.024	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1262	<0.024	DLR	0.024	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1268	<0.024	DLR	0.024	mg/kg	21-OCT-21	21-OCT-21	R5626110
Total Polychlorinated Biphenyls	0.429		0.072	mg/kg	21-OCT-21	21-OCT-21	R5626110
Surrogate: d14-Terphenyl	84.7		50-140	%	21-OCT-21	21-OCT-21	R5626110
Report Remarks : RRR; The Reporting Limit has been adjusted based on compound recovey in sample matrix spike.							
L2650174-7 PCE-SG-014 Sampled By: CLIENT on 06-OCT-21 @ 15:00 Matrix: SEDIMENT							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650174-7 PCE-SG-014 Sampled By: CLIENT on 06-OCT-21 @ 15:00 Matrix: SEDIMENT							
Physical Tests							
% Moisture	78.8		0.25	%	14-OCT-21	15-OCT-21	R5617857
Particle Size							
General Texture Class	Fine				18-OCT-21	18-OCT-21	R5623956
MUST PSA % > 75um	2.1		1.0	%	18-OCT-21	18-OCT-21	R5623956
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0667		0.0010	g/g	20-OCT-21	20-OCT-21	R5625269
Total Organic Carbon	6.67		0.10	%	20-OCT-21	20-OCT-21	R5625269
Metals							
Aluminum (Al)	15300	DLHC	1000	ug/g	18-OCT-21	20-OCT-21	R5624998
Antimony (Sb)	<2.0	DLHC	2.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Arsenic (As)	5.6	DLHC	2.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Barium (Ba)	206	DLHC	10	ug/g	18-OCT-21	20-OCT-21	R5624998
Beryllium (Be)	<2.0	DLHC	2.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Bismuth (Bi)	<4.0	DLHC	4.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Boron (B)	<100	DLHC	100	ug/g	18-OCT-21	20-OCT-21	R5624998
Cadmium (Cd)	0.62	DLHC	0.40	ug/g	18-OCT-21	20-OCT-21	R5624998
Calcium (Ca)	44100	DLHC	1000	ug/g	18-OCT-21	20-OCT-21	R5624998
Chromium (Cr)	1000	DLHC	10	ug/g	18-OCT-21	20-OCT-21	R5624998
Cobalt (Co)	11.8	DLHC	2.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Copper (Cu)	34	DLHC	10	ug/g	18-OCT-21	20-OCT-21	R5624998
Iron (Fe)	26100	DLHC	1000	ug/g	18-OCT-21	20-OCT-21	R5624998
Lead (Pb)	85	DLHC	10	ug/g	18-OCT-21	20-OCT-21	R5624998
Lithium (Li)	<40	DLHC	40	ug/g	18-OCT-21	20-OCT-21	R5624998
Magnesium (Mg)	14300	DLHC	400	ug/g	18-OCT-21	20-OCT-21	R5624998
Manganese (Mn)	627	DLHC	20	ug/g	18-OCT-21	20-OCT-21	R5624998
Mercury (Hg)	0.271		0.0050	ug/g	18-OCT-21	20-OCT-21	R5624985
Molybdenum (Mo)	<2.0	DLHC	2.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Nickel (Ni)	24	DLHC	10	ug/g	18-OCT-21	20-OCT-21	R5624998
Phosphorus (P)	1000	DLHC	1000	ug/g	18-OCT-21	20-OCT-21	R5624998
Potassium (K)	3200	DLHC	2000	ug/g	18-OCT-21	20-OCT-21	R5624998
Selenium (Se)	<4.0	DLHC	4.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Silver (Ag)	<2.0	DLHC	2.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Sodium (Na)	<1000	DLHC	1000	ug/g	18-OCT-21	20-OCT-21	R5624998
Strontium (Sr)	237	DLHC	10	ug/g	18-OCT-21	20-OCT-21	R5624998
Sulfur (S)	<20000	DLHC	20000	ug/g	18-OCT-21	20-OCT-21	R5624998
Thallium (Tl)	<1.0	DLHC	1.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Tin (Sn)	<40	DLHC	40	ug/g	18-OCT-21	20-OCT-21	R5624998
Titanium (Ti)	968	DLHC	20	ug/g	18-OCT-21	20-OCT-21	R5624998
Tungsten (W)	<10	DLHC	10	ug/g	18-OCT-21	20-OCT-21	R5624998
Uranium (U)	<1.0	DLHC	1.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Vanadium (V)	41.1	DLHC	4.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Zinc (Zn)	152	DLHC	40	ug/g	18-OCT-21	20-OCT-21	R5624998

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650174-7 PCE-SG-014 Sampled By: CLIENT on 06-OCT-21 @ 15:00 Matrix: SEDIMENT							
Metals							
Zirconium (Zr)	<20	DLHC	20	ug/g	18-OCT-21	20-OCT-21	R5624998
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.062	DLHM	0.015	ug/g	19-OCT-21	20-OCT-21	R5624927
Acenaphthylene	0.509	DLHM	0.015	ug/g	19-OCT-21	20-OCT-21	R5624927
Acridine	<0.040	DLM	0.040	ug/g	19-OCT-21	20-OCT-21	R5624927
Anthracene	0.224	DLHM	0.012	ug/g	19-OCT-21	20-OCT-21	R5624927
Benzo(a)anthracene	0.878	R	0.030	ug/g	19-OCT-21	20-OCT-21	R5624927
Benzo(a)pyrene	1.35	DLHM	0.015	ug/g	19-OCT-21	20-OCT-21	R5624927
Benzo(b&j)fluoranthene	1.12	DLHM	0.030	ug/g	19-OCT-21	20-OCT-21	R5624927
Benzo(g,h,i)perylene	0.799	DLHM	0.030	ug/g	19-OCT-21	20-OCT-21	R5624927
Benzo(k)fluoranthene	0.509	DLHM	0.030	ug/g	19-OCT-21	20-OCT-21	R5624927
Chrysene	1.15	DLHM	0.030	ug/g	19-OCT-21	20-OCT-21	R5624927
Dibenz(a,h)anthracene	<0.400	RRR	0.40	ug/g	19-OCT-21	20-OCT-21	R5624927
Fluoroanthene	0.886	DLHM	0.015	ug/g	19-OCT-21	20-OCT-21	R5624927
Fluorene	0.086	DLHM	0.015	ug/g	19-OCT-21	20-OCT-21	R5624927
Indeno(1,2,3-cd)pyrene	0.607	DLHM	0.030	ug/g	19-OCT-21	20-OCT-21	R5624927
1-Methylnaphthalene	0.025	DLHM	0.015	ug/g	19-OCT-21	20-OCT-21	R5624927
2-Methylnaphthalene	0.027	DLHM	0.015	ug/g	19-OCT-21	20-OCT-21	R5624927
Naphthalene	0.031	DLHM	0.015	ug/g	19-OCT-21	20-OCT-21	R5624927
Phenanthrene	0.346	DLHM	0.015	ug/g	19-OCT-21	20-OCT-21	R5624927
Pyrene	1.30	DLHM	0.015	ug/g	19-OCT-21	20-OCT-21	R5624927
Quinoline	<0.015	DLHM	0.015	ug/g	19-OCT-21	20-OCT-21	R5624927
Surrogate: 2-Fluorobiphenyl	96.2		60-140	%	19-OCT-21	20-OCT-21	R5624927
Surrogate: d14-Terphenyl	95.2		60-140	%	19-OCT-21	20-OCT-21	R5624927
B(a)P Total Potency Equivalent	1.87		0.021	ug/g	19-OCT-21	20-OCT-21	R5624927
IACR (CCME)	18.2		0.30		19-OCT-21	20-OCT-21	R5624927
Polychlorinated Biphenyls							
Aroclor 1016	<0.0030		0.0030	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1221	<0.0030		0.0030	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1232	<0.0030		0.0030	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1242	<0.0030		0.0030	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1248	<0.0030		0.0030	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1254	0.0251		0.0030	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1260	0.0294		0.0030	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1262	<0.0030		0.0030	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1268	<0.0030		0.0030	mg/kg	21-OCT-21	21-OCT-21	R5626110
Total Polychlorinated Biphenyls	0.0544		0.0090	mg/kg	21-OCT-21	21-OCT-21	R5626110
Surrogate: d14-Terphenyl	98.0		50-140	%	21-OCT-21	21-OCT-21	R5626110
Report Remarks : RRR; The Reporting Limit has been adjusted based on compound recovey in sample matrix spike.							
L2650174-8 DUP- 209 Sampled By: CLIENT on 06-OCT-21 Matrix: SEDIMENT							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650174-8 DUP- 209 Sampled By: CLIENT on 06-OCT-21 Matrix: SEDIMENT							
Physical Tests							
% Moisture	86.3		0.25	%	14-OCT-21	15-OCT-21	R5617857
Particle Size							
General Texture Class	Fine				18-OCT-21	18-OCT-21	R5623956
MUST PSA % > 75um	<1.0		1.0	%	18-OCT-21	18-OCT-21	R5623956
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.105		0.0010	g/g	20-OCT-21	20-OCT-21	R5625269
Total Organic Carbon	10.5		0.10	%	20-OCT-21	20-OCT-21	R5625269
Metals							
Aluminum (Al)	23300		50	ug/g	18-OCT-21	20-OCT-21	R5624998
Antimony (Sb)	0.42		0.10	ug/g	18-OCT-21	20-OCT-21	R5624998
Arsenic (As)	4.95		0.10	ug/g	18-OCT-21	20-OCT-21	R5624998
Barium (Ba)	272		0.50	ug/g	18-OCT-21	20-OCT-21	R5624998
Beryllium (Be)	0.79		0.10	ug/g	18-OCT-21	20-OCT-21	R5624998
Bismuth (Bi)	0.23		0.20	ug/g	18-OCT-21	20-OCT-21	R5624998
Boron (B)	9.6		5.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Cadmium (Cd)	0.674		0.020	ug/g	18-OCT-21	20-OCT-21	R5624998
Calcium (Ca)	16500		50	ug/g	18-OCT-21	20-OCT-21	R5624998
Chromium (Cr)	115		0.50	ug/g	18-OCT-21	20-OCT-21	R5624998
Cobalt (Co)	13.0		0.10	ug/g	18-OCT-21	20-OCT-21	R5624998
Copper (Cu)	42.0		0.50	ug/g	18-OCT-21	20-OCT-21	R5624998
Iron (Fe)	30800		50	ug/g	18-OCT-21	20-OCT-21	R5624998
Lead (Pb)	50.2		0.50	ug/g	18-OCT-21	20-OCT-21	R5624998
Lithium (Li)	19.9		2.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Magnesium (Mg)	11300		20	ug/g	18-OCT-21	20-OCT-21	R5624998
Manganese (Mn)	1450		1.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Mercury (Hg)	0.136		0.0050	ug/g	18-OCT-21	20-OCT-21	R5624985
Molybdenum (Mo)	0.89		0.10	ug/g	18-OCT-21	20-OCT-21	R5624998
Nickel (Ni)	31.3		0.50	ug/g	18-OCT-21	20-OCT-21	R5624998
Phosphorus (P)	1060		50	ug/g	18-OCT-21	20-OCT-21	R5624998
Potassium (K)	4160		100	ug/g	18-OCT-21	20-OCT-21	R5624998
Selenium (Se)	1.34		0.20	ug/g	18-OCT-21	20-OCT-21	R5624998
Silver (Ag)	0.27		0.10	ug/g	18-OCT-21	20-OCT-21	R5624998
Sodium (Na)	555		50	ug/g	18-OCT-21	20-OCT-21	R5624998
Strontium (Sr)	99.5		0.50	ug/g	18-OCT-21	20-OCT-21	R5624998
Sulfur (S)	6900		1000	ug/g	18-OCT-21	20-OCT-21	R5624998
Thallium (Tl)	0.281		0.050	ug/g	18-OCT-21	20-OCT-21	R5624998
Tin (Sn)	2.7		2.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Titanium (Ti)	1170		1.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Tungsten (W)	<0.50		0.50	ug/g	18-OCT-21	20-OCT-21	R5624998
Uranium (U)	0.911		0.050	ug/g	18-OCT-21	20-OCT-21	R5624998
Vanadium (V)	45.7		0.20	ug/g	18-OCT-21	20-OCT-21	R5624998
Zinc (Zn)	147		2.0	ug/g	18-OCT-21	20-OCT-21	R5624998

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650174-8 DUP- 209 Sampled By: CLIENT on 06-OCT-21 Matrix: SEDIMENT							
Metals							
Zirconium (Zr)	5.6		1.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.121	DLHM	0.038	ug/g	19-OCT-21	20-OCT-21	R5624927
Acenaphthylene	0.358	DLHM	0.038	ug/g	19-OCT-21	20-OCT-21	R5624927
Acridine	<0.075	DLHM	0.075	ug/g	19-OCT-21	20-OCT-21	R5624927
Anthracene	0.837	DLHM	0.030	ug/g	19-OCT-21	20-OCT-21	R5624927
Benzo(a)anthracene	0.981	R	0.075	ug/g	19-OCT-21	20-OCT-21	R5624927
Benzo(a)pyrene	1.20	DLHM	0.038	ug/g	19-OCT-21	20-OCT-21	R5624927
Benzo(b&j)fluoranthene	1.02	DLHM	0.075	ug/g	19-OCT-21	20-OCT-21	R5624927
Benzo(g,h,i)perylene	0.628	DLHM	0.075	ug/g	19-OCT-21	20-OCT-21	R5624927
Benzo(k)fluoranthene	0.458	DLHM	0.075	ug/g	19-OCT-21	20-OCT-21	R5624927
Chrysene	1.39	DLHM	0.075	ug/g	19-OCT-21	20-OCT-21	R5624927
Dibenz(a,h)anthracene	<0.320	RRR	0.32	ug/g	19-OCT-21	20-OCT-21	R5624927
Fluoroanthene	1.23	DLHM	0.038	ug/g	19-OCT-21	20-OCT-21	R5624927
Fluorene	0.110	DLHM	0.038	ug/g	19-OCT-21	20-OCT-21	R5624927
Indeno(1,2,3-cd)pyrene	0.458	DLHM	0.075	ug/g	19-OCT-21	20-OCT-21	R5624927
1-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	19-OCT-21	20-OCT-21	R5624927
2-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	19-OCT-21	20-OCT-21	R5624927
Naphthalene	0.042	DLHM	0.038	ug/g	19-OCT-21	20-OCT-21	R5624927
Phenanthrene	0.496	DLHM	0.038	ug/g	19-OCT-21	20-OCT-21	R5624927
Pyrene	1.72	DLHM	0.038	ug/g	19-OCT-21	20-OCT-21	R5624927
Quinoline	<0.038	DLHM	0.038	ug/g	19-OCT-21	20-OCT-21	R5624927
Surrogate: 2-Fluorobiphenyl	98.8		60-140	%	19-OCT-21	20-OCT-21	R5624927
Surrogate: d14-Terphenyl	97.2		60-140	%	19-OCT-21	20-OCT-21	R5624927
B(a)P Total Potency Equivalent	1.66		0.053	ug/g	19-OCT-21	20-OCT-21	R5624927
IACR (CCME)	17.0		0.75		19-OCT-21	20-OCT-21	R5624927
Polychlorinated Biphenyls							
Aroclor 1016	<0.036	DLR	0.036	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1221	<0.036	DLR	0.036	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1232	<0.036	DLR	0.036	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1242	<0.036	DLR	0.036	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1248	<0.036	DLR	0.036	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1254	0.194	DLR	0.036	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1260	0.338	DLR	0.036	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1262	<0.036	DLR	0.036	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1268	<0.036	DLR	0.036	mg/kg	21-OCT-21	21-OCT-21	R5626110
Total Polychlorinated Biphenyls	0.53		0.11	mg/kg	21-OCT-21	21-OCT-21	R5626110
Surrogate: d14-Terphenyl	89.4		50-140	%	21-OCT-21	21-OCT-21	R5626110
Report Remarks : RRR; The Reporting Limit has been adjusted based on compound recovey in sample matrix spike.							
L2650174-9 DUP- 210 Sampled By: CLIENT on 06-OCT-21 Matrix: SEDIMENT							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650174-9 DUP- 210 Sampled By: CLIENT on 06-OCT-21 Matrix: SEDIMENT							
Physical Tests							
% Moisture	79.7		0.25	%	14-OCT-21	15-OCT-21	R5617857
Particle Size							
General Texture Class	Fine				18-OCT-21	18-OCT-21	R5623956
MUST PSA % > 75um	2.2		1.0	%	18-OCT-21	18-OCT-21	R5623956
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0684		0.0010	g/g	20-OCT-21	20-OCT-21	R5625269
Total Organic Carbon	6.84		0.10	%	20-OCT-21	20-OCT-21	R5625269
Metals							
Aluminum (Al)	15700	DLHC	1000	ug/g	18-OCT-21	20-OCT-21	R5624998
Antimony (Sb)	<2.0	DLHC	2.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Arsenic (As)	5.4	DLHC	2.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Barium (Ba)	203	DLHC	10	ug/g	18-OCT-21	20-OCT-21	R5624998
Beryllium (Be)	<2.0	DLHC	2.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Bismuth (Bi)	<4.0	DLHC	4.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Boron (B)	<100	DLHC	100	ug/g	18-OCT-21	20-OCT-21	R5624998
Cadmium (Cd)	0.57	DLHC	0.40	ug/g	18-OCT-21	20-OCT-21	R5624998
Calcium (Ca)	44000	DLHC	1000	ug/g	18-OCT-21	20-OCT-21	R5624998
Chromium (Cr)	963	DLHC	10	ug/g	18-OCT-21	20-OCT-21	R5624998
Cobalt (Co)	11.6	DLHC	2.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Copper (Cu)	33	DLHC	10	ug/g	18-OCT-21	20-OCT-21	R5624998
Iron (Fe)	25200	DLHC	1000	ug/g	18-OCT-21	20-OCT-21	R5624998
Lead (Pb)	90	DLHC	10	ug/g	18-OCT-21	20-OCT-21	R5624998
Lithium (Li)	<40	DLHC	40	ug/g	18-OCT-21	20-OCT-21	R5624998
Magnesium (Mg)	14000	DLHC	400	ug/g	18-OCT-21	20-OCT-21	R5624998
Manganese (Mn)	600	DLHC	20	ug/g	18-OCT-21	20-OCT-21	R5624998
Mercury (Hg)	0.207		0.0050	ug/g	18-OCT-21	20-OCT-21	R5624985
Molybdenum (Mo)	<2.0	DLHC	2.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Nickel (Ni)	23	DLHC	10	ug/g	18-OCT-21	20-OCT-21	R5624998
Phosphorus (P)	1000	DLHC	1000	ug/g	18-OCT-21	20-OCT-21	R5624998
Potassium (K)	3300	DLHC	2000	ug/g	18-OCT-21	20-OCT-21	R5624998
Selenium (Se)	<4.0	DLHC	4.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Silver (Ag)	<2.0	DLHC	2.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Sodium (Na)	<1000	DLHC	1000	ug/g	18-OCT-21	20-OCT-21	R5624998
Strontium (Sr)	245	DLHC	10	ug/g	18-OCT-21	20-OCT-21	R5624998
Sulfur (S)	<20000	DLHC	20000	ug/g	18-OCT-21	20-OCT-21	R5624998
Thallium (Tl)	<1.0	DLHC	1.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Tin (Sn)	<40	DLHC	40	ug/g	18-OCT-21	20-OCT-21	R5624998
Titanium (Ti)	1000	DLHC	20	ug/g	18-OCT-21	20-OCT-21	R5624998
Tungsten (W)	<10	DLHC	10	ug/g	18-OCT-21	20-OCT-21	R5624998
Uranium (U)	<1.0	DLHC	1.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Vanadium (V)	42.0	DLHC	4.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Zinc (Zn)	140	DLHC	40	ug/g	18-OCT-21	20-OCT-21	R5624998

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650174-9 DUP- 210 Sampled By: CLIENT on 06-OCT-21 Matrix: SEDIMENT							
Metals							
Zirconium (Zr)	<20	DLHC	20	ug/g	18-OCT-21	20-OCT-21	R5624998
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.047	DLHM	0.015	ug/g	19-OCT-21	20-OCT-21	R5624927
Acenaphthylene	0.431	DLHM	0.015	ug/g	19-OCT-21	20-OCT-21	R5624927
Acridine	<0.040	DLM	0.040	ug/g	19-OCT-21	20-OCT-21	R5624927
Anthracene	0.202	DLHM	0.012	ug/g	19-OCT-21	20-OCT-21	R5624927
Benzo(a)anthracene	0.865	R	0.030	ug/g	19-OCT-21	20-OCT-21	R5624927
Benzo(a)pyrene	1.25	DLHM	0.015	ug/g	19-OCT-21	20-OCT-21	R5624927
Benzo(b&j)fluoranthene	1.06	DLHM	0.030	ug/g	19-OCT-21	20-OCT-21	R5624927
Benzo(g,h,i)perylene	0.747	DLHM	0.030	ug/g	19-OCT-21	20-OCT-21	R5624927
Benzo(k)fluoranthene	0.486	DLHM	0.030	ug/g	19-OCT-21	20-OCT-21	R5624927
Chrysene	1.05	DLHM	0.030	ug/g	19-OCT-21	20-OCT-21	R5624927
Dibenz(a,h)anthracene	<0.360	RRR	0.36	ug/g	19-OCT-21	20-OCT-21	R5624927
Fluoroanthene	0.840	DLHM	0.015	ug/g	19-OCT-21	20-OCT-21	R5624927
Fluorene	0.073	DLHM	0.015	ug/g	19-OCT-21	20-OCT-21	R5624927
Indeno(1,2,3-cd)pyrene	0.505	DLHM	0.030	ug/g	19-OCT-21	20-OCT-21	R5624927
1-Methylnaphthalene	0.021	DLHM	0.015	ug/g	19-OCT-21	20-OCT-21	R5624927
2-Methylnaphthalene	0.025	DLHM	0.015	ug/g	19-OCT-21	20-OCT-21	R5624927
Naphthalene	0.032	DLHM	0.015	ug/g	19-OCT-21	20-OCT-21	R5624927
Phenanthrene	0.317	DLHM	0.015	ug/g	19-OCT-21	20-OCT-21	R5624927
Pyrene	1.28	DLHM	0.015	ug/g	19-OCT-21	20-OCT-21	R5624927
Quinoline	<0.015	DLHM	0.015	ug/g	19-OCT-21	20-OCT-21	R5624927
Surrogate: 2-Fluorobiphenyl	89.7		60-140	%	19-OCT-21	20-OCT-21	R5624927
Surrogate: d14-Terphenyl	89.5		60-140	%	19-OCT-21	20-OCT-21	R5624927
B(a)P Total Potency Equivalent	1.74		0.021	ug/g	19-OCT-21	20-OCT-21	R5624927
IACR (CCME)	17.3		0.30		19-OCT-21	20-OCT-21	R5624927
Polychlorinated Biphenyls							
Aroclor 1016	<0.014	DLR	0.014	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1221	<0.014	DLR	0.014	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1232	<0.014	DLR	0.014	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1242	<0.014	DLR	0.014	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1248	<0.014	DLR	0.014	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1254	0.137	DLR	0.014	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1260	0.233	DLR	0.014	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1262	<0.014	DLR	0.014	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1268	<0.014	DLR	0.014	mg/kg	21-OCT-21	21-OCT-21	R5626110
Total Polychlorinated Biphenyls	0.370		0.041	mg/kg	21-OCT-21	21-OCT-21	R5626110
Surrogate: d14-Terphenyl	88.7		50-140	%	21-OCT-21	21-OCT-21	R5626110
Report Remarks : RRR; The Reporting Limit has been adjusted based on compound recovey in sample matrix spike.							
L2650174-10 TC4-SC-010AX Sampled By: CLIENT on 06-OCT-21 @ 15:30 Matrix: SEDIMENT							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650174-10 TC4-SC-010AX Sampled By: CLIENT on 06-OCT-21 @ 15:30 Matrix: SEDIMENT							
Physical Tests							
% Moisture	86.3		0.25	%	14-OCT-21	15-OCT-21	R5617857
Metals							
Aluminum (Al)	18300		50	ug/g	18-OCT-21	20-OCT-21	R5624998
Antimony (Sb)	0.43		0.10	ug/g	18-OCT-21	20-OCT-21	R5624998
Arsenic (As)	4.70		0.10	ug/g	18-OCT-21	20-OCT-21	R5624998
Barium (Ba)	253		0.50	ug/g	18-OCT-21	20-OCT-21	R5624998
Beryllium (Be)	0.63		0.10	ug/g	18-OCT-21	20-OCT-21	R5624998
Bismuth (Bi)	0.33		0.20	ug/g	18-OCT-21	20-OCT-21	R5624998
Boron (B)	8.7		5.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Cadmium (Cd)	0.629		0.020	ug/g	18-OCT-21	20-OCT-21	R5624998
Calcium (Ca)	81300		50	ug/g	18-OCT-21	20-OCT-21	R5624998
Chromium (Cr)	188		0.50	ug/g	18-OCT-21	20-OCT-21	R5624998
Cobalt (Co)	11.1		0.10	ug/g	18-OCT-21	20-OCT-21	R5624998
Copper (Cu)	45.3		0.50	ug/g	18-OCT-21	20-OCT-21	R5624998
Iron (Fe)	25600		50	ug/g	18-OCT-21	20-OCT-21	R5624998
Lead (Pb)	65.0		0.50	ug/g	18-OCT-21	20-OCT-21	R5624998
Lithium (Li)	14.8		2.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Magnesium (Mg)	10300		20	ug/g	18-OCT-21	20-OCT-21	R5624998
Manganese (Mn)	954		1.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Mercury (Hg)	0.194		0.0050	ug/g	18-OCT-21	20-OCT-21	R5624985
Molybdenum (Mo)	0.94		0.10	ug/g	18-OCT-21	20-OCT-21	R5624998
Nickel (Ni)	24.8		0.50	ug/g	18-OCT-21	20-OCT-21	R5624998
Phosphorus (P)	954		50	ug/g	18-OCT-21	20-OCT-21	R5624998
Potassium (K)	3450		100	ug/g	18-OCT-21	20-OCT-21	R5624998
Selenium (Se)	1.19		0.20	ug/g	18-OCT-21	20-OCT-21	R5624998
Silver (Ag)	0.37		0.10	ug/g	18-OCT-21	20-OCT-21	R5624998
Sodium (Na)	598		50	ug/g	18-OCT-21	20-OCT-21	R5624998
Strontium (Sr)	375		0.50	ug/g	18-OCT-21	20-OCT-21	R5624998
Sulfur (S)	7900		1000	ug/g	18-OCT-21	20-OCT-21	R5624998
Thallium (Tl)	0.286		0.050	ug/g	18-OCT-21	20-OCT-21	R5624998
Tin (Sn)	3.4		2.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Titanium (Ti)	926		1.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Tungsten (W)	<0.50		0.50	ug/g	18-OCT-21	20-OCT-21	R5624998
Uranium (U)	0.893		0.050	ug/g	18-OCT-21	20-OCT-21	R5624998
Vanadium (V)	37.4		0.20	ug/g	18-OCT-21	20-OCT-21	R5624998
Zinc (Zn)	137		2.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Zirconium (Zr)	3.5		1.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.084	DLHM	0.038	ug/g	19-OCT-21	20-OCT-21	R5624927
Acenaphthylene	0.429	DLHM	0.038	ug/g	19-OCT-21	20-OCT-21	R5624927
Acridine	<0.075	DLHM	0.075	ug/g	19-OCT-21	20-OCT-21	R5624927

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650174-10 TC4-SC-010AX Sampled By: CLIENT on 06-OCT-21 @ 15:30 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
Anthracene	0.241	DLHM	0.030	ug/g	19-OCT-21	20-OCT-21	R5624927
Benzo(a)anthracene	0.990	R	0.075	ug/g	19-OCT-21	20-OCT-21	R5624927
Benzo(a)pyrene	1.44	DLHM	0.038	ug/g	19-OCT-21	20-OCT-21	R5624927
Benzo(b&j)fluoranthene	1.15	DLHM	0.075	ug/g	19-OCT-21	20-OCT-21	R5624927
Benzo(g,h,i)perylene	0.854	DLHM	0.075	ug/g	19-OCT-21	20-OCT-21	R5624927
Benzo(k)fluoranthene	0.449	DLHM	0.075	ug/g	19-OCT-21	20-OCT-21	R5624927
Chrysene	1.05	DLHM	0.075	ug/g	19-OCT-21	20-OCT-21	R5624927
Dibenz(a,h)anthracene	<0.410	RRR	0.41	ug/g	19-OCT-21	20-OCT-21	R5624927
Fluoroanthene	1.08	DLHM	0.038	ug/g	19-OCT-21	20-OCT-21	R5624927
Fluorene	0.095	DLHM	0.038	ug/g	19-OCT-21	20-OCT-21	R5624927
Indeno(1,2,3-cd)pyrene	0.573	DLHM	0.075	ug/g	19-OCT-21	20-OCT-21	R5624927
1-Methylnaphthalene	0.042	DLHM	0.038	ug/g	19-OCT-21	20-OCT-21	R5624927
2-Methylnaphthalene	0.054	DLHM	0.038	ug/g	19-OCT-21	20-OCT-21	R5624927
Naphthalene	0.074	DLHM	0.038	ug/g	19-OCT-21	20-OCT-21	R5624927
Phenanthrene	0.495	DLHM	0.038	ug/g	19-OCT-21	20-OCT-21	R5624927
Pyrene	1.52	DLHM	0.038	ug/g	19-OCT-21	20-OCT-21	R5624927
Quinoline	<0.038	DLHM	0.038	ug/g	19-OCT-21	20-OCT-21	R5624927
Surrogate: 2-Fluorobiphenyl	86.5		60-140	%	19-OCT-21	20-OCT-21	R5624927
Surrogate: d14-Terphenyl	83.6		60-140	%	19-OCT-21	20-OCT-21	R5624927
B(a)P Total Potency Equivalent	1.97		0.053	ug/g	19-OCT-21	20-OCT-21	R5624927
IACR (CCME)	18.6		0.75		19-OCT-21	20-OCT-21	R5624927
Polychlorinated Biphenyls							
Aroclor 1016	<0.034	DLR	0.034	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1221	<0.034	DLR	0.034	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1232	<0.034	DLR	0.034	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1242	<0.034	DLR	0.034	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1248	<0.034	DLR	0.034	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1254	0.106	DLR	0.034	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1260	0.134	DLR	0.034	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1262	<0.034	DLR	0.034	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1268	<0.034	DLR	0.034	mg/kg	21-OCT-21	21-OCT-21	R5626110
Total Polychlorinated Biphenyls	0.24		0.10	mg/kg	21-OCT-21	21-OCT-21	R5626110
Surrogate: d14-Terphenyl	86.5		50-140	%	21-OCT-21	21-OCT-21	R5626110
Report Remarks : RRR; The Reporting Limit has been adjusted based on compound recovey in sample matrix spike.							
L2650174-11 TC4-SC-010BX Sampled By: CLIENT on 06-OCT-21 @ 15:30 Matrix: SEDIMENT							
Physical Tests							
% Moisture	84.3		0.25	%	14-OCT-21	15-OCT-21	R5617857
Metals							
Aluminum (Al)	17500		50	ug/g	18-OCT-21	20-OCT-21	R5624998
Antimony (Sb)	0.47		0.10	ug/g	18-OCT-21	20-OCT-21	R5624998

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650174-11 TC4-SC-010BX Sampled By: CLIENT on 06-OCT-21 @ 15:30 Matrix: SEDIMENT							
Metals							
Arsenic (As)	5.12		0.10	ug/g	18-OCT-21	20-OCT-21	R5624998
Barium (Ba)	253		0.50	ug/g	18-OCT-21	20-OCT-21	R5624998
Beryllium (Be)	0.65		0.10	ug/g	18-OCT-21	20-OCT-21	R5624998
Bismuth (Bi)	0.40		0.20	ug/g	18-OCT-21	20-OCT-21	R5624998
Boron (B)	8.6		5.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Cadmium (Cd)	0.670		0.020	ug/g	18-OCT-21	20-OCT-21	R5624998
Calcium (Ca)	67900		50	ug/g	18-OCT-21	20-OCT-21	R5624998
Chromium (Cr)	220		0.50	ug/g	18-OCT-21	20-OCT-21	R5624998
Cobalt (Co)	11.2		0.10	ug/g	18-OCT-21	20-OCT-21	R5624998
Copper (Cu)	44.5		0.50	ug/g	18-OCT-21	20-OCT-21	R5624998
Iron (Fe)	25300		50	ug/g	18-OCT-21	20-OCT-21	R5624998
Lead (Pb)	78.5		0.50	ug/g	18-OCT-21	20-OCT-21	R5624998
Lithium (Li)	15.5		2.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Magnesium (Mg)	9910		20	ug/g	18-OCT-21	20-OCT-21	R5624998
Manganese (Mn)	780		1.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Mercury (Hg)	0.235		0.0050	ug/g	18-OCT-21	20-OCT-21	R5624985
Molybdenum (Mo)	1.00		0.10	ug/g	18-OCT-21	20-OCT-21	R5624998
Nickel (Ni)	25.3		0.50	ug/g	18-OCT-21	20-OCT-21	R5624998
Phosphorus (P)	847		50	ug/g	18-OCT-21	20-OCT-21	R5624998
Potassium (K)	3460		100	ug/g	18-OCT-21	20-OCT-21	R5624998
Selenium (Se)	1.29		0.20	ug/g	18-OCT-21	20-OCT-21	R5624998
Silver (Ag)	0.42		0.10	ug/g	18-OCT-21	20-OCT-21	R5624998
Sodium (Na)	550		50	ug/g	18-OCT-21	20-OCT-21	R5624998
Strontium (Sr)	333		0.50	ug/g	18-OCT-21	20-OCT-21	R5624998
Sulfur (S)	8000		1000	ug/g	18-OCT-21	20-OCT-21	R5624998
Thallium (Tl)	0.300		0.050	ug/g	18-OCT-21	20-OCT-21	R5624998
Tin (Sn)	4.6		2.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Titanium (Ti)	912		1.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Tungsten (W)	<0.50		0.50	ug/g	18-OCT-21	20-OCT-21	R5624998
Uranium (U)	0.897		0.050	ug/g	18-OCT-21	20-OCT-21	R5624998
Vanadium (V)	37.9		0.20	ug/g	18-OCT-21	20-OCT-21	R5624998
Zinc (Zn)	149		2.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Zirconium (Zr)	4.2		1.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.129	DLHM	0.025	ug/g	19-OCT-21	20-OCT-21	R5624927
Acenaphthylene	0.539	DLHM	0.025	ug/g	19-OCT-21	20-OCT-21	R5624927
Acridine	<0.050	DLHM	0.050	ug/g	19-OCT-21	20-OCT-21	R5624927
Anthracene	0.284	DLHM	0.020	ug/g	19-OCT-21	20-OCT-21	R5624927
Benzo(a)anthracene	1.09	R	0.050	ug/g	19-OCT-21	20-OCT-21	R5624927
Benzo(a)pyrene	1.54	DLHM	0.025	ug/g	19-OCT-21	20-OCT-21	R5624927
Benzo(b&j)fluoranthene	1.15	DLHM	0.050	ug/g	19-OCT-21	20-OCT-21	R5624927

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650174-11 TC4-SC-010BX Sampled By: CLIENT on 06-OCT-21 @ 15:30 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
Benzo(g,h,i)perylene	0.940	DLHM	0.050	ug/g	19-OCT-21	20-OCT-21	R5624927
Benzo(k)fluoranthene	0.521	DLHM	0.050	ug/g	19-OCT-21	20-OCT-21	R5624927
Chrysene	0.970	DLHM	0.050	ug/g	19-OCT-21	20-OCT-21	R5624927
Dibenz(a,h)anthracene	<0.440	RRR	0.44	ug/g	19-OCT-21	20-OCT-21	R5624927
Fluoroanthene	0.907	DLHM	0.025	ug/g	19-OCT-21	20-OCT-21	R5624927
Fluorene	0.108	DLHM	0.025	ug/g	19-OCT-21	20-OCT-21	R5624927
Indeno(1,2,3-cd)pyrene	0.628	DLHM	0.050	ug/g	19-OCT-21	20-OCT-21	R5624927
1-Methylnaphthalene	0.053	DLHM	0.025	ug/g	19-OCT-21	20-OCT-21	R5624927
2-Methylnaphthalene	0.055	DLHM	0.025	ug/g	19-OCT-21	20-OCT-21	R5624927
Naphthalene	0.046	DLHM	0.025	ug/g	19-OCT-21	20-OCT-21	R5624927
Phenanthrene	0.397	DLHM	0.025	ug/g	19-OCT-21	20-OCT-21	R5624927
Pyrene	1.42	DLHM	0.025	ug/g	19-OCT-21	20-OCT-21	R5624927
Quinoline	<0.025	DLHM	0.025	ug/g	19-OCT-21	20-OCT-21	R5624927
Surrogate: 2-Fluorobiphenyl	84.6		60-140	%	19-OCT-21	20-OCT-21	R5624927
Surrogate: d14-Terphenyl	75.8		60-140	%	19-OCT-21	20-OCT-21	R5624927
B(a)P Total Potency Equivalent	2.12		0.036	ug/g	19-OCT-21	20-OCT-21	R5624927
IACR (CCME)	19.7		0.50		19-OCT-21	20-OCT-21	R5624927
Polychlorinated Biphenyls							
Aroclor 1016	<0.023	DLR	0.023	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1221	<0.023	DLR	0.023	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1232	<0.023	DLR	0.023	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1242	<0.023	DLR	0.023	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1248	<0.023	DLR	0.023	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1254	0.172	DLR	0.023	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1260	0.123	DLR	0.023	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1262	<0.023	DLR	0.023	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1268	<0.023	DLR	0.023	mg/kg	21-OCT-21	21-OCT-21	R5626110
Total Polychlorinated Biphenyls	0.295		0.068	mg/kg	21-OCT-21	21-OCT-21	R5626110
Surrogate: d14-Terphenyl	81.0		50-140	%	21-OCT-21	21-OCT-21	R5626110
Report Remarks : RRR; The Reporting Limit has been adjusted based on compound recovey in sample matrix spike.							
L2650174-12 TC4-SC-010CX Sampled By: CLIENT on 06-OCT-21 @ 15:30 Matrix: SEDIMENT							
Physical Tests							
% Moisture	80.0		0.25	%	14-OCT-21	15-OCT-21	R5617857
Metals							
Aluminum (Al)	19200		50	ug/g	18-OCT-21	20-OCT-21	R5624998
Antimony (Sb)	0.67		0.10	ug/g	18-OCT-21	20-OCT-21	R5624998
Arsenic (As)	6.98		0.10	ug/g	18-OCT-21	20-OCT-21	R5624998
Barium (Ba)	255		0.50	ug/g	18-OCT-21	20-OCT-21	R5624998
Beryllium (Be)	0.67		0.10	ug/g	18-OCT-21	20-OCT-21	R5624998
Bismuth (Bi)	0.51		0.20	ug/g	18-OCT-21	20-OCT-21	R5624998

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650174-12 TC4-SC-010CX Sampled By: CLIENT on 06-OCT-21 @ 15:30 Matrix: SEDIMENT							
Metals							
Boron (B)	7.8		5.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Cadmium (Cd)	0.839		0.020	ug/g	18-OCT-21	20-OCT-21	R5624998
Calcium (Ca)	55400		50	ug/g	18-OCT-21	20-OCT-21	R5624998
Chromium (Cr)	296		0.50	ug/g	18-OCT-21	20-OCT-21	R5624998
Cobalt (Co)	12.7		0.10	ug/g	18-OCT-21	20-OCT-21	R5624998
Copper (Cu)	52.5		0.50	ug/g	18-OCT-21	20-OCT-21	R5624998
Iron (Fe)	28200		50	ug/g	18-OCT-21	20-OCT-21	R5624998
Lead (Pb)	119		0.50	ug/g	18-OCT-21	20-OCT-21	R5624998
Lithium (Li)	16.0		2.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Magnesium (Mg)	11000		20	ug/g	18-OCT-21	20-OCT-21	R5624998
Manganese (Mn)	666		1.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Mercury (Hg)	0.295		0.0050	ug/g	18-OCT-21	20-OCT-21	R5624985
Molybdenum (Mo)	1.02		0.10	ug/g	18-OCT-21	20-OCT-21	R5624998
Nickel (Ni)	27.8		0.50	ug/g	18-OCT-21	20-OCT-21	R5624998
Phosphorus (P)	866		50	ug/g	18-OCT-21	20-OCT-21	R5624998
Potassium (K)	3750		100	ug/g	18-OCT-21	20-OCT-21	R5624998
Selenium (Se)	1.25		0.20	ug/g	18-OCT-21	20-OCT-21	R5624998
Silver (Ag)	0.71		0.10	ug/g	18-OCT-21	20-OCT-21	R5624998
Sodium (Na)	542		50	ug/g	18-OCT-21	20-OCT-21	R5624998
Strontium (Sr)	301		0.50	ug/g	18-OCT-21	20-OCT-21	R5624998
Sulfur (S)	7500		1000	ug/g	18-OCT-21	20-OCT-21	R5624998
Thallium (Tl)	0.309		0.050	ug/g	18-OCT-21	20-OCT-21	R5624998
Tin (Sn)	5.1		2.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Titanium (Ti)	1010		1.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Tungsten (W)	<0.50		0.50	ug/g	18-OCT-21	20-OCT-21	R5624998
Uranium (U)	0.924		0.050	ug/g	18-OCT-21	20-OCT-21	R5624998
Vanadium (V)	43.4		0.20	ug/g	18-OCT-21	20-OCT-21	R5624998
Zinc (Zn)	164		2.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Zirconium (Zr)	4.9		1.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.112	DLHM	0.025	ug/g	19-OCT-21	20-OCT-21	R5624927
Acenaphthylene	0.599	DLHM	0.025	ug/g	19-OCT-21	20-OCT-21	R5624927
Acridine	<0.080	DLM	0.080	ug/g	19-OCT-21	20-OCT-21	R5624927
Anthracene	0.309	DLHM	0.020	ug/g	19-OCT-21	20-OCT-21	R5624927
Benzo(a)anthracene	1.46	R	0.050	ug/g	19-OCT-21	20-OCT-21	R5624927
Benzo(a)pyrene	1.86	DLHM	0.025	ug/g	19-OCT-21	20-OCT-21	R5624927
Benzo(b&j)fluoranthene	1.52	DLHM	0.050	ug/g	19-OCT-21	20-OCT-21	R5624927
Benzo(g,h,i)perylene	1.07	DLHM	0.050	ug/g	19-OCT-21	20-OCT-21	R5624927
Benzo(k)fluoranthene	0.650	DLHM	0.050	ug/g	19-OCT-21	20-OCT-21	R5624927
Chrysene	1.31	DLHM	0.050	ug/g	19-OCT-21	20-OCT-21	R5624927
Dibenz(a,h)anthracene	<0.530	RRR	0.53	ug/g	19-OCT-21	20-OCT-21	R5624927

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650174-12 TC4-SC-010CX Sampled By: CLIENT on 06-OCT-21 @ 15:30 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
Fluoroanthene	1.48	DLHM	0.025	ug/g	19-OCT-21	20-OCT-21	R5624927
Fluorene	0.096	DLHM	0.025	ug/g	19-OCT-21	20-OCT-21	R5624927
Indeno(1,2,3-cd)pyrene	0.775	DLHM	0.050	ug/g	19-OCT-21	20-OCT-21	R5624927
1-Methylnaphthalene	0.031	DLHM	0.025	ug/g	19-OCT-21	20-OCT-21	R5624927
2-Methylnaphthalene	0.041	DLHM	0.025	ug/g	19-OCT-21	20-OCT-21	R5624927
Naphthalene	0.036	DLHM	0.025	ug/g	19-OCT-21	20-OCT-21	R5624927
Phenanthrene	0.493	DLHM	0.025	ug/g	19-OCT-21	20-OCT-21	R5624927
Pyrene	2.20	DLHM	0.025	ug/g	19-OCT-21	20-OCT-21	R5624927
Quinoline	<0.025	DLHM	0.025	ug/g	19-OCT-21	20-OCT-21	R5624927
Surrogate: 2-Fluorobiphenyl	88.1		60-140	%	19-OCT-21	20-OCT-21	R5624927
Surrogate: d14-Terphenyl	82.6		60-140	%	19-OCT-21	20-OCT-21	R5624927
B(a)P Total Potency Equivalent	2.59		0.036	ug/g	19-OCT-21	20-OCT-21	R5624927
IACR (CCME)	25.3		0.50		19-OCT-21	20-OCT-21	R5624927
Polychlorinated Biphenyls							
Aroclor 1016	<0.023	DLR	0.023	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1221	<0.023	DLR	0.023	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1232	<0.023	DLR	0.023	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1242	<0.023	DLR	0.023	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1248	<0.023	DLR	0.023	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1254	0.159	DLR	0.023	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1260	0.169	DLR	0.023	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1262	<0.023	DLR	0.023	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1268	<0.023	DLR	0.023	mg/kg	21-OCT-21	21-OCT-21	R5626110
Total Polychlorinated Biphenyls	0.328		0.068	mg/kg	21-OCT-21	21-OCT-21	R5626110
Surrogate: d14-Terphenyl	84.9		50-140	%	21-OCT-21	21-OCT-21	R5626110
Report Remarks : RRR; The Reporting Limit has been adjusted based on compound recovey in sample matrix spike.							
L2650174-13 TC4-SC-010DX Sampled By: CLIENT on 06-OCT-21 @ 15:30 Matrix: SEDIMENT							
Physical Tests							
% Moisture	72.3		0.25	%	14-OCT-21	15-OCT-21	R5617857
Metals							
Aluminum (Al)	20600		50	ug/g	18-OCT-21	20-OCT-21	R5624998
Antimony (Sb)	0.77		0.10	ug/g	18-OCT-21	20-OCT-21	R5624998
Arsenic (As)	10.8		0.10	ug/g	18-OCT-21	20-OCT-21	R5624998
Barium (Ba)	267		0.50	ug/g	18-OCT-21	20-OCT-21	R5624998
Beryllium (Be)	0.75		0.10	ug/g	18-OCT-21	20-OCT-21	R5624998
Bismuth (Bi)	0.64		0.20	ug/g	18-OCT-21	20-OCT-21	R5624998
Boron (B)	8.7		5.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Cadmium (Cd)	0.848		0.020	ug/g	18-OCT-21	20-OCT-21	R5624998
Calcium (Ca)	42000		50	ug/g	18-OCT-21	20-OCT-21	R5624998
Chromium (Cr)	386		0.50	ug/g	18-OCT-21	20-OCT-21	R5624998

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650174-13 TC4-SC-010DX Sampled By: CLIENT on 06-OCT-21 @ 15:30 Matrix: SEDIMENT							
Metals							
Cobalt (Co)	14.0		0.10	ug/g	18-OCT-21	20-OCT-21	R5624998
Copper (Cu)	46.3		0.50	ug/g	18-OCT-21	20-OCT-21	R5624998
Iron (Fe)	29200		50	ug/g	18-OCT-21	20-OCT-21	R5624998
Lead (Pb)	166		0.50	ug/g	18-OCT-21	20-OCT-21	R5624998
Lithium (Li)	17.7		2.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Magnesium (Mg)	11500		20	ug/g	18-OCT-21	20-OCT-21	R5624998
Manganese (Mn)	666		1.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Mercury (Hg)	0.472		0.0050	ug/g	18-OCT-21	20-OCT-21	R5624985
Molybdenum (Mo)	0.95		0.10	ug/g	18-OCT-21	20-OCT-21	R5624998
Nickel (Ni)	31.1		0.50	ug/g	18-OCT-21	20-OCT-21	R5624998
Phosphorus (P)	970		50	ug/g	18-OCT-21	20-OCT-21	R5624998
Potassium (K)	4000		100	ug/g	18-OCT-21	20-OCT-21	R5624998
Selenium (Se)	1.16		0.20	ug/g	18-OCT-21	20-OCT-21	R5624998
Silver (Ag)	0.74		0.10	ug/g	18-OCT-21	20-OCT-21	R5624998
Sodium (Na)	552		50	ug/g	18-OCT-21	20-OCT-21	R5624998
Strontium (Sr)	225		0.50	ug/g	18-OCT-21	20-OCT-21	R5624998
Sulfur (S)	6400		1000	ug/g	18-OCT-21	20-OCT-21	R5624998
Thallium (Tl)	0.330		0.050	ug/g	18-OCT-21	20-OCT-21	R5624998
Tin (Sn)	6.4		2.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Titanium (Ti)	1160		1.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Tungsten (W)	<0.50		0.50	ug/g	18-OCT-21	20-OCT-21	R5624998
Uranium (U)	0.849		0.050	ug/g	18-OCT-21	20-OCT-21	R5624998
Vanadium (V)	47.8		0.20	ug/g	18-OCT-21	20-OCT-21	R5624998
Zinc (Zn)	185		2.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Zirconium (Zr)	6.1		1.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.128	DLHM	0.015	ug/g	19-OCT-21	20-OCT-21	R5624927
Acenaphthylene	0.621	DLHM	0.015	ug/g	19-OCT-21	20-OCT-21	R5624927
Acridine	<0.090	DLM	0.090	ug/g	19-OCT-21	20-OCT-21	R5624927
Anthracene	0.392	DLHM	0.012	ug/g	19-OCT-21	20-OCT-21	R5624927
Benzo(a)anthracene	1.25	R	0.030	ug/g	19-OCT-21	20-OCT-21	R5624927
Benzo(a)pyrene	1.88	DLHM	0.015	ug/g	19-OCT-21	20-OCT-21	R5624927
Benzo(b&j)fluoranthene	1.56	DLHM	0.030	ug/g	19-OCT-21	20-OCT-21	R5624927
Benzo(g,h,i)perylene	1.18	DLHM	0.030	ug/g	19-OCT-21	20-OCT-21	R5624927
Benzo(k)fluoranthene	0.616	DLHM	0.030	ug/g	19-OCT-21	20-OCT-21	R5624927
Chrysene	1.41	DLHM	0.030	ug/g	19-OCT-21	20-OCT-21	R5624927
Dibenz(a,h)anthracene	<0.600	RRR	0.60	ug/g	19-OCT-21	20-OCT-21	R5624927
Fluoroanthene	1.39	DLHM	0.015	ug/g	19-OCT-21	20-OCT-21	R5624927
Fluorene	0.114	DLHM	0.015	ug/g	19-OCT-21	20-OCT-21	R5624927
Indeno(1,2,3-cd)pyrene	0.825	DLHM	0.030	ug/g	19-OCT-21	20-OCT-21	R5624927
1-Methylnaphthalene	0.050	DLHM	0.015	ug/g	19-OCT-21	20-OCT-21	R5624927

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650174-13 TC4-SC-010DX Sampled By: CLIENT on 06-OCT-21 @ 15:30 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
2-Methylnaphthalene	0.068	DLHM	0.015	ug/g	19-OCT-21	20-OCT-21	R5624927
Naphthalene	0.086	DLHM	0.015	ug/g	19-OCT-21	20-OCT-21	R5624927
Phenanthrene	0.653	DLHM	0.015	ug/g	19-OCT-21	20-OCT-21	R5624927
Pyrene	2.14	DLHM	0.015	ug/g	19-OCT-21	20-OCT-21	R5624927
Quinoline	<0.015	DLHM	0.015	ug/g	19-OCT-21	20-OCT-21	R5624927
Surrogate: 2-Fluorobiphenyl	87.8		60-140	%	19-OCT-21	20-OCT-21	R5624927
Surrogate: d14-Terphenyl	88.5		60-140	%	19-OCT-21	20-OCT-21	R5624927
B(a)P Total Potency Equivalent	2.62		0.021	ug/g	19-OCT-21	20-OCT-21	R5624927
IACR (CCME)	24.9		0.30		19-OCT-21	20-OCT-21	R5624927
Polychlorinated Biphenyls							
Aroclor 1016	<0.014	DLR	0.014	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1221	<0.014	DLR	0.014	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1232	<0.014	DLR	0.014	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1242	<0.014	DLR	0.014	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1248	<0.014	DLR	0.014	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1254	0.230	DLR	0.014	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1260	0.199	DLR	0.014	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1262	<0.014	DLR	0.014	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1268	<0.014	DLR	0.014	mg/kg	21-OCT-21	21-OCT-21	R5626110
Total Polychlorinated Biphenyls	0.430		0.041	mg/kg	21-OCT-21	21-OCT-21	R5626110
Surrogate: d14-Terphenyl	89.4		50-140	%	21-OCT-21	21-OCT-21	R5626110
Report Remarks : RRR; The Reporting Limit has been adjusted based on compound recovey in sample matrix spike.							
L2650174-14 PCW-SC-001AX Sampled By: CLIENT on 06-OCT-21 @ 12:15 Matrix: SEDIMENT							
Physical Tests							
% Moisture	78.6		0.25	%	14-OCT-21	15-OCT-21	R5617857
Metals							
Aluminum (Al)	11800	DLHC	1000	ug/g	18-OCT-21	20-OCT-21	R5624998
Antimony (Sb)	<2.0	DLHC	2.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Arsenic (As)	5.1	DLHC	2.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Barium (Ba)	198	DLHC	10	ug/g	18-OCT-21	20-OCT-21	R5624998
Beryllium (Be)	<2.0	DLHC	2.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Bismuth (Bi)	<4.0	DLHC	4.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Boron (B)	<100	DLHC	100	ug/g	18-OCT-21	20-OCT-21	R5624998
Cadmium (Cd)	0.51	DLHC	0.40	ug/g	18-OCT-21	20-OCT-21	R5624998
Calcium (Ca)	65000	DLHC	1000	ug/g	18-OCT-21	20-OCT-21	R5624998
Chromium (Cr)	1020	DLHC	10	ug/g	18-OCT-21	20-OCT-21	R5624998
Cobalt (Co)	10.3	DLHC	2.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Copper (Cu)	34	DLHC	10	ug/g	18-OCT-21	20-OCT-21	R5624998
Iron (Fe)	22200	DLHC	1000	ug/g	18-OCT-21	20-OCT-21	R5624998
Lead (Pb)	89	DLHC	10	ug/g	18-OCT-21	20-OCT-21	R5624998

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650174-14 PCW-SC-001AX Sampled By: CLIENT on 06-OCT-21 @ 12:15 Matrix: SEDIMENT							
Metals							
Lithium (Li)	<40	DLHC	40	ug/g	18-OCT-21	20-OCT-21	R5624998
Magnesium (Mg)	12100	DLHC	400	ug/g	18-OCT-21	20-OCT-21	R5624998
Manganese (Mn)	552	DLHC	20	ug/g	18-OCT-21	20-OCT-21	R5624998
Mercury (Hg)	0.201		0.0050	ug/g	18-OCT-21	20-OCT-21	R5624985
Molybdenum (Mo)	<2.0	DLHC	2.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Nickel (Ni)	20	DLHC	10	ug/g	18-OCT-21	20-OCT-21	R5624998
Phosphorus (P)	1200	DLHC	1000	ug/g	18-OCT-21	20-OCT-21	R5624998
Potassium (K)	2600	DLHC	2000	ug/g	18-OCT-21	20-OCT-21	R5624998
Selenium (Se)	<4.0	DLHC	4.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Silver (Ag)	<2.0	DLHC	2.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Sodium (Na)	<1000	DLHC	1000	ug/g	18-OCT-21	20-OCT-21	R5624998
Strontium (Sr)	380	DLHC	10	ug/g	18-OCT-21	20-OCT-21	R5624998
Sulfur (S)	<20000	DLHC	20000	ug/g	18-OCT-21	20-OCT-21	R5624998
Thallium (Tl)	<1.0	DLHC	1.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Tin (Sn)	<40	DLHC	40	ug/g	18-OCT-21	20-OCT-21	R5624998
Titanium (Ti)	768	DLHC	20	ug/g	18-OCT-21	20-OCT-21	R5624998
Tungsten (W)	<10	DLHC	10	ug/g	18-OCT-21	20-OCT-21	R5624998
Uranium (U)	<1.0	DLHC	1.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Vanadium (V)	35.6	DLHC	4.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Zinc (Zn)	134	DLHC	40	ug/g	18-OCT-21	20-OCT-21	R5624998
Zirconium (Zr)	<20	DLHC	20	ug/g	18-OCT-21	20-OCT-21	R5624998
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.045	DLHM	0.015	ug/g	19-OCT-21	20-OCT-21	R5624927
Acenaphthylene	0.429	DLHM	0.015	ug/g	19-OCT-21	20-OCT-21	R5624927
Acridine	<0.060	DLM	0.060	ug/g	19-OCT-21	20-OCT-21	R5624927
Anthracene	0.165	DLHM	0.012	ug/g	19-OCT-21	20-OCT-21	R5624927
Benzo(a)anthracene	0.747	R	0.030	ug/g	19-OCT-21	20-OCT-21	R5624927
Benzo(a)pyrene	1.12	DLHM	0.015	ug/g	19-OCT-21	20-OCT-21	R5624927
Benzo(b&j)fluoranthene	0.918	DLHM	0.030	ug/g	19-OCT-21	20-OCT-21	R5624927
Benzo(g,h,i)perylene	0.648	DLHM	0.030	ug/g	19-OCT-21	20-OCT-21	R5624927
Benzo(k)fluoranthene	0.398	DLHM	0.030	ug/g	19-OCT-21	20-OCT-21	R5624927
Chrysene	0.942	DLHM	0.030	ug/g	19-OCT-21	20-OCT-21	R5624927
Dibenz(a,h)anthracene	<0.300	RRR	0.30	ug/g	19-OCT-21	20-OCT-21	R5624927
Fluoroanthene	0.779	DLHM	0.015	ug/g	19-OCT-21	20-OCT-21	R5624927
Fluorene	0.062	DLHM	0.015	ug/g	19-OCT-21	20-OCT-21	R5624927
Indeno(1,2,3-cd)pyrene	0.471	DLHM	0.030	ug/g	19-OCT-21	20-OCT-21	R5624927
1-Methylnaphthalene	0.016	DLHM	0.015	ug/g	19-OCT-21	20-OCT-21	R5624927
2-Methylnaphthalene	0.018	DLHM	0.015	ug/g	19-OCT-21	20-OCT-21	R5624927
Naphthalene	<0.015	DLHM	0.015	ug/g	19-OCT-21	20-OCT-21	R5624927
Phenanthrene	0.273	DLHM	0.015	ug/g	19-OCT-21	20-OCT-21	R5624927
Pyrene	1.21	DLHM	0.015	ug/g	19-OCT-21	20-OCT-21	R5624927

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650174-14 PCW-SC-001AX Sampled By: CLIENT on 06-OCT-21 @ 12:15 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
Quinoline	<0.015	DLHM	0.015	ug/g	19-OCT-21	20-OCT-21	R5624927
Surrogate: 2-Fluorobiphenyl	85.6		60-140	%	19-OCT-21	20-OCT-21	R5624927
Surrogate: d14-Terphenyl	68.5		60-140	%	19-OCT-21	20-OCT-21	R5624927
B(a)P Total Potency Equivalent	1.54		0.021	ug/g	19-OCT-21	20-OCT-21	R5624927
IACR (CCME)	14.9		0.30		19-OCT-21	20-OCT-21	R5624927
Polychlorinated Biphenyls							
Aroclor 1016	<0.014	DLR	0.014	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1221	<0.014	DLR	0.014	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1232	<0.014	DLR	0.014	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1242	<0.014	DLR	0.014	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1248	<0.014	DLR	0.014	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1254	0.144	DLR	0.014	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1260	0.230	DLR	0.014	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1262	<0.014	DLR	0.014	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1268	<0.014	DLR	0.014	mg/kg	21-OCT-21	21-OCT-21	R5626110
Total Polychlorinated Biphenyls	0.374		0.041	mg/kg	21-OCT-21	21-OCT-21	R5626110
Surrogate: d14-Terphenyl	85.9		50-140	%	21-OCT-21	21-OCT-21	R5626110
Report Remarks : RRR; The Reporting Limit has been adjusted based on compound recovey in sample matrix spike.							
L2650174-15 PCW-SC-001BX Sampled By: CLIENT on 06-OCT-21 @ 12:15 Matrix: SEDIMENT							
Physical Tests							
% Moisture	71.5		0.25	%	14-OCT-21	15-OCT-21	R5617857
Metals							
Aluminum (Al)	17200	DLHC	1000	ug/g	18-OCT-21	20-OCT-21	R5624998
Antimony (Sb)	<2.0	DLHC	2.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Arsenic (As)	6.1	DLHC	2.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Barium (Ba)	238	DLHC	10	ug/g	18-OCT-21	20-OCT-21	R5624998
Beryllium (Be)	<2.0	DLHC	2.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Bismuth (Bi)	<4.0	DLHC	4.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Boron (B)	<100	DLHC	100	ug/g	18-OCT-21	20-OCT-21	R5624998
Cadmium (Cd)	0.54	DLHC	0.40	ug/g	18-OCT-21	20-OCT-21	R5624998
Calcium (Ca)	55400	DLHC	1000	ug/g	18-OCT-21	20-OCT-21	R5624998
Chromium (Cr)	872	DLHC	10	ug/g	18-OCT-21	20-OCT-21	R5624998
Cobalt (Co)	13.0	DLHC	2.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Copper (Cu)	38	DLHC	10	ug/g	18-OCT-21	20-OCT-21	R5624998
Iron (Fe)	29600	DLHC	1000	ug/g	18-OCT-21	20-OCT-21	R5624998
Lead (Pb)	83	DLHC	10	ug/g	18-OCT-21	20-OCT-21	R5624998
Lithium (Li)	<40	DLHC	40	ug/g	18-OCT-21	20-OCT-21	R5624998
Magnesium (Mg)	14800	DLHC	400	ug/g	18-OCT-21	20-OCT-21	R5624998
Manganese (Mn)	597	DLHC	20	ug/g	18-OCT-21	20-OCT-21	R5624998
Mercury (Hg)	0.178		0.0050	ug/g	18-OCT-21	20-OCT-21	R5624985

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650174-15 PCW-SC-001BX Sampled By: CLIENT on 06-OCT-21 @ 12:15 Matrix: SEDIMENT							
Metals							
Molybdenum (Mo)	<2.0	DLHC	2.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Nickel (Ni)	26	DLHC	10	ug/g	18-OCT-21	20-OCT-21	R5624998
Phosphorus (P)	1100	DLHC	1000	ug/g	18-OCT-21	20-OCT-21	R5624998
Potassium (K)	3900	DLHC	2000	ug/g	18-OCT-21	20-OCT-21	R5624998
Selenium (Se)	<4.0	DLHC	4.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Silver (Ag)	<2.0	DLHC	2.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Sodium (Na)	<1000	DLHC	1000	ug/g	18-OCT-21	20-OCT-21	R5624998
Strontium (Sr)	283	DLHC	10	ug/g	18-OCT-21	20-OCT-21	R5624998
Sulfur (S)	<20000	DLHC	20000	ug/g	18-OCT-21	20-OCT-21	R5624998
Thallium (Tl)	<1.0	DLHC	1.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Tin (Sn)	<40	DLHC	40	ug/g	18-OCT-21	20-OCT-21	R5624998
Titanium (Ti)	1170	DLHC	20	ug/g	18-OCT-21	20-OCT-21	R5624998
Tungsten (W)	<10	DLHC	10	ug/g	18-OCT-21	20-OCT-21	R5624998
Uranium (U)	<1.0	DLHC	1.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Vanadium (V)	50.1	DLHC	4.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Zinc (Zn)	152	DLHC	40	ug/g	18-OCT-21	20-OCT-21	R5624998
Zirconium (Zr)	<20	DLHC	20	ug/g	18-OCT-21	20-OCT-21	R5624998
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.038	DLHM	0.015	ug/g	19-OCT-21	20-OCT-21	R5624927
Acenaphthylene	0.331	DLHM	0.015	ug/g	19-OCT-21	20-OCT-21	R5624927
Acridine	<0.070	DLM	0.070	ug/g	19-OCT-21	20-OCT-21	R5624927
Anthracene	0.155	DLHM	0.012	ug/g	19-OCT-21	20-OCT-21	R5624927
Benzo(a)anthracene	0.719	R	0.030	ug/g	19-OCT-21	20-OCT-21	R5624927
Benzo(a)pyrene	0.949	DLHM	0.015	ug/g	19-OCT-21	20-OCT-21	R5624927
Benzo(b&j)fluoranthene	0.815	DLHM	0.030	ug/g	19-OCT-21	20-OCT-21	R5624927
Benzo(g,h,i)perylene	0.526	DLHM	0.030	ug/g	19-OCT-21	20-OCT-21	R5624927
Benzo(k)fluoranthene	0.366	DLHM	0.030	ug/g	19-OCT-21	20-OCT-21	R5624927
Chrysene	0.877	DLHM	0.030	ug/g	19-OCT-21	20-OCT-21	R5624927
Dibenz(a,h)anthracene	<0.270	RRR	0.27	ug/g	19-OCT-21	20-OCT-21	R5624927
Fluoroanthene	0.781	DLHM	0.015	ug/g	19-OCT-21	20-OCT-21	R5624927
Fluorene	0.056	DLHM	0.015	ug/g	19-OCT-21	20-OCT-21	R5624927
Indeno(1,2,3-cd)pyrene	0.409	DLHM	0.030	ug/g	19-OCT-21	20-OCT-21	R5624927
1-Methylnaphthalene	<0.015	DLHM	0.015	ug/g	19-OCT-21	20-OCT-21	R5624927
2-Methylnaphthalene	0.022	DLHM	0.015	ug/g	19-OCT-21	20-OCT-21	R5624927
Naphthalene	0.022	DLHM	0.015	ug/g	19-OCT-21	20-OCT-21	R5624927
Phenanthrene	0.238	DLHM	0.015	ug/g	19-OCT-21	20-OCT-21	R5624927
Pyrene	1.21	DLHM	0.015	ug/g	19-OCT-21	20-OCT-21	R5624927
Quinoline	<0.015	DLHM	0.015	ug/g	19-OCT-21	20-OCT-21	R5624927
Surrogate: 2-Fluorobiphenyl	89.2		60-140	%	19-OCT-21	20-OCT-21	R5624927
Surrogate: d14-Terphenyl	89.8		60-140	%	19-OCT-21	20-OCT-21	R5624927
B(a)P Total Potency Equivalent	1.33		0.021	ug/g	19-OCT-21	20-OCT-21	R5624927

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650174-15 PCW-SC-001BX Sampled By: CLIENT on 06-OCT-21 @ 12:15 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
IACR (CCME)	13.3		0.30		19-OCT-21	20-OCT-21	R5624927
Polychlorinated Biphenyls							
Aroclor 1016	<0.014	DLR	0.014	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1221	<0.014	DLR	0.014	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1232	<0.014	DLR	0.014	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1242	<0.014	DLR	0.014	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1248	<0.014	DLR	0.014	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1254	0.131	DLR	0.014	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1260	0.208	DLR	0.014	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1262	<0.014	DLR	0.014	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1268	<0.014	DLR	0.014	mg/kg	21-OCT-21	21-OCT-21	R5626110
Total Polychlorinated Biphenyls	0.339		0.041	mg/kg	21-OCT-21	21-OCT-21	R5626110
Surrogate: d14-Terphenyl	91.1		50-140	%	21-OCT-21	21-OCT-21	R5626110
Report Remarks : RRR; The Reporting Limit has been adjusted based on compound recovey in sample matrix spike.							
L2650174-16 PCW-SC-001CX Sampled By: CLIENT on 06-OCT-21 @ 12:15 Matrix: SEDIMENT							
Physical Tests							
% Moisture	64.8		0.25	%	14-OCT-21	15-OCT-21	R5617857
Metals							
Aluminum (Al)	20000	DLHC	1000	ug/g	18-OCT-21	20-OCT-21	R5624998
Antimony (Sb)	<2.0	DLHC	2.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Arsenic (As)	5.7	DLHC	2.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Barium (Ba)	251	DLHC	10	ug/g	18-OCT-21	20-OCT-21	R5624998
Beryllium (Be)	<2.0	DLHC	2.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Bismuth (Bi)	<4.0	DLHC	4.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Boron (B)	<100	DLHC	100	ug/g	18-OCT-21	20-OCT-21	R5624998
Cadmium (Cd)	0.50	DLHC	0.40	ug/g	18-OCT-21	20-OCT-21	R5624998
Calcium (Ca)	36600	DLHC	1000	ug/g	18-OCT-21	20-OCT-21	R5624998
Chromium (Cr)	697	DLHC	10	ug/g	18-OCT-21	20-OCT-21	R5624998
Cobalt (Co)	14.7	DLHC	2.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Copper (Cu)	39	DLHC	10	ug/g	18-OCT-21	20-OCT-21	R5624998
Iron (Fe)	32300	DLHC	1000	ug/g	18-OCT-21	20-OCT-21	R5624998
Lead (Pb)	63	DLHC	10	ug/g	18-OCT-21	20-OCT-21	R5624998
Lithium (Li)	<40	DLHC	40	ug/g	18-OCT-21	20-OCT-21	R5624998
Magnesium (Mg)	15500	DLHC	400	ug/g	18-OCT-21	20-OCT-21	R5624998
Manganese (Mn)	609	DLHC	20	ug/g	18-OCT-21	20-OCT-21	R5624998
Mercury (Hg)	0.178		0.0050	ug/g	18-OCT-21	20-OCT-21	R5624985
Molybdenum (Mo)	<2.0	DLHC	2.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Nickel (Ni)	30	DLHC	10	ug/g	18-OCT-21	20-OCT-21	R5624998
Phosphorus (P)	<1000	DLHC	1000	ug/g	18-OCT-21	20-OCT-21	R5624998
Potassium (K)	4400	DLHC	2000	ug/g	18-OCT-21	20-OCT-21	R5624998

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650174-16 PCW-SC-001CX Sampled By: CLIENT on 06-OCT-21 @ 12:15 Matrix: SEDIMENT							
Metals							
Selenium (Se)	<4.0	DLHC	4.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Silver (Ag)	<2.0	DLHC	2.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Sodium (Na)	<1000	DLHC	1000	ug/g	18-OCT-21	20-OCT-21	R5624998
Strontium (Sr)	171	DLHC	10	ug/g	18-OCT-21	20-OCT-21	R5624998
Sulfur (S)	<20000	DLHC	20000	ug/g	18-OCT-21	20-OCT-21	R5624998
Thallium (Tl)	<1.0	DLHC	1.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Tin (Sn)	<40	DLHC	40	ug/g	18-OCT-21	20-OCT-21	R5624998
Titanium (Ti)	1370	DLHC	20	ug/g	18-OCT-21	20-OCT-21	R5624998
Tungsten (W)	<10	DLHC	10	ug/g	18-OCT-21	20-OCT-21	R5624998
Uranium (U)	1.0	DLHC	1.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Vanadium (V)	56.9	DLHC	4.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Zinc (Zn)	141	DLHC	40	ug/g	18-OCT-21	20-OCT-21	R5624998
Zirconium (Zr)	<20	DLHC	20	ug/g	18-OCT-21	20-OCT-21	R5624998
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.033	DLHM	0.010	ug/g	19-OCT-21	20-OCT-21	R5624927
Acenaphthylene	0.270	DLHM	0.010	ug/g	19-OCT-21	20-OCT-21	R5624927
Acridine	<0.080	DLM	0.080	ug/g	19-OCT-21	20-OCT-21	R5624927
Anthracene	0.132	DLHM	0.0080	ug/g	19-OCT-21	20-OCT-21	R5624927
Benzo(a)anthracene	0.717	R	0.020	ug/g	19-OCT-21	20-OCT-21	R5624927
Benzo(a)pyrene	0.863	DLHM	0.010	ug/g	19-OCT-21	20-OCT-21	R5624927
Benzo(b&j)fluoranthene	0.749	DLHM	0.020	ug/g	19-OCT-21	20-OCT-21	R5624927
Benzo(g,h,i)perylene	0.467	DLHM	0.020	ug/g	19-OCT-21	20-OCT-21	R5624927
Benzo(k)fluoranthene	0.330	DLHM	0.020	ug/g	19-OCT-21	20-OCT-21	R5624927
Chrysene	0.722	DLHM	0.020	ug/g	19-OCT-21	20-OCT-21	R5624927
Dibenz(a,h)anthracene	<0.230	RRR	0.23	ug/g	19-OCT-21	20-OCT-21	R5624927
Fluoroanthene	0.771	DLHM	0.010	ug/g	19-OCT-21	20-OCT-21	R5624927
Fluorene	0.046	DLHM	0.010	ug/g	19-OCT-21	20-OCT-21	R5624927
Indeno(1,2,3-cd)pyrene	0.353	DLHM	0.020	ug/g	19-OCT-21	20-OCT-21	R5624927
1-Methylnaphthalene	0.016	DLHM	0.010	ug/g	19-OCT-21	20-OCT-21	R5624927
2-Methylnaphthalene	0.025	DLHM	0.010	ug/g	19-OCT-21	20-OCT-21	R5624927
Naphthalene	0.023	DLHM	0.010	ug/g	19-OCT-21	20-OCT-21	R5624927
Phenanthrene	0.195	DLHM	0.010	ug/g	19-OCT-21	20-OCT-21	R5624927
Pyrene	1.26	DLHM	0.010	ug/g	19-OCT-21	20-OCT-21	R5624927
Quinoline	<0.010	DLHM	0.010	ug/g	19-OCT-21	20-OCT-21	R5624927
Surrogate: 2-Fluorobiphenyl	80.3		60-140	%	19-OCT-21	20-OCT-21	R5624927
Surrogate: d14-Terphenyl	83.6		60-140	%	19-OCT-21	20-OCT-21	R5624927
B(a)P Total Potency Equivalent	1.20		0.020	ug/g	19-OCT-21	20-OCT-21	R5624927
IACR (CCME)	12.3		0.20		19-OCT-21	20-OCT-21	R5624927
Polychlorinated Biphenyls							
Aroclor 1016	<0.0090	DLR	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1221	<0.0090	DLR	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5626110

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650174-16 PCW-SC-001CX Sampled By: CLIENT on 06-OCT-21 @ 12:15 Matrix: SEDIMENT							
Polychlorinated Biphenyls							
Aroclor 1232	<0.0090	DLR	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1242	<0.0090	DLR	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1248	<0.0090	DLR	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1254	0.139	DLR	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1260	0.177	DLR	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1262	<0.0090	DLR	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1268	<0.0090	DLR	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5626110
Total Polychlorinated Biphenyls	0.315		0.027	mg/kg	21-OCT-21	21-OCT-21	R5626110
Surrogate: d14-Terphenyl	85.0		50-140	%	21-OCT-21	21-OCT-21	R5626110
Report Remarks : RRR; The Reporting Limit has been adjusted based on compound recovey in sample matrix spike.							
L2650174-17 PCW-SC-001DX Sampled By: CLIENT on 06-OCT-21 @ 12:15 Matrix: SEDIMENT							
Physical Tests							
% Moisture	60.2		0.25	%	14-OCT-21	15-OCT-21	R5617857
Metals							
Aluminum (Al)	22000	DLHC	1000	ug/g	18-OCT-21	20-OCT-21	R5624998
Antimony (Sb)	<2.0	DLHC	2.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Arsenic (As)	6.2	DLHC	2.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Barium (Ba)	280	DLHC	10	ug/g	18-OCT-21	20-OCT-21	R5624998
Beryllium (Be)	<2.0	DLHC	2.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Bismuth (Bi)	<4.0	DLHC	4.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Boron (B)	<100	DLHC	100	ug/g	18-OCT-21	20-OCT-21	R5624998
Cadmium (Cd)	<0.40	DLHC	0.40	ug/g	18-OCT-21	20-OCT-21	R5624998
Calcium (Ca)	31800	DLHC	1000	ug/g	18-OCT-21	20-OCT-21	R5624998
Chromium (Cr)	1130	DLHC	10	ug/g	18-OCT-21	20-OCT-21	R5624998
Cobalt (Co)	15.8	DLHC	2.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Copper (Cu)	39	DLHC	10	ug/g	18-OCT-21	20-OCT-21	R5624998
Iron (Fe)	35400	DLHC	1000	ug/g	18-OCT-21	20-OCT-21	R5624998
Lead (Pb)	76	DLHC	10	ug/g	18-OCT-21	20-OCT-21	R5624998
Lithium (Li)	<40	DLHC	40	ug/g	18-OCT-21	20-OCT-21	R5624998
Magnesium (Mg)	16600	DLHC	400	ug/g	18-OCT-21	20-OCT-21	R5624998
Manganese (Mn)	667	DLHC	20	ug/g	18-OCT-21	20-OCT-21	R5624998
Mercury (Hg)	0.204		0.0050	ug/g	18-OCT-21	20-OCT-21	R5624985
Molybdenum (Mo)	<2.0	DLHC	2.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Nickel (Ni)	32	DLHC	10	ug/g	18-OCT-21	20-OCT-21	R5624998
Phosphorus (P)	1000	DLHC	1000	ug/g	18-OCT-21	20-OCT-21	R5624998
Potassium (K)	5100	DLHC	2000	ug/g	18-OCT-21	20-OCT-21	R5624998
Selenium (Se)	<4.0	DLHC	4.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Silver (Ag)	<2.0	DLHC	2.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Sodium (Na)	<1000	DLHC	1000	ug/g	18-OCT-21	20-OCT-21	R5624998
Strontium (Sr)	140	DLHC	10	ug/g	18-OCT-21	20-OCT-21	R5624998

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650174-17 PCW-SC-001DX Sampled By: CLIENT on 06-OCT-21 @ 12:15 Matrix: SEDIMENT							
Metals							
Sulfur (S)	<20000	DLHC	20000	ug/g	18-OCT-21	20-OCT-21	R5624998
Thallium (Tl)	<1.0	DLHC	1.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Tin (Sn)	<40	DLHC	40	ug/g	18-OCT-21	20-OCT-21	R5624998
Titanium (Ti)	1530	DLHC	20	ug/g	18-OCT-21	20-OCT-21	R5624998
Tungsten (W)	<10	DLHC	10	ug/g	18-OCT-21	20-OCT-21	R5624998
Uranium (U)	1.1	DLHC	1.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Vanadium (V)	61.5	DLHC	4.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Zinc (Zn)	132	DLHC	40	ug/g	18-OCT-21	20-OCT-21	R5624998
Zirconium (Zr)	<20	DLHC	20	ug/g	18-OCT-21	20-OCT-21	R5624998
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.059	DLHM	0.010	ug/g	19-OCT-21	20-OCT-21	R5624927
Acenaphthylene	0.280	DLHM	0.010	ug/g	19-OCT-21	20-OCT-21	R5624927
Acridine	<0.100	DLM	0.10	ug/g	19-OCT-21	20-OCT-21	R5624927
Anthracene	0.116	DLHM	0.0080	ug/g	19-OCT-21	20-OCT-21	R5624927
Benzo(a)anthracene	0.560	R	0.020	ug/g	19-OCT-21	20-OCT-21	R5624927
Benzo(a)pyrene	0.740	DLHM	0.010	ug/g	19-OCT-21	20-OCT-21	R5624927
Benzo(b&j)fluoranthene	0.652	DLHM	0.020	ug/g	19-OCT-21	20-OCT-21	R5624927
Benzo(g,h,i)perylene	0.406	DLHM	0.020	ug/g	19-OCT-21	20-OCT-21	R5624927
Benzo(k)fluoranthene	0.287	DLHM	0.020	ug/g	19-OCT-21	20-OCT-21	R5624927
Chrysene	0.682	DLHM	0.020	ug/g	19-OCT-21	20-OCT-21	R5624927
Dibenz(a,h)anthracene	<0.200	RRR	0.20	ug/g	19-OCT-21	20-OCT-21	R5624927
Fluoroanthene	0.703	DLHM	0.010	ug/g	19-OCT-21	20-OCT-21	R5624927
Fluorene	0.054	DLHM	0.010	ug/g	19-OCT-21	20-OCT-21	R5624927
Indeno(1,2,3-cd)pyrene	0.281	DLHM	0.020	ug/g	19-OCT-21	20-OCT-21	R5624927
1-Methylnaphthalene	0.028	DLHM	0.010	ug/g	19-OCT-21	20-OCT-21	R5624927
2-Methylnaphthalene	0.028	DLHM	0.010	ug/g	19-OCT-21	20-OCT-21	R5624927
Naphthalene	0.026	DLHM	0.010	ug/g	19-OCT-21	20-OCT-21	R5624927
Phenanthrene	0.250	DLHM	0.010	ug/g	19-OCT-21	20-OCT-21	R5624927
Pyrene	1.18	DLHM	0.010	ug/g	19-OCT-21	20-OCT-21	R5624927
Quinoline	<0.010	DLHM	0.010	ug/g	19-OCT-21	20-OCT-21	R5624927
Surrogate: 2-Fluorobiphenyl	88.4		60-140	%	19-OCT-21	20-OCT-21	R5624927
Surrogate: d14-Terphenyl	92.6		60-140	%	19-OCT-21	20-OCT-21	R5624927
B(a)P Total Potency Equivalent	1.02		0.020	ug/g	19-OCT-21	20-OCT-21	R5624927
IACR (CCME)	10.5		0.20		19-OCT-21	20-OCT-21	R5624927
Polychlorinated Biphenyls							
Aroclor 1016	<0.0090	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1221	<0.0090	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1232	<0.0090	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1242	<0.0180	DLM	0.018	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1248	<0.0090	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1254	0.205	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5626110

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650174-17 PCW-SC-001DX Sampled By: CLIENT on 06-OCT-21 @ 12:15 Matrix: SEDIMENT							
Polychlorinated Biphenyls							
Aroclor 1260	0.327	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1262	<0.0090	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1268	<0.0090	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5626110
Total Polychlorinated Biphenyls	0.532		0.027	mg/kg	21-OCT-21	21-OCT-21	R5626110
Surrogate: d14-Terphenyl	98.3		50-140	%	21-OCT-21	21-OCT-21	R5626110
Report Remarks : RRR; The Reporting Limit has been adjusted based on compound recovey in sample matrix spike.							
L2650174-18 PCW-SC-001EX Sampled By: CLIENT on 06-OCT-21 @ 12:15 Matrix: SEDIMENT							
Physical Tests							
% Moisture	64.6		0.25	%	14-OCT-21	15-OCT-21	R5617857
Metals							
Aluminum (Al)	21000	DLHC	1000	ug/g	18-OCT-21	20-OCT-21	R5624998
Antimony (Sb)	<2.0	DLHC	2.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Arsenic (As)	7.8	DLHC	2.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Barium (Ba)	301	DLHC	10	ug/g	18-OCT-21	20-OCT-21	R5624998
Beryllium (Be)	<2.0	DLHC	2.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Bismuth (Bi)	<4.0	DLHC	4.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Boron (B)	<100	DLHC	100	ug/g	18-OCT-21	20-OCT-21	R5624998
Cadmium (Cd)	0.62	DLHC	0.40	ug/g	18-OCT-21	20-OCT-21	R5624998
Calcium (Ca)	28000	DLHC	1000	ug/g	18-OCT-21	20-OCT-21	R5624998
Chromium (Cr)	3140	DLHC	10	ug/g	18-OCT-21	20-OCT-21	R5624998
Cobalt (Co)	16.4	DLHC	2.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Copper (Cu)	45	DLHC	10	ug/g	18-OCT-21	20-OCT-21	R5624998
Iron (Fe)	28600	DLHC	1000	ug/g	18-OCT-21	20-OCT-21	R5624998
Lead (Pb)	150	DLHC	10	ug/g	18-OCT-21	20-OCT-21	R5624998
Lithium (Li)	<40	DLHC	40	ug/g	18-OCT-21	20-OCT-21	R5624998
Magnesium (Mg)	15500	DLHC	400	ug/g	18-OCT-21	20-OCT-21	R5624998
Manganese (Mn)	617	DLHC	20	ug/g	18-OCT-21	20-OCT-21	R5624998
Mercury (Hg)	0.374		0.0050	ug/g	18-OCT-21	20-OCT-21	R5624985
Molybdenum (Mo)	<2.0	DLHC	2.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Nickel (Ni)	32	DLHC	10	ug/g	18-OCT-21	20-OCT-21	R5624998
Phosphorus (P)	1300	DLHC	1000	ug/g	18-OCT-21	20-OCT-21	R5624998
Potassium (K)	5100	DLHC	2000	ug/g	18-OCT-21	20-OCT-21	R5624998
Selenium (Se)	<4.0	DLHC	4.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Silver (Ag)	<2.0	DLHC	2.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Sodium (Na)	<1000	DLHC	1000	ug/g	18-OCT-21	20-OCT-21	R5624998
Strontium (Sr)	137	DLHC	10	ug/g	18-OCT-21	20-OCT-21	R5624998
Sulfur (S)	<20000	DLHC	20000	ug/g	18-OCT-21	20-OCT-21	R5624998
Thallium (Tl)	<1.0	DLHC	1.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Tin (Sn)	<40	DLHC	40	ug/g	18-OCT-21	20-OCT-21	R5624998
Titanium (Ti)	1420	DLHC	20	ug/g	18-OCT-21	20-OCT-21	R5624998

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650174-18 PCW-SC-001EX Sampled By: CLIENT on 06-OCT-21 @ 12:15 Matrix: SEDIMENT							
Metals							
Tungsten (W)	<10	DLHC	10	ug/g	18-OCT-21	20-OCT-21	R5624998
Uranium (U)	<1.0	DLHC	1.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Vanadium (V)	56.8	DLHC	4.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Zinc (Zn)	196	DLHC	40	ug/g	18-OCT-21	20-OCT-21	R5624998
Zirconium (Zr)	<20	DLHC	20	ug/g	18-OCT-21	20-OCT-21	R5624998
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.173	DLHM	0.010	ug/g	19-OCT-21	20-OCT-21	R5624927
Acenaphthylene	0.611	DLHM	0.010	ug/g	19-OCT-21	20-OCT-21	R5624927
Acridine	<0.230	DLM	0.23	ug/g	19-OCT-21	20-OCT-21	R5624927
Anthracene	0.271	DLHM	0.0080	ug/g	19-OCT-21	20-OCT-21	R5624927
Benzo(a)anthracene	1.11	R	0.020	ug/g	19-OCT-21	20-OCT-21	R5624927
Benzo(a)pyrene	1.34	DLHM	0.010	ug/g	19-OCT-21	20-OCT-21	R5624927
Benzo(b&j)fluoranthene	1.23	DLHM	0.020	ug/g	19-OCT-21	20-OCT-21	R5624927
Benzo(g,h,i)perylene	0.726	DLHM	0.020	ug/g	19-OCT-21	20-OCT-21	R5624927
Benzo(k)fluoranthene	0.368	DLHM	0.020	ug/g	19-OCT-21	20-OCT-21	R5624927
Chrysene	1.19	DLHM	0.020	ug/g	19-OCT-21	20-OCT-21	R5624927
Dibenz(a,h)anthracene	<0.330	RRR	0.33	ug/g	19-OCT-21	20-OCT-21	R5624927
Fluoroanthene	1.29	DLHM	0.010	ug/g	19-OCT-21	20-OCT-21	R5624927
Fluorene	0.154	DLHM	0.010	ug/g	19-OCT-21	20-OCT-21	R5624927
Indeno(1,2,3-cd)pyrene	0.501	DLHM	0.020	ug/g	19-OCT-21	20-OCT-21	R5624927
1-Methylnaphthalene	0.052	DLHM	0.010	ug/g	19-OCT-21	20-OCT-21	R5624927
2-Methylnaphthalene	0.071	DLHM	0.010	ug/g	19-OCT-21	20-OCT-21	R5624927
Naphthalene	0.064	DLHM	0.010	ug/g	19-OCT-21	20-OCT-21	R5624927
Phenanthrene	0.612	DLHM	0.010	ug/g	19-OCT-21	20-OCT-21	R5624927
Pyrene	2.22	DLHM	0.010	ug/g	19-OCT-21	20-OCT-21	R5624927
Quinoline	<0.010	DLHM	0.010	ug/g	19-OCT-21	20-OCT-21	R5624927
Surrogate: 2-Fluorobiphenyl	90.9		60-140	%	19-OCT-21	20-OCT-21	R5624927
Surrogate: d14-Terphenyl	90.9		60-140	%	19-OCT-21	20-OCT-21	R5624927
B(a)P Total Potency Equivalent	1.85		0.020	ug/g	19-OCT-21	20-OCT-21	R5624927
IACR (CCME)	18.6		0.20		19-OCT-21	20-OCT-21	R5624927
Polychlorinated Biphenyls							
Aroclor 1016	<0.0090	DLR	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1221	<0.0090	DLR	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1232	<0.0090	DLR	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1242	<0.0090	DLR	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1248	<0.0090	DLR	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1254	0.419	DLR	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1260	0.621	DLR	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1262	<0.0090	DLR	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1268	<0.0090	DLR	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5626110
Total Polychlorinated Biphenyls	1.04		0.027	mg/kg	21-OCT-21	21-OCT-21	R5626110

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650174-18 PCW-SC-001EX Sampled By: CLIENT on 06-OCT-21 @ 12:15 Matrix: SEDIMENT							
Polychlorinated Biphenyls							
Surrogate: d14-Terphenyl	88.6		50-140	%	21-OCT-21	21-OCT-21	R5626110
Report Remarks : RRR; The Reporting Limit has been adjusted based on compound recovey in sample matrix spike.							
L2650174-19 PCW-SC-001FX Sampled By: CLIENT on 06-OCT-21 @ 12:15 Matrix: SEDIMENT							
Physical Tests							
% Moisture	80.4		0.25	%	14-OCT-21	15-OCT-21	R5617857
Metals							
Aluminum (Al)	10400	DLHC	1000	ug/g	18-OCT-21	20-OCT-21	R5624998
Antimony (Sb)	3.7	DLHC	2.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Arsenic (As)	10.6	DLHC	2.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Barium (Ba)	235	DLHC	10	ug/g	18-OCT-21	20-OCT-21	R5624998
Beryllium (Be)	<2.0	DLHC	2.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Bismuth (Bi)	<4.0	DLHC	4.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Boron (B)	<100	DLHC	100	ug/g	18-OCT-21	20-OCT-21	R5624998
Cadmium (Cd)	1.15	DLHC	0.40	ug/g	18-OCT-21	20-OCT-21	R5624998
Calcium (Ca)	31900	DLHC	1000	ug/g	18-OCT-21	20-OCT-21	R5624998
Chromium (Cr)	5470	DLHC	10	ug/g	18-OCT-21	20-OCT-21	R5624998
Cobalt (Co)	11.5	DLHC	2.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Copper (Cu)	42	DLHC	10	ug/g	18-OCT-21	20-OCT-21	R5624998
Iron (Fe)	16700	DLHC	1000	ug/g	18-OCT-21	20-OCT-21	R5624998
Lead (Pb)	338	DLHC	10	ug/g	18-OCT-21	20-OCT-21	R5624998
Lithium (Li)	<40	DLHC	40	ug/g	18-OCT-21	20-OCT-21	R5624998
Magnesium (Mg)	8670	DLHC	400	ug/g	18-OCT-21	20-OCT-21	R5624998
Manganese (Mn)	318	DLHC	20	ug/g	18-OCT-21	20-OCT-21	R5624998
Mercury (Hg)	0.631		0.0050	ug/g	18-OCT-21	20-OCT-21	R5624985
Molybdenum (Mo)	<2.0	DLHC	2.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Nickel (Ni)	18	DLHC	10	ug/g	18-OCT-21	20-OCT-21	R5624998
Phosphorus (P)	1900	DLHC	1000	ug/g	18-OCT-21	20-OCT-21	R5624998
Potassium (K)	<2000	DLHC	2000	ug/g	18-OCT-21	20-OCT-21	R5624998
Selenium (Se)	<4.0	DLHC	4.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Silver (Ag)	<2.0	DLHC	2.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Sodium (Na)	<1000	DLHC	1000	ug/g	18-OCT-21	20-OCT-21	R5624998
Strontium (Sr)	184	DLHC	10	ug/g	18-OCT-21	20-OCT-21	R5624998
Sulfur (S)	<20000	DLHC	20000	ug/g	18-OCT-21	20-OCT-21	R5624998
Thallium (Tl)	<1.0	DLHC	1.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Tin (Sn)	<40	DLHC	40	ug/g	18-OCT-21	20-OCT-21	R5624998
Titanium (Ti)	574	DLHC	20	ug/g	18-OCT-21	20-OCT-21	R5624998
Tungsten (W)	<10	DLHC	10	ug/g	18-OCT-21	20-OCT-21	R5624998
Uranium (U)	<1.0	DLHC	1.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Vanadium (V)	24.7	DLHC	4.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Zinc (Zn)	253	DLHC	40	ug/g	18-OCT-21	20-OCT-21	R5624998

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650174-19 PCW-SC-001FX Sampled By: CLIENT on 06-OCT-21 @ 12:15 Matrix: SEDIMENT							
Metals							
Zirconium (Zr)	<20	DLHC	20	ug/g	18-OCT-21	20-OCT-21	R5624998
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.506	DLHM	0.025	ug/g	19-OCT-21	20-OCT-21	R5624927
Acenaphthylene	2.01	DLHM	0.025	ug/g	19-OCT-21	20-OCT-21	R5624927
Acridine	<1.20	DLM	1.2	ug/g	19-OCT-21	20-OCT-21	R5624927
Anthracene	0.959	DLHM	0.020	ug/g	19-OCT-21	20-OCT-21	R5624927
Benzo(a)anthracene	3.30	R	0.050	ug/g	19-OCT-21	20-OCT-21	R5624927
Benzo(a)pyrene	3.91	DLHM	0.025	ug/g	19-OCT-21	20-OCT-21	R5624927
Benzo(b&j)fluoranthene	3.25	DLHM	0.050	ug/g	19-OCT-21	20-OCT-21	R5624927
Benzo(g,h,i)perylene	2.07	DLHM	0.050	ug/g	19-OCT-21	20-OCT-21	R5624927
Benzo(k)fluoranthene	1.36	DLHM	0.050	ug/g	19-OCT-21	20-OCT-21	R5624927
Chrysene	3.45	DLHM	0.050	ug/g	19-OCT-21	20-OCT-21	R5624927
Dibenz(a,h)anthracene	<1.0	RRR	1.0	ug/g	19-OCT-21	20-OCT-21	R5624927
Fluoroanthene	4.11	DLHM	0.025	ug/g	19-OCT-21	20-OCT-21	R5624927
Fluorene	0.527	DLHM	0.025	ug/g	19-OCT-21	20-OCT-21	R5624927
Indeno(1,2,3-cd)pyrene	1.38	DLHM	0.050	ug/g	19-OCT-21	20-OCT-21	R5624927
1-Methylnaphthalene	0.117	DLHM	0.025	ug/g	19-OCT-21	20-OCT-21	R5624927
2-Methylnaphthalene	0.150	DLHM	0.025	ug/g	19-OCT-21	20-OCT-21	R5624927
Naphthalene	0.095	DLHM	0.025	ug/g	19-OCT-21	20-OCT-21	R5624927
Phenanthrene	2.25	DLHM	0.025	ug/g	19-OCT-21	20-OCT-21	R5624927
Pyrene	7.08	DLHM	0.025	ug/g	19-OCT-21	20-OCT-21	R5624927
Quinoline	<0.025	DLHM	0.025	ug/g	19-OCT-21	20-OCT-21	R5624927
Surrogate: 2-Fluorobiphenyl	84.1		60-140	%	19-OCT-21	20-OCT-21	R5624927
Surrogate: d14-Terphenyl	68.1		60-140	%	19-OCT-21	20-OCT-21	R5624927
B(a)P Total Potency Equivalent	5.36		0.036	ug/g	19-OCT-21	20-OCT-21	R5624927
IACR (CCME)	53.9		0.50		19-OCT-21	20-OCT-21	R5624927
Polychlorinated Biphenyls							
Aroclor 1016	<0.023	DLR	0.023	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1221	<0.023	DLR	0.023	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1232	<0.023	DLR	0.023	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1242	<0.023	DLR	0.023	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1248	<0.023	DLR	0.023	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1254	1.62	DLR	0.023	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1260	2.43	DLR	0.023	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1262	<0.023	DLR	0.023	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1268	<0.023	DLR	0.023	mg/kg	21-OCT-21	21-OCT-21	R5626110
Total Polychlorinated Biphenyls	4.05		0.068	mg/kg	21-OCT-21	21-OCT-21	R5626110
Surrogate: d14-Terphenyl	114.7		50-140	%	21-OCT-21	21-OCT-21	R5626110
Report Remarks : RRR; The Reporting Limit has been adjusted based on compound recovey in sample matrix spike.							
L2650174-20 PCW-SC-001GX Sampled By: CLIENT on 06-OCT-21 @ 12:15 Matrix: SEDIMENT							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650174-20 PCW-SC-001GX Sampled By: CLIENT on 06-OCT-21 @ 12:15 Matrix: SEDIMENT							
Physical Tests							
% Moisture	87.1		0.25	%	14-OCT-21	15-OCT-21	R5617857
Metals							
Aluminum (Al)	5500	DLHC	1000	ug/g	18-OCT-21	20-OCT-21	R5624998
Antimony (Sb)	2.9	DLHC	2.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Arsenic (As)	7.4	DLHC	2.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Barium (Ba)	172	DLHC	10	ug/g	18-OCT-21	20-OCT-21	R5624998
Beryllium (Be)	<2.0	DLHC	2.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Bismuth (Bi)	<4.0	DLHC	4.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Boron (B)	<100	DLHC	100	ug/g	18-OCT-21	20-OCT-21	R5624998
Cadmium (Cd)	0.67	DLHC	0.40	ug/g	18-OCT-21	20-OCT-21	R5624998
Calcium (Ca)	25700	DLHC	1000	ug/g	18-OCT-21	20-OCT-21	R5624998
Chromium (Cr)	2950	DLHC	10	ug/g	18-OCT-21	20-OCT-21	R5624998
Cobalt (Co)	6.1	DLHC	2.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Copper (Cu)	28	DLHC	10	ug/g	18-OCT-21	20-OCT-21	R5624998
Iron (Fe)	9300	DLHC	1000	ug/g	18-OCT-21	20-OCT-21	R5624998
Lead (Pb)	215	DLHC	10	ug/g	18-OCT-21	20-OCT-21	R5624998
Lithium (Li)	<40	DLHC	40	ug/g	18-OCT-21	20-OCT-21	R5624998
Magnesium (Mg)	4730	DLHC	400	ug/g	18-OCT-21	20-OCT-21	R5624998
Manganese (Mn)	279	DLHC	20	ug/g	18-OCT-21	20-OCT-21	R5624998
Mercury (Hg)	0.371		0.0050	ug/g	18-OCT-21	20-OCT-21	R5624985
Molybdenum (Mo)	<2.0	DLHC	2.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Nickel (Ni)	11	DLHC	10	ug/g	18-OCT-21	20-OCT-21	R5624998
Phosphorus (P)	1100	DLHC	1000	ug/g	18-OCT-21	20-OCT-21	R5624998
Potassium (K)	<2000	DLHC	2000	ug/g	18-OCT-21	20-OCT-21	R5624998
Selenium (Se)	<4.0	DLHC	4.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Silver (Ag)	<2.0	DLHC	2.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Sodium (Na)	<1000	DLHC	1000	ug/g	18-OCT-21	20-OCT-21	R5624998
Strontium (Sr)	190	DLHC	10	ug/g	18-OCT-21	20-OCT-21	R5624998
Sulfur (S)	<20000	DLHC	20000	ug/g	18-OCT-21	20-OCT-21	R5624998
Thallium (Tl)	<1.0	DLHC	1.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Tin (Sn)	<40	DLHC	40	ug/g	18-OCT-21	20-OCT-21	R5624998
Titanium (Ti)	294	DLHC	20	ug/g	18-OCT-21	20-OCT-21	R5624998
Tungsten (W)	<10	DLHC	10	ug/g	18-OCT-21	20-OCT-21	R5624998
Uranium (U)	<1.0	DLHC	1.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Vanadium (V)	13.1	DLHC	4.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Zinc (Zn)	201	DLHC	40	ug/g	18-OCT-21	20-OCT-21	R5624998
Zirconium (Zr)	<20	DLHC	20	ug/g	18-OCT-21	20-OCT-21	R5624998
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.251	DLHM	0.038	ug/g	19-OCT-21	20-OCT-21	R5624927
Acenaphthylene	1.32	DLHM	0.038	ug/g	19-OCT-21	20-OCT-21	R5624927
Acridine	<0.840	DLM	0.84	ug/g	19-OCT-21	20-OCT-21	R5624927

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650174-20 PCW-SC-001GX Sampled By: CLIENT on 06-OCT-21 @ 12:15 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
Anthracene	0.441	DLHM	0.030	ug/g	19-OCT-21	20-OCT-21	R5624927
Benzo(a)anthracene	2.21	R	0.075	ug/g	19-OCT-21	20-OCT-21	R5624927
Benzo(a)pyrene	2.64	DLHM	0.038	ug/g	19-OCT-21	20-OCT-21	R5624927
Benzo(b&j)fluoranthene	2.22	DLHM	0.075	ug/g	19-OCT-21	20-OCT-21	R5624927
Benzo(g,h,i)perylene	1.42	DLHM	0.075	ug/g	19-OCT-21	20-OCT-21	R5624927
Benzo(k)fluoranthene	0.651	DLHM	0.075	ug/g	19-OCT-21	20-OCT-21	R5624927
Chrysene	1.96	DLHM	0.075	ug/g	19-OCT-21	20-OCT-21	R5624927
Dibenz(a,h)anthracene	<0.620	RRR	0.62	ug/g	19-OCT-21	20-OCT-21	R5624927
Fluoroanthene	2.38	DLHM	0.038	ug/g	19-OCT-21	20-OCT-21	R5624927
Fluorene	0.287	DLHM	0.038	ug/g	19-OCT-21	20-OCT-21	R5624927
Indeno(1,2,3-cd)pyrene	0.919	DLHM	0.075	ug/g	19-OCT-21	20-OCT-21	R5624927
1-Methylnaphthalene	<0.060	DLQ	0.060	ug/g	19-OCT-21	20-OCT-21	R5624927
2-Methylnaphthalene	0.091	DLHM	0.038	ug/g	19-OCT-21	20-OCT-21	R5624927
Naphthalene	0.065	DLHM	0.038	ug/g	19-OCT-21	20-OCT-21	R5624927
Phenanthrene	1.18	DLHM	0.038	ug/g	19-OCT-21	20-OCT-21	R5624927
Pyrene	4.24	DLHM	0.038	ug/g	19-OCT-21	20-OCT-21	R5624927
Quinoline	<0.038	DLHM	0.038	ug/g	19-OCT-21	20-OCT-21	R5624927
Surrogate: 2-Fluorobiphenyl	84.0		60-140	%	19-OCT-21	20-OCT-21	R5624927
Surrogate: d14-Terphenyl	84.1		60-140	%	19-OCT-21	20-OCT-21	R5624927
B(a)P Total Potency Equivalent	3.58		0.053	ug/g	19-OCT-21	20-OCT-21	R5624927
IACR (CCME)	34.6		0.75		19-OCT-21	20-OCT-21	R5624927
Polychlorinated Biphenyls							
Aroclor 1016	<0.024	DLHM	0.024	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1221	<0.024	DLHM	0.024	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1232	<0.024	DLHM	0.024	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1242	<0.0750	DLM	0.075	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1248	<0.024	DLHM	0.024	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1254	0.981	DLHM	0.024	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1260	1.31	DLHM	0.024	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1262	<0.024	DLHM	0.024	mg/kg	21-OCT-21	21-OCT-21	R5626110
Aroclor 1268	<0.024	DLHM	0.024	mg/kg	21-OCT-21	21-OCT-21	R5626110
Total Polychlorinated Biphenyls	2.291		0.072	mg/kg	21-OCT-21	21-OCT-21	R5626110
Surrogate: d14-Terphenyl	89.5		50-140	%	21-OCT-21	21-OCT-21	R5626110
Report Remarks : RRR; The Reporting Limit has been adjusted based on compound recovey in sample matrix spike.							
L2650174-21 TCOM-SC-006AX Sampled By: CLIENT on 06-OCT-21 @ 13:38 Matrix: SEDIMENT							
Physical Tests							
% Moisture	82.7		0.25	%	14-OCT-21	15-OCT-21	R5617857
Metals							
Aluminum (Al)	11100	DLHC	1000	ug/g	18-OCT-21	20-OCT-21	R5624998
Antimony (Sb)	<2.0	DLHC	2.0	ug/g	18-OCT-21	20-OCT-21	R5624998

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650174-21 TCOM-SC-006AX Sampled By: CLIENT on 06-OCT-21 @ 13:38 Matrix: SEDIMENT							
Metals							
Arsenic (As)	8.0	DLHC	2.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Barium (Ba)	228	DLHC	10	ug/g	18-OCT-21	20-OCT-21	R5624998
Beryllium (Be)	<2.0	DLHC	2.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Bismuth (Bi)	<4.0	DLHC	4.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Boron (B)	<100	DLHC	100	ug/g	18-OCT-21	20-OCT-21	R5624998
Cadmium (Cd)	0.61	DLHC	0.40	ug/g	18-OCT-21	20-OCT-21	R5624998
Calcium (Ca)	97800	DLHC	1000	ug/g	18-OCT-21	20-OCT-21	R5624998
Chromium (Cr)	709	DLHC	10	ug/g	18-OCT-21	20-OCT-21	R5624998
Cobalt (Co)	11.1	DLHC	2.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Copper (Cu)	41	DLHC	10	ug/g	18-OCT-21	20-OCT-21	R5624998
Iron (Fe)	21600	DLHC	1000	ug/g	18-OCT-21	20-OCT-21	R5624998
Lead (Pb)	105	DLHC	10	ug/g	18-OCT-21	20-OCT-21	R5624998
Lithium (Li)	<40	DLHC	40	ug/g	18-OCT-21	20-OCT-21	R5624998
Magnesium (Mg)	11100	DLHC	400	ug/g	18-OCT-21	20-OCT-21	R5624998
Manganese (Mn)	598	DLHC	20	ug/g	18-OCT-21	20-OCT-21	R5624998
Mercury (Hg)	0.312		0.0050	ug/g	18-OCT-21	20-OCT-21	R5624985
Molybdenum (Mo)	<2.0	DLHC	2.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Nickel (Ni)	21	DLHC	10	ug/g	18-OCT-21	20-OCT-21	R5624998
Phosphorus (P)	<1000	DLHC	1000	ug/g	18-OCT-21	20-OCT-21	R5624998
Potassium (K)	2400	DLHC	2000	ug/g	18-OCT-21	20-OCT-21	R5624998
Selenium (Se)	<4.0	DLHC	4.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Silver (Ag)	<2.0	DLHC	2.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Sodium (Na)	<1000	DLHC	1000	ug/g	18-OCT-21	20-OCT-21	R5624998
Strontium (Sr)	744	DLHC	10	ug/g	18-OCT-21	20-OCT-21	R5624998
Sulfur (S)	<20000	DLHC	20000	ug/g	18-OCT-21	20-OCT-21	R5624998
Thallium (Tl)	<1.0	DLHC	1.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Tin (Sn)	<40	DLHC	40	ug/g	18-OCT-21	20-OCT-21	R5624998
Titanium (Ti)	657	DLHC	20	ug/g	18-OCT-21	20-OCT-21	R5624998
Tungsten (W)	<10	DLHC	10	ug/g	18-OCT-21	20-OCT-21	R5624998
Uranium (U)	<1.0	DLHC	1.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Vanadium (V)	33.9	DLHC	4.0	ug/g	18-OCT-21	20-OCT-21	R5624998
Zinc (Zn)	160	DLHC	40	ug/g	18-OCT-21	20-OCT-21	R5624998
Zirconium (Zr)	<20	DLHC	20	ug/g	18-OCT-21	20-OCT-21	R5624998
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.069		0.025	ug/g	19-OCT-21	20-OCT-21	R5625547
Acenaphthylene	0.227		0.025	ug/g	19-OCT-21	20-OCT-21	R5625547
Acridine	<0.050	DLHM	0.050	ug/g	19-OCT-21	20-OCT-21	R5625547
Anthracene	0.135		0.020	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(a)anthracene	0.427	R	0.050	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(a)pyrene	0.616		0.025	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(b&j)fluoranthene	0.675		0.050	ug/g	19-OCT-21	20-OCT-21	R5625547

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650174-21 TCOM-SC-006AX Sampled By: CLIENT on 06-OCT-21 @ 13:38 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
Benzo(g,h,i)perylene	0.434		0.050	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(k)fluoranthene	0.352		0.050	ug/g	19-OCT-21	20-OCT-21	R5625547
Chrysene	0.579		0.050	ug/g	19-OCT-21	20-OCT-21	R5625547
Dibenz(a,h)anthracene	0.106	R	0.025	ug/g	19-OCT-21	20-OCT-21	R5625547
Fluoroanthene	0.681		0.025	ug/g	19-OCT-21	20-OCT-21	R5625547
Fluorene	0.071	R	0.025	ug/g	19-OCT-21	20-OCT-21	R5625547
Indeno(1,2,3-cd)pyrene	0.425		0.050	ug/g	19-OCT-21	20-OCT-21	R5625547
1-Methylnaphthalene	<0.025	DLHM	0.025	ug/g	19-OCT-21	20-OCT-21	R5625547
2-Methylnaphthalene	<0.025	DLHM	0.025	ug/g	19-OCT-21	20-OCT-21	R5625547
Naphthalene	<0.025	DLHM	0.025	ug/g	19-OCT-21	20-OCT-21	R5625547
Phenanthrene	0.320		0.025	ug/g	19-OCT-21	20-OCT-21	R5625547
Pyrene	0.809		0.025	ug/g	19-OCT-21	20-OCT-21	R5625547
Quinoline	<0.025	DLHM	0.025	ug/g	19-OCT-21	20-OCT-21	R5625547
Surrogate: 2-Fluorobiphenyl	90.4		60-140	%	19-OCT-21	20-OCT-21	R5625547
Surrogate: d14-Terphenyl	86.0		60-140	%	19-OCT-21	20-OCT-21	R5625547
B(a)P Total Potency Equivalent	0.920		0.036	ug/g	19-OCT-21	20-OCT-21	R5625547
IACR (CCME)	10.3		0.50		19-OCT-21	20-OCT-21	R5625547
Polychlorinated Biphenyls							
Aroclor 1016	<0.015	DLHM	0.015	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1221	<0.015	DLHM	0.015	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1232	<0.015	DLHM	0.015	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1242	<0.020	DLM	0.020	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1248	<0.015	DLHM	0.015	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1254	0.136	DLHM	0.015	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1260	0.240	DLHM	0.015	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1262	<0.015	DLHM	0.015	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1268	<0.015	DLHM	0.015	mg/kg	21-OCT-21	21-OCT-21	R5625841
Total Polychlorinated Biphenyls	0.376		0.045	mg/kg	21-OCT-21	21-OCT-21	R5625841
Surrogate: d14-Terphenyl	100.3		50-140	%	21-OCT-21	21-OCT-21	R5625841
L2650174-22 TCOM-SC-006BX Sampled By: CLIENT on 06-OCT-21 @ 13:38 Matrix: SEDIMENT							
Physical Tests							
% Moisture	78.6		0.25	%	14-OCT-21	15-OCT-21	R5617857
Metals							
Aluminum (Al)	14900		50	ug/g	18-OCT-21	19-OCT-21	R5624603
Antimony (Sb)	0.65		0.10	ug/g	18-OCT-21	19-OCT-21	R5624603
Arsenic (As)	11.0		0.10	ug/g	18-OCT-21	19-OCT-21	R5624603
Barium (Ba)	250		0.50	ug/g	18-OCT-21	19-OCT-21	R5624603
Beryllium (Be)	0.59		0.10	ug/g	18-OCT-21	19-OCT-21	R5624603
Bismuth (Bi)	0.36		0.20	ug/g	18-OCT-21	19-OCT-21	R5624603
Boron (B)	9.1		5.0	ug/g	18-OCT-21	19-OCT-21	R5624603

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650174-22 TCOM-SC-006BX Sampled By: CLIENT on 06-OCT-21 @ 13:38 Matrix: SEDIMENT							
Metals							
Cadmium (Cd)	0.742		0.020	ug/g	18-OCT-21	19-OCT-21	R5624603
Calcium (Ca)	89100		50	ug/g	18-OCT-21	19-OCT-21	R5624603
Chromium (Cr)	866		0.50	ug/g	18-OCT-21	19-OCT-21	R5624603
Cobalt (Co)	12.7		0.10	ug/g	18-OCT-21	19-OCT-21	R5624603
Copper (Cu)	40.1		0.50	ug/g	18-OCT-21	19-OCT-21	R5624603
Iron (Fe)	23900		50	ug/g	18-OCT-21	19-OCT-21	R5624603
Lead (Pb)	123		0.50	ug/g	18-OCT-21	19-OCT-21	R5624603
Lithium (Li)	13.7		2.0	ug/g	18-OCT-21	19-OCT-21	R5624603
Magnesium (Mg)	12600		20	ug/g	18-OCT-21	19-OCT-21	R5624603
Manganese (Mn)	591		1.0	ug/g	18-OCT-21	19-OCT-21	R5624603
Mercury (Hg)	0.348		0.0050	ug/g	18-OCT-21	19-OCT-21	R5624427
Molybdenum (Mo)	0.99		0.10	ug/g	18-OCT-21	19-OCT-21	R5624603
Nickel (Ni)	24.2		0.50	ug/g	18-OCT-21	19-OCT-21	R5624603
Phosphorus (P)	927		50	ug/g	18-OCT-21	19-OCT-21	R5624603
Potassium (K)	3510		100	ug/g	18-OCT-21	19-OCT-21	R5624603
Selenium (Se)	0.94		0.20	ug/g	18-OCT-21	19-OCT-21	R5624603
Silver (Ag)	0.47		0.10	ug/g	18-OCT-21	19-OCT-21	R5624603
Sodium (Na)	617		50	ug/g	18-OCT-21	19-OCT-21	R5624603
Strontium (Sr)	582		0.50	ug/g	18-OCT-21	19-OCT-21	R5624603
Sulfur (S)	6800		1000	ug/g	18-OCT-21	19-OCT-21	R5624603
Thallium (Tl)	0.241		0.050	ug/g	18-OCT-21	19-OCT-21	R5624603
Tin (Sn)	5.2		2.0	ug/g	18-OCT-21	19-OCT-21	R5624603
Titanium (Ti)	923		1.0	ug/g	18-OCT-21	19-OCT-21	R5624603
Tungsten (W)	<0.50		0.50	ug/g	18-OCT-21	19-OCT-21	R5624603
Uranium (U)	0.630		0.050	ug/g	18-OCT-21	19-OCT-21	R5624603
Vanadium (V)	41.1		0.20	ug/g	18-OCT-21	19-OCT-21	R5624603
Zinc (Zn)	164		2.0	ug/g	18-OCT-21	19-OCT-21	R5624603
Zirconium (Zr)	2.7		1.0	ug/g	18-OCT-21	19-OCT-21	R5624603
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.074		0.015	ug/g	19-OCT-21	20-OCT-21	R5625547
Acenaphthylene	0.303		0.015	ug/g	19-OCT-21	20-OCT-21	R5625547
Acridine	<0.06	DLM	0.060	ug/g	19-OCT-21	20-OCT-21	R5625547
Anthracene	0.150		0.012	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(a)anthracene	0.447	R	0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(a)pyrene	0.691		0.015	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(b&j)fluoranthene	0.832		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(g,h,i)perylene	0.487		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(k)fluoranthene	0.280		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Chrysene	0.593		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Dibenz(a,h)anthracene	0.120		0.015	ug/g	19-OCT-21	20-OCT-21	R5625547
Fluoroanthene	0.683		0.015	ug/g	19-OCT-21	20-OCT-21	R5625547

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650174-22 TCOM-SC-006BX Sampled By: CLIENT on 06-OCT-21 @ 13:38 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
Fluorene	0.082	R	0.015	ug/g	19-OCT-21	20-OCT-21	R5625547
Indeno(1,2,3-cd)pyrene	0.481		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
1-Methylnaphthalene	0.027		0.015	ug/g	19-OCT-21	20-OCT-21	R5625547
2-Methylnaphthalene	0.038		0.015	ug/g	19-OCT-21	20-OCT-21	R5625547
Naphthalene	0.040		0.015	ug/g	19-OCT-21	20-OCT-21	R5625547
Phenanthrene	0.298		0.015	ug/g	19-OCT-21	20-OCT-21	R5625547
Pyrene	0.875		0.015	ug/g	19-OCT-21	20-OCT-21	R5625547
Quinoline	<0.015	DLHM	0.015	ug/g	19-OCT-21	20-OCT-21	R5625547
Surrogate: 2-Fluorobiphenyl	93.2		60-140	%	19-OCT-21	20-OCT-21	R5625547
Surrogate: d14-Terphenyl	89.5		60-140	%	19-OCT-21	20-OCT-21	R5625547
B(a)P Total Potency Equivalent	1.03		0.021	ug/g	19-OCT-21	20-OCT-21	R5625547
IACR (CCME)	11.2		0.30		19-OCT-21	20-OCT-21	R5625547
Polychlorinated Biphenyls							
Aroclor 1016	<0.0090	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1221	<0.0090	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1232	<0.0090	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1242	<0.0093	DLM	0.0093	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1248	<0.0090	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1254	0.179	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1260	0.320	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1262	<0.0090	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1268	<0.0090	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Total Polychlorinated Biphenyls	0.499		0.027	mg/kg	21-OCT-21	21-OCT-21	R5625841
Surrogate: d14-Terphenyl	100.9		50-140	%	21-OCT-21	21-OCT-21	R5625841
L2650174-23 TCOM-SC-006CX Sampled By: CLIENT on 06-OCT-21 @ 13:38 Matrix: SEDIMENT							
Physical Tests							
% Moisture	74.5		0.25	%	14-OCT-21	15-OCT-21	R5617857
Metals							
Aluminum (Al)	20800		50	ug/g	18-OCT-21	19-OCT-21	R5624603
Antimony (Sb)	1.42		0.10	ug/g	18-OCT-21	19-OCT-21	R5624603
Arsenic (As)	15.8		0.10	ug/g	18-OCT-21	19-OCT-21	R5624603
Barium (Ba)	293		0.50	ug/g	18-OCT-21	19-OCT-21	R5624603
Beryllium (Be)	0.81		0.10	ug/g	18-OCT-21	19-OCT-21	R5624603
Bismuth (Bi)	0.49		0.20	ug/g	18-OCT-21	19-OCT-21	R5624603
Boron (B)	11.3		5.0	ug/g	18-OCT-21	19-OCT-21	R5624603
Cadmium (Cd)	1.01		0.020	ug/g	18-OCT-21	19-OCT-21	R5624603
Calcium (Ca)	61700		50	ug/g	18-OCT-21	19-OCT-21	R5624603
Chromium (Cr)	1540		0.50	ug/g	18-OCT-21	19-OCT-21	R5624603
Cobalt (Co)	18.4		0.10	ug/g	18-OCT-21	19-OCT-21	R5624603
Copper (Cu)	52.0		0.50	ug/g	18-OCT-21	19-OCT-21	R5624603

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650174-23 TCOM-SC-006CX Sampled By: CLIENT on 06-OCT-21 @ 13:38 Matrix: SEDIMENT							
Metals							
Iron (Fe)	32200		50	ug/g	18-OCT-21	19-OCT-21	R5624603
Lead (Pb)	179		0.50	ug/g	18-OCT-21	19-OCT-21	R5624603
Lithium (Li)	19.3		2.0	ug/g	18-OCT-21	19-OCT-21	R5624603
Magnesium (Mg)	16800		20	ug/g	18-OCT-21	19-OCT-21	R5624603
Manganese (Mn)	729		1.0	ug/g	18-OCT-21	19-OCT-21	R5624603
Mercury (Hg)	0.497		0.0050	ug/g	18-OCT-21	19-OCT-21	R5624427
Molybdenum (Mo)	1.23		0.10	ug/g	18-OCT-21	19-OCT-21	R5624603
Nickel (Ni)	34.4		0.50	ug/g	18-OCT-21	19-OCT-21	R5624603
Phosphorus (P)	1370		50	ug/g	18-OCT-21	19-OCT-21	R5624603
Potassium (K)	4830		100	ug/g	18-OCT-21	19-OCT-21	R5624603
Selenium (Se)	1.18		0.20	ug/g	18-OCT-21	19-OCT-21	R5624603
Silver (Ag)	0.72		0.10	ug/g	18-OCT-21	19-OCT-21	R5624603
Sodium (Na)	740		50	ug/g	18-OCT-21	19-OCT-21	R5624603
Strontium (Sr)	410		0.50	ug/g	18-OCT-21	19-OCT-21	R5624603
Sulfur (S)	7000		1000	ug/g	18-OCT-21	19-OCT-21	R5624603
Thallium (Tl)	0.327		0.050	ug/g	18-OCT-21	19-OCT-21	R5624603
Tin (Sn)	7.6		2.0	ug/g	18-OCT-21	19-OCT-21	R5624603
Titanium (Ti)	1330		1.0	ug/g	18-OCT-21	19-OCT-21	R5624603
Tungsten (W)	<0.50		0.50	ug/g	18-OCT-21	19-OCT-21	R5624603
Uranium (U)	0.801		0.050	ug/g	18-OCT-21	19-OCT-21	R5624603
Vanadium (V)	58.1		0.20	ug/g	18-OCT-21	19-OCT-21	R5624603
Zinc (Zn)	220		2.0	ug/g	18-OCT-21	19-OCT-21	R5624603
Zirconium (Zr)	6.5		1.0	ug/g	18-OCT-21	19-OCT-21	R5624603
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.081		0.015	ug/g	19-OCT-21	20-OCT-21	R5625547
Acenaphthylene	0.505		0.015	ug/g	19-OCT-21	20-OCT-21	R5625547
Acridine	0.043	AI	0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Anthracene	0.218		0.012	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(a)anthracene	0.600	R	0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(a)pyrene	0.958		0.015	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(b&j)fluoranthene	0.997		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(g,h,i)perylene	0.580		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(k)fluoranthene	0.330		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Chrysene	0.718		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Dibenz(a,h)anthracene	0.150		0.015	ug/g	19-OCT-21	20-OCT-21	R5625547
Fluoroanthene	0.728		0.015	ug/g	19-OCT-21	20-OCT-21	R5625547
Fluorene	0.100	R	0.015	ug/g	19-OCT-21	20-OCT-21	R5625547
Indeno(1,2,3-cd)pyrene	0.570		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
1-Methylnaphthalene	0.034		0.015	ug/g	19-OCT-21	20-OCT-21	R5625547
2-Methylnaphthalene	0.052		0.015	ug/g	19-OCT-21	20-OCT-21	R5625547
Naphthalene	0.045		0.015	ug/g	19-OCT-21	20-OCT-21	R5625547

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650174-23 TCOM-SC-006CX Sampled By: CLIENT on 06-OCT-21 @ 13:38 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
Phenanthrene	0.315		0.015	ug/g	19-OCT-21	20-OCT-21	R5625547
Pyrene	1.08		0.015	ug/g	19-OCT-21	20-OCT-21	R5625547
Quinoline	<0.015	DLHM	0.015	ug/g	19-OCT-21	20-OCT-21	R5625547
Surrogate: 2-Fluorobiphenyl	91.4		60-140	%	19-OCT-21	20-OCT-21	R5625547
Surrogate: d14-Terphenyl	88.2		60-140	%	19-OCT-21	20-OCT-21	R5625547
B(a)P Total Potency Equivalent	1.37		0.021	ug/g	19-OCT-21	20-OCT-21	R5625547
IACR (CCME)	14.0		0.30		19-OCT-21	20-OCT-21	R5625547
Polychlorinated Biphenyls							
Aroclor 1016	<0.0090	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1221	<0.0090	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1232	<0.0090	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1242	<0.0150	DLM	0.015	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1248	<0.0090	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1254	0.203	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1260	0.374	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1262	<0.0090	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1268	<0.0090	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Total Polychlorinated Biphenyls	0.577		0.027	mg/kg	21-OCT-21	21-OCT-21	R5625841
Surrogate: d14-Terphenyl	98.3		50-140	%	21-OCT-21	21-OCT-21	R5625841
L2650174-24 TCOM-SC-006DX Sampled By: CLIENT on 06-OCT-21 @ 13:38 Matrix: SEDIMENT							
Physical Tests							
% Moisture	71.9		0.25	%	14-OCT-21	15-OCT-21	R5617857
Metals							
Aluminum (Al)	24100		50	ug/g	18-OCT-21	19-OCT-21	R5624603
Antimony (Sb)	1.80		0.10	ug/g	18-OCT-21	19-OCT-21	R5624603
Arsenic (As)	19.6		0.10	ug/g	18-OCT-21	19-OCT-21	R5624603
Barium (Ba)	333		0.50	ug/g	18-OCT-21	19-OCT-21	R5624603
Beryllium (Be)	0.80		0.10	ug/g	18-OCT-21	19-OCT-21	R5624603
Bismuth (Bi)	0.54		0.20	ug/g	18-OCT-21	19-OCT-21	R5624603
Boron (B)	10.6		5.0	ug/g	18-OCT-21	19-OCT-21	R5624603
Cadmium (Cd)	1.20		0.020	ug/g	18-OCT-21	19-OCT-21	R5624603
Calcium (Ca)	43300		50	ug/g	18-OCT-21	19-OCT-21	R5624603
Chromium (Cr)	2510		0.50	ug/g	18-OCT-21	19-OCT-21	R5624603
Cobalt (Co)	23.0		0.10	ug/g	18-OCT-21	19-OCT-21	R5624603
Copper (Cu)	57.9		0.50	ug/g	18-OCT-21	19-OCT-21	R5624603
Iron (Fe)	31200		50	ug/g	18-OCT-21	19-OCT-21	R5624603
Lead (Pb)	224		0.50	ug/g	18-OCT-21	19-OCT-21	R5624603
Lithium (Li)	19.5		2.0	ug/g	18-OCT-21	19-OCT-21	R5624603
Magnesium (Mg)	18700		20	ug/g	18-OCT-21	19-OCT-21	R5624603
Manganese (Mn)	799		1.0	ug/g	18-OCT-21	19-OCT-21	R5624603

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650174-24 TCOM-SC-006DX Sampled By: CLIENT on 06-OCT-21 @ 13:38 Matrix: SEDIMENT							
Metals							
Mercury (Hg)	0.617		0.0050	ug/g	18-OCT-21	19-OCT-21	R5624427
Molybdenum (Mo)	1.19		0.10	ug/g	18-OCT-21	19-OCT-21	R5624603
Nickel (Ni)	39.7		0.50	ug/g	18-OCT-21	19-OCT-21	R5624603
Phosphorus (P)	1430		50	ug/g	18-OCT-21	19-OCT-21	R5624603
Potassium (K)	5690		100	ug/g	18-OCT-21	19-OCT-21	R5624603
Selenium (Se)	0.97		0.20	ug/g	18-OCT-21	19-OCT-21	R5624603
Silver (Ag)	0.72		0.10	ug/g	18-OCT-21	19-OCT-21	R5624603
Sodium (Na)	836		50	ug/g	18-OCT-21	19-OCT-21	R5624603
Strontium (Sr)	286		0.50	ug/g	18-OCT-21	19-OCT-21	R5624603
Sulfur (S)	6100		1000	ug/g	18-OCT-21	19-OCT-21	R5624603
Thallium (Tl)	0.354		0.050	ug/g	18-OCT-21	19-OCT-21	R5624603
Tin (Sn)	8.7		2.0	ug/g	18-OCT-21	19-OCT-21	R5624603
Titanium (Ti)	1590		1.0	ug/g	18-OCT-21	19-OCT-21	R5624603
Tungsten (W)	<0.50		0.50	ug/g	18-OCT-21	19-OCT-21	R5624603
Uranium (U)	0.774		0.050	ug/g	18-OCT-21	19-OCT-21	R5624603
Vanadium (V)	66.9		0.20	ug/g	18-OCT-21	19-OCT-21	R5624603
Zinc (Zn)	257		2.0	ug/g	18-OCT-21	19-OCT-21	R5624603
Zirconium (Zr)	7.6		1.0	ug/g	18-OCT-21	19-OCT-21	R5624603
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.099		0.015	ug/g	19-OCT-21	20-OCT-21	R5625547
Acenaphthylene	0.894		0.015	ug/g	19-OCT-21	20-OCT-21	R5625547
Acridine	0.072	AI	0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Anthracene	0.313		0.012	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(a)anthracene	1.24	R	0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(a)pyrene	1.77		0.015	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(b&j)fluoranthene	1.66		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(g,h,i)perylene	0.898		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(k)fluoranthene	0.539		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Chrysene	1.28		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Dibenz(a,h)anthracene	0.227		0.015	ug/g	19-OCT-21	20-OCT-21	R5625547
Fluoroanthene	1.21		0.015	ug/g	19-OCT-21	20-OCT-21	R5625547
Fluorene	0.149	R	0.015	ug/g	19-OCT-21	20-OCT-21	R5625547
Indeno(1,2,3-cd)pyrene	0.846		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
1-Methylnaphthalene	0.050		0.015	ug/g	19-OCT-21	20-OCT-21	R5625547
2-Methylnaphthalene	0.073		0.015	ug/g	19-OCT-21	20-OCT-21	R5625547
Naphthalene	0.065		0.015	ug/g	19-OCT-21	20-OCT-21	R5625547
Phenanthrene	0.478		0.015	ug/g	19-OCT-21	20-OCT-21	R5625547
Pyrene	2.00		0.015	ug/g	19-OCT-21	20-OCT-21	R5625547
Quinoline	<0.015	DLHM	0.015	ug/g	19-OCT-21	20-OCT-21	R5625547
Surrogate: 2-Fluorobiphenyl	86.6		60-140	%	19-OCT-21	20-OCT-21	R5625547
Surrogate: d14-Terphenyl	84.8		60-140	%	19-OCT-21	20-OCT-21	R5625547

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650174-24 TCOM-SC-006DX Sampled By: CLIENT on 06-OCT-21 @ 13:38 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
B(a)P Total Potency Equivalent	2.44		0.021	ug/g	19-OCT-21	20-OCT-21	R5625547
IACR (CCME)	24.3		0.30		19-OCT-21	20-OCT-21	R5625547
Polychlorinated Biphenyls							
Aroclor 1016	<0.0090	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1221	<0.0090	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1232	<0.0090	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1242	<0.0220	DLM	0.022	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1248	<0.0090	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1254	0.265	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1260	0.493	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1262	<0.0090	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1268	<0.0090	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Total Polychlorinated Biphenyls	0.758		0.027	mg/kg	21-OCT-21	21-OCT-21	R5625841
Surrogate: d14-Terphenyl	97.1		50-140	%	21-OCT-21	21-OCT-21	R5625841
L2650174-25 TCOM-SC-006EX Sampled By: CLIENT on 06-OCT-21 @ 13:38 Matrix: SEDIMENT							
Physical Tests							
% Moisture	71.3		0.25	%	14-OCT-21	15-OCT-21	R5617916
Metals							
Aluminum (Al)	19900		50	ug/g	18-OCT-21	19-OCT-21	R5624603
Antimony (Sb)	2.22		0.10	ug/g	18-OCT-21	19-OCT-21	R5624603
Arsenic (As)	23.0		0.10	ug/g	18-OCT-21	19-OCT-21	R5624603
Barium (Ba)	286		0.50	ug/g	18-OCT-21	19-OCT-21	R5624603
Beryllium (Be)	0.79		0.10	ug/g	18-OCT-21	19-OCT-21	R5624603
Bismuth (Bi)	0.66		0.20	ug/g	18-OCT-21	19-OCT-21	R5624603
Boron (B)	11.4		5.0	ug/g	18-OCT-21	19-OCT-21	R5624603
Cadmium (Cd)	1.44		0.020	ug/g	18-OCT-21	19-OCT-21	R5624603
Calcium (Ca)	35700		50	ug/g	18-OCT-21	19-OCT-21	R5624603
Chromium (Cr)	2650		0.50	ug/g	18-OCT-21	19-OCT-21	R5624603
Cobalt (Co)	24.3		0.10	ug/g	18-OCT-21	19-OCT-21	R5624603
Copper (Cu)	50.1		0.50	ug/g	18-OCT-21	19-OCT-21	R5624603
Iron (Fe)	31100		50	ug/g	18-OCT-21	19-OCT-21	R5624603
Lead (Pb)	249		0.50	ug/g	18-OCT-21	19-OCT-21	R5624603
Lithium (Li)	17.8		2.0	ug/g	18-OCT-21	19-OCT-21	R5624603
Magnesium (Mg)	15000		20	ug/g	18-OCT-21	19-OCT-21	R5624603
Manganese (Mn)	660		1.0	ug/g	18-OCT-21	19-OCT-21	R5624603
Mercury (Hg)	0.820		0.0050	ug/g	18-OCT-21	19-OCT-21	R5624427
Molybdenum (Mo)	1.25		0.10	ug/g	18-OCT-21	19-OCT-21	R5624603
Nickel (Ni)	35.8		0.50	ug/g	18-OCT-21	19-OCT-21	R5624603
Phosphorus (P)	1260		50	ug/g	18-OCT-21	19-OCT-21	R5624603
Potassium (K)	4890		100	ug/g	18-OCT-21	19-OCT-21	R5624603

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650174-25 TCOM-SC-006EX Sampled By: CLIENT on 06-OCT-21 @ 13:38 Matrix: SEDIMENT							
Metals							
Selenium (Se)	1.02		0.20	ug/g	18-OCT-21	19-OCT-21	R5624603
Silver (Ag)	0.82		0.10	ug/g	18-OCT-21	19-OCT-21	R5624603
Sodium (Na)	689		50	ug/g	18-OCT-21	19-OCT-21	R5624603
Strontium (Sr)	232		0.50	ug/g	18-OCT-21	19-OCT-21	R5624603
Sulfur (S)	6300		1000	ug/g	18-OCT-21	19-OCT-21	R5624603
Thallium (Tl)	0.386		0.050	ug/g	18-OCT-21	19-OCT-21	R5624603
Tin (Sn)	10.6		2.0	ug/g	18-OCT-21	19-OCT-21	R5624603
Titanium (Ti)	1350		1.0	ug/g	18-OCT-21	19-OCT-21	R5624603
Tungsten (W)	<0.50		0.50	ug/g	18-OCT-21	19-OCT-21	R5624603
Uranium (U)	0.771		0.050	ug/g	18-OCT-21	19-OCT-21	R5624603
Vanadium (V)	56.2		0.20	ug/g	18-OCT-21	19-OCT-21	R5624603
Zinc (Zn)	235		2.0	ug/g	18-OCT-21	19-OCT-21	R5624603
Zirconium (Zr)	8.0		1.0	ug/g	18-OCT-21	19-OCT-21	R5624603
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.086		0.015	ug/g	19-OCT-21	20-OCT-21	R5625547
Acenaphthylene	0.678		0.015	ug/g	19-OCT-21	20-OCT-21	R5625547
Acridine	0.062	AI	0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Anthracene	0.269		0.012	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(a)anthracene	0.868	R	0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(a)pyrene	1.28		0.015	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(b&j)fluoranthene	1.04		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(g,h,i)perylene	0.702		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(k)fluoranthene	0.532		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Chrysene	0.992		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Dibenz(a,h)anthracene	0.172		0.015	ug/g	19-OCT-21	20-OCT-21	R5625547
Fluoroanthene	1.08		0.015	ug/g	19-OCT-21	20-OCT-21	R5625547
Fluorene	0.114	R	0.015	ug/g	19-OCT-21	20-OCT-21	R5625547
Indeno(1,2,3-cd)pyrene	0.674		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
1-Methylnaphthalene	0.038		0.015	ug/g	19-OCT-21	20-OCT-21	R5625547
2-Methylnaphthalene	0.042		0.015	ug/g	19-OCT-21	20-OCT-21	R5625547
Naphthalene	0.039		0.015	ug/g	19-OCT-21	20-OCT-21	R5625547
Phenanthrene	0.441		0.015	ug/g	19-OCT-21	20-OCT-21	R5625547
Pyrene	1.70		0.015	ug/g	19-OCT-21	20-OCT-21	R5625547
Quinoline	<0.015	DLHM	0.015	ug/g	19-OCT-21	20-OCT-21	R5625547
Surrogate: 2-Fluorobiphenyl	83.5		60-140	%	19-OCT-21	20-OCT-21	R5625547
Surrogate: d14-Terphenyl	68.9		60-140	%	19-OCT-21	20-OCT-21	R5625547
B(a)P Total Potency Equivalent	1.79		0.021	ug/g	19-OCT-21	20-OCT-21	R5625547
IACR (CCME)	17.5		0.30		19-OCT-21	20-OCT-21	R5625547
Polychlorinated Biphenyls							
Aroclor 1016	<0.0090	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1221	<0.0090	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650174-25 TCOM-SC-006EX Sampled By: CLIENT on 06-OCT-21 @ 13:38 Matrix: SEDIMENT							
Polychlorinated Biphenyls							
Aroclor 1232	<0.0090	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1242	<0.0250	DLM	0.025	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1248	<0.0090	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1254	0.295	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1260	0.565	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1262	<0.0090	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1268	<0.0090	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Total Polychlorinated Biphenyls	0.86		0.027	mg/kg	21-OCT-21	21-OCT-21	R5625841
Surrogate: d14-Terphenyl	97.1		50-140	%	21-OCT-21	21-OCT-21	R5625841
L2650174-26 TCOM-SC-006FX Sampled By: CLIENT on 06-OCT-21 @ 13:38 Matrix: SEDIMENT							
Physical Tests							
% Moisture	71.3		0.25	%	14-OCT-21	15-OCT-21	R5617916
Metals							
Aluminum (Al)	22000		50	ug/g	18-OCT-21	19-OCT-21	R5624603
Antimony (Sb)	2.90		0.10	ug/g	18-OCT-21	19-OCT-21	R5624603
Arsenic (As)	42.9		0.10	ug/g	18-OCT-21	19-OCT-21	R5624603
Barium (Ba)	289		0.50	ug/g	18-OCT-21	19-OCT-21	R5624603
Beryllium (Be)	0.86		0.10	ug/g	18-OCT-21	19-OCT-21	R5624603
Bismuth (Bi)	0.71		0.20	ug/g	18-OCT-21	19-OCT-21	R5624603
Boron (B)	10.7		5.0	ug/g	18-OCT-21	19-OCT-21	R5624603
Cadmium (Cd)	1.02		0.020	ug/g	18-OCT-21	19-OCT-21	R5624603
Calcium (Ca)	44800		50	ug/g	18-OCT-21	19-OCT-21	R5624603
Chromium (Cr)	2290		0.50	ug/g	18-OCT-21	19-OCT-21	R5624603
Cobalt (Co)	38.1		0.10	ug/g	18-OCT-21	19-OCT-21	R5624603
Copper (Cu)	48.5		0.50	ug/g	18-OCT-21	19-OCT-21	R5624603
Iron (Fe)	33000		50	ug/g	18-OCT-21	19-OCT-21	R5624603
Lead (Pb)	246		0.50	ug/g	18-OCT-21	19-OCT-21	R5624603
Lithium (Li)	19.8		2.0	ug/g	18-OCT-21	19-OCT-21	R5624603
Magnesium (Mg)	15900		20	ug/g	18-OCT-21	19-OCT-21	R5624603
Manganese (Mn)	691		1.0	ug/g	18-OCT-21	19-OCT-21	R5624603
Mercury (Hg)	1.63	DLHC	0.050	ug/g	18-OCT-21	19-OCT-21	R5624427
Molybdenum (Mo)	1.16		0.10	ug/g	18-OCT-21	19-OCT-21	R5624603
Nickel (Ni)	42.3		0.50	ug/g	18-OCT-21	19-OCT-21	R5624603
Phosphorus (P)	1380		50	ug/g	18-OCT-21	19-OCT-21	R5624603
Potassium (K)	4750		100	ug/g	18-OCT-21	19-OCT-21	R5624603
Selenium (Se)	1.00		0.20	ug/g	18-OCT-21	19-OCT-21	R5624603
Silver (Ag)	0.84		0.10	ug/g	18-OCT-21	19-OCT-21	R5624603
Sodium (Na)	697		50	ug/g	18-OCT-21	19-OCT-21	R5624603
Strontium (Sr)	273		0.50	ug/g	18-OCT-21	19-OCT-21	R5624603
Sulfur (S)	7100		1000	ug/g	18-OCT-21	19-OCT-21	R5624603

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650174-26 TCOM-SC-006FX Sampled By: CLIENT on 06-OCT-21 @ 13:38 Matrix: SEDIMENT							
Metals							
Thallium (Tl)	0.389		0.050	ug/g	18-OCT-21	19-OCT-21	R5624603
Tin (Sn)	9.3		2.0	ug/g	18-OCT-21	19-OCT-21	R5624603
Titanium (Ti)	1410		1.0	ug/g	18-OCT-21	19-OCT-21	R5624603
Tungsten (W)	<0.50		0.50	ug/g	18-OCT-21	19-OCT-21	R5624603
Uranium (U)	0.800		0.050	ug/g	18-OCT-21	19-OCT-21	R5624603
Vanadium (V)	57.7		0.20	ug/g	18-OCT-21	19-OCT-21	R5624603
Zinc (Zn)	223		2.0	ug/g	18-OCT-21	19-OCT-21	R5624603
Zirconium (Zr)	7.9		1.0	ug/g	18-OCT-21	19-OCT-21	R5624603
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.081		0.015	ug/g	19-OCT-21	20-OCT-21	R5625547
Acenaphthylene	0.655		0.015	ug/g	19-OCT-21	20-OCT-21	R5625547
Acridine	0.085	AI	0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Anthracene	0.306		0.012	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(a)anthracene	0.941	R	0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(a)pyrene	1.26		0.015	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(b&j)fluoranthene	1.32		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(g,h,i)perylene	0.701		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(k)fluoranthene	0.452		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Chrysene	1.05		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Dibenz(a,h)anthracene	0.177		0.015	ug/g	19-OCT-21	20-OCT-21	R5625547
Fluoroanthene	1.19		0.015	ug/g	19-OCT-21	20-OCT-21	R5625547
Fluorene	0.132	R	0.015	ug/g	19-OCT-21	20-OCT-21	R5625547
Indeno(1,2,3-cd)pyrene	0.672		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
1-Methylnaphthalene	0.045		0.015	ug/g	19-OCT-21	20-OCT-21	R5625547
2-Methylnaphthalene	0.071		0.015	ug/g	19-OCT-21	20-OCT-21	R5625547
Naphthalene	0.089		0.015	ug/g	19-OCT-21	20-OCT-21	R5625547
Phenanthrene	0.553		0.015	ug/g	19-OCT-21	20-OCT-21	R5625547
Pyrene	1.85		0.015	ug/g	19-OCT-21	20-OCT-21	R5625547
Quinoline	<0.015	DLHM	0.015	ug/g	19-OCT-21	20-OCT-21	R5625547
Surrogate: 2-Fluorobiphenyl	87.8		60-140	%	19-OCT-21	20-OCT-21	R5625547
Surrogate: d14-Terphenyl	86.2		60-140	%	19-OCT-21	20-OCT-21	R5625547
B(a)P Total Potency Equivalent	1.80		0.021	ug/g	19-OCT-21	20-OCT-21	R5625547
IACR (CCME)	19.0		0.30		19-OCT-21	20-OCT-21	R5625547
Polychlorinated Biphenyls							
Aroclor 1016	<0.0090	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1221	<0.0090	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1232	<0.0090	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1242	<0.0250	DLM	0.025	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1248	<0.0090	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1254	0.285	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1260	0.504	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650174-26 TCOM-SC-006FX Sampled By: CLIENT on 06-OCT-21 @ 13:38 Matrix: SEDIMENT							
Polychlorinated Biphenyls							
Aroclor 1262	<0.0090	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1268	<0.0090	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Total Polychlorinated Biphenyls	0.789		0.027	mg/kg	21-OCT-21	21-OCT-21	R5625841
Surrogate: d14-Terphenyl	97.2		50-140	%	21-OCT-21	21-OCT-21	R5625841
L2650174-27 TCOM-SC-006GX Sampled By: CLIENT on 06-OCT-21 @ 13:38 Matrix: SEDIMENT							
Physical Tests							
% Moisture	66.0		0.25	%	14-OCT-21	15-OCT-21	R5617916
Metals							
Aluminum (Al)	23700		50	ug/g	18-OCT-21	19-OCT-21	R5624603
Antimony (Sb)	1.04		0.10	ug/g	18-OCT-21	19-OCT-21	R5624603
Arsenic (As)	16.1		0.10	ug/g	18-OCT-21	19-OCT-21	R5624603
Barium (Ba)	296		0.50	ug/g	18-OCT-21	19-OCT-21	R5624603
Beryllium (Be)	0.86		0.10	ug/g	18-OCT-21	19-OCT-21	R5624603
Bismuth (Bi)	0.29		0.20	ug/g	18-OCT-21	19-OCT-21	R5624603
Boron (B)	10.4		5.0	ug/g	18-OCT-21	19-OCT-21	R5624603
Cadmium (Cd)	0.436		0.020	ug/g	18-OCT-21	19-OCT-21	R5624603
Calcium (Ca)	47000		50	ug/g	18-OCT-21	19-OCT-21	R5624603
Chromium (Cr)	809		0.50	ug/g	18-OCT-21	19-OCT-21	R5624603
Cobalt (Co)	20.7		0.10	ug/g	18-OCT-21	19-OCT-21	R5624603
Copper (Cu)	34.7		0.50	ug/g	18-OCT-21	19-OCT-21	R5624603
Iron (Fe)	31300		50	ug/g	18-OCT-21	19-OCT-21	R5624603
Lead (Pb)	106		0.50	ug/g	18-OCT-21	19-OCT-21	R5624603
Lithium (Li)	21.0		2.0	ug/g	18-OCT-21	19-OCT-21	R5624603
Magnesium (Mg)	16000		20	ug/g	18-OCT-21	19-OCT-21	R5624603
Manganese (Mn)	662		1.0	ug/g	18-OCT-21	19-OCT-21	R5624603
Mercury (Hg)	0.480		0.0050	ug/g	18-OCT-21	19-OCT-21	R5624427
Molybdenum (Mo)	0.86		0.10	ug/g	18-OCT-21	19-OCT-21	R5624603
Nickel (Ni)	33.1		0.50	ug/g	18-OCT-21	19-OCT-21	R5624603
Phosphorus (P)	1120		50	ug/g	18-OCT-21	19-OCT-21	R5624603
Potassium (K)	5520		100	ug/g	18-OCT-21	19-OCT-21	R5624603
Selenium (Se)	0.47		0.20	ug/g	18-OCT-21	19-OCT-21	R5624603
Silver (Ag)	0.34		0.10	ug/g	18-OCT-21	19-OCT-21	R5624603
Sodium (Na)	731		50	ug/g	18-OCT-21	19-OCT-21	R5624603
Strontium (Sr)	239		0.50	ug/g	18-OCT-21	19-OCT-21	R5624603
Sulfur (S)	4400		1000	ug/g	18-OCT-21	19-OCT-21	R5624603
Thallium (Tl)	0.327		0.050	ug/g	18-OCT-21	19-OCT-21	R5624603
Tin (Sn)	4.8		2.0	ug/g	18-OCT-21	19-OCT-21	R5624603
Titanium (Ti)	1530		1.0	ug/g	18-OCT-21	19-OCT-21	R5624603
Tungsten (W)	<0.50		0.50	ug/g	18-OCT-21	19-OCT-21	R5624603
Uranium (U)	0.715		0.050	ug/g	18-OCT-21	19-OCT-21	R5624603

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650174-27 TCOM-SC-006GX Sampled By: CLIENT on 06-OCT-21 @ 13:38 Matrix: SEDIMENT							
Metals							
Vanadium (V)	57.6		0.20	ug/g	18-OCT-21	19-OCT-21	R5624603
Zinc (Zn)	135		2.0	ug/g	18-OCT-21	19-OCT-21	R5624603
Zirconium (Zr)	8.2		1.0	ug/g	18-OCT-21	19-OCT-21	R5624603
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.028		0.010	ug/g	19-OCT-21	20-OCT-21	R5625547
Acenaphthylene	0.173		0.010	ug/g	19-OCT-21	20-OCT-21	R5625547
Acridine	0.036	AI	0.020	ug/g	19-OCT-21	20-OCT-21	R5625547
Anthracene	0.111		0.0080	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(a)anthracene	0.340	R	0.020	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(a)pyrene	0.427		0.010	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(b&j)fluoranthene	0.404		0.020	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(g,h,i)perylene	0.222		0.020	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(k)fluoranthene	0.205		0.020	ug/g	19-OCT-21	20-OCT-21	R5625547
Chrysene	0.392		0.020	ug/g	19-OCT-21	20-OCT-21	R5625547
Dibenz(a,h)anthracene	0.062	R	0.010	ug/g	19-OCT-21	20-OCT-21	R5625547
Fluoroanthene	0.504		0.010	ug/g	19-OCT-21	20-OCT-21	R5625547
Fluorene	0.044	R	0.010	ug/g	19-OCT-21	20-OCT-21	R5625547
Indeno(1,2,3-cd)pyrene	0.222		0.020	ug/g	19-OCT-21	20-OCT-21	R5625547
1-Methylnaphthalene	0.030		0.010	ug/g	19-OCT-21	20-OCT-21	R5625547
2-Methylnaphthalene	0.035		0.010	ug/g	19-OCT-21	20-OCT-21	R5625547
Naphthalene	0.039		0.010	ug/g	19-OCT-21	20-OCT-21	R5625547
Phenanthrene	0.230		0.010	ug/g	19-OCT-21	20-OCT-21	R5625547
Pyrene	0.693		0.010	ug/g	19-OCT-21	20-OCT-21	R5625547
Quinoline	<0.010	DLHM	0.010	ug/g	19-OCT-21	20-OCT-21	R5625547
Surrogate: 2-Fluorobiphenyl	89.6		60-140	%	19-OCT-21	20-OCT-21	R5625547
Surrogate: d14-Terphenyl	89.0		60-140	%	19-OCT-21	20-OCT-21	R5625547
B(a)P Total Potency Equivalent	0.612		0.020	ug/g	19-OCT-21	20-OCT-21	R5625547
IACR (CCME)	6.56		0.20		19-OCT-21	20-OCT-21	R5625547
Polychlorinated Biphenyls							
Aroclor 1016	<0.0060	DLHM	0.0060	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1221	<0.0060	DLHM	0.0060	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1232	<0.0060	DLHM	0.0060	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1242	<0.0110	DLM	0.011	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1248	<0.0060	DLHM	0.0060	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1254	0.0990	DLHM	0.0060	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1260	0.161	DLHM	0.0060	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1262	<0.0060	DLHM	0.0060	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1268	<0.0060	DLHM	0.0060	mg/kg	21-OCT-21	21-OCT-21	R5625841
Total Polychlorinated Biphenyls	0.26		0.018	mg/kg	21-OCT-21	21-OCT-21	R5625841
Surrogate: d14-Terphenyl	99.2		50-140	%	21-OCT-21	21-OCT-21	R5625841

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Reference Information

QC Samples with Qualifiers & Comments:

QC Type Description	Parameter	Qualifier	Applies to Sample Number(s)
Duplicate	Zinc (Zn)	DUP-H	L2650174-10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -20, -21, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Aroclor 1260	E	L2650174-3
Matrix Spike	Benzo(b&j)fluoranthene	K	L2650174-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -20, -4, -5, -6, -7, -8, -9
Matrix Spike	Benzo(g,h,i)perylene	K	L2650174-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -20, -4, -5, -6, -7, -8, -9
Matrix Spike	Dibenz(a,h)anthracene	K	L2650174-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -20, -4, -5, -6, -7, -8, -9
Matrix Spike	Indeno(1,2,3-cd)pyrene	K	L2650174-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -20, -4, -5, -6, -7, -8, -9
Matrix Spike	Benzo(g,h,i)perylene	MES	L2650174-21, -22, -23, -24, -25, -26, -27
Matrix Spike	Benzo(a)pyrene	MS-B	L2650174-21, -22, -23, -24, -25, -26, -27
Matrix Spike	Benzo(b&j)fluoranthene	MS-B	L2650174-21, -22, -23, -24, -25, -26, -27
Matrix Spike	Pyrene	MS-B	L2650174-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -20, -4, -5, -6, -7, -8, -9
Matrix Spike	Pyrene	MS-B	L2650174-21, -22, -23, -24, -25, -26, -27
Matrix Spike	Aroclor 1254	MS-B	L2650174-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -20, -4, -5, -6, -7, -8, -9
Matrix Spike	Aroclor 1254	MS-B	L2650174-21, -22, -23, -24, -25, -26, -27
Matrix Spike	Aroclor 1260	MS-B	L2650174-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -20, -4, -5, -6, -7, -8, -9
Matrix Spike	Aroclor 1260	MS-B	L2650174-21, -22, -23, -24, -25, -26, -27

Sample Parameter Qualifier key listed:

Qualifier	Description
AI	Analytical interferences may be present. Result may be biased high.
DLHC	Detection Limit Raised: Dilution required due to high concentration of test analyte(s).
DLHM	Detection Limit Adjusted: Sample has High Moisture Content
DLM	Detection Limit Adjusted due to sample matrix effects (e.g. chemical interference, colour, turbidity).
DLQ	Detection Limit raised due to co-eluting interference. GCMS qualifier ion ratio did not meet acceptance criteria.
DLR	Detection Limit Raised due to required dilution, limited sample amount, and/or high moisture content (soil samples)
DUP-H	Duplicate results outside ALS DQO, due to sample heterogeneity.
E	Matrix Spike recovery outside ALS DQO due to heterogeneous analyte background in sample.
K	Matrix Spike recovery outside ALS DQO due to sample matrix effects.
MES	Data Quality Objective was marginally exceeded (by < 10% absolute) for < 10% of analytes in a Multi-Element Scan / Multi-Parameter Scan (considered acceptable as per OMOE & CCME).
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
R	The ion abundance ratio(s) did not meet the acceptance criteria. Value is an estimated maximum.
RRR	Refer to Report Remarks for issues regarding this analysis

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
HG-200.2-CVAA-WT	Soil	Mercury in Soil by CVAAS	EPA 200.2/1631E (mod)

Soil samples are digested with nitric and hydrochloric acids, followed by analysis by CVAAS.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

MET-200.2-CCMS-WT	Soil	Metals in Soil by CRC ICPMS	EPA 200.2/6020B (mod)

Soil/sediment is dried, disaggregated, and sieved (2 mm). For tests intended to support Ontario regulations, the <2mm fraction is ground to pass through a 0.355 mm sieve. Strong Acid Leachable Metals in the <2mm fraction are solubilized by heated digestion with nitric and hydrochloric acids. Instrumental analysis is by Collision / Reaction Cell ICPMS.

Limitations: This method is intended to liberate environmentally available metals. Silicate minerals are not solubilized. Some metals may be only partially recovered (matrix dependent), including Al, Ba, Be, Cr, S, Sr, Ti, Tl, V, W, and Zr. Elemental Sulfur may be poorly recovered by this method. Volatile forms of sulfur (e.g. sulfide, H2S) may be excluded if lost during sampling, storage, or digestion.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011), unless a subset of the Analytical Test Group (ATG) has been requested (the Protocol states that all analytes in an ATG

Reference Information

must be reported).

MOISTURE-WT	Soil	% Moisture	CCME PHC in Soil - Tier 1 (mod)
PAH-CCME-SQGL-WT	Soil	PAHs in Sediment	SW846 8270

The procedure uses a mechanical shaking technique to extract a representative sub-sample with a mixture of methanol and toluene. The extract is analyzed by GC/MSD. Depending on the analytical GC/MS column used benzo(j)fluoranthene may chromatographically co-elute with benzo(b)fluoranthene or benzo(k)fluoranthene.

PCB9-LOW-WT	Soil	PCBs to meet CCME Sediment Criteria	SW846 8270

A representative sub-sample of a soil sample is mixed with methanol and extracted with toluene using a shaker technique. An aliquot of the separated toluene is analyzed by GC/MSD.

PSA-MUST-SK	Soil	% Particles > 75um (Coarse/Fine)	ASTM D6913

An air-dried sample is reduced to < 2 mm size and mixed with a dispersing agent (Calgon solution). The sample is washed through a 200 mesh (75 µm) sieve. The retained mass of sample is used to determine % sand fraction.

Reference: ASTM D422-63

TOC-WT	Soil	TOC & FOC in Solids	CARTER 21.3.2

Soil is treated with excess acidic dichromate, which reacts with the organic carbon, oxidizing it to CO2. The residual dichromate is titrated with ferrous ammonium sulphate and TOC calculated by difference.

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
SK	ALS ENVIRONMENTAL - SASKATOON, SASKATCHEWAN, CANADA
WT	ALS ENVIRONMENTAL - WATERLOO, ONTARIO, CANADA

Chain of Custody Numbers:

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.
mg/kg - milligrams per kilogram based on dry weight of sample
mg/kg wwt - milligrams per kilogram based on wet weight of sample
mg/kg lwt - milligrams per kilogram based on lipid weight of sample
mg/L - unit of concentration based on volume, parts per million.
< - Less than.
D.L. - The reporting limit.
N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.
UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.
Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
HG-200.2-CVAA-WT	**Soil**							
Batch R5624427								
WG3639906-2 CRM		**WT-SS-2**						
Mercury (Hg)			98.0		%		70-130	19-OCT-21
WG3639906-6 DUP		**WG3639906-5**						
Mercury (Hg)		0.480	0.398		ug/g	19	40	19-OCT-21
WG3639906-3 LCS								
Mercury (Hg)			107.0		%		80-120	19-OCT-21
WG3639906-1 MB								
Mercury (Hg)			<0.0050		mg/kg		0.005	19-OCT-21
Batch R5624985								
WG3640098-2 CRM		**WT-SS-2**						
Mercury (Hg)			111.4		%		70-130	20-OCT-21
WG3640098-6 DUP		**WG3640098-5**						
Mercury (Hg)		0.371	0.470		ug/g	23	40	20-OCT-21
WG3640098-4 LCS								
Mercury (Hg)			110.0		%		80-120	20-OCT-21
WG3640098-1 MB								
Mercury (Hg)			<0.0050		mg/kg		0.005	20-OCT-21
MET-200.2-CCMS-WT	**Soil**							
Batch R5624603								
WG3639906-2 CRM		**WT-SS-2**						
Aluminum (Al)			109.3		%		70-130	19-OCT-21
Antimony (Sb)			92.3		%		70-130	19-OCT-21
Arsenic (As)			108.6		%		70-130	19-OCT-21
Barium (Ba)			106.8		%		70-130	19-OCT-21
Beryllium (Be)			104.7		%		70-130	19-OCT-21
Bismuth (Bi)			0.14		mg/kg		0-0.34	19-OCT-21
Boron (B)			8.9		mg/kg		3.5-13.5	19-OCT-21
Cadmium (Cd)			103.1		%		70-130	19-OCT-21
Calcium (Ca)			103.6		%		70-130	19-OCT-21
Chromium (Cr)			98.9		%		70-130	19-OCT-21
Cobalt (Co)			101.7		%		70-130	19-OCT-21
Copper (Cu)			102.4		%		70-130	19-OCT-21
Iron (Fe)			102.8		%		70-130	19-OCT-21
Lead (Pb)			103.2		%		70-130	19-OCT-21
Lithium (Li)			101.7		%		70-130	19-OCT-21
Magnesium (Mg)			108.8		%		70-130	19-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5624603								
WG3639906-2 CRM		**WT-SS-2**						
Manganese (Mn)			106.7		%		70-130	19-OCT-21
Molybdenum (Mo)			102.4		%		70-130	19-OCT-21
Nickel (Ni)			104.8		%		70-130	19-OCT-21
Phosphorus (P)			101.0		%		70-130	19-OCT-21
Potassium (K)			103.5		%		70-130	19-OCT-21
Selenium (Se)			0.12		mg/kg		0-0.34	19-OCT-21
Silver (Ag)			86.5		%		70-130	19-OCT-21
Sodium (Na)			111.4		%		70-130	19-OCT-21
Strontium (Sr)			101.6		%		70-130	19-OCT-21
Thallium (Tl)			0.076		mg/kg		0.029-0.129	19-OCT-21
Tin (Sn)			97.7		%		70-130	19-OCT-21
Titanium (Ti)			98.8		%		70-130	19-OCT-21
Uranium (U)			93.6		%		70-130	19-OCT-21
Vanadium (V)			100.7		%		70-130	19-OCT-21
Zinc (Zn)			98.2		%		70-130	19-OCT-21
Zirconium (Zr)			102.2		%		70-130	19-OCT-21
WG3639906-6 DUP		**WG3639906-5**						
Aluminum (Al)		23700	23100		ug/g	2.6	40	19-OCT-21
Antimony (Sb)		1.04	1.01		ug/g	2.6	30	19-OCT-21
Arsenic (As)		16.1	15.4		ug/g	4.4	30	19-OCT-21
Barium (Ba)		296	283		ug/g	4.6	40	19-OCT-21
Beryllium (Be)		0.86	0.86		ug/g	0.1	30	19-OCT-21
Bismuth (Bi)		0.29	0.30		ug/g	3.5	30	19-OCT-21
Boron (B)		10.4	10.4		ug/g	0.8	30	19-OCT-21
Cadmium (Cd)		0.436	0.439		ug/g	0.6	30	19-OCT-21
Calcium (Ca)		47000	45600		ug/g	3.0	30	19-OCT-21
Chromium (Cr)		809	787		ug/g	2.8	30	19-OCT-21
Cobalt (Co)		20.7	19.9		ug/g	4.1	30	19-OCT-21
Copper (Cu)		34.7	33.7		ug/g	3.0	30	19-OCT-21
Iron (Fe)		31300	31300		ug/g	0.2	30	19-OCT-21
Lead (Pb)		106	107		ug/g	1.0	40	19-OCT-21
Lithium (Li)		21.0	20.3		ug/g	3.5	30	19-OCT-21
Magnesium (Mg)		16000	15800		ug/g	1.6	30	19-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5624603								
WG3639906-6 DUP		**WG3639906-5**						
Manganese (Mn)		662	645		ug/g	2.5	30	19-OCT-21
Molybdenum (Mo)		0.86	0.85		ug/g	1.3	40	19-OCT-21
Nickel (Ni)		33.1	32.4		ug/g	2.2	30	19-OCT-21
Phosphorus (P)		1120	1090		ug/g	2.5	30	19-OCT-21
Potassium (K)		5520	5200		ug/g	5.8	40	19-OCT-21
Selenium (Se)		0.47	0.50		ug/g	5.9	30	19-OCT-21
Silver (Ag)		0.34	0.32		ug/g	4.6	40	19-OCT-21
Sodium (Na)		731	717		ug/g	1.9	40	19-OCT-21
Strontium (Sr)		239	244		ug/g	2.3	40	19-OCT-21
Sulfur (S)		4400	4500		ug/g	1.5	30	19-OCT-21
Thallium (Tl)		0.327	0.335		ug/g	2.4	30	19-OCT-21
Tin (Sn)		4.8	4.8		ug/g	1.7	40	19-OCT-21
Titanium (Ti)		1530	1500		ug/g	1.8	40	19-OCT-21
Tungsten (W)		<0.50	<0.50	RPD-NA	ug/g	N/A	30	19-OCT-21
Uranium (U)		0.715	0.724		ug/g	1.1	30	19-OCT-21
Vanadium (V)		57.6	56.4		ug/g	2.2	30	19-OCT-21
Zinc (Zn)		135	132		ug/g	2.4	30	19-OCT-21
Zirconium (Zr)		8.2	7.7		ug/g	5.8	30	19-OCT-21
WG3639906-4 LCS								
Aluminum (Al)			100.2		%		80-120	19-OCT-21
Antimony (Sb)			103.1		%		80-120	19-OCT-21
Arsenic (As)			101.3		%		80-120	19-OCT-21
Barium (Ba)			99.1		%		80-120	19-OCT-21
Beryllium (Be)			100.1		%		80-120	19-OCT-21
Bismuth (Bi)			99.0		%		80-120	19-OCT-21
Boron (B)			95.8		%		80-120	19-OCT-21
Cadmium (Cd)			99.7		%		80-120	19-OCT-21
Calcium (Ca)			96.6		%		80-120	19-OCT-21
Chromium (Cr)			95.8		%		80-120	19-OCT-21
Cobalt (Co)			96.7		%		80-120	19-OCT-21
Copper (Cu)			96.3		%		80-120	19-OCT-21
Iron (Fe)			93.9		%		80-120	19-OCT-21
Lead (Pb)			100.8		%		80-120	19-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5624603								
WG3639906-4 LCS								
Lithium (Li)			101.9		%		80-120	19-OCT-21
Magnesium (Mg)			104.7		%		80-120	19-OCT-21
Manganese (Mn)			98.0		%		80-120	19-OCT-21
Molybdenum (Mo)			102.9		%		80-120	19-OCT-21
Nickel (Ni)			97.9		%		80-120	19-OCT-21
Phosphorus (P)			103.8		%		80-120	19-OCT-21
Potassium (K)			101.9		%		80-120	19-OCT-21
Selenium (Se)			100.1		%		80-120	19-OCT-21
Silver (Ag)			93.1		%		80-120	19-OCT-21
Sodium (Na)			104.9		%		80-120	19-OCT-21
Strontium (Sr)			102.4		%		80-120	19-OCT-21
Sulfur (S)			99.0		%		80-120	19-OCT-21
Thallium (Tl)			99.5		%		80-120	19-OCT-21
Tin (Sn)			98.7		%		80-120	19-OCT-21
Titanium (Ti)			98.3		%		80-120	19-OCT-21
Tungsten (W)			96.6		%		80-120	19-OCT-21
Uranium (U)			96.5		%		80-120	19-OCT-21
Vanadium (V)			99.5		%		80-120	19-OCT-21
Zinc (Zn)			94.3		%		80-120	19-OCT-21
Zirconium (Zr)			101.9		%		80-120	19-OCT-21
WG3639906-1 MB								
Aluminum (Al)			<50		mg/kg		50	19-OCT-21
Antimony (Sb)			<0.10		mg/kg		0.1	19-OCT-21
Arsenic (As)			<0.10		mg/kg		0.1	19-OCT-21
Barium (Ba)			<0.50		mg/kg		0.5	19-OCT-21
Beryllium (Be)			<0.10		mg/kg		0.1	19-OCT-21
Bismuth (Bi)			<0.20		mg/kg		0.2	19-OCT-21
Boron (B)			<5.0		mg/kg		5	19-OCT-21
Cadmium (Cd)			<0.020		mg/kg		0.02	19-OCT-21
Calcium (Ca)			<50		mg/kg		50	19-OCT-21
Chromium (Cr)			<0.50		mg/kg		0.5	19-OCT-21
Cobalt (Co)			<0.10		mg/kg		0.1	19-OCT-21
Copper (Cu)			<0.50		mg/kg		0.5	19-OCT-21
Iron (Fe)			<50		mg/kg		50	19-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5624603								
WG3639906-1 MB								
Lead (Pb)			<0.50		mg/kg		0.5	19-OCT-21
Lithium (Li)			<2.0		mg/kg		2	19-OCT-21
Magnesium (Mg)			<20		mg/kg		20	19-OCT-21
Manganese (Mn)			<1.0		mg/kg		1	19-OCT-21
Molybdenum (Mo)			<0.10		mg/kg		0.1	19-OCT-21
Nickel (Ni)			<0.50		mg/kg		0.5	19-OCT-21
Phosphorus (P)			<50		mg/kg		50	19-OCT-21
Potassium (K)			<100		mg/kg		100	19-OCT-21
Selenium (Se)			<0.20		mg/kg		0.2	19-OCT-21
Silver (Ag)			<0.10		mg/kg		0.1	19-OCT-21
Sodium (Na)			<50		mg/kg		50	19-OCT-21
Strontium (Sr)			<0.50		mg/kg		0.5	19-OCT-21
Sulfur (S)			<1000		mg/kg		1000	19-OCT-21
Thallium (Tl)			<0.050		mg/kg		0.05	19-OCT-21
Tin (Sn)			<2.0		mg/kg		2	19-OCT-21
Titanium (Ti)			<1.0		mg/kg		1	19-OCT-21
Tungsten (W)			<0.50		mg/kg		0.5	19-OCT-21
Uranium (U)			<0.050		mg/kg		0.05	19-OCT-21
Vanadium (V)			<0.20		mg/kg		0.2	19-OCT-21
Zinc (Zn)			<2.0		mg/kg		2	19-OCT-21
Zirconium (Zr)			<1.0		mg/kg		1	19-OCT-21
Batch R5624998								
WG3640098-2 CRM		**WT-SS-2**						
Aluminum (Al)			100.7		%		70-130	20-OCT-21
Antimony (Sb)			88.8		%		70-130	20-OCT-21
Arsenic (As)			103.3		%		70-130	20-OCT-21
Barium (Ba)			101.8		%		70-130	20-OCT-21
Beryllium (Be)			97.5		%		70-130	20-OCT-21
Bismuth (Bi)			0.15		mg/kg		0-0.34	20-OCT-21
Boron (B)			8.3		mg/kg		3.5-13.5	20-OCT-21
Cadmium (Cd)			98.6		%		70-130	20-OCT-21
Calcium (Ca)			101.2		%		70-130	20-OCT-21
Chromium (Cr)			95.7		%		70-130	20-OCT-21
Cobalt (Co)			100.6		%		70-130	20-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5624998								
WG3640098-2 CRM		**WT-SS-2**						
Copper (Cu)			101.7		%		70-130	20-OCT-21
Iron (Fe)			102.1		%		70-130	20-OCT-21
Lead (Pb)			100.9		%		70-130	20-OCT-21
Lithium (Li)			99.6		%		70-130	20-OCT-21
Magnesium (Mg)			100.1		%		70-130	20-OCT-21
Manganese (Mn)			100.9		%		70-130	20-OCT-21
Molybdenum (Mo)			95.1		%		70-130	20-OCT-21
Nickel (Ni)			99.7		%		70-130	20-OCT-21
Phosphorus (P)			92.6		%		70-130	20-OCT-21
Potassium (K)			88.5		%		70-130	20-OCT-21
Selenium (Se)			0.12		mg/kg		0-0.34	20-OCT-21
Silver (Ag)			93.0		%		70-130	20-OCT-21
Sodium (Na)			96.6		%		70-130	20-OCT-21
Strontium (Sr)			100.8		%		70-130	20-OCT-21
Thallium (Tl)			0.068		mg/kg		0.029-0.129	20-OCT-21
Tin (Sn)			93.8		%		70-130	20-OCT-21
Titanium (Ti)			91.6		%		70-130	20-OCT-21
Uranium (U)			101.5		%		70-130	20-OCT-21
Vanadium (V)			95.2		%		70-130	20-OCT-21
Zinc (Zn)			97.6		%		70-130	20-OCT-21
Zirconium (Zr)			92.2		%		70-130	20-OCT-21
WG3640098-6 DUP		**WG3640098-5**						
Aluminum (Al)		5500	5400		ug/g	1.4	40	20-OCT-21
Antimony (Sb)		2.9	2.9		ug/g	1.3	30	20-OCT-21
Arsenic (As)		7.4	7.3		ug/g	1.5	30	20-OCT-21
Barium (Ba)		172	164		ug/g	5.2	40	20-OCT-21
Beryllium (Be)		<2.0	<2.0	RPD-NA	ug/g	N/A	30	20-OCT-21
Bismuth (Bi)		<4.0	<4.0	RPD-NA	ug/g	N/A	30	20-OCT-21
Boron (B)		<100	<100	RPD-NA	ug/g	N/A	30	20-OCT-21
Cadmium (Cd)		0.67	0.61		ug/g	9.9	30	20-OCT-21
Calcium (Ca)		25700	24600		ug/g	4.4	30	20-OCT-21
Chromium (Cr)		2950	2800		ug/g	5.1	30	20-OCT-21
Cobalt (Co)		6.1	5.9		ug/g	2.9	30	20-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5624998								
WG3640098-6 DUP		**WG3640098-5**						
Copper (Cu)		28	25		ug/g	8.3	30	20-OCT-21
Iron (Fe)		9300	9000		ug/g	3.5	30	20-OCT-21
Lead (Pb)		215	199		ug/g	7.4	40	20-OCT-21
Lithium (Li)		<40	<40	RPD-NA	ug/g	N/A	30	20-OCT-21
Magnesium (Mg)		4730	4420		ug/g	6.9	30	20-OCT-21
Manganese (Mn)		279	267		ug/g	4.3	30	20-OCT-21
Molybdenum (Mo)		<2.0	<2.0	RPD-NA	ug/g	N/A	40	20-OCT-21
Nickel (Ni)		11	11		ug/g	2.4	30	20-OCT-21
Phosphorus (P)		1100	<1000	RPD-NA	ug/g	N/A	30	20-OCT-21
Potassium (K)		<2000	<2000	RPD-NA	ug/g	N/A	40	20-OCT-21
Selenium (Se)		<4.0	<4.0	RPD-NA	ug/g	N/A	30	20-OCT-21
Silver (Ag)		<2.0	<2.0	RPD-NA	ug/g	N/A	40	20-OCT-21
Sodium (Na)		<1000	<1000	RPD-NA	ug/g	N/A	40	20-OCT-21
Strontium (Sr)		190	185		ug/g	2.7	40	20-OCT-21
Sulfur (S)		<20000	<20000	RPD-NA	ug/g	N/A	30	20-OCT-21
Thallium (Tl)		<1.0	<1.0	RPD-NA	ug/g	N/A	30	20-OCT-21
Tin (Sn)		<40	<40	RPD-NA	ug/g	N/A	40	20-OCT-21
Titanium (Ti)		294	288		ug/g	1.8	40	20-OCT-21
Tungsten (W)		<10	<10	RPD-NA	ug/g	N/A	30	20-OCT-21
Uranium (U)		<1.0	<1.0	RPD-NA	ug/g	N/A	30	20-OCT-21
Vanadium (V)		13.1	12.7		ug/g	3.6	30	20-OCT-21
Zinc (Zn)		201	134	DUP-H	ug/g	67	80	20-OCT-21
Zirconium (Zr)		<20	<20	RPD-NA	ug/g	N/A	30	20-OCT-21
WG3640098-3 LCS								
Aluminum (Al)			99.4		%		80-120	20-OCT-21
Antimony (Sb)			110.9		%		80-120	20-OCT-21
Arsenic (As)			102.1		%		80-120	20-OCT-21
Barium (Ba)			100.8		%		80-120	20-OCT-21
Beryllium (Be)			94.9		%		80-120	20-OCT-21
Bismuth (Bi)			105.5		%		80-120	20-OCT-21
Boron (B)			92.3		%		80-120	20-OCT-21
Cadmium (Cd)			99.9		%		80-120	20-OCT-21
Calcium (Ca)			97.8		%		80-120	20-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5624998								
WG3640098-3 LCS								
Chromium (Cr)			98.2		%		80-120	20-OCT-21
Cobalt (Co)			101.9		%		80-120	20-OCT-21
Copper (Cu)			98.2		%		80-120	20-OCT-21
Iron (Fe)			101.4		%		80-120	20-OCT-21
Lead (Pb)			104.0		%		80-120	20-OCT-21
Lithium (Li)			99.5		%		80-120	20-OCT-21
Magnesium (Mg)			105.1		%		80-120	20-OCT-21
Manganese (Mn)			98.0		%		80-120	20-OCT-21
Molybdenum (Mo)			104.9		%		80-120	20-OCT-21
Nickel (Ni)			99.1		%		80-120	20-OCT-21
Phosphorus (P)			101.3		%		80-120	20-OCT-21
Potassium (K)			98.3		%		80-120	20-OCT-21
Selenium (Se)			107.3		%		80-120	20-OCT-21
Silver (Ag)			96.7		%		80-120	20-OCT-21
Sodium (Na)			104.3		%		80-120	20-OCT-21
Strontium (Sr)			107.5		%		80-120	20-OCT-21
Sulfur (S)			101.2		%		80-120	20-OCT-21
Thallium (Tl)			101.4		%		80-120	20-OCT-21
Tin (Sn)			99.9		%		80-120	20-OCT-21
Titanium (Ti)			100.6		%		80-120	20-OCT-21
Tungsten (W)			101.3		%		80-120	20-OCT-21
Uranium (U)			102.2		%		80-120	20-OCT-21
Vanadium (V)			101.0		%		80-120	20-OCT-21
Zinc (Zn)			94.9		%		80-120	20-OCT-21
Zirconium (Zr)			103.1		%		80-120	20-OCT-21
WG3640098-1 MB								
Aluminum (Al)			<50		mg/kg		50	20-OCT-21
Antimony (Sb)			<0.10		mg/kg		0.1	20-OCT-21
Arsenic (As)			<0.10		mg/kg		0.1	20-OCT-21
Barium (Ba)			<0.50		mg/kg		0.5	20-OCT-21
Beryllium (Be)			<0.10		mg/kg		0.1	20-OCT-21
Bismuth (Bi)			<0.20		mg/kg		0.2	20-OCT-21
Boron (B)			<5.0		mg/kg		5	20-OCT-21
Cadmium (Cd)			<0.020		mg/kg		0.02	20-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5624998								
WG3640098-1 MB								
Calcium (Ca)			<50		mg/kg		50	20-OCT-21
Chromium (Cr)			<0.50		mg/kg		0.5	20-OCT-21
Cobalt (Co)			<0.10		mg/kg		0.1	20-OCT-21
Copper (Cu)			<0.50		mg/kg		0.5	20-OCT-21
Iron (Fe)			<50		mg/kg		50	20-OCT-21
Lead (Pb)			<0.50		mg/kg		0.5	20-OCT-21
Lithium (Li)			<2.0		mg/kg		2	20-OCT-21
Magnesium (Mg)			<20		mg/kg		20	20-OCT-21
Manganese (Mn)			<1.0		mg/kg		1	20-OCT-21
Molybdenum (Mo)			<0.10		mg/kg		0.1	20-OCT-21
Nickel (Ni)			<0.50		mg/kg		0.5	20-OCT-21
Phosphorus (P)			<50		mg/kg		50	20-OCT-21
Potassium (K)			<100		mg/kg		100	20-OCT-21
Selenium (Se)			<0.20		mg/kg		0.2	20-OCT-21
Silver (Ag)			<0.10		mg/kg		0.1	20-OCT-21
Sodium (Na)			<50		mg/kg		50	20-OCT-21
Strontium (Sr)			<0.50		mg/kg		0.5	20-OCT-21
Sulfur (S)			<1000		mg/kg		1000	20-OCT-21
Thallium (Tl)			<0.050		mg/kg		0.05	20-OCT-21
Tin (Sn)			<2.0		mg/kg		2	20-OCT-21
Titanium (Ti)			<1.0		mg/kg		1	20-OCT-21
Tungsten (W)			<0.50		mg/kg		0.5	20-OCT-21
Uranium (U)			<0.050		mg/kg		0.05	20-OCT-21
Vanadium (V)			<0.20		mg/kg		0.2	20-OCT-21
Zinc (Zn)			<2.0		mg/kg		2	20-OCT-21
Zirconium (Zr)			<1.0		mg/kg		1	20-OCT-21
MOISTURE-WT	**Soil**							
Batch R5617415								
WG3637291-3 DUP		**L2648998-1**						
% Moisture		14.6	16.1		%	9.7	20	15-OCT-21
WG3637291-2 LCS								
% Moisture			101.2		%		90-110	15-OCT-21
WG3637291-1 MB								
% Moisture			<0.25		%		0.25	15-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MOISTURE-WT	**Soil**							
Batch R5617857								
WG3637474-3 DUP		**L2650174-5**						
% Moisture		85.3	85.2		%	0.1	20	15-OCT-21
WG3637474-2 LCS								
% Moisture			100.9		%		90-110	15-OCT-21
WG3637474-1 MB								
% Moisture			<0.25		%		0.25	15-OCT-21
Batch R5617916								
WG3637487-6 DUP		**L2648783-1**						
% Moisture		17.9	18.7		%	4.4	20	15-OCT-21
WG3637487-2 LCS								
% Moisture			100.7		%		90-110	15-OCT-21
WG3637487-1 MB								
% Moisture			<0.25		%		0.25	15-OCT-21
PAH-CCME-SQGL-WT	**Soil**							
Batch R5624927								
WG3640264-3 DUP		**WG3640264-5**						
1-Methylnaphthalene		<0.060	<0.060		ug/g	2.3	50	20-OCT-21
2-Methylnaphthalene		0.091	0.085		ug/g	6.4	50	20-OCT-21
Acenaphthene		0.251	0.214		ug/g	16	50	20-OCT-21
Acenaphthylene		1.32	1.13		ug/g	16	50	20-OCT-21
Acridine		<0.840	<0.650		ug/g	24	50	20-OCT-21
Anthracene		0.441	0.322		ug/g	31	50	20-OCT-21
Benzo(a)anthracene		2.21	1.68		ug/g	27	50	20-OCT-21
Benzo(a)pyrene		2.64	2.13		ug/g	21	50	20-OCT-21
Benzo(b&j)fluoranthene		2.22	1.73		ug/g	25	50	20-OCT-21
Benzo(g,h,i)perylene		1.42	1.15		ug/g	21	50	20-OCT-21
Benzo(k)fluoranthene		0.651	0.706		ug/g	8.2	50	20-OCT-21
Chrysene		1.96	1.62		ug/g	19	50	20-OCT-21
Dibenz(a,h)anthracene		<0.620	<0.510		ug/g	19	50	20-OCT-21
Fluoroanthene		2.38	1.94		ug/g	21	50	20-OCT-21
Fluorene		0.287	0.264		ug/g	8.4	50	20-OCT-21
Indeno(1,2,3-cd)pyrene		0.919	0.867		ug/g	5.8	50	20-OCT-21
Naphthalene		0.065	0.060		ug/g	8.4	50	20-OCT-21
Phenanthrene		1.18	0.995		ug/g	17	50	20-OCT-21
Pyrene		4.24	3.36		ug/g	23	50	20-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-CCME-SQGL-WT	**Soil**							
Batch R5624927								
WG3640264-3 DUP		**WG3640264-5**						
Quinoline		<0.038	<0.038	RPD-NA	ug/g	N/A	50	20-OCT-21
WG3640264-2 LCS								
1-Methylnaphthalene			96.4		%		50-140	20-OCT-21
2-Methylnaphthalene			83.3		%		50-140	20-OCT-21
Acenaphthene			87.1		%		50-140	20-OCT-21
Acenaphthylene			79.7		%		50-140	20-OCT-21
Acridine			71.5		%		50-140	20-OCT-21
Anthracene			75.0		%		50-140	20-OCT-21
Benzo(a)anthracene			82.7		%		50-140	20-OCT-21
Benzo(a)pyrene			74.8		%		50-140	20-OCT-21
Benzo(b&j)fluoranthene			75.8		%		50-150	20-OCT-21
Benzo(g,h,i)perylene			83.0		%		50-140	20-OCT-21
Benzo(k)fluoranthene			91.4		%		50-140	20-OCT-21
Chrysene			102.7		%		50-140	20-OCT-21
Dibenz(a,h)anthracene			84.6		%		50-140	20-OCT-21
Fluoroanthene			88.9		%		50-140	20-OCT-21
Fluorene			80.2		%		50-140	20-OCT-21
Indeno(1,2,3-cd)pyrene			69.8		%		50-140	20-OCT-21
Naphthalene			86.1		%		50-140	20-OCT-21
Phenanthrene			86.8		%		50-140	20-OCT-21
Pyrene			89.7		%		50-140	20-OCT-21
Quinoline			66.9		%		50-140	20-OCT-21
WG3640264-1 MB								
1-Methylnaphthalene			<0.0050		ug/g		0.005	20-OCT-21
2-Methylnaphthalene			<0.0050		ug/g		0.005	20-OCT-21
Acenaphthene			<0.0050		ug/g		0.005	20-OCT-21
Acenaphthylene			<0.0050		ug/g		0.005	20-OCT-21
Acridine			<0.010		ug/g		0.01	20-OCT-21
Anthracene			<0.0040		ug/g		0.004	20-OCT-21
Benzo(a)anthracene			<0.010		ug/g		0.01	20-OCT-21
Benzo(a)pyrene			<0.0050		ug/g		0.005	20-OCT-21
Benzo(b&j)fluoranthene			<0.010		ug/g		0.01	20-OCT-21
Benzo(g,h,i)perylene			<0.010		ug/g		0.01	20-OCT-21
Benzo(k)fluoranthene			<0.010		ug/g		0.01	20-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-CCME-SQGL-WT	**Soil**							
Batch R5624927								
WG3640264-1 MB								
Chrysene			<0.010		ug/g		0.01	20-OCT-21
Dibenz(a,h)anthracene			<0.0050		ug/g		0.005	20-OCT-21
Fluoroanthene			<0.0050		ug/g		0.005	20-OCT-21
Fluorene			<0.0050		ug/g		0.005	20-OCT-21
Indeno(1,2,3-cd)pyrene			<0.010		ug/g		0.01	20-OCT-21
Naphthalene			<0.0050		ug/g		0.005	20-OCT-21
Phenanthrene			<0.0050		ug/g		0.005	20-OCT-21
Pyrene			<0.0050		ug/g		0.005	20-OCT-21
Quinoline			<0.0050		ug/g		0.005	20-OCT-21
Surrogate: 2-Fluorobiphenyl			83.4		%		60-140	20-OCT-21
Surrogate: d14-Terphenyl			91.6		%		60-140	20-OCT-21
WG3640264-4 MS		**WG3640264-5**						
1-Methylnaphthalene			96.6		%		50-150	20-OCT-21
2-Methylnaphthalene			88.1		%		50-150	20-OCT-21
Acenaphthene			95.2		%		50-150	20-OCT-21
Acenaphthylene			72.4		%		50-150	20-OCT-21
Acridine			68.0		%		50-150	20-OCT-21
Anthracene			83.3		%		50-150	20-OCT-21
Benzo(a)anthracene			65.8		%		50-150	20-OCT-21
Benzo(a)pyrene			50.9		%		50-150	20-OCT-21
Benzo(b&j)fluoranthene			43.8	K	%		50-150	20-OCT-21
Benzo(g,h,i)perylene			41.8	K	%		50-150	20-OCT-21
Benzo(k)fluoranthene			52.3		%		50-150	20-OCT-21
Chrysene			82.6		%		50-150	20-OCT-21
Dibenz(a,h)anthracene			37.2	K	%		50-150	20-OCT-21
Fluoroanthene			84.3		%		50-150	20-OCT-21
Fluorene			96.3		%		50-150	20-OCT-21
Indeno(1,2,3-cd)pyrene			41.3	K	%		50-150	20-OCT-21
Naphthalene			88.0		%		50-150	20-OCT-21
Phenanthrene			92.4		%		50-150	20-OCT-21
Pyrene			N/A	MS-B	%		-	20-OCT-21
Quinoline			71.7		%		50-150	20-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-CCME-SQGL-WT	**Soil**							
Batch R5625547								
WG3640266-3 DUP		**WG3640266-5**						
1-Methylnaphthalene		0.050	0.047		ug/g	7.3	50	20-OCT-21
2-Methylnaphthalene		0.070	0.064		ug/g	8.6	50	20-OCT-21
Acenaphthene		0.091	0.083		ug/g	9.4	50	20-OCT-21
Acenaphthylene		0.775	0.753		ug/g	3.0	50	20-OCT-21
Acridine		0.075	0.074		ug/g	1.5	50	20-OCT-21
Anthracene		0.319	0.342		ug/g	6.7	50	20-OCT-21
Benzo(a)anthracene		0.956	0.941		ug/g	1.5	50	20-OCT-21
Benzo(a)pyrene		1.47	1.42		ug/g	3.8	50	20-OCT-21
Benzo(b&j)fluoranthene		1.32	1.33		ug/g	1.0	50	20-OCT-21
Benzo(g,h,i)perylene		0.787	0.767		ug/g	2.6	50	20-OCT-21
Benzo(k)fluoranthene		0.480	0.473		ug/g	1.4	50	20-OCT-21
Chrysene		1.10	1.14		ug/g	3.1	50	20-OCT-21
Dibenz(a,h)anthracene		0.205	0.200		ug/g	2.6	50	20-OCT-21
Fluoroanthene		1.07	1.14		ug/g	6.0	50	20-OCT-21
Fluorene		0.135	0.130		ug/g	3.6	50	20-OCT-21
Indeno(1,2,3-cd)pyrene		0.752	0.739		ug/g	1.8	50	20-OCT-21
Naphthalene		0.075	0.065		ug/g	14	50	20-OCT-21
Phenanthrene		0.468	0.491		ug/g	4.9	50	20-OCT-21
Pyrene		1.85	1.88		ug/g	1.6	50	20-OCT-21
Quinoline		<0.02	0.010		ug/g	5.6	50	20-OCT-21
WG3640266-2 LCS								
1-Methylnaphthalene			97.4		%		50-140	20-OCT-21
2-Methylnaphthalene			92.3		%		50-140	20-OCT-21
Acenaphthene			90.5		%		50-140	20-OCT-21
Acenaphthylene			83.5		%		50-140	20-OCT-21
Acridine			87.9		%		50-140	20-OCT-21
Anthracene			81.6		%		50-140	20-OCT-21
Benzo(a)anthracene			92.0		%		50-140	20-OCT-21
Benzo(a)pyrene			82.2		%		50-140	20-OCT-21
Benzo(b&j)fluoranthene			94.9		%		50-150	20-OCT-21
Benzo(g,h,i)perylene			79.3		%		50-140	20-OCT-21
Benzo(k)fluoranthene			98.1		%		50-140	20-OCT-21
Chrysene			102.5		%		50-140	20-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-CCME-SQGL-WT	**Soil**							
Batch R5625547								
WG3640266-2 LCS								
Dibenz(a,h)anthracene			86.5		%		50-140	20-OCT-21
Fluoroanthene			93.9		%		50-140	20-OCT-21
Fluorene			87.4		%		50-140	20-OCT-21
Indeno(1,2,3-cd)pyrene			82.6		%		50-140	20-OCT-21
Naphthalene			89.0		%		50-140	20-OCT-21
Phenanthrene			94.4		%		50-140	20-OCT-21
Pyrene			93.4		%		50-140	20-OCT-21
Quinoline			79.3		%		50-140	20-OCT-21
WG3640266-1 MB								
1-Methylnaphthalene			<0.0050		ug/g		0.005	20-OCT-21
2-Methylnaphthalene			<0.0050		ug/g		0.005	20-OCT-21
Acenaphthene			<0.0050		ug/g		0.005	20-OCT-21
Acenaphthylene			<0.0050		ug/g		0.005	20-OCT-21
Acridine			<0.010		ug/g		0.01	20-OCT-21
Anthracene			<0.0040		ug/g		0.004	20-OCT-21
Benzo(a)anthracene			<0.010		ug/g		0.01	20-OCT-21
Benzo(a)pyrene			<0.0050		ug/g		0.005	20-OCT-21
Benzo(b&j)fluoranthene			<0.010		ug/g		0.01	20-OCT-21
Benzo(g,h,i)perylene			<0.010		ug/g		0.01	20-OCT-21
Benzo(k)fluoranthene			<0.010		ug/g		0.01	20-OCT-21
Chrysene			<0.010		ug/g		0.01	20-OCT-21
Dibenz(a,h)anthracene			<0.0050		ug/g		0.005	20-OCT-21
Fluoroanthene			<0.0050		ug/g		0.005	20-OCT-21
Fluorene			<0.0050		ug/g		0.005	20-OCT-21
Indeno(1,2,3-cd)pyrene			<0.010		ug/g		0.01	20-OCT-21
Naphthalene			<0.0050		ug/g		0.005	20-OCT-21
Phenanthrene			<0.0050		ug/g		0.005	20-OCT-21
Pyrene			<0.0050		ug/g		0.005	20-OCT-21
Quinoline			<0.0050		ug/g		0.005	20-OCT-21
Surrogate: 2-Fluorobiphenyl			90.3		%		60-140	20-OCT-21
Surrogate: d14-Terphenyl			92.8		%		60-140	20-OCT-21
WG3640266-4 MS		**WG3640266-5**						
1-Methylnaphthalene			95.0		%		50-150	20-OCT-21
2-Methylnaphthalene			91.8		%		50-150	20-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-CCME-SQGL-WT	**Soil**							
Batch R5625547								
WG3640266-4 MS		**WG3640266-5**						
Acenaphthene			92.9		%		50-150	20-OCT-21
Acenaphthylene			52.1		%		50-150	20-OCT-21
Acridine			93.1		%		50-150	20-OCT-21
Anthracene			78.3		%		50-150	20-OCT-21
Benzo(a)anthracene			93.5		%		50-150	20-OCT-21
Benzo(a)pyrene			N/A	MS-B	%		-	20-OCT-21
Benzo(b&j)fluoranthene			N/A	MS-B	%		-	20-OCT-21
Benzo(g,h,i)perylene			49.7	MES	%		50-150	20-OCT-21
Benzo(k)fluoranthene			86.9		%		50-150	20-OCT-21
Chrysene			94.2		%		50-150	20-OCT-21
Dibenz(a,h)anthracene			63.1		%		50-150	20-OCT-21
Fluoroanthene			93.3		%		50-150	20-OCT-21
Fluorene			96.7		%		50-150	20-OCT-21
Indeno(1,2,3-cd)pyrene			63.0		%		50-150	20-OCT-21
Naphthalene			86.8		%		50-150	20-OCT-21
Phenanthrene			94.0		%		50-150	20-OCT-21
Pyrene			N/A	MS-B	%		-	20-OCT-21
Quinoline			83.6		%		50-150	20-OCT-21
Batch R5626548								
WG3642511-3 DUP		**WG3642511-5**						
1-Methylnaphthalene		<0.015	<0.015	RPD-NA	ug/g	N/A	50	22-OCT-21
2-Methylnaphthalene		0.022	0.022		ug/g	1.9	50	22-OCT-21
Acenaphthene		0.016	0.017		ug/g	6.9	50	22-OCT-21
Acenaphthylene		0.044	0.049		ug/g	11	50	22-OCT-21
Acridine		<0.030	<0.030	RPD-NA	ug/g	N/A	50	22-OCT-21
Anthracene		0.053	0.054		ug/g	2.8	50	22-OCT-21
Benzo(a)anthracene		0.182	0.184		ug/g	1.1	50	22-OCT-21
Benzo(a)pyrene		0.234	0.237		ug/g	1.1	50	22-OCT-21
Benzo(b&j)fluoranthene		0.343	0.345		ug/g	0.6	50	22-OCT-21
Benzo(g,h,i)perylene		0.230	0.228		ug/g	1.0	50	22-OCT-21
Benzo(k)fluoranthene		0.144	0.146		ug/g	1.0	50	22-OCT-21
Chrysene		0.253	0.259		ug/g	2.1	50	22-OCT-21
Dibenz(a,h)anthracene		0.054	0.054		ug/g	0.8	50	22-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-CCME-SQGL-WT	**Soil**							
Batch R5626548								
WG3642511-3 DUP		**WG3642511-5**						
Fluoroanthene		0.352	0.360		ug/g	2.3	50	22-OCT-21
Fluorene		0.023	0.023		ug/g	0.5	50	22-OCT-21
Indeno(1,2,3-cd)pyrene		0.189	0.182		ug/g	3.6	50	22-OCT-21
Naphthalene		0.019	0.019		ug/g	1.9	50	22-OCT-21
Phenanthrene		0.160	0.166		ug/g	4.1	50	22-OCT-21
Pyrene		0.374	0.383		ug/g	2.4	50	22-OCT-21
Quinoline		<0.015	<0.015	RPD-NA	ug/g	N/A	50	22-OCT-21
WG3642511-2 LCS								
1-Methylnaphthalene			105.0		%		50-140	22-OCT-21
2-Methylnaphthalene			100.1		%		50-140	22-OCT-21
Acenaphthene			98.0		%		50-140	22-OCT-21
Acenaphthylene			93.7		%		50-140	22-OCT-21
Acridine			96.3		%		50-140	22-OCT-21
Anthracene			90.0		%		50-140	22-OCT-21
Benzo(a)anthracene			99.5		%		50-140	22-OCT-21
Benzo(a)pyrene			86.9		%		50-140	22-OCT-21
Benzo(b&j)fluoranthene			90.5		%		50-150	22-OCT-21
Benzo(g,h,i)perylene			93.5		%		50-140	22-OCT-21
Benzo(k)fluoranthene			106.9		%		50-140	22-OCT-21
Chrysene			106.8		%		50-140	22-OCT-21
Dibenz(a,h)anthracene			100.3		%		50-140	22-OCT-21
Fluoroanthene			99.4		%		50-140	22-OCT-21
Fluorene			94.3		%		50-140	22-OCT-21
Indeno(1,2,3-cd)pyrene			93.8		%		50-140	22-OCT-21
Naphthalene			96.3		%		50-140	22-OCT-21
Phenanthrene			101.0		%		50-140	22-OCT-21
Pyrene			99.4		%		50-140	22-OCT-21
Quinoline			84.1		%		50-140	22-OCT-21
WG3642511-1 MB								
1-Methylnaphthalene			<0.0050		ug/g		0.005	22-OCT-21
2-Methylnaphthalene			<0.0050		ug/g		0.005	22-OCT-21
Acenaphthene			<0.0050		ug/g		0.005	22-OCT-21
Acenaphthylene			<0.0050		ug/g		0.005	22-OCT-21
Acridine			<0.010		ug/g		0.01	22-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-CCME-SQGL-WT	**Soil**							
Batch R5626548								
WG3642511-1 MB								
Anthracene			<0.0040		ug/g		0.004	22-OCT-21
Benzo(a)anthracene			<0.010		ug/g		0.01	22-OCT-21
Benzo(a)pyrene			<0.0050		ug/g		0.005	22-OCT-21
Benzo(b&j)fluoranthene			<0.010		ug/g		0.01	22-OCT-21
Benzo(g,h,i)perylene			<0.010		ug/g		0.01	22-OCT-21
Benzo(k)fluoranthene			<0.010		ug/g		0.01	22-OCT-21
Chrysene			<0.010		ug/g		0.01	22-OCT-21
Dibenz(a,h)anthracene			<0.0050		ug/g		0.005	22-OCT-21
Fluoroanthene			<0.0050		ug/g		0.005	22-OCT-21
Fluorene			<0.0050		ug/g		0.005	22-OCT-21
Indeno(1,2,3-cd)pyrene			<0.010		ug/g		0.01	22-OCT-21
Naphthalene			<0.0050		ug/g		0.005	22-OCT-21
Phenanthrene			<0.0050		ug/g		0.005	22-OCT-21
Pyrene			<0.0050		ug/g		0.005	22-OCT-21
Quinoline			<0.0050		ug/g		0.005	22-OCT-21
Surrogate: 2-Fluorobiphenyl			89.7		%		60-140	22-OCT-21
Surrogate: d14-Terphenyl			89.5		%		60-140	22-OCT-21
WG3642511-4 MS		**WG3642511-5**						
1-Methylnaphthalene			100.7		%		50-150	22-OCT-21
2-Methylnaphthalene			96.8		%		50-150	22-OCT-21
Acenaphthene			96.0		%		50-150	22-OCT-21
Acenaphthylene			77.7		%		50-150	22-OCT-21
Acridine			68.3		%		50-150	22-OCT-21
Anthracene			81.0		%		50-150	22-OCT-21
Benzo(a)anthracene			99.8		%		50-150	22-OCT-21
Benzo(a)pyrene			77.3		%		50-150	22-OCT-21
Benzo(b&j)fluoranthene			82.1		%		50-150	22-OCT-21
Benzo(g,h,i)perylene			80.1		%		50-150	22-OCT-21
Benzo(k)fluoranthene			91.5		%		50-150	22-OCT-21
Chrysene			96.1		%		50-150	22-OCT-21
Dibenz(a,h)anthracene			82.7		%		50-150	22-OCT-21
Fluoroanthene			97.3		%		50-150	22-OCT-21
Fluorene			96.5		%		50-150	22-OCT-21
Indeno(1,2,3-cd)pyrene			80.9		%		50-150	22-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-CCME-SQGL-WT	**Soil**							
Batch R5626548								
WG3642511-4 MS		**WG3642511-5**						
Naphthalene			92.2		%		50-150	22-OCT-21
Phenanthrene			97.9		%		50-150	22-OCT-21
Pyrene			96.2		%		50-150	22-OCT-21
Quinoline			84.3		%		50-150	22-OCT-21
PCB9-LOW-WT	**Soil**							
Batch R5625841								
WG3640271-3 DUP		**WG3640271-5**						
Aroclor 1016		<0.0060	<0.0060	RPD-NA	mg/kg	N/A	50	21-OCT-21
Aroclor 1221		N/A	<0.0060	RPD-NA	%	N/A	50	21-OCT-21
Aroclor 1232		N/A	<0.0060	RPD-NA	%	N/A	50	21-OCT-21
Aroclor 1242		<0.0350	<0.0330	RPD-NA	mg/kg	N/A	40	21-OCT-21
Aroclor 1248		<0.0060	<0.0060	RPD-NA	mg/kg	N/A	40	21-OCT-21
Aroclor 1254		0.409	0.446		mg/kg	8.9	40	21-OCT-21
Aroclor 1260		0.743	0.803		mg/kg	7.7	40	21-OCT-21
Aroclor 1262		<0.0060	<0.0060	RPD-NA	mg/kg	N/A	50	21-OCT-21
Aroclor 1268		<0.0060	<0.0060	RPD-NA	mg/kg	N/A	50	21-OCT-21
WG3640271-2 LCS								
Aroclor 1242			99.9		%		60-140	21-OCT-21
Aroclor 1248			94.9		%		-	21-OCT-21
Aroclor 1254			108.0		%		60-140	21-OCT-21
Aroclor 1260			108.0		%		60-140	21-OCT-21
WG3640271-1 MB								
Aroclor 1016			<0.0030		mg/kg		0.003	21-OCT-21
Aroclor 1221			<0.0030		mg/kg		0.003	21-OCT-21
Aroclor 1232			<0.0030		mg/kg		0.003	21-OCT-21
Aroclor 1242			<0.0030		mg/kg		0.003	21-OCT-21
Aroclor 1248			<0.0030		mg/kg		0.003	21-OCT-21
Aroclor 1254			<0.0030		mg/kg		0.003	21-OCT-21
Aroclor 1260			<0.0030		mg/kg		0.003	21-OCT-21
Aroclor 1262			<0.0030		mg/kg		0.003	21-OCT-21
Aroclor 1268			<0.0030		mg/kg		0.003	21-OCT-21
Surrogate: d14-Terphenyl			108.6		%		50-140	21-OCT-21
WG3640271-4 MS		**WG3640271-5**						
Aroclor 1242			119.3		%		60-140	21-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PCB9-LOW-WT	**Soil**							
Batch R5625841								
WG3640271-4 MS		**WG3640271-5**						
Aroclor 1254			N/A	MS-B	%		-	21-OCT-21
Aroclor 1260			N/A	MS-B	%		-	21-OCT-21
Batch R5626110								
WG3640265-3 DUP		**WG3640265-5**						
Aroclor 1016		<0.024	<0.024	RPD-NA	mg/kg	N/A	50	21-OCT-21
Aroclor 1221		<0.024	<0.024	RPD-NA	mg/kg	N/A	50	21-OCT-21
Aroclor 1232		<0.024	<0.024	RPD-NA	mg/kg	N/A	50	21-OCT-21
Aroclor 1242		<0.0750	<0.0920	RPD-NA	mg/kg	N/A	40	21-OCT-21
Aroclor 1248		<0.024	<0.024	RPD-NA	mg/kg	N/A	40	21-OCT-21
Aroclor 1254		0.981	0.703		mg/kg	33	40	21-OCT-21
Aroclor 1260		1.31	1.17		mg/kg	12	40	21-OCT-21
Aroclor 1262		<0.024	<0.024	RPD-NA	mg/kg	N/A	50	21-OCT-21
Aroclor 1268		<0.024	<0.024	RPD-NA	mg/kg	N/A	50	21-OCT-21
WG3640265-2 LCS								
Aroclor 1242			94.6		%		60-140	21-OCT-21
Aroclor 1248			90.5		%		60-140	21-OCT-21
Aroclor 1254			94.2		%		60-140	21-OCT-21
Aroclor 1260			97.7		%		60-140	21-OCT-21
WG3640265-1 MB								
Aroclor 1016			<0.0030		mg/kg		0.003	21-OCT-21
Aroclor 1221			<0.0030		mg/kg		0.003	21-OCT-21
Aroclor 1232			<0.0030		mg/kg		0.003	21-OCT-21
Aroclor 1242			<0.0030		mg/kg		0.003	21-OCT-21
Aroclor 1248			<0.0030		mg/kg		0.003	21-OCT-21
Aroclor 1254			<0.0030		mg/kg		0.003	21-OCT-21
Aroclor 1260			<0.0030		mg/kg		0.003	21-OCT-21
Aroclor 1262			<0.0030		mg/kg		0.003	21-OCT-21
Aroclor 1268			<0.0030		mg/kg		0.003	21-OCT-21
Surrogate: d14-Terphenyl			100.5		%		50-140	21-OCT-21
WG3640265-4 MS		**WG3640265-5**						
Aroclor 1242			87.9		%		60-140	21-OCT-21
Aroclor 1254			N/A	MS-B	%		-	21-OCT-21
Aroclor 1260			N/A	MS-B	%		-	21-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PCB9-LOW-WT	**Soil**							
Batch R5626575								
WG3641289-12 DUP		**WG3641289-11**						
Aroclor 1016		<0.015	<0.015	RPD-NA	mg/kg	N/A	50	22-OCT-21
Aroclor 1221		<0.015	<0.015	RPD-NA	mg/kg	N/A	50	22-OCT-21
Aroclor 1232		<0.015	<0.015	RPD-NA	mg/kg	N/A	50	22-OCT-21
Aroclor 1242		<0.015	<0.015	RPD-NA	mg/kg	N/A	40	22-OCT-21
Aroclor 1248		<0.015	<0.015	RPD-NA	mg/kg	N/A	40	22-OCT-21
Aroclor 1254		0.087	0.103		mg/kg	16	40	22-OCT-21
Aroclor 1260		0.049	0.067		mg/kg	29	40	22-OCT-21
Aroclor 1262		<0.015	<0.015	RPD-NA	mg/kg	N/A	50	22-OCT-21
Aroclor 1268		<0.015	<0.015	RPD-NA	mg/kg	N/A	50	22-OCT-21
WG3641289-15 LCS								
Aroclor 1242			88.9		%		60-140	22-OCT-21
Aroclor 1254			93.6		%		60-140	22-OCT-21
Aroclor 1260			93.9		%		60-140	22-OCT-21
WG3641289-14 MB								
Aroclor 1016			<0.0030		mg/kg		0.003	22-OCT-21
Aroclor 1221			<0.0030		mg/kg		0.003	22-OCT-21
Aroclor 1232			<0.0030		mg/kg		0.003	22-OCT-21
Aroclor 1242			<0.0030		mg/kg		0.003	22-OCT-21
Aroclor 1248			<0.0030		mg/kg		0.003	22-OCT-21
Aroclor 1254			<0.0030		mg/kg		0.003	22-OCT-21
Aroclor 1260			<0.0030		mg/kg		0.003	22-OCT-21
Aroclor 1262			<0.0030		mg/kg		0.003	22-OCT-21
Aroclor 1268			<0.0030		mg/kg		0.003	22-OCT-21
Surrogate: d14-Terphenyl			96.2		%		50-140	22-OCT-21
WG3641289-13 MS		**WG3641289-11**						
Aroclor 1242			85.4		%		60-140	22-OCT-21
Aroclor 1254			69.3		%		60-140	22-OCT-21
Aroclor 1260			44.4	E	%		60-140	22-OCT-21
PSA-MUST-SK	**Soil**							
Batch R5623956								
WG3638494-1 DUP		**L2650174-6**						
MUST PSA % > 75um		1.4	2.4	J	%	0.9	5	18-OCT-21
WG3638494-2 IRM		**2020-PSA_SOIL**						
MUST PSA % > 75um			43.2		%		37.9-47.9	18-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
TOC-WT	**Soil**							
Batch R5625269								
WG3641337-3 CRM		**WT-TOC-CRM**						
Total Organic Carbon			96.4		%		70-130	20-OCT-21
WG3641337-4 DUP		**L2650157-8**						
Total Organic Carbon		13.3	13.8		%	3.9	20	20-OCT-21
Fraction Organic Carbon		0.133	0.138		g/g	3.9	25	20-OCT-21
WG3641337-2 LCS								
Total Organic Carbon			98.4		%		80-120	20-OCT-21
WG3641337-1 MB								
Total Organic Carbon			<0.10		%		0.1	20-OCT-21
Fraction Organic Carbon			<0.0010		g/g		0.001	20-OCT-21
Batch R5626139								
WG3642290-3 CRM		**WT-TOC-CRM**						
Total Organic Carbon			96.3		%		70-130	21-OCT-21
WG3642290-4 DUP		**L2650162-11**						
Total Organic Carbon		0.51	0.50		%	2.4	20	21-OCT-21
Fraction Organic Carbon		0.0051	0.0050		g/g	2.4	25	21-OCT-21
WG3642290-2 LCS								
Total Organic Carbon			99.7		%		80-120	21-OCT-21
WG3642290-1 MB								
Total Organic Carbon			<0.10		%		0.1	21-OCT-21
Fraction Organic Carbon			<0.0010		g/g		0.001	21-OCT-21

Quality Control Report

Workorder: L2650174 Report Date: 22-OCT-21

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Legend:

Limit	ALS Control Limit (Data Quality Objectives)
DUP	Duplicate
RPD	Relative Percent Difference
N/A	Not Available
LCS	Laboratory Control Sample
SRM	Standard Reference Material
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ADE	Average Desorption Efficiency
MB	Method Blank
IRM	Internal Reference Material
CRM	Certified Reference Material
CCV	Continuing Calibration Verification
CVS	Calibration Verification Standard
LCSD	Laboratory Control Sample Duplicate

Sample Parameter Qualifier Definitions:

Qualifier	Description
DLHM	Detection Limit Adjusted: Sample has High Moisture Content
DUP-H	Duplicate results outside ALS DQO, due to sample heterogeneity.
E	Matrix Spike recovery outside ALS DQO due to heterogeneous analyte background in sample.
J	Duplicate results and limits are expressed in terms of absolute difference.
K	Matrix Spike recovery outside ALS DQO due to sample matrix effects.
MES	Data Quality Objective was marginally exceeded (by < 10% absolute) for < 10% of analytes in a Multi-Element Scan / Multi-Parameter Scan (considered acceptable as per OMOE & CCME).
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Hold Time Exceedances:

All test results reported with this submission were conducted within ALS recommended hold times.

ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.

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Chain of Custody

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L2650174-COFC

COC Number: 20 - 0214

Page 3 of 3

Report To	Contact and company name below will appear on the final report
Company:	Golder Associates Ltd.
Contact:	Jill LaPorte
Phone:	905-723-2727
	Company address below will appear on the final report
Street:	100 Scotia Court
City/Province:	Whtby, Ontario
Postal Code:	L1N 8Y6
Invoice To	Same as Report To ☑ YES ☐ NO
	Copy of Invoice with Report ☑ YES ☐ NO
Company:	Golder Associates Ltd.
Contact:	Accounts Payables

Project Information

ALS Account # / Quote #:	15520 / Q86566
Job #:	1783886-8000-8006
PO / AFE:	
LSD:	
ALS Lab Work Order # (ALS use only):	L2650174

Reports / Recipients

Select Report Format: ☑ PDF ☑ EXCEL ☐ EDD (DIGITAL)

Merge QC/QCI Reports with COA ☑ YES ☐ NO ☐ N/A

☐ Compare Results to Criteria on Report - provide details below if box checked

Select Distribution: ☑ EMAIL ☐ MAIL ☐ FAX

Email 1 or Fax: Jill_LaPorte@golder.com

Email 2: shawn_seguin@golder.com

Email 3:

Invoice Recipients

Select Invoice Distribution: ☑ EMAIL ☐ MAIL ☐ FAX

Email 1 or Fax: Jill_LaPorte@golder.com

Email 2: canadaaccountspayableinvoices@golder.com

Oil and Gas Required Fields (client use)

AFE/Cost Center:	PO#
Major/Minor Code:	Routing Code:
Requisitioner:	
Location:	

ALS Contact: Amanda Overholster

Sampler:

Turnaround Time (TAT) Requested

☑ Routine [R] if received by 3pm M-F - no surcharges apply

☐ 4 day [P4] if received by 3pm M-F - 20% rush surcharge minimum

☐ 3 day [P3] if received by 3pm M-F - 25% rush surcharge minimum

☐ 2 day [P2] if received by 3pm M-F - 50% rush surcharge minimum

☐ 1 day [E] if received by 3pm M-F - 100% rush surcharge minimum

☐ Same day [E2] if received by 10am M-S - 200% rush surcharge. Additional fees may apply to rush requests on weekends, statutory holidays and non-routine tests

Date and Time Required for all E&P TATs: dd-mmm-yy hh:mm am/pm

For all tests with rush TATs requested, please contact your AM to confirm availability.

AFFIX ALS BARCODE LABEL HERE (ALS use only)

Analysis Request

Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below

ALS Sample # (ALS use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	NUMBER OF CONTAINERS	HWS-Boron (B-HWS-R511-WT)	Cr3 (CR-CR3-WT)	Cr6 (CR-CR6-IC-WT)	Mercury (HG-200.2-CVAA-WT)	Metals (MET-200.2-CCMS-WT)	PAH (PAH-CCME-SQG-WT)	MOISTURE-WT	TOC (TOC-WT)	PCB9 (PCB9-LOW-WT)		Specific Gravity (SPECGRAV-CL)	PSA (PSA-MUST-WT-SK)	Atterberg (ATTERBERG-SK)		SAMPLES ON HOLD	EXTENDED STORAGE REQUIRED	SUSPECTED HAZARD (see notes)
	TCOM-SC-006EX	06-OCT-21	13:38	Sediment	4				X	X	X			X								
	TCOM-SC-006FX	06-OCT-21	13:38	Sediment	4				X	X	X			X								
	TCOM-SC-006GX	06-OCT-21	13:38	Sediment	4				X	X	X			X								
				Sediment																		
				Sediment																		
				Sediment																		
				Sediment																		
				Sediment																		
				Sediment																		
				Sediment																		
				Sediment																		
				Sediment																		
				Sediment																		

Drinking Water (DW) Samples[1] (client use)

Are samples taken from a Regulated DW System?

☐ YES ☑ NO

Are samples for human consumption/ use?

☐ YES ☑ NO

Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only)

SAMPLE RECEIPT DETAILS (ALS use only)

Cooling Method: ☐ NONE ☒ ICE ☐ ICE PACKS ☐ FROZEN ☐ COOLING INITIATED

Submission Comments identified on Sample Receipt Notification: ☐ YES ☐ NO

Cooler Custody Seals Intact: ☐ YES ☐ N/A Sample Custody Seals Intact: ☐ YES ☐ N/A

INITIAL COOLER TEMPERATURES °C				FINAL COOLER TEMPERATURES °C			
				14.2°C			

SHIPMENT RELEASE (client use)			INITIAL SHIPMENT RECEPTION (ALS use only)			FINAL SHIPMENT RECEPTION (ALS use only)		
Released by:	Date:	Time:	Received by:	Date:	Time:	Received by:	Date: 08/oct/2021	Time: 17:40

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

AUG 2020 FRONT

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

1. If any water samples are taken from a **Regulated Drinking Water (DW) System**, please submit using an **Authorized DW COC form.**

Chain of Custody (C

Canada T

L2650174-COFC

COC Number: 20 - 026

Page 2 of 3

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Report To	Contact and company name below will appear on the final report
Company:	Golder Associates Ltd.
Contact:	Jill LaPorte
Phone:	905-723-2727
	Company address below will appear on the final report
Street:	100 Scotia Court
City/Province:	Whtby, Ontario
Postal Code:	L1N 8Y6
Invoice To	Same as Report To ☑ YES ☐ NO
	Copy of Invoice with Report ☑ YES ☐ NO
Company:	Golder Associates Ltd.
Contact:	Accounts Payables

Reports / Recipients

Select Report Format: ☑ PDF ☑ EXCEL ☐ EDD (DIGITAL)

Merge QC/QCI Reports with COA ☑ YES ☐ NO ☐ N/A

☐ Compare Results to Criteria on Report - provide details below if box checked

Select Distribution: ☑ EMAIL ☐ MAIL ☐ FAX

Email 1 or Fax: Jill_LaPorte@golder.com

Email 2: shawn_seguin@golder.com

Email 3:

Invoice Recipients

Select Invoice Distribution: ☑ EMAIL ☐ MAIL ☐ FAX

Email 1 or Fax: Jill_LaPorte@golder.com

Email 2: canadaaccountspayableinvoices@golder.com

Project Information

ALS Account # / Quote #: 15520 / Q86566

Job #: 1783886-8000-8006

PO / AFE:

LSD:

Oil and Gas Required Fields (client use)

AFE/Cost Center: PO#

Major/Minor Code: Routing Code:

Requisitioner:

Location:

ALS Lab Work Order # (ALS use only): L2650174

ALS Contact: Amanda Overholster

Sampler:

Turnaround Time (TAT) Requested

☑ Routine [R] if received by 3pm M-F - no surcharges apply

☐ 4 day [P4] if received by 3pm M-F - 20% rush surcharge minimum

☐ 3 day [P3] if received by 3pm M-F - 25% rush surcharge minimum

☐ 2 day [P2] if received by 3pm M-F - 50% rush surcharge minimum

☐ 1 day [E] if received by 3pm M-F - 100% rush surcharge minimum

☐ Same day [E2] if received by 10am M-S - 200% rush surcharge. Additional fees may apply to rush requests on weekends, statutory holidays and non-routine tests

AFFIX ALS BARCODE LABEL HERE (ALS use only)

Date and Time Required for all E&P TATs: dd-mmm-yy hh:mm am/pm

For all tests with rush TATs requested, please contact your AM to confirm availability.

Analysis Request

Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below

ALS Sample # (ALS use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	NUMBER OF CONTAINERS	HWS-Boron (B-HWS-R511-WT)	Cr3 (CR-CR3-WT)	Cr6 (CR-CR6-IC-WT)	Mercury (HG-200.2-CVAA-WT)	Metals (MET-200.2-CCMS-WT)	PAH (PAH-CCME-SOGL-WT)	MOISTURE-WT	TOC (TOC-WT)	PCB9 (PCB9-LOW-WT)		Specific Gravity (SPECGRAV-CL)	PSA (PSA-MUST-WT-SK)	Atterberg (ATTERBERG-SK)		SAMPLES ON HOLD	EXTENDED STORAGE REQUIRED	SUSPECTED HAZARD (see notes)
	TC4-SC-010DX	06-OCT-21	15:30	Sediment	4				X	X	X			X								
	PCW-SC-001AX	06-OCT-21	12:15	Sediment	4				X	X	X			X								
	PCW-SC-001BX	06-OCT-21	12:15	Sediment	4				X	X	X			X								
	PCW-SC-001CX	06-OCT-21	12:15	Sediment	4				X	X	X			X								
	PCW-SC-001DX	06-OCT-21	12:15	Sediment	4				X	X	X			X								
	PCW-SC-001EX	06-OCT-21	12:15	Sediment	4				X	X	X			X								
	PCW-SC-001FX	06-OCT-21	12:15	Sediment	4				X	X	X			X								
	PCW-SC-001GX	06-OCT-21	12:15	Sediment	4				X	X	X			X								
	TCOM-SC-006AX	06-OCT-21	13:38	Sediment	4				X	X	X			X								
	TCOM-SC-006BX	06-OCT-21	13:38	Sediment	4				X	X	X			X								
	TCOM-SC-006CX	06-OCT-21	13:38	Sediment	4				X	X	X			X								
	TCOM-SC-006DX	06-OCT-21	13:38	Sediment	4				X	X	X			X								

Drinking Water (DW) Samples[1] (client use)

Are samples taken from a Regulated DW System? ☐ YES ☑ NO

Are samples for human consumption/ use? ☐ YES ☑ NO

Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only)

SAMPLE RECEIPT DETAILS (ALS use only)

Cooling Method: ☐ NONE ☑ ICE ☐ ICE PACKS ☐ FROZEN ☐ COOLING INITIATED

Submission Comments identified on Sample Receipt Notification: ☐ YES ☐ NO

Cooler Custody Seals Intact: ☐ YES ☐ N/A Sample Custody Seals Intact: ☐ YES ☐ N/A

INITIAL COOLER TEMPERATURES °C				FINAL COOLER TEMPERATURES °C			
				14.2			

SHIPMENT RELEASE (client use)			INITIAL SHIPMENT RECEPTION (ALS use only)			FINAL SHIPMENT RECEPTION (ALS use only)		
Released by:	Date:	Time:	Received by:	Date:	Time:	Received by:	Date: 08/oct/2021	Time: 17:40

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION WHITE - LABORATORY COPY YELLOW - CLIENT COPY

AUG 2020 FRONT

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

1. If any water samples are taken from a **Regulated Drinking Water (DW) System**, please submit using an **Authorized DW COC form.**

Chain of Custody (

L2650174-COFC

COC Number: 20 - ~~0226~~ 025

Page 1 of 3

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Canada

Report To	Contact and company name below will appear on the final report
Company:	Golder Associates Ltd.
Contact:	Jill LaPorte
Phone:	905-723-2727
	Company address below will appear on the final report
Street:	100 Scotia Court
City/Province:	Whtby, Ontario
Postal Code:	L1N 8Y6
Invoice To	Same as Report To ☑ YES ☐ NO
	Copy of Invoice with Report ☑ YES ☐ NO
Company:	Golder Associates Ltd.
Contact:	Accounts Payables

Project Information

ALS Account # / Quote #:	15520 / Q86566
Job #:	1783886-8000-8006
PO / AFE:	RA
LSD:	
ALS Lab Work Order # (ALS use only):	L2650174

Reports / Recipients

Select Report Format: ☑ PDF ☑ EXCEL ☐ EDD (DIGITAL)
Merge QC/QCI Reports with COA ☑ YES ☐ NO ☐ N/A
☐ Compare Results to Criteria on Report - provide details below if box checked
Select Distribution: ☑ EMAIL ☐ MAIL ☐ FAX
Email 1 or Fax: Jill_LaPorte@golder.com
Email 2: shawn_seguin@golder.com
Email 3:

Invoice Recipients

Select Invoice Distribution: ☑ EMAIL ☐ MAIL ☐ FAX
Email 1 or Fax: Jill_LaPorte@golder.com
Email 2: canadaaccountspayableinvoices@golder.com

Oil and Gas Required Fields (client use)

AFE/Cost Center:	PO#
Major/Minor Code:	Routing Code:
Requisitioner:	
Location:	
ALS Contact: Amanda Overholster	Sampler:

Turnaround Time (TAT) Requested

☑ Routine [R] if received by 3pm M-F - no surcharges apply
☐ 4 day [P4] if received by 3pm M-F - 20% rush surcharge minimum
☐ 3 day [P3] if received by 3pm M-F - 25% rush surcharge minimum
☐ 2 day [P2] if received by 3pm M-F - 50% rush surcharge minimum
☐ 1 day [E] if received by 3pm M-F - 100% rush surcharge minimum
☐ Same day [E2] if received by 10am M-S - 200% rush surcharge. Additional fees may apply to rush requests on weekends, statutory holidays and non-routine tests

AFFIX ALS BARCODE LABEL HERE (ALS use only)

Date and Time Required for all E&P TATs: dd-mmm-yy hh:mm am/pm

For all tests with rush TATs requested, please contact your AM to confirm availability.

Analysis Request

Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below

ALS Sample # (ALS use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	NUMBER OF CONTAINERS	HWS-Boron (B-HWS-R511-WT)	Cr3 (CR-CR3-WT)	Cr6 (CR-CR6-IC-WT)	Mercury (HG-200.2-CVAA-WT)	Metals (MET-200.2-CCMS-WT)	PAH (PAH-CCME-SQG-WT)	MOISTURE-WT	TOC (TOC-WT)	PCB9 (PCB9-LOW-WT)		Specific Gravity (SPECGRAV-CL)	PSA (PSA-MUST-WT-SK)	Atterberg (ATTERBERG-SK)		SAMPLES ON HOLD	EXTENDED STORAGE REQUIRED	SUSPECTED HAZARD (see notes)
	TC1-SG-006	06-OCT-21	15:50	Sediment	7				X	X	X	X	X	X			X					
	TC1-SG-007	06-OCT-21	16:10	Sediment	7				X	X	X	X	X	X			X					
	TC5-SG-006	06-OCT-21	17:15	Sediment	7				X	X	X	X	X	X			X					
	TC5-SG-007	06-OCT-21	13:00	Sediment	7				X	X	X	X	X	X			X					
	TC1-SG-008	06-OCT-21	16:30	Sediment	7				X	X	X	X	X	X			X					
	PCE-SG-013	06-OCT-21	14:30	Sediment	7				X	X	X	X	X	X			X					
	PCE-SG-014	06-OCT-21	15:00	Sediment	7				X	X	X	X	X	X			X					
	DUP-209	06-OCT-21	—	Sediment	7				X	X	X	X	X	X			X					
	DUP-210	06-OCT-21	—	Sediment	7				X	X	X	X	X	X			X					
	TC4-SC-~~010~~010AX	06-OCT-21	15:30	Sediment	4				X	X	X			X								
	TC4-SC-010BX	06-OCT-21	15:30	Sediment	4				X	X	X			X								
	TC4-SC-010CX	06-OCT-21	15:30	Sediment	4				X	X	X			X								

Drinking Water (DW) Samples[1] (client use)

Are samples taken from a Regulated DW System? ☐ YES ☑ NO
Are samples for human consumption/ use? ☐ YES ☑ NO

Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only)

SAMPLE RECEIPT DETAILS (ALS use only)

Cooling Method: ☐ NONE ☒ ICE ☐ ICE PACKS ☐ FROZEN ☐ COOLING INITIATED
Submission Comments identified on Sample Receipt Notification: ☐ YES ☐ NO
Cooler Custody Seals Intact: ☐ YES ☐ N/A Sample Custody Seals Intact: ☐ YES ☐ N/A

INITIAL COOLER TEMPERATURES °C				FINAL COOLER TEMPERATURES °C			
17.4	11.9	10.2	13.5	14.2			

SHIPMENT RELEASE (client use)

Released by:	Date:	Time:

INITIAL SHIPMENT RECEPTION (ALS use only)

Received by:	Date:	Time:
Karan	10/8/2021	9:09

FINAL SHIPMENT RECEPTION (ALS use only)

Received by:	Date:	Time:
	08/Oct/2021	17:40

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

AUG 2020 FRONT

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

1. If any water samples are taken from a Regulated Drinking Water (DW) System, please submit using an Authorized DW COC form.

GOLDER ASSOCIATES LTD (Whitby)
ATTN: Jill LaPorte
100 Scotia Court
Whitby ON L1N 8Y6

Date Received: 08-OCT-21
Report Date: 25-OCT-21 15:20 (MT)
Version: FINAL

Client Phone: 905-723-2727

Certificate of Analysis

Lab Work Order #: L2650175

Project P.O. #: NOT SUBMITTED
Job Reference: 1783886-8000-8006
C of C Numbers:
Legal Site Desc:

Amanda Overholster
Account Manager

[This report shall not be reproduced except in full without the written authority of the Laboratory.]

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650175-1 TC1-SG-010 Sampled By: CLIENT on 07-OCT-21 @ 09:55 Matrix: SEDIMENT							
Physical Tests							
% Moisture	86.5		0.25	%	14-OCT-21	15-OCT-21	R5617661
Particle Size							
General Texture Class	Fine				18-OCT-21	18-OCT-21	R5623956
MUST PSA % > 75um	<1.0		1.0	%	18-OCT-21	18-OCT-21	R5623956
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0949		0.0010	g/g	22-OCT-21	22-OCT-21	R5627061
Total Organic Carbon	9.49		0.10	%	22-OCT-21	22-OCT-21	R5627061
Metals							
Aluminum (Al)	20700		50	ug/g	19-OCT-21	20-OCT-21	R5625366
Antimony (Sb)	0.74		0.10	ug/g	19-OCT-21	20-OCT-21	R5625366
Arsenic (As)	6.09		0.10	ug/g	19-OCT-21	20-OCT-21	R5625366
Barium (Ba)	265		0.50	ug/g	19-OCT-21	20-OCT-21	R5625366
Beryllium (Be)	0.83		0.10	ug/g	19-OCT-21	20-OCT-21	R5625366
Bismuth (Bi)	0.44		0.20	ug/g	19-OCT-21	20-OCT-21	R5625366
Boron (B)	12.5		5.0	ug/g	19-OCT-21	20-OCT-21	R5625366
Cadmium (Cd)	0.880		0.020	ug/g	19-OCT-21	20-OCT-21	R5625366
Calcium (Ca)	36300		50	ug/g	19-OCT-21	20-OCT-21	R5625366
Chromium (Cr)	827		0.50	ug/g	19-OCT-21	20-OCT-21	R5625366
Cobalt (Co)	12.8		0.10	ug/g	19-OCT-21	20-OCT-21	R5625366
Copper (Cu)	42.6		0.50	ug/g	19-OCT-21	20-OCT-21	R5625366
Iron (Fe)	29200		50	ug/g	19-OCT-21	20-OCT-21	R5625366
Lead (Pb)	113		0.50	ug/g	19-OCT-21	20-OCT-21	R5625366
Lithium (Li)	17.7		2.0	ug/g	19-OCT-21	20-OCT-21	R5625366
Magnesium (Mg)	12800		20	ug/g	19-OCT-21	20-OCT-21	R5625366
Manganese (Mn)	801		1.0	ug/g	19-OCT-21	20-OCT-21	R5625366
Mercury (Hg)	0.304		0.0050	ug/g	19-OCT-21	20-OCT-21	R5625185
Molybdenum (Mo)	1.22		0.10	ug/g	19-OCT-21	20-OCT-21	R5625366
Nickel (Ni)	29.0		0.50	ug/g	19-OCT-21	20-OCT-21	R5625366
Phosphorus (P)	1100		50	ug/g	19-OCT-21	20-OCT-21	R5625366
Potassium (K)	4380		100	ug/g	19-OCT-21	20-OCT-21	R5625366
Selenium (Se)	1.27		0.20	ug/g	19-OCT-21	20-OCT-21	R5625366
Silver (Ag)	0.55		0.10	ug/g	19-OCT-21	20-OCT-21	R5625366
Sodium (Na)	621		50	ug/g	19-OCT-21	20-OCT-21	R5625366
Strontium (Sr)	235		0.50	ug/g	19-OCT-21	20-OCT-21	R5625366
Sulfur (S)	9700		1000	ug/g	19-OCT-21	20-OCT-21	R5625366
Thallium (Tl)	0.329		0.050	ug/g	19-OCT-21	20-OCT-21	R5625366
Tin (Sn)	5.2		2.0	ug/g	19-OCT-21	20-OCT-21	R5625366
Titanium (Ti)	1210		1.0	ug/g	19-OCT-21	20-OCT-21	R5625366
Tungsten (W)	<0.50		0.50	ug/g	19-OCT-21	20-OCT-21	R5625366
Uranium (U)	1.02		0.050	ug/g	19-OCT-21	20-OCT-21	R5625366
Vanadium (V)	49.5		0.20	ug/g	19-OCT-21	20-OCT-21	R5625366
Zinc (Zn)	158		2.0	ug/g	19-OCT-21	20-OCT-21	R5625366

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650175-1 TC1-SG-010 Sampled By: CLIENT on 07-OCT-21 @ 09:55 Matrix: SEDIMENT							
Metals							
Zirconium (Zr)	5.5		1.0	ug/g	19-OCT-21	20-OCT-21	R5625366
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	<0.038	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Acenaphthylene	0.252	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Acridine	<0.075	DLHM	0.075	ug/g	19-OCT-21	21-OCT-21	R5625700
Anthracene	0.101	DLHM	0.030	ug/g	19-OCT-21	21-OCT-21	R5625700
Benzo(a)anthracene	0.348	R	0.075	ug/g	19-OCT-21	21-OCT-21	R5625700
Benzo(a)pyrene	0.597	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Benzo(b&j)fluoranthene	0.646	DLHM	0.075	ug/g	19-OCT-21	21-OCT-21	R5625700
Benzo(g,h,i)perylene	0.345	DLHM	0.075	ug/g	19-OCT-21	21-OCT-21	R5625700
Benzo(k)fluoranthene	0.200	DLHM	0.075	ug/g	19-OCT-21	21-OCT-21	R5625700
Chrysene	0.428	DLHM	0.075	ug/g	19-OCT-21	21-OCT-21	R5625700
Dibenz(a,h)anthracene	0.093	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Fluoroanthene	0.427	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Fluorene	0.051	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Indeno(1,2,3-cd)pyrene	0.317	DLHM	0.075	ug/g	19-OCT-21	21-OCT-21	R5625700
1-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
2-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Naphthalene	<0.038	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Phenanthrene	0.179	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Pyrene	0.584	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Quinoline	<0.038	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Surrogate: 2-Fluorobiphenyl	91.1		60-140	%	19-OCT-21	21-OCT-21	R5625700
Surrogate: d14-Terphenyl	88.1		60-140	%	19-OCT-21	21-OCT-21	R5625700
B(a)P Total Potency Equivalent	0.848		0.053	ug/g	19-OCT-21	21-OCT-21	R5625700
IACR (CCME)	8.73		0.75		19-OCT-21	21-OCT-21	R5625700
Polychlorinated Biphenyls							
Aroclor 1016	<0.034	DLHM	0.034	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1221	<0.034	DLHM	0.034	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1232	<0.034	DLHM	0.034	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1242	<0.034	DLHM	0.034	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1248	<0.034	DLHM	0.034	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1254	0.158	DLHM	0.034	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1260	0.327	DLHM	0.034	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1262	<0.034	DLHM	0.034	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1268	<0.034	DLHM	0.034	mg/kg	20-OCT-21	20-OCT-21	R5625592
Total Polychlorinated Biphenyls	0.48		0.10	mg/kg	20-OCT-21	20-OCT-21	R5625592
Surrogate: d14-Terphenyl	90.9		50-140	%	20-OCT-21	20-OCT-21	R5625592
L2650175-2 TC1-SG-009 Sampled By: CLIENT on 07-OCT-21 @ 09:40 Matrix: SEDIMENT							
Physical Tests							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650175-2 TC1-SG-009 Sampled By: CLIENT on 07-OCT-21 @ 09:40 Matrix: SEDIMENT							
Physical Tests							
% Moisture	86.4		0.25	%	14-OCT-21	15-OCT-21	R5617661
Particle Size							
General Texture Class	Fine				18-OCT-21	18-OCT-21	R5623956
MUST PSA % > 75um	1.2		1.0	%	18-OCT-21	18-OCT-21	R5623956
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0942		0.0010	g/g	22-OCT-21	22-OCT-21	R5627061
Total Organic Carbon	9.42		0.10	%	22-OCT-21	22-OCT-21	R5627061
Metals							
Aluminum (Al)	21800	DLM	100	ug/g	20-OCT-21	20-OCT-21	R5625485
Antimony (Sb)	0.95	DLM	0.20	ug/g	20-OCT-21	20-OCT-21	R5625485
Arsenic (As)	7.30	DLM	0.20	ug/g	20-OCT-21	20-OCT-21	R5625485
Barium (Ba)	297	DLM	1.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Beryllium (Be)	0.69	DLM	0.20	ug/g	20-OCT-21	20-OCT-21	R5625485
Bismuth (Bi)	0.43	DLM	0.40	ug/g	20-OCT-21	20-OCT-21	R5625485
Boron (B)	12	DLM	10	ug/g	20-OCT-21	20-OCT-21	R5625485
Cadmium (Cd)	0.833	DLM	0.040	ug/g	20-OCT-21	20-OCT-21	R5625485
Calcium (Ca)	68100	DLM	100	ug/g	20-OCT-21	20-OCT-21	R5625485
Chromium (Cr)	963	DLM	1.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Cobalt (Co)	13.5	DLM	0.20	ug/g	20-OCT-21	20-OCT-21	R5625485
Copper (Cu)	44.3	DLM	1.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Iron (Fe)	30000	DLM	100	ug/g	20-OCT-21	20-OCT-21	R5625485
Lead (Pb)	113	DLM	1.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Lithium (Li)	15.0	DLM	4.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Magnesium (Mg)	14600	DLM	40	ug/g	20-OCT-21	20-OCT-21	R5625485
Manganese (Mn)	1020	DLM	2.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Mercury (Hg)	0.310	DLM	0.010	ug/g	20-OCT-21	21-OCT-21	R5625980
Molybdenum (Mo)	1.27	DLM	0.20	ug/g	20-OCT-21	20-OCT-21	R5625485
Nickel (Ni)	28.9	DLM	1.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Phosphorus (P)	1200	DLM	100	ug/g	20-OCT-21	20-OCT-21	R5625485
Potassium (K)	5190	DLM	200	ug/g	20-OCT-21	20-OCT-21	R5625485
Selenium (Se)	1.31	DLM	0.40	ug/g	20-OCT-21	20-OCT-21	R5625485
Silver (Ag)	0.59	DLM	0.20	ug/g	20-OCT-21	20-OCT-21	R5625485
Sodium (Na)	760	DLM	100	ug/g	20-OCT-21	20-OCT-21	R5625485
Strontium (Sr)	445	DLM	1.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Sulfur (S)	9700	DLM	2000	ug/g	20-OCT-21	20-OCT-21	R5625485
Thallium (Tl)	0.30	DLM	0.10	ug/g	20-OCT-21	20-OCT-21	R5625485
Tin (Sn)	5.1	DLM	4.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Titanium (Ti)	1320	DLM	2.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Tungsten (W)	<1.0	DLM	1.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Uranium (U)	1.00	DLM	0.10	ug/g	20-OCT-21	20-OCT-21	R5625485
Vanadium (V)	52.1	DLM	0.40	ug/g	20-OCT-21	20-OCT-21	R5625485
Zinc (Zn)	177	DLM	4.0	ug/g	20-OCT-21	20-OCT-21	R5625485

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650175-2 TC1-SG-009 Sampled By: CLIENT on 07-OCT-21 @ 09:40 Matrix: SEDIMENT							
Metals							
Zirconium (Zr)	4.3	DLM	2.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.039	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Acenaphthylene	0.238	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Acridine	<0.075	DLHM	0.075	ug/g	19-OCT-21	21-OCT-21	R5625700
Anthracene	0.094	DLHM	0.030	ug/g	19-OCT-21	21-OCT-21	R5625700
Benzo(a)anthracene	0.342	R	0.075	ug/g	19-OCT-21	21-OCT-21	R5625700
Benzo(a)pyrene	0.584	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Benzo(b&j)fluoranthene	0.623	DLHM	0.075	ug/g	19-OCT-21	21-OCT-21	R5625700
Benzo(g,h,i)perylene	0.384	DLHM	0.075	ug/g	19-OCT-21	21-OCT-21	R5625700
Benzo(k)fluoranthene	0.216	DLHM	0.075	ug/g	19-OCT-21	21-OCT-21	R5625700
Chrysene	0.429	DLHM	0.075	ug/g	19-OCT-21	21-OCT-21	R5625700
Dibenz(a,h)anthracene	0.098	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Fluoroanthene	0.434	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Fluorene	0.050	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Indeno(1,2,3-cd)pyrene	0.360	DLHM	0.075	ug/g	19-OCT-21	21-OCT-21	R5625700
1-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
2-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Naphthalene	<0.038	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Phenanthrene	0.188	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Pyrene	0.580	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Quinoline	<0.038	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Surrogate: 2-Fluorobiphenyl	94.5		60-140	%	19-OCT-21	21-OCT-21	R5625700
Surrogate: d14-Terphenyl	89.6		60-140	%	19-OCT-21	21-OCT-21	R5625700
B(a)P Total Potency Equivalent	0.844		0.053	ug/g	19-OCT-21	21-OCT-21	R5625700
IACR (CCME)	8.68		0.75		19-OCT-21	21-OCT-21	R5625700
Polychlorinated Biphenyls							
Aroclor 1016	<0.034	DLHM	0.034	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1221	<0.034	DLHM	0.034	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1232	<0.034	DLHM	0.034	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1242	<0.034	DLHM	0.034	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1248	<0.034	DLHM	0.034	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1254	0.143	DLHM	0.034	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1260	0.323	DLHM	0.034	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1262	<0.034	DLHM	0.034	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1268	<0.034	DLHM	0.034	mg/kg	20-OCT-21	20-OCT-21	R5625592
Total Polychlorinated Biphenyls	0.47		0.10	mg/kg	20-OCT-21	20-OCT-21	R5625592
Surrogate: d14-Terphenyl	98.3		50-140	%	20-OCT-21	20-OCT-21	R5625592
L2650175-3 TC1-SG-011 Sampled By: CLIENT on 07-OCT-21 @ 10:15 Matrix: SEDIMENT							
Physical Tests							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650175-3 TC1-SG-011 Sampled By: CLIENT on 07-OCT-21 @ 10:15 Matrix: SEDIMENT							
Physical Tests							
% Moisture	88.3		0.25	%	14-OCT-21	15-OCT-21	R5617661
Particle Size							
General Texture Class	Fine				18-OCT-21	18-OCT-21	R5623956
MUST PSA % > 75um	<1.0		1.0	%	18-OCT-21	18-OCT-21	R5623956
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0969		0.0010	g/g	25-OCT-21	25-OCT-21	R5628208
Total Organic Carbon	9.69		0.10	%	25-OCT-21	25-OCT-21	R5628208
Metals							
Aluminum (Al)	19600		50	ug/g	19-OCT-21	20-OCT-21	R5625366
Antimony (Sb)	0.50		0.10	ug/g	19-OCT-21	20-OCT-21	R5625366
Arsenic (As)	4.30		0.10	ug/g	19-OCT-21	20-OCT-21	R5625366
Barium (Ba)	267		0.50	ug/g	19-OCT-21	20-OCT-21	R5625366
Beryllium (Be)	0.71		0.10	ug/g	19-OCT-21	20-OCT-21	R5625366
Bismuth (Bi)	0.23		0.20	ug/g	19-OCT-21	20-OCT-21	R5625366
Boron (B)	11.4		5.0	ug/g	19-OCT-21	20-OCT-21	R5625366
Cadmium (Cd)	0.741		0.020	ug/g	19-OCT-21	20-OCT-21	R5625366
Calcium (Ca)	44600		50	ug/g	19-OCT-21	20-OCT-21	R5625366
Chromium (Cr)	371		0.50	ug/g	19-OCT-21	20-OCT-21	R5625366
Cobalt (Co)	11.6		0.10	ug/g	19-OCT-21	20-OCT-21	R5625366
Copper (Cu)	34.5		0.50	ug/g	19-OCT-21	20-OCT-21	R5625366
Iron (Fe)	26600		50	ug/g	19-OCT-21	20-OCT-21	R5625366
Lead (Pb)	65.4		0.50	ug/g	19-OCT-21	20-OCT-21	R5625366
Lithium (Li)	15.0		2.0	ug/g	19-OCT-21	20-OCT-21	R5625366
Magnesium (Mg)	11300		20	ug/g	19-OCT-21	20-OCT-21	R5625366
Manganese (Mn)	868		1.0	ug/g	19-OCT-21	20-OCT-21	R5625366
Mercury (Hg)	0.150		0.0050	ug/g	19-OCT-21	20-OCT-21	R5625185
Molybdenum (Mo)	1.10		0.10	ug/g	19-OCT-21	20-OCT-21	R5625366
Nickel (Ni)	25.7		0.50	ug/g	19-OCT-21	20-OCT-21	R5625366
Phosphorus (P)	1040		50	ug/g	19-OCT-21	20-OCT-21	R5625366
Potassium (K)	3930		100	ug/g	19-OCT-21	20-OCT-21	R5625366
Selenium (Se)	1.24		0.20	ug/g	19-OCT-21	20-OCT-21	R5625366
Silver (Ag)	0.27		0.10	ug/g	19-OCT-21	20-OCT-21	R5625366
Sodium (Na)	586		50	ug/g	19-OCT-21	20-OCT-21	R5625366
Strontium (Sr)	296		0.50	ug/g	19-OCT-21	20-OCT-21	R5625366
Sulfur (S)	9300		1000	ug/g	19-OCT-21	20-OCT-21	R5625366
Thallium (Tl)	0.278		0.050	ug/g	19-OCT-21	20-OCT-21	R5625366
Tin (Sn)	3.4		2.0	ug/g	19-OCT-21	20-OCT-21	R5625366
Titanium (Ti)	1120		1.0	ug/g	19-OCT-21	20-OCT-21	R5625366
Tungsten (W)	<0.50		0.50	ug/g	19-OCT-21	20-OCT-21	R5625366
Uranium (U)	0.940		0.050	ug/g	19-OCT-21	20-OCT-21	R5625366
Vanadium (V)	44.3		0.20	ug/g	19-OCT-21	20-OCT-21	R5625366
Zinc (Zn)	127		2.0	ug/g	19-OCT-21	20-OCT-21	R5625366

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650175-3 TC1-SG-011 Sampled By: CLIENT on 07-OCT-21 @ 10:15 Matrix: SEDIMENT							
Metals							
Zirconium (Zr)	5.3		1.0	ug/g	19-OCT-21	20-OCT-21	R5625366
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	<0.038	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Acenaphthylene	0.139	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Acridine	<0.075	DLHM	0.075	ug/g	19-OCT-21	21-OCT-21	R5625700
Anthracene	0.055	DLHM	0.030	ug/g	19-OCT-21	21-OCT-21	R5625700
Benzo(a)anthracene	0.207	R	0.075	ug/g	19-OCT-21	21-OCT-21	R5625700
Benzo(a)pyrene	0.348	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Benzo(b&j)fluoranthene	0.357	DLHM	0.075	ug/g	19-OCT-21	21-OCT-21	R5625700
Benzo(g,h,i)perylene	0.189	DLHM	0.075	ug/g	19-OCT-21	21-OCT-21	R5625700
Benzo(k)fluoranthene	0.124	DLHM	0.075	ug/g	19-OCT-21	21-OCT-21	R5625700
Chrysene	0.273	DLHM	0.075	ug/g	19-OCT-21	21-OCT-21	R5625700
Dibenz(a,h)anthracene	0.049	R	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Fluoroanthene	0.310	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Fluorene	<0.038	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Indeno(1,2,3-cd)pyrene	0.160	DLHM	0.075	ug/g	19-OCT-21	21-OCT-21	R5625700
1-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
2-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Naphthalene	<0.038	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Phenanthrene	0.122	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Pyrene	0.377	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Quinoline	<0.038	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Surrogate: 2-Fluorobiphenyl	94.8		60-140	%	19-OCT-21	21-OCT-21	R5625700
Surrogate: d14-Terphenyl	79.8		60-140	%	19-OCT-21	21-OCT-21	R5625700
B(a)P Total Potency Equivalent	0.486		0.053	ug/g	19-OCT-21	21-OCT-21	R5625700
IACR (CCME)	5.00		0.75		19-OCT-21	21-OCT-21	R5625700
Polychlorinated Biphenyls							
Aroclor 1016	<0.034	DLHM	0.034	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1221	<0.034	DLHM	0.034	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1232	<0.034	DLHM	0.034	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1242	<0.034	DLHM	0.034	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1248	<0.034	DLHM	0.034	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1254	0.085	DLHM	0.034	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1260	0.159	DLHM	0.034	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1262	<0.034	DLHM	0.034	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1268	<0.034	DLHM	0.034	mg/kg	20-OCT-21	20-OCT-21	R5625592
Total Polychlorinated Biphenyls	0.24		0.10	mg/kg	20-OCT-21	20-OCT-21	R5625592
Surrogate: d14-Terphenyl	91.1		50-140	%	20-OCT-21	20-OCT-21	R5625592
L2650175-4 TC1-SG-013 Sampled By: CLIENT on 07-OCT-21 @ 10:35 Matrix: SEDIMENT							
Physical Tests							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650175-4 TC1-SG-013 Sampled By: CLIENT on 07-OCT-21 @ 10:35 Matrix: SEDIMENT							
Physical Tests							
% Moisture	88.3		0.25	%	14-OCT-21	15-OCT-21	R5617661
Particle Size							
General Texture Class	Fine				18-OCT-21	18-OCT-21	R5623956
MUST PSA % > 75um	<1.0		1.0	%	18-OCT-21	18-OCT-21	R5623956
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.110		0.0010	g/g	22-OCT-21	22-OCT-21	R5627061
Total Organic Carbon	11.0		0.10	%	22-OCT-21	22-OCT-21	R5627061
Metals							
Aluminum (Al)	24000	DLM	100	ug/g	20-OCT-21	20-OCT-21	R5625485
Antimony (Sb)	0.75	DLM	0.20	ug/g	20-OCT-21	20-OCT-21	R5625485
Arsenic (As)	6.09	DLM	0.20	ug/g	20-OCT-21	20-OCT-21	R5625485
Barium (Ba)	302	DLM	1.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Beryllium (Be)	0.75	DLM	0.20	ug/g	20-OCT-21	20-OCT-21	R5625485
Bismuth (Bi)	<0.40	DLM	0.40	ug/g	20-OCT-21	20-OCT-21	R5625485
Boron (B)	13	DLM	10	ug/g	20-OCT-21	20-OCT-21	R5625485
Cadmium (Cd)	0.874	DLM	0.040	ug/g	20-OCT-21	20-OCT-21	R5625485
Calcium (Ca)	40600	DLM	100	ug/g	20-OCT-21	20-OCT-21	R5625485
Chromium (Cr)	634	DLM	1.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Cobalt (Co)	13.7	DLM	0.20	ug/g	20-OCT-21	20-OCT-21	R5625485
Copper (Cu)	43.5	DLM	1.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Iron (Fe)	31900	DLM	100	ug/g	20-OCT-21	20-OCT-21	R5625485
Lead (Pb)	91.8	DLM	1.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Lithium (Li)	16.1	DLM	4.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Magnesium (Mg)	13500	DLM	40	ug/g	20-OCT-21	20-OCT-21	R5625485
Manganese (Mn)	1110	DLM	2.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Mercury (Hg)	0.272	DLM	0.010	ug/g	20-OCT-21	21-OCT-21	R5625980
Molybdenum (Mo)	1.24	DLM	0.20	ug/g	20-OCT-21	20-OCT-21	R5625485
Nickel (Ni)	30.7	DLM	1.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Phosphorus (P)	1210	DLM	100	ug/g	20-OCT-21	20-OCT-21	R5625485
Potassium (K)	5110	DLM	200	ug/g	20-OCT-21	20-OCT-21	R5625485
Selenium (Se)	1.49	DLM	0.40	ug/g	20-OCT-21	20-OCT-21	R5625485
Silver (Ag)	0.58	DLM	0.20	ug/g	20-OCT-21	20-OCT-21	R5625485
Sodium (Na)	770	DLM	100	ug/g	20-OCT-21	20-OCT-21	R5625485
Strontium (Sr)	268	DLM	1.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Sulfur (S)	10500	DLM	2000	ug/g	20-OCT-21	20-OCT-21	R5625485
Thallium (Tl)	0.32	DLM	0.10	ug/g	20-OCT-21	20-OCT-21	R5625485
Tin (Sn)	4.8	DLM	4.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Titanium (Ti)	1460	DLM	2.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Tungsten (W)	<1.0	DLM	1.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Uranium (U)	1.15	DLM	0.10	ug/g	20-OCT-21	20-OCT-21	R5625485
Vanadium (V)	53.7	DLM	0.40	ug/g	20-OCT-21	20-OCT-21	R5625485
Zinc (Zn)	164	DLM	4.0	ug/g	20-OCT-21	20-OCT-21	R5625485

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650175-4 TC1-SG-013 Sampled By: CLIENT on 07-OCT-21 @ 10:35 Matrix: SEDIMENT							
Metals							
Zirconium (Zr)	4.9	DLM	2.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	<0.038	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Acenaphthylene	0.169	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Acridine	<0.075	DLHM	0.075	ug/g	19-OCT-21	21-OCT-21	R5625700
Anthracene	0.085	DLHM	0.030	ug/g	19-OCT-21	21-OCT-21	R5625700
Benzo(a)anthracene	0.278	R	0.075	ug/g	19-OCT-21	21-OCT-21	R5625700
Benzo(a)pyrene	0.438	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Benzo(b&j)fluoranthene	0.500	DLHM	0.075	ug/g	19-OCT-21	21-OCT-21	R5625700
Benzo(g,h,i)perylene	0.260	DLHM	0.075	ug/g	19-OCT-21	21-OCT-21	R5625700
Benzo(k)fluoranthene	0.181	DLHM	0.075	ug/g	19-OCT-21	21-OCT-21	R5625700
Chrysene	0.332	DLHM	0.075	ug/g	19-OCT-21	21-OCT-21	R5625700
Dibenz(a,h)anthracene	0.069	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Fluoroanthene	0.362	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Fluorene	0.045	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Indeno(1,2,3-cd)pyrene	0.245	DLHM	0.075	ug/g	19-OCT-21	21-OCT-21	R5625700
1-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
2-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Naphthalene	<0.038	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Phenanthrene	0.146	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Pyrene	0.458	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Quinoline	<0.038	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Surrogate: 2-Fluorobiphenyl	91.2		60-140	%	19-OCT-21	21-OCT-21	R5625700
Surrogate: d14-Terphenyl	86.9		60-140	%	19-OCT-21	21-OCT-21	R5625700
B(a)P Total Potency Equivalent	0.634		0.053	ug/g	19-OCT-21	21-OCT-21	R5625700
IACR (CCME)	6.87		0.75		19-OCT-21	21-OCT-21	R5625700
Polychlorinated Biphenyls							
Aroclor 1016	<0.034	DLHM	0.034	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1221	<0.034	DLHM	0.034	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1232	<0.034	DLHM	0.034	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1242	<0.034	DLHM	0.034	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1248	<0.034	DLHM	0.034	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1254	0.126	DLHM	0.034	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1260	0.234	DLHM	0.034	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1262	<0.034	DLHM	0.034	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1268	<0.034	DLHM	0.034	mg/kg	20-OCT-21	20-OCT-21	R5625592
Total Polychlorinated Biphenyls	0.36		0.10	mg/kg	20-OCT-21	20-OCT-21	R5625592
Surrogate: d14-Terphenyl	81.6		50-140	%	20-OCT-21	20-OCT-21	R5625592
L2650175-5 TC1-SG-012 Sampled By: CLIENT on 07-OCT-21 @ 10:50 Matrix: SEDIMENT							
Physical Tests							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650175-5 TC1-SG-012 Sampled By: CLIENT on 07-OCT-21 @ 10:50 Matrix: SEDIMENT							
Physical Tests							
% Moisture	85.8		0.25	%	14-OCT-21	15-OCT-21	R5617661
Particle Size							
General Texture Class	Fine				18-OCT-21	18-OCT-21	R5623956
MUST PSA % > 75um	1.3		1.0	%	18-OCT-21	18-OCT-21	R5623956
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.103		0.0010	g/g	22-OCT-21	22-OCT-21	R5627061
Total Organic Carbon	10.3		0.10	%	22-OCT-21	22-OCT-21	R5627061
Metals							
Aluminum (Al)	22900	DLM	100	ug/g	20-OCT-21	20-OCT-21	R5625485
Antimony (Sb)	1.08	DLM	0.20	ug/g	20-OCT-21	20-OCT-21	R5625485
Arsenic (As)	8.66	DLM	0.20	ug/g	20-OCT-21	20-OCT-21	R5625485
Barium (Ba)	292	DLM	1.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Beryllium (Be)	0.78	DLM	0.20	ug/g	20-OCT-21	20-OCT-21	R5625485
Bismuth (Bi)	0.57	DLM	0.40	ug/g	20-OCT-21	20-OCT-21	R5625485
Boron (B)	13	DLM	10	ug/g	20-OCT-21	20-OCT-21	R5625485
Cadmium (Cd)	0.946	DLM	0.040	ug/g	20-OCT-21	20-OCT-21	R5625485
Calcium (Ca)	44800	DLM	100	ug/g	20-OCT-21	20-OCT-21	R5625485
Chromium (Cr)	1020	DLM	1.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Cobalt (Co)	15.3	DLM	0.20	ug/g	20-OCT-21	20-OCT-21	R5625485
Copper (Cu)	50.9	DLM	1.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Iron (Fe)	32100	DLM	100	ug/g	20-OCT-21	20-OCT-21	R5625485
Lead (Pb)	132	DLM	1.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Lithium (Li)	17.0	DLM	4.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Magnesium (Mg)	14700	DLM	40	ug/g	20-OCT-21	20-OCT-21	R5625485
Manganese (Mn)	1000	DLM	2.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Mercury (Hg)	0.446	DLM	0.010	ug/g	20-OCT-21	21-OCT-21	R5625980
Molybdenum (Mo)	1.23	DLM	0.20	ug/g	20-OCT-21	20-OCT-21	R5625485
Nickel (Ni)	31.7	DLM	1.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Phosphorus (P)	1240	DLM	100	ug/g	20-OCT-21	20-OCT-21	R5625485
Potassium (K)	5210	DLM	200	ug/g	20-OCT-21	20-OCT-21	R5625485
Selenium (Se)	1.49	DLM	0.40	ug/g	20-OCT-21	20-OCT-21	R5625485
Silver (Ag)	0.95	DLM	0.20	ug/g	20-OCT-21	20-OCT-21	R5625485
Sodium (Na)	800	DLM	100	ug/g	20-OCT-21	20-OCT-21	R5625485
Strontium (Sr)	272	DLM	1.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Sulfur (S)	10700	DLM	2000	ug/g	20-OCT-21	20-OCT-21	R5625485
Thallium (Tl)	0.35	DLM	0.10	ug/g	20-OCT-21	20-OCT-21	R5625485
Tin (Sn)	6.1	DLM	4.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Titanium (Ti)	1460	DLM	2.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Tungsten (W)	<1.0	DLM	1.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Uranium (U)	1.08	DLM	0.10	ug/g	20-OCT-21	20-OCT-21	R5625485
Vanadium (V)	54.9	DLM	0.40	ug/g	20-OCT-21	20-OCT-21	R5625485
Zinc (Zn)	188	DLM	4.0	ug/g	20-OCT-21	20-OCT-21	R5625485

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650175-5 TC1-SG-012 Sampled By: CLIENT on 07-OCT-21 @ 10:50 Matrix: SEDIMENT							
Metals							
Zirconium (Zr)	4.8	DLM	2.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.041	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Acenaphthylene	0.274	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Acridine	<0.075	DLHM	0.075	ug/g	19-OCT-21	21-OCT-21	R5625700
Anthracene	0.120	DLHM	0.030	ug/g	19-OCT-21	21-OCT-21	R5625700
Benzo(a)anthracene	0.416	R	0.075	ug/g	19-OCT-21	21-OCT-21	R5625700
Benzo(a)pyrene	0.698	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Benzo(b&j)fluoranthene	0.741	DLHM	0.075	ug/g	19-OCT-21	21-OCT-21	R5625700
Benzo(g,h,i)perylene	0.397	DLHM	0.075	ug/g	19-OCT-21	21-OCT-21	R5625700
Benzo(k)fluoranthene	0.257	DLHM	0.075	ug/g	19-OCT-21	21-OCT-21	R5625700
Chrysene	0.495	DLHM	0.075	ug/g	19-OCT-21	21-OCT-21	R5625700
Dibenz(a,h)anthracene	0.102	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Fluoroanthene	0.504	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Fluorene	0.055	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Indeno(1,2,3-cd)pyrene	0.348	DLHM	0.075	ug/g	19-OCT-21	21-OCT-21	R5625700
1-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
2-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Naphthalene	<0.038	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Phenanthrene	0.209	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Pyrene	0.694	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Quinoline	<0.038	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Surrogate: 2-Fluorobiphenyl	93.3		60-140	%	19-OCT-21	21-OCT-21	R5625700
Surrogate: d14-Terphenyl	89.3		60-140	%	19-OCT-21	21-OCT-21	R5625700
B(a)P Total Potency Equivalent	0.985		0.053	ug/g	19-OCT-21	21-OCT-21	R5625700
IACR (CCME)	10.2		0.75		19-OCT-21	21-OCT-21	R5625700
Polychlorinated Biphenyls							
Aroclor 1016	<0.034	DLHM	0.034	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1221	<0.034	DLHM	0.034	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1232	<0.034	DLHM	0.034	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1242	<0.034	DLHM	0.034	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1248	<0.034	DLHM	0.034	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1254	0.197	DLHM	0.034	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1260	0.370	DLHM	0.034	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1262	<0.034	DLHM	0.034	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1268	<0.034	DLHM	0.034	mg/kg	20-OCT-21	20-OCT-21	R5625592
Total Polychlorinated Biphenyls	0.57		0.10	mg/kg	20-OCT-21	20-OCT-21	R5625592
Surrogate: d14-Terphenyl	96.9		50-140	%	20-OCT-21	20-OCT-21	R5625592
L2650175-6 TC5-SG-005 Sampled By: CLIENT on 07-OCT-21 @ 11:50 Matrix: SEDIMENT							
Physical Tests							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650175-6 TC5-SG-005 Sampled By: CLIENT on 07-OCT-21 @ 11:50 Matrix: SEDIMENT							
Physical Tests							
% Moisture	86.9		0.25	%	14-OCT-21	15-OCT-21	R5617676
Particle Size							
General Texture Class	Fine				18-OCT-21	18-OCT-21	R5623956
MUST PSA % > 75um	5.5		1.0	%	18-OCT-21	18-OCT-21	R5623956
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0948		0.0010	g/g	25-OCT-21	25-OCT-21	R5628208
Total Organic Carbon	9.48		0.10	%	25-OCT-21	25-OCT-21	R5628208
Metals							
Aluminum (Al)	23000	DLM	100	ug/g	20-OCT-21	20-OCT-21	R5625485
Antimony (Sb)	0.54	DLM	0.20	ug/g	20-OCT-21	20-OCT-21	R5625485
Arsenic (As)	4.81	DLM	0.20	ug/g	20-OCT-21	20-OCT-21	R5625485
Barium (Ba)	285	DLM	1.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Beryllium (Be)	0.72	DLM	0.20	ug/g	20-OCT-21	20-OCT-21	R5625485
Bismuth (Bi)	<0.40	DLM	0.40	ug/g	20-OCT-21	20-OCT-21	R5625485
Boron (B)	12	DLM	10	ug/g	20-OCT-21	20-OCT-21	R5625485
Cadmium (Cd)	0.693	DLM	0.040	ug/g	20-OCT-21	20-OCT-21	R5625485
Calcium (Ca)	64200	DLM	100	ug/g	20-OCT-21	20-OCT-21	R5625485
Chromium (Cr)	169	DLM	1.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Cobalt (Co)	12.5	DLM	0.20	ug/g	20-OCT-21	20-OCT-21	R5625485
Copper (Cu)	40.7	DLM	1.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Iron (Fe)	29900	DLM	100	ug/g	20-OCT-21	20-OCT-21	R5625485
Lead (Pb)	51.6	DLM	1.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Lithium (Li)	16.5	DLM	4.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Magnesium (Mg)	11800	DLM	40	ug/g	20-OCT-21	20-OCT-21	R5625485
Manganese (Mn)	1210	DLM	2.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Mercury (Hg)	0.147	DLM	0.010	ug/g	20-OCT-21	21-OCT-21	R5625980
Molybdenum (Mo)	1.08	DLM	0.20	ug/g	20-OCT-21	20-OCT-21	R5625485
Nickel (Ni)	29.8	DLM	1.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Phosphorus (P)	1130	DLM	100	ug/g	20-OCT-21	20-OCT-21	R5625485
Potassium (K)	4560	DLM	200	ug/g	20-OCT-21	20-OCT-21	R5625485
Selenium (Se)	1.45	DLM	0.40	ug/g	20-OCT-21	20-OCT-21	R5625485
Silver (Ag)	0.29	DLM	0.20	ug/g	20-OCT-21	20-OCT-21	R5625485
Sodium (Na)	760	DLM	100	ug/g	20-OCT-21	20-OCT-21	R5625485
Strontium (Sr)	294	DLM	1.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Sulfur (S)	8400	DLM	2000	ug/g	20-OCT-21	20-OCT-21	R5625485
Thallium (Tl)	0.32	DLM	0.10	ug/g	20-OCT-21	20-OCT-21	R5625485
Tin (Sn)	<4.0	DLM	4.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Titanium (Ti)	1340	DLM	2.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Tungsten (W)	<1.0	DLM	1.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Uranium (U)	1.03	DLM	0.10	ug/g	20-OCT-21	20-OCT-21	R5625485
Vanadium (V)	48.1	DLM	0.40	ug/g	20-OCT-21	20-OCT-21	R5625485
Zinc (Zn)	145	DLM	4.0	ug/g	20-OCT-21	20-OCT-21	R5625485

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650175-6 TC5-SG-005 Sampled By: CLIENT on 07-OCT-21 @ 11:50 Matrix: SEDIMENT							
Metals							
Zirconium (Zr)	3.9	DLM	2.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.099	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Acenaphthylene	0.491	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Acridine	<0.075	DLHM	0.075	ug/g	19-OCT-21	21-OCT-21	R5625700
Anthracene	0.619	DLHM	0.030	ug/g	19-OCT-21	21-OCT-21	R5625700
Benzo(a)anthracene	1.12	R	0.075	ug/g	19-OCT-21	21-OCT-21	R5625700
Benzo(a)pyrene	1.49	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Benzo(b&j)fluoranthene	1.28	DLHM	0.075	ug/g	19-OCT-21	21-OCT-21	R5625700
Benzo(g,h,i)perylene	0.682	DLHM	0.075	ug/g	19-OCT-21	21-OCT-21	R5625700
Benzo(k)fluoranthene	0.389	DLHM	0.075	ug/g	19-OCT-21	21-OCT-21	R5625700
Chrysene	1.25	DLHM	0.075	ug/g	19-OCT-21	21-OCT-21	R5625700
Dibenz(a,h)anthracene	0.197	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Fluoroanthene	1.17	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Fluorene	0.107	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Indeno(1,2,3-cd)pyrene	0.608	DLHM	0.075	ug/g	19-OCT-21	21-OCT-21	R5625700
1-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
2-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Naphthalene	<0.038	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Phenanthrene	0.419	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Pyrene	1.71	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Quinoline	<0.038	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Surrogate: 2-Fluorobiphenyl	88.5		60-140	%	19-OCT-21	21-OCT-21	R5625700
Surrogate: d14-Terphenyl	79.5		60-140	%	19-OCT-21	21-OCT-21	R5625700
B(a)P Total Potency Equivalent	2.05		0.053	ug/g	19-OCT-21	21-OCT-21	R5625700
IACR (CCME)	19.6		0.75		19-OCT-21	21-OCT-21	R5625700
Polychlorinated Biphenyls							
Aroclor 1016	<0.034	DLHM	0.034	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1221	<0.034	DLHM	0.034	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1232	<0.034	DLHM	0.034	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1242	<0.034	DLHM	0.034	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1248	<0.034	DLHM	0.034	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1254	0.056	DLHM	0.034	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1260	0.092	DLHM	0.034	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1262	<0.034	DLHM	0.034	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1268	<0.034	DLHM	0.034	mg/kg	20-OCT-21	20-OCT-21	R5625592
Total Polychlorinated Biphenyls	0.15		0.10	mg/kg	20-OCT-21	20-OCT-21	R5625592
Surrogate: d14-Terphenyl	80.6		50-140	%	20-OCT-21	20-OCT-21	R5625592
L2650175-7 TC3A-SG-004 Sampled By: CLIENT on 07-OCT-21 @ 12:05 Matrix: SEDIMENT							
Physical Tests							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650175-7 TC3A-SG-004 Sampled By: CLIENT on 07-OCT-21 @ 12:05 Matrix: SEDIMENT							
Physical Tests							
% Moisture	86.4		0.25	%	14-OCT-21	15-OCT-21	R5617676
Particle Size							
General Texture Class	Fine				18-OCT-21	18-OCT-21	R5623956
MUST PSA % > 75um	1.7		1.0	%	18-OCT-21	18-OCT-21	R5623956
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0882		0.0010	g/g	22-OCT-21	22-OCT-21	R5627061
Total Organic Carbon	8.82		0.10	%	22-OCT-21	22-OCT-21	R5627061
Metals							
Aluminum (Al)	20300	DLM	100	ug/g	20-OCT-21	20-OCT-21	R5625485
Antimony (Sb)	1.00	DLM	0.20	ug/g	20-OCT-21	20-OCT-21	R5625485
Arsenic (As)	9.72	DLM	0.20	ug/g	20-OCT-21	20-OCT-21	R5625485
Barium (Ba)	295	DLM	1.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Beryllium (Be)	0.73	DLM	0.20	ug/g	20-OCT-21	20-OCT-21	R5625485
Bismuth (Bi)	0.69	DLM	0.40	ug/g	20-OCT-21	20-OCT-21	R5625485
Boron (B)	11	DLM	10	ug/g	20-OCT-21	20-OCT-21	R5625485
Cadmium (Cd)	0.931	DLM	0.040	ug/g	20-OCT-21	20-OCT-21	R5625485
Calcium (Ca)	93200	DLM	100	ug/g	20-OCT-21	20-OCT-21	R5625485
Chromium (Cr)	649	DLM	1.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Cobalt (Co)	14.2	DLM	0.20	ug/g	20-OCT-21	20-OCT-21	R5625485
Copper (Cu)	54.9	DLM	1.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Iron (Fe)	28900	DLM	100	ug/g	20-OCT-21	20-OCT-21	R5625485
Lead (Pb)	127	DLM	1.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Lithium (Li)	15.4	DLM	4.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Magnesium (Mg)	13300	DLM	40	ug/g	20-OCT-21	20-OCT-21	R5625485
Manganese (Mn)	971	DLM	2.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Mercury (Hg)	0.634	DLM	0.010	ug/g	20-OCT-21	21-OCT-21	R5625980
Molybdenum (Mo)	1.37	DLM	0.20	ug/g	20-OCT-21	20-OCT-21	R5625485
Nickel (Ni)	30.0	DLM	1.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Phosphorus (P)	1430	DLM	100	ug/g	20-OCT-21	20-OCT-21	R5625485
Potassium (K)	4490	DLM	200	ug/g	20-OCT-21	20-OCT-21	R5625485
Selenium (Se)	1.58	DLM	0.40	ug/g	20-OCT-21	20-OCT-21	R5625485
Silver (Ag)	1.07	DLM	0.20	ug/g	20-OCT-21	20-OCT-21	R5625485
Sodium (Na)	740	DLM	100	ug/g	20-OCT-21	20-OCT-21	R5625485
Strontium (Sr)	477	DLM	1.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Sulfur (S)	9500	DLM	2000	ug/g	20-OCT-21	20-OCT-21	R5625485
Thallium (Tl)	0.33	DLM	0.10	ug/g	20-OCT-21	20-OCT-21	R5625485
Tin (Sn)	7.0	DLM	4.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Titanium (Ti)	1160	DLM	2.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Tungsten (W)	<1.0	DLM	1.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Uranium (U)	1.04	DLM	0.10	ug/g	20-OCT-21	20-OCT-21	R5625485
Vanadium (V)	47.1	DLM	0.40	ug/g	20-OCT-21	20-OCT-21	R5625485
Zinc (Zn)	214	DLM	4.0	ug/g	20-OCT-21	20-OCT-21	R5625485

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650175-7 TC3A-SG-004 Sampled By: CLIENT on 07-OCT-21 @ 12:05 Matrix: SEDIMENT							
Metals							
Zirconium (Zr)	3.5	DLM	2.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.065	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Acenaphthylene	0.309	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Acridine	<0.075	DLHM	0.075	ug/g	19-OCT-21	21-OCT-21	R5625700
Anthracene	0.159	DLHM	0.030	ug/g	19-OCT-21	21-OCT-21	R5625700
Benzo(a)anthracene	0.542	R	0.075	ug/g	19-OCT-21	21-OCT-21	R5625700
Benzo(a)pyrene	0.876	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Benzo(b&j)fluoranthene	0.958	DLHM	0.075	ug/g	19-OCT-21	21-OCT-21	R5625700
Benzo(g,h,i)perylene	0.547	DLHM	0.075	ug/g	19-OCT-21	21-OCT-21	R5625700
Benzo(k)fluoranthene	0.322	DLHM	0.075	ug/g	19-OCT-21	21-OCT-21	R5625700
Chrysene	0.632	DLHM	0.075	ug/g	19-OCT-21	21-OCT-21	R5625700
Dibenz(a,h)anthracene	0.148	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Fluoroanthene	0.716	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Fluorene	0.075	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Indeno(1,2,3-cd)pyrene	0.487	DLHM	0.075	ug/g	19-OCT-21	21-OCT-21	R5625700
1-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
2-Methylnaphthalene	0.050	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Naphthalene	0.057	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Phenanthrene	0.327	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Pyrene	0.904	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Quinoline	<0.038	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Surrogate: 2-Fluorobiphenyl	92.1		60-140	%	19-OCT-21	21-OCT-21	R5625700
Surrogate: d14-Terphenyl	89.4		60-140	%	19-OCT-21	21-OCT-21	R5625700
B(a)P Total Potency Equivalent	1.27		0.053	ug/g	19-OCT-21	21-OCT-21	R5625700
IACR (CCME)	13.2		0.75		19-OCT-21	21-OCT-21	R5625700
Polychlorinated Biphenyls							
Aroclor 1016	<0.034	DLHM	0.034	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1221	<0.034	DLHM	0.034	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1232	<0.034	DLHM	0.034	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1242	<0.034	DLHM	0.034	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1248	<0.034	DLHM	0.034	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1254	0.218	DLHM	0.034	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1260	0.270	DLHM	0.034	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1262	<0.034	DLHM	0.034	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1268	<0.034	DLHM	0.034	mg/kg	20-OCT-21	20-OCT-21	R5625592
Total Polychlorinated Biphenyls	0.49		0.10	mg/kg	20-OCT-21	20-OCT-21	R5625592
Surrogate: d14-Terphenyl	89.0		50-140	%	20-OCT-21	20-OCT-21	R5625592
L2650175-8 TC2B-SG-002 Sampled By: CLIENT on 07-OCT-21 @ 10:15 Matrix: SEDIMENT							
Physical Tests							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650175-8 TC2B-SG-002 Sampled By: CLIENT on 07-OCT-21 @ 10:15 Matrix: SEDIMENT							
Physical Tests							
% Moisture	87.2		0.25	%	14-OCT-21	15-OCT-21	R5617676
Particle Size							
General Texture Class	Fine				18-OCT-21	18-OCT-21	R5623956
MUST PSA % > 75um	1.1		1.0	%	18-OCT-21	18-OCT-21	R5623956
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0992		0.0010	g/g	22-OCT-21	22-OCT-21	R5627061
Total Organic Carbon	9.92		0.10	%	22-OCT-21	22-OCT-21	R5627061
Metals							
Aluminum (Al)	24800	DLM	100	ug/g	20-OCT-21	20-OCT-21	R5625485
Antimony (Sb)	0.54	DLM	0.20	ug/g	20-OCT-21	20-OCT-21	R5625485
Arsenic (As)	5.35	DLM	0.20	ug/g	20-OCT-21	20-OCT-21	R5625485
Barium (Ba)	315	DLM	1.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Beryllium (Be)	0.74	DLM	0.20	ug/g	20-OCT-21	20-OCT-21	R5625485
Bismuth (Bi)	<0.40	DLM	0.40	ug/g	20-OCT-21	20-OCT-21	R5625485
Boron (B)	13	DLM	10	ug/g	20-OCT-21	20-OCT-21	R5625485
Cadmium (Cd)	0.684	DLM	0.040	ug/g	20-OCT-21	20-OCT-21	R5625485
Calcium (Ca)	47500	DLM	100	ug/g	20-OCT-21	20-OCT-21	R5625485
Chromium (Cr)	315	DLM	1.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Cobalt (Co)	13.8	DLM	0.20	ug/g	20-OCT-21	20-OCT-21	R5625485
Copper (Cu)	38.9	DLM	1.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Iron (Fe)	32100	DLM	100	ug/g	20-OCT-21	20-OCT-21	R5625485
Lead (Pb)	59.7	DLM	1.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Lithium (Li)	17.4	DLM	4.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Magnesium (Mg)	13700	DLM	40	ug/g	20-OCT-21	20-OCT-21	R5625485
Manganese (Mn)	1230	DLM	2.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Mercury (Hg)	0.165	DLM	0.010	ug/g	20-OCT-21	21-OCT-21	R5625980
Molybdenum (Mo)	1.07	DLM	0.20	ug/g	20-OCT-21	20-OCT-21	R5625485
Nickel (Ni)	30.6	DLM	1.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Phosphorus (P)	1170	DLM	100	ug/g	20-OCT-21	20-OCT-21	R5625485
Potassium (K)	5020	DLM	200	ug/g	20-OCT-21	20-OCT-21	R5625485
Selenium (Se)	1.29	DLM	0.40	ug/g	20-OCT-21	20-OCT-21	R5625485
Silver (Ag)	0.37	DLM	0.20	ug/g	20-OCT-21	20-OCT-21	R5625485
Sodium (Na)	820	DLM	100	ug/g	20-OCT-21	20-OCT-21	R5625485
Strontium (Sr)	255	DLM	1.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Sulfur (S)	8000	DLM	2000	ug/g	20-OCT-21	20-OCT-21	R5625485
Thallium (Tl)	0.32	DLM	0.10	ug/g	20-OCT-21	20-OCT-21	R5625485
Tin (Sn)	<4.0	DLM	4.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Titanium (Ti)	1500	DLM	2.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Tungsten (W)	<1.0	DLM	1.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Uranium (U)	1.11	DLM	0.10	ug/g	20-OCT-21	20-OCT-21	R5625485
Vanadium (V)	54.6	DLM	0.40	ug/g	20-OCT-21	20-OCT-21	R5625485
Zinc (Zn)	140	DLM	4.0	ug/g	20-OCT-21	20-OCT-21	R5625485

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650175-8 TC2B-SG-002 Sampled By: CLIENT on 07-OCT-21 @ 10:15 Matrix: SEDIMENT							
Metals							
Zirconium (Zr)	4.6	DLM	2.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	<0.038	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Acenaphthylene	0.116	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Acridine	<0.075	DLHM	0.075	ug/g	19-OCT-21	21-OCT-21	R5625700
Anthracene	0.073	DLHM	0.030	ug/g	19-OCT-21	21-OCT-21	R5625700
Benzo(a)anthracene	0.255	R	0.075	ug/g	19-OCT-21	21-OCT-21	R5625700
Benzo(a)pyrene	0.363	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Benzo(b&j)fluoranthene	0.387	DLHM	0.075	ug/g	19-OCT-21	21-OCT-21	R5625700
Benzo(g,h,i)perylene	0.284	DLHM	0.075	ug/g	19-OCT-21	21-OCT-21	R5625700
Benzo(k)fluoranthene	0.154	DLHM	0.075	ug/g	19-OCT-21	21-OCT-21	R5625700
Chrysene	0.299	DLHM	0.075	ug/g	19-OCT-21	21-OCT-21	R5625700
Dibenz(a,h)anthracene	0.064	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Fluoroanthene	0.369	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Fluorene	0.038	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Indeno(1,2,3-cd)pyrene	0.195	DLHM	0.075	ug/g	19-OCT-21	21-OCT-21	R5625700
1-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
2-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Naphthalene	<0.038	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Phenanthrene	0.139	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Pyrene	0.438	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Quinoline	<0.038	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Surrogate: 2-Fluorobiphenyl	89.5		60-140	%	19-OCT-21	21-OCT-21	R5625700
Surrogate: d14-Terphenyl	85.3		60-140	%	19-OCT-21	21-OCT-21	R5625700
B(a)P Total Potency Equivalent	0.532		0.053	ug/g	19-OCT-21	21-OCT-21	R5625700
IACR (CCME)	5.67		0.75		19-OCT-21	21-OCT-21	R5625700
Polychlorinated Biphenyls							
Aroclor 1016	<0.034	DLHM	0.034	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1221	<0.034	DLHM	0.034	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1232	<0.034	DLHM	0.034	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1242	<0.034	DLHM	0.034	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1248	<0.034	DLHM	0.034	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1254	0.091	DLHM	0.034	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1260	0.161	DLHM	0.034	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1262	<0.034	DLHM	0.034	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1268	<0.034	DLHM	0.034	mg/kg	20-OCT-21	20-OCT-21	R5625592
Total Polychlorinated Biphenyls	0.25		0.10	mg/kg	20-OCT-21	20-OCT-21	R5625592
Surrogate: d14-Terphenyl	78.3		50-140	%	20-OCT-21	20-OCT-21	R5625592
L2650175-9 TC2B-SG-003 Sampled By: CLIENT on 07-OCT-21 @ 10:45 Matrix: SEDIMENT							
Physical Tests							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650175-9 TC2B-SG-003 Sampled By: CLIENT on 07-OCT-21 @ 10:45 Matrix: SEDIMENT							
Physical Tests							
% Moisture	86.8		0.25	%	14-OCT-21	15-OCT-21	R5617676
Particle Size							
General Texture Class	Fine				18-OCT-21	18-OCT-21	R5623956
MUST PSA % > 75um	1.4		1.0	%	18-OCT-21	18-OCT-21	R5623956
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0982		0.0010	g/g	22-OCT-21	22-OCT-21	R5627061
Total Organic Carbon	9.82		0.10	%	22-OCT-21	22-OCT-21	R5627061
Metals							
Aluminum (Al)	22200	DLM	100	ug/g	20-OCT-21	20-OCT-21	R5625485
Antimony (Sb)	0.76	DLM	0.20	ug/g	20-OCT-21	20-OCT-21	R5625485
Arsenic (As)	6.58	DLM	0.20	ug/g	20-OCT-21	20-OCT-21	R5625485
Barium (Ba)	283	DLM	1.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Beryllium (Be)	0.72	DLM	0.20	ug/g	20-OCT-21	20-OCT-21	R5625485
Bismuth (Bi)	0.48	DLM	0.40	ug/g	20-OCT-21	20-OCT-21	R5625485
Boron (B)	13	DLM	10	ug/g	20-OCT-21	20-OCT-21	R5625485
Cadmium (Cd)	0.830	DLM	0.040	ug/g	20-OCT-21	20-OCT-21	R5625485
Calcium (Ca)	52800	DLM	100	ug/g	20-OCT-21	20-OCT-21	R5625485
Chromium (Cr)	577	DLM	1.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Cobalt (Co)	12.6	DLM	0.20	ug/g	20-OCT-21	20-OCT-21	R5625485
Copper (Cu)	47.6	DLM	1.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Iron (Fe)	28100	DLM	100	ug/g	20-OCT-21	20-OCT-21	R5625485
Lead (Pb)	94.1	DLM	1.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Lithium (Li)	16.1	DLM	4.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Magnesium (Mg)	12600	DLM	40	ug/g	20-OCT-21	20-OCT-21	R5625485
Manganese (Mn)	957	DLM	2.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Mercury (Hg)	0.300	DLM	0.010	ug/g	20-OCT-21	21-OCT-21	R5625980
Molybdenum (Mo)	1.25	DLM	0.20	ug/g	20-OCT-21	20-OCT-21	R5625485
Nickel (Ni)	29.3	DLM	1.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Phosphorus (P)	1080	DLM	100	ug/g	20-OCT-21	20-OCT-21	R5625485
Potassium (K)	4780	DLM	200	ug/g	20-OCT-21	20-OCT-21	R5625485
Selenium (Se)	1.27	DLM	0.40	ug/g	20-OCT-21	20-OCT-21	R5625485
Silver (Ag)	0.78	DLM	0.20	ug/g	20-OCT-21	20-OCT-21	R5625485
Sodium (Na)	710	DLM	100	ug/g	20-OCT-21	20-OCT-21	R5625485
Strontium (Sr)	301	DLM	1.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Sulfur (S)	8900	DLM	2000	ug/g	20-OCT-21	20-OCT-21	R5625485
Thallium (Tl)	0.32	DLM	0.10	ug/g	20-OCT-21	20-OCT-21	R5625485
Tin (Sn)	5.0	DLM	4.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Titanium (Ti)	1340	DLM	2.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Tungsten (W)	<1.0	DLM	1.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Uranium (U)	1.09	DLM	0.10	ug/g	20-OCT-21	20-OCT-21	R5625485
Vanadium (V)	49.5	DLM	0.40	ug/g	20-OCT-21	20-OCT-21	R5625485
Zinc (Zn)	157	DLM	4.0	ug/g	20-OCT-21	20-OCT-21	R5625485

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650175-9 TC2B-SG-003 Sampled By: CLIENT on 07-OCT-21 @ 10:45 Matrix: SEDIMENT							
Metals							
Zirconium (Zr)	4.0	DLM	2.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.046	DLHM	0.038	ug/g	21-OCT-21	22-OCT-21	R5626548
Acenaphthylene	0.290	DLHM	0.038	ug/g	21-OCT-21	22-OCT-21	R5626548
Acridine	<0.075	DLHM	0.075	ug/g	21-OCT-21	22-OCT-21	R5626548
Anthracene	0.132	DLHM	0.030	ug/g	21-OCT-21	22-OCT-21	R5626548
Benzo(a)anthracene	0.415	R	0.075	ug/g	21-OCT-21	22-OCT-21	R5626548
Benzo(a)pyrene	0.694	DLHM	0.038	ug/g	21-OCT-21	22-OCT-21	R5626548
Benzo(b&j)fluoranthene	0.708	DLHM	0.075	ug/g	21-OCT-21	22-OCT-21	R5626548
Benzo(g,h,i)perylene	0.480	DLHM	0.075	ug/g	21-OCT-21	22-OCT-21	R5626548
Benzo(k)fluoranthene	0.220	DLHM	0.075	ug/g	21-OCT-21	22-OCT-21	R5626548
Chrysene	0.482	DLHM	0.075	ug/g	21-OCT-21	22-OCT-21	R5626548
Dibenz(a,h)anthracene	0.112	DLHM	0.038	ug/g	21-OCT-21	22-OCT-21	R5626548
Fluoroanthene	0.501	DLHM	0.038	ug/g	21-OCT-21	22-OCT-21	R5626548
Fluorene	0.056	DLHM	0.038	ug/g	21-OCT-21	22-OCT-21	R5626548
Indeno(1,2,3-cd)pyrene	0.350	DLHM	0.075	ug/g	21-OCT-21	22-OCT-21	R5626548
1-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	21-OCT-21	22-OCT-21	R5626548
2-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	21-OCT-21	22-OCT-21	R5626548
Naphthalene	<0.038	DLHM	0.038	ug/g	21-OCT-21	22-OCT-21	R5626548
Phenanthrene	0.180	DLHM	0.038	ug/g	21-OCT-21	22-OCT-21	R5626548
Pyrene	0.692	DLHM	0.038	ug/g	21-OCT-21	22-OCT-21	R5626548
Quinoline	<0.038	DLHM	0.038	ug/g	21-OCT-21	22-OCT-21	R5626548
Surrogate: 2-Fluorobiphenyl	95.7		60-140	%	21-OCT-21	22-OCT-21	R5626548
Surrogate: d14-Terphenyl	90.9		60-140	%	21-OCT-21	22-OCT-21	R5626548
B(a)P Total Potency Equivalent	0.985		0.053	ug/g	21-OCT-21	22-OCT-21	R5626548
IACR (CCME)	9.84		0.75		21-OCT-21	22-OCT-21	R5626548
Polychlorinated Biphenyls							
Aroclor 1016	<0.034	DLHM	0.034	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1221	<0.034	DLHM	0.034	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1232	<0.034	DLHM	0.034	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1242	<0.034	DLHM	0.034	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1248	<0.034	DLHM	0.034	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1254	0.151	DLHM	0.034	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1260	0.304	DLHM	0.034	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1262	<0.034	DLHM	0.034	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1268	<0.034	DLHM	0.034	mg/kg	20-OCT-21	20-OCT-21	R5625592
Total Polychlorinated Biphenyls	0.45		0.10	mg/kg	20-OCT-21	20-OCT-21	R5625592
Surrogate: d14-Terphenyl	81.6		50-140	%	20-OCT-21	20-OCT-21	R5625592
L2650175-10 TC2B-SG-001 Sampled By: CLIENT on 07-OCT-21 @ 11:20 Matrix: SEDIMENT							
Physical Tests							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650175-10 TC2B-SG-001 Sampled By: CLIENT on 07-OCT-21 @ 11:20 Matrix: SEDIMENT							
Physical Tests							
% Moisture	86.4		0.25	%	14-OCT-21	15-OCT-21	R5617676
Particle Size							
General Texture Class	Fine				18-OCT-21	18-OCT-21	R5623956
MUST PSA % > 75um	<1.0		1.0	%	18-OCT-21	18-OCT-21	R5623956
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0947		0.0010	g/g	22-OCT-21	22-OCT-21	R5627061
Total Organic Carbon	9.47		0.10	%	22-OCT-21	22-OCT-21	R5627061
Metals							
Aluminum (Al)	19700	DLM	100	ug/g	20-OCT-21	20-OCT-21	R5625485
Antimony (Sb)	0.86	DLM	0.20	ug/g	20-OCT-21	20-OCT-21	R5625485
Arsenic (As)	7.35	DLM	0.20	ug/g	20-OCT-21	20-OCT-21	R5625485
Barium (Ba)	262	DLM	1.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Beryllium (Be)	0.66	DLM	0.20	ug/g	20-OCT-21	20-OCT-21	R5625485
Bismuth (Bi)	0.76	DLM	0.40	ug/g	20-OCT-21	20-OCT-21	R5625485
Boron (B)	11	DLM	10	ug/g	20-OCT-21	20-OCT-21	R5625485
Cadmium (Cd)	0.884	DLM	0.040	ug/g	20-OCT-21	20-OCT-21	R5625485
Calcium (Ca)	39500	DLM	100	ug/g	20-OCT-21	20-OCT-21	R5625485
Chromium (Cr)	679	DLM	1.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Cobalt (Co)	13.7	DLM	0.20	ug/g	20-OCT-21	20-OCT-21	R5625485
Copper (Cu)	63.2	DLM	1.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Iron (Fe)	28400	DLM	100	ug/g	20-OCT-21	20-OCT-21	R5625485
Lead (Pb)	109	DLM	1.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Lithium (Li)	14.5	DLM	4.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Magnesium (Mg)	13300	DLM	40	ug/g	20-OCT-21	20-OCT-21	R5625485
Manganese (Mn)	925	DLM	2.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Mercury (Hg)	0.622	DLM	0.010	ug/g	20-OCT-21	21-OCT-21	R5625980
Molybdenum (Mo)	1.32	DLM	0.20	ug/g	20-OCT-21	20-OCT-21	R5625485
Nickel (Ni)	29.2	DLM	1.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Phosphorus (P)	1150	DLM	100	ug/g	20-OCT-21	20-OCT-21	R5625485
Potassium (K)	4670	DLM	200	ug/g	20-OCT-21	20-OCT-21	R5625485
Selenium (Se)	1.37	DLM	0.40	ug/g	20-OCT-21	20-OCT-21	R5625485
Silver (Ag)	1.99	DLM	0.20	ug/g	20-OCT-21	20-OCT-21	R5625485
Sodium (Na)	670	DLM	100	ug/g	20-OCT-21	20-OCT-21	R5625485
Strontium (Sr)	268	DLM	1.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Sulfur (S)	9700	DLM	2000	ug/g	20-OCT-21	20-OCT-21	R5625485
Thallium (Tl)	0.34	DLM	0.10	ug/g	20-OCT-21	20-OCT-21	R5625485
Tin (Sn)	6.8	DLM	4.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Titanium (Ti)	1320	DLM	2.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Tungsten (W)	<1.0	DLM	1.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Uranium (U)	1.02	DLM	0.10	ug/g	20-OCT-21	20-OCT-21	R5625485
Vanadium (V)	48.9	DLM	0.40	ug/g	20-OCT-21	20-OCT-21	R5625485
Zinc (Zn)	178	DLM	4.0	ug/g	20-OCT-21	20-OCT-21	R5625485

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650175-10 TC2B-SG-001 Sampled By: CLIENT on 07-OCT-21 @ 11:20 Matrix: SEDIMENT							
Metals							
Zirconium (Zr)	3.9	DLM	2.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.049	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Acenaphthylene	0.225	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Acridine	<0.075	DLHM	0.075	ug/g	19-OCT-21	21-OCT-21	R5625700
Anthracene	0.127	DLHM	0.030	ug/g	19-OCT-21	21-OCT-21	R5625700
Benzo(a)anthracene	0.456	R	0.075	ug/g	19-OCT-21	21-OCT-21	R5625700
Benzo(a)pyrene	0.666	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Benzo(b&j)fluoranthene	0.704	DLHM	0.075	ug/g	19-OCT-21	21-OCT-21	R5625700
Benzo(g,h,i)perylene	0.483	DLHM	0.075	ug/g	19-OCT-21	21-OCT-21	R5625700
Benzo(k)fluoranthene	0.269	DLHM	0.075	ug/g	19-OCT-21	21-OCT-21	R5625700
Chrysene	0.514	DLHM	0.075	ug/g	19-OCT-21	21-OCT-21	R5625700
Dibenz(a,h)anthracene	0.111	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Fluoroanthene	0.653	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Fluorene	0.056	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Indeno(1,2,3-cd)pyrene	0.331	DLHM	0.075	ug/g	19-OCT-21	21-OCT-21	R5625700
1-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
2-Methylnaphthalene	<0.038	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Naphthalene	<0.038	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Phenanthrene	0.286	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Pyrene	0.772	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Quinoline	<0.038	DLHM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Surrogate: 2-Fluorobiphenyl	93.9		60-140	%	19-OCT-21	21-OCT-21	R5625700
Surrogate: d14-Terphenyl	92.3		60-140	%	19-OCT-21	21-OCT-21	R5625700
B(a)P Total Potency Equivalent	0.963		0.053	ug/g	19-OCT-21	21-OCT-21	R5625700
IACR (CCME)	10.2		0.75		19-OCT-21	21-OCT-21	R5625700
Polychlorinated Biphenyls							
Aroclor 1016	<0.034	DLHM	0.034	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1221	<0.034	DLHM	0.034	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1232	<0.034	DLHM	0.034	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1242	<0.034	DLHM	0.034	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1248	<0.034	DLHM	0.034	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1254	0.194	DLHM	0.034	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1260	0.355	DLHM	0.034	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1262	<0.034	DLHM	0.034	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1268	<0.034	DLHM	0.034	mg/kg	20-OCT-21	20-OCT-21	R5625592
Total Polychlorinated Biphenyls	0.55		0.10	mg/kg	20-OCT-21	20-OCT-21	R5625592
Surrogate: d14-Terphenyl	89.6		50-140	%	20-OCT-21	20-OCT-21	R5625592
L2650175-11 TC3B-SG-001 Sampled By: CLIENT on 07-OCT-21 @ 12:00 Matrix: SEDIMENT							
Physical Tests							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650175-11 TC3B-SG-001 Sampled By: CLIENT on 07-OCT-21 @ 12:00 Matrix: SEDIMENT							
Physical Tests							
% Moisture	84.8		0.25	%	14-OCT-21	15-OCT-21	R5617676
Particle Size							
General Texture Class	Fine				18-OCT-21	18-OCT-21	R5623956
MUST PSA % > 75um	3.8		1.0	%	18-OCT-21	18-OCT-21	R5623956
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0754		0.0010	g/g	22-OCT-21	22-OCT-21	R5627061
Total Organic Carbon	7.54		0.10	%	22-OCT-21	22-OCT-21	R5627061
Metals							
Aluminum (Al)	15500	DLM	100	ug/g	20-OCT-21	20-OCT-21	R5625485
Antimony (Sb)	0.40	DLM	0.20	ug/g	20-OCT-21	20-OCT-21	R5625485
Arsenic (As)	3.65	DLM	0.20	ug/g	20-OCT-21	20-OCT-21	R5625485
Barium (Ba)	263	DLM	1.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Beryllium (Be)	0.42	DLM	0.20	ug/g	20-OCT-21	20-OCT-21	R5625485
Bismuth (Bi)	<0.40	DLM	0.40	ug/g	20-OCT-21	20-OCT-21	R5625485
Boron (B)	<10	DLM	10	ug/g	20-OCT-21	20-OCT-21	R5625485
Cadmium (Cd)	0.422	DLM	0.040	ug/g	20-OCT-21	20-OCT-21	R5625485
Calcium (Ca)	164000	DLM	100	ug/g	20-OCT-21	20-OCT-21	R5625485
Chromium (Cr)	166	DLM	1.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Cobalt (Co)	7.73	DLM	0.20	ug/g	20-OCT-21	20-OCT-21	R5625485
Copper (Cu)	25.8	DLM	1.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Iron (Fe)	18800	DLM	100	ug/g	20-OCT-21	20-OCT-21	R5625485
Lead (Pb)	37.7	DLM	1.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Lithium (Li)	9.5	DLM	4.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Magnesium (Mg)	8710	DLM	40	ug/g	20-OCT-21	20-OCT-21	R5625485
Manganese (Mn)	786	DLM	2.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Mercury (Hg)	0.115	DLM	0.010	ug/g	20-OCT-21	21-OCT-21	R5625980
Molybdenum (Mo)	0.92	DLM	0.20	ug/g	20-OCT-21	20-OCT-21	R5625485
Nickel (Ni)	18.4	DLM	1.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Phosphorus (P)	840	DLM	100	ug/g	20-OCT-21	20-OCT-21	R5625485
Potassium (K)	2950	DLM	200	ug/g	20-OCT-21	20-OCT-21	R5625485
Selenium (Se)	1.01	DLM	0.40	ug/g	20-OCT-21	20-OCT-21	R5625485
Silver (Ag)	0.24	DLM	0.20	ug/g	20-OCT-21	20-OCT-21	R5625485
Sodium (Na)	750	DLM	100	ug/g	20-OCT-21	20-OCT-21	R5625485
Strontium (Sr)	793	DLM	1.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Sulfur (S)	5800	DLM	2000	ug/g	20-OCT-21	20-OCT-21	R5625485
Thallium (Tl)	0.20	DLM	0.10	ug/g	20-OCT-21	20-OCT-21	R5625485
Tin (Sn)	<4.0	DLM	4.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Titanium (Ti)	899	DLM	2.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Tungsten (W)	<1.0	DLM	1.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Uranium (U)	0.82	DLM	0.10	ug/g	20-OCT-21	20-OCT-21	R5625485
Vanadium (V)	32.4	DLM	0.40	ug/g	20-OCT-21	20-OCT-21	R5625485
Zinc (Zn)	91.3	DLM	4.0	ug/g	20-OCT-21	20-OCT-21	R5625485

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650175-11 TC3B-SG-001 Sampled By: CLIENT on 07-OCT-21 @ 12:00 Matrix: SEDIMENT							
Metals							
Zirconium (Zr)	2.2	DLM	2.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.040	DLHM	0.025	ug/g	19-OCT-21	21-OCT-21	R5625700
Acenaphthylene	0.185	DLHM	0.025	ug/g	19-OCT-21	21-OCT-21	R5625700
Acridine	<0.050	DLHM	0.050	ug/g	19-OCT-21	21-OCT-21	R5625700
Anthracene	0.095	DLHM	0.020	ug/g	19-OCT-21	21-OCT-21	R5625700
Benzo(a)anthracene	0.385	R	0.050	ug/g	19-OCT-21	21-OCT-21	R5625700
Benzo(a)pyrene	0.537	DLHM	0.025	ug/g	19-OCT-21	21-OCT-21	R5625700
Benzo(b&j)fluoranthene	0.465	DLHM	0.050	ug/g	19-OCT-21	21-OCT-21	R5625700
Benzo(g,h,i)perylene	0.343	DLHM	0.050	ug/g	19-OCT-21	21-OCT-21	R5625700
Benzo(k)fluoranthene	0.182	DLHM	0.050	ug/g	19-OCT-21	21-OCT-21	R5625700
Chrysene	0.404	DLHM	0.050	ug/g	19-OCT-21	21-OCT-21	R5625700
Dibenz(a,h)anthracene	0.080	DLHM	0.025	ug/g	19-OCT-21	21-OCT-21	R5625700
Fluoroanthene	0.450	DLHM	0.025	ug/g	19-OCT-21	21-OCT-21	R5625700
Fluorene	0.044	DLHM	0.025	ug/g	19-OCT-21	21-OCT-21	R5625700
Indeno(1,2,3-cd)pyrene	0.231	DLHM	0.050	ug/g	19-OCT-21	21-OCT-21	R5625700
1-Methylnaphthalene	<0.025	DLHM	0.025	ug/g	19-OCT-21	21-OCT-21	R5625700
2-Methylnaphthalene	<0.025	DLHM	0.025	ug/g	19-OCT-21	21-OCT-21	R5625700
Naphthalene	<0.025	DLHM	0.025	ug/g	19-OCT-21	21-OCT-21	R5625700
Phenanthrene	0.163	DLHM	0.025	ug/g	19-OCT-21	21-OCT-21	R5625700
Pyrene	0.608	DLHM	0.025	ug/g	19-OCT-21	21-OCT-21	R5625700
Quinoline	<0.025	DLHM	0.025	ug/g	19-OCT-21	21-OCT-21	R5625700
Surrogate: 2-Fluorobiphenyl	88.9		60-140	%	19-OCT-21	21-OCT-21	R5625700
Surrogate: d14-Terphenyl	77.4		60-140	%	19-OCT-21	21-OCT-21	R5625700
B(a)P Total Potency Equivalent	0.751		0.036	ug/g	19-OCT-21	21-OCT-21	R5625700
IACR (CCME)	7.34		0.50		19-OCT-21	21-OCT-21	R5625700
Polychlorinated Biphenyls							
Aroclor 1016	<0.023	DLHM	0.023	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1221	<0.023	DLHM	0.023	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1232	<0.023	DLHM	0.023	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1242	<0.023	DLHM	0.023	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1248	<0.023	DLHM	0.023	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1254	0.072	DLHM	0.023	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1260	0.131	DLHM	0.023	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1262	<0.023	DLHM	0.023	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1268	<0.023	DLHM	0.023	mg/kg	20-OCT-21	20-OCT-21	R5625592
Total Polychlorinated Biphenyls	0.203		0.068	mg/kg	20-OCT-21	20-OCT-21	R5625592
Surrogate: d14-Terphenyl	74.6		50-140	%	20-OCT-21	20-OCT-21	R5625592
L2650175-12 PCOM-SC-001A Sampled By: CLIENT on 07-OCT-21 @ 10:00 Matrix: SEDIMENT							
Physical Tests							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650175-12 PCOM-SC-001A Sampled By: CLIENT on 07-OCT-21 @ 10:00 Matrix: SEDIMENT							
Physical Tests							
% Moisture	58.7		0.25	%	14-OCT-21	15-OCT-21	R5617676
Metals							
Aluminum (Al)	6520		50	ug/g	19-OCT-21	20-OCT-21	R5625366
Antimony (Sb)	3.95		0.10	ug/g	19-OCT-21	20-OCT-21	R5625366
Arsenic (As)	3.28		0.10	ug/g	19-OCT-21	20-OCT-21	R5625366
Barium (Ba)	162		0.50	ug/g	19-OCT-21	20-OCT-21	R5625366
Beryllium (Be)	0.31		0.10	ug/g	19-OCT-21	20-OCT-21	R5625366
Bismuth (Bi)	0.56		0.20	ug/g	19-OCT-21	20-OCT-21	R5625366
Boron (B)	10.6		5.0	ug/g	19-OCT-21	20-OCT-21	R5625366
Cadmium (Cd)	0.835		0.020	ug/g	19-OCT-21	20-OCT-21	R5625366
Calcium (Ca)	115000		50	ug/g	19-OCT-21	20-OCT-21	R5625366
Chromium (Cr)	2230	DLHC	10	ug/g	19-OCT-21	20-OCT-21	R5625366
Cobalt (Co)	6.10		0.10	ug/g	19-OCT-21	20-OCT-21	R5625366
Copper (Cu)	70.8		0.50	ug/g	19-OCT-21	20-OCT-21	R5625366
Iron (Fe)	17600		50	ug/g	19-OCT-21	20-OCT-21	R5625366
Lead (Pb)	211		0.50	ug/g	19-OCT-21	20-OCT-21	R5625366
Lithium (Li)	7.7		2.0	ug/g	19-OCT-21	20-OCT-21	R5625366
Magnesium (Mg)	12800		20	ug/g	19-OCT-21	20-OCT-21	R5625366
Manganese (Mn)	256		1.0	ug/g	19-OCT-21	20-OCT-21	R5625366
Mercury (Hg)	0.248		0.0050	ug/g	19-OCT-21	20-OCT-21	R5625185
Molybdenum (Mo)	1.61		0.10	ug/g	19-OCT-21	20-OCT-21	R5625366
Nickel (Ni)	15.0		0.50	ug/g	19-OCT-21	20-OCT-21	R5625366
Phosphorus (P)	1270		50	ug/g	19-OCT-21	20-OCT-21	R5625366
Potassium (K)	1550		100	ug/g	19-OCT-21	20-OCT-21	R5625366
Selenium (Se)	0.64		0.20	ug/g	19-OCT-21	20-OCT-21	R5625366
Silver (Ag)	0.54		0.10	ug/g	19-OCT-21	20-OCT-21	R5625366
Sodium (Na)	370		50	ug/g	19-OCT-21	20-OCT-21	R5625366
Strontium (Sr)	392		0.50	ug/g	19-OCT-21	20-OCT-21	R5625366
Sulfur (S)	4100		1000	ug/g	19-OCT-21	20-OCT-21	R5625366
Thallium (Tl)	0.227		0.050	ug/g	19-OCT-21	20-OCT-21	R5625366
Tin (Sn)	6.6		2.0	ug/g	19-OCT-21	20-OCT-21	R5625366
Titanium (Ti)	323		1.0	ug/g	19-OCT-21	20-OCT-21	R5625366
Tungsten (W)	4.49		0.50	ug/g	19-OCT-21	20-OCT-21	R5625366
Uranium (U)	0.407		0.050	ug/g	19-OCT-21	20-OCT-21	R5625366
Vanadium (V)	23.0		0.20	ug/g	19-OCT-21	20-OCT-21	R5625366
Zinc (Zn)	280		2.0	ug/g	19-OCT-21	20-OCT-21	R5625366
Zirconium (Zr)	<1.0		1.0	ug/g	19-OCT-21	20-OCT-21	R5625366
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.563	DLM	0.019	ug/g	19-OCT-21	21-OCT-21	R5625700
Acenaphthylene	0.543	DLM	0.019	ug/g	19-OCT-21	21-OCT-21	R5625700
Acridine	0.333	DLM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650175-12 PCOM-SC-001A Sampled By: CLIENT on 07-OCT-21 @ 10:00 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
Anthracene	1.20	DLM	0.015	ug/g	19-OCT-21	21-OCT-21	R5625700
Benzo(a)anthracene	2.89	DLM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Benzo(a)pyrene	2.98	DLM	0.019	ug/g	19-OCT-21	21-OCT-21	R5625700
Benzo(b&j)fluoranthene	3.52	DLM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Benzo(g,h,i)perylene	2.12	DLM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Benzo(k)fluoranthene	1.29	DLM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Chrysene	3.22	DLM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Dibenz(a,h)anthracene	0.492	DLM	0.019	ug/g	19-OCT-21	21-OCT-21	R5625700
Fluoroanthene	6.88	DLM	0.019	ug/g	19-OCT-21	21-OCT-21	R5625700
Fluorene	0.535	DLM	0.019	ug/g	19-OCT-21	21-OCT-21	R5625700
Indeno(1,2,3-cd)pyrene	1.68	DLM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
1-Methylnaphthalene	0.151	DLM	0.019	ug/g	19-OCT-21	21-OCT-21	R5625700
2-Methylnaphthalene	0.117	DLM	0.019	ug/g	19-OCT-21	21-OCT-21	R5625700
Naphthalene	0.167	DLM	0.019	ug/g	19-OCT-21	21-OCT-21	R5625700
Phenanthrene	4.72	DLM	0.019	ug/g	19-OCT-21	21-OCT-21	R5625700
Pyrene	6.62	DLM	0.019	ug/g	19-OCT-21	21-OCT-21	R5625700
Quinoline	<0.030	DLM	0.030	ug/g	19-OCT-21	21-OCT-21	R5625700
Surrogate: 2-Fluorobiphenyl	89.2		60-140	%	19-OCT-21	21-OCT-21	R5625700
Surrogate: d14-Terphenyl	89.1		60-140	%	19-OCT-21	21-OCT-21	R5625700
B(a)P Total Potency Equivalent	4.47		0.027	ug/g	19-OCT-21	21-OCT-21	R5625700
IACR (CCME)	51.5		0.38		19-OCT-21	21-OCT-21	R5625700
Polychlorinated Biphenyls							
Aroclor 1016	<0.009	DLM	0.0090	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1221	<0.009	DLM	0.0090	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1232	<0.009	DLM	0.0090	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1242	<0.009	DLM	0.0090	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1248	<0.009	DLM	0.0090	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1254	0.0750	DLHM	0.0068	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1260	0.123	DLHM	0.0068	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1262	<0.0068	DLHM	0.0068	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1268	<0.0068	DLHM	0.0068	mg/kg	20-OCT-21	20-OCT-21	R5625592
Total Polychlorinated Biphenyls	0.198		0.020	mg/kg	20-OCT-21	20-OCT-21	R5625592
Surrogate: d14-Terphenyl	84.2		50-140	%	20-OCT-21	20-OCT-21	R5625592
L2650175-13 PCOM-SG-001 Sampled By: CLIENT on 07-OCT-21 @ 11:30 Matrix: SEDIMENT							
Physical Tests							
% Moisture	70.2		0.25	%	14-OCT-21	15-OCT-21	R5617676
Particle Size							
General Texture Class	Fine				19-OCT-21	19-OCT-21	R5624753
MUST PSA % > 75um	25.9		1.0	%	19-OCT-21	19-OCT-21	R5624753
Organic / Inorganic Carbon							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650175-13 PCOM-SG-001 Sampled By: CLIENT on 07-OCT-21 @ 11:30 Matrix: SEDIMENT							
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0515		0.0010	g/g	25-OCT-21	25-OCT-21	R5628208
Total Organic Carbon	5.15		0.10	%	25-OCT-21	25-OCT-21	R5628208
Metals							
Aluminum (Al)	6850		50	ug/g	19-OCT-21	20-OCT-21	R5625366
Antimony (Sb)	3.58		0.10	ug/g	19-OCT-21	20-OCT-21	R5625366
Arsenic (As)	3.44		0.10	ug/g	19-OCT-21	20-OCT-21	R5625366
Barium (Ba)	165		0.50	ug/g	19-OCT-21	20-OCT-21	R5625366
Beryllium (Be)	0.33		0.10	ug/g	19-OCT-21	20-OCT-21	R5625366
Bismuth (Bi)	0.61		0.20	ug/g	19-OCT-21	20-OCT-21	R5625366
Boron (B)	10.9		5.0	ug/g	19-OCT-21	20-OCT-21	R5625366
Cadmium (Cd)	0.857		0.020	ug/g	19-OCT-21	20-OCT-21	R5625366
Calcium (Ca)	126000		50	ug/g	19-OCT-21	20-OCT-21	R5625366
Chromium (Cr)	1820	DLHC	10	ug/g	19-OCT-21	20-OCT-21	R5625366
Cobalt (Co)	6.39		0.10	ug/g	19-OCT-21	20-OCT-21	R5625366
Copper (Cu)	74.1		0.50	ug/g	19-OCT-21	20-OCT-21	R5625366
Iron (Fe)	19000		50	ug/g	19-OCT-21	20-OCT-21	R5625366
Lead (Pb)	207		0.50	ug/g	19-OCT-21	20-OCT-21	R5625366
Lithium (Li)	8.0		2.0	ug/g	19-OCT-21	20-OCT-21	R5625366
Magnesium (Mg)	15100		20	ug/g	19-OCT-21	20-OCT-21	R5625366
Manganese (Mn)	281		1.0	ug/g	19-OCT-21	20-OCT-21	R5625366
Mercury (Hg)	0.186		0.0050	ug/g	19-OCT-21	20-OCT-21	R5625185
Molybdenum (Mo)	1.63		0.10	ug/g	19-OCT-21	20-OCT-21	R5625366
Nickel (Ni)	16.0		0.50	ug/g	19-OCT-21	20-OCT-21	R5625366
Phosphorus (P)	1370		50	ug/g	19-OCT-21	20-OCT-21	R5625366
Potassium (K)	1630		100	ug/g	19-OCT-21	20-OCT-21	R5625366
Selenium (Se)	0.62		0.20	ug/g	19-OCT-21	20-OCT-21	R5625366
Silver (Ag)	0.47		0.10	ug/g	19-OCT-21	20-OCT-21	R5625366
Sodium (Na)	357		50	ug/g	19-OCT-21	20-OCT-21	R5625366
Strontium (Sr)	416		0.50	ug/g	19-OCT-21	20-OCT-21	R5625366
Sulfur (S)	4100		1000	ug/g	19-OCT-21	20-OCT-21	R5625366
Thallium (Tl)	0.235		0.050	ug/g	19-OCT-21	20-OCT-21	R5625366
Tin (Sn)	6.6		2.0	ug/g	19-OCT-21	20-OCT-21	R5625366
Titanium (Ti)	331		1.0	ug/g	19-OCT-21	20-OCT-21	R5625366
Tungsten (W)	3.20		0.50	ug/g	19-OCT-21	20-OCT-21	R5625366
Uranium (U)	0.427		0.050	ug/g	19-OCT-21	20-OCT-21	R5625366
Vanadium (V)	24.8		0.20	ug/g	19-OCT-21	20-OCT-21	R5625366
Zinc (Zn)	286		2.0	ug/g	19-OCT-21	20-OCT-21	R5625366
Zirconium (Zr)	1.0		1.0	ug/g	19-OCT-21	20-OCT-21	R5625366
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.500	DLM	0.030	ug/g	19-OCT-21	21-OCT-21	R5625700
Acenaphthylene	0.667	DLM	0.030	ug/g	19-OCT-21	21-OCT-21	R5625700

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650175-13 PCOM-SG-001 Sampled By: CLIENT on 07-OCT-21 @ 11:30 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
Acridine	0.205	AI	0.060	ug/g	19-OCT-21	21-OCT-21	R5625700
Anthracene	0.695	DLM	0.024	ug/g	19-OCT-21	21-OCT-21	R5625700
Benzo(a)anthracene	2.17	R	0.060	ug/g	19-OCT-21	21-OCT-21	R5625700
Benzo(a)pyrene	2.53	DLM	0.030	ug/g	19-OCT-21	21-OCT-21	R5625700
Benzo(b&j)fluoranthene	2.88	DLM	0.060	ug/g	19-OCT-21	21-OCT-21	R5625700
Benzo(g,h,i)perylene	1.84	DLM	0.060	ug/g	19-OCT-21	21-OCT-21	R5625700
Benzo(k)fluoranthene	1.11	DLM	0.060	ug/g	19-OCT-21	21-OCT-21	R5625700
Chrysene	2.53	DLM	0.060	ug/g	19-OCT-21	21-OCT-21	R5625700
Dibenz(a,h)anthracene	0.413	DLM	0.030	ug/g	19-OCT-21	21-OCT-21	R5625700
Fluoroanthene	4.39	DLM	0.030	ug/g	19-OCT-21	21-OCT-21	R5625700
Fluorene	0.364	DLM	0.030	ug/g	19-OCT-21	21-OCT-21	R5625700
Indeno(1,2,3-cd)pyrene	1.34	DLM	0.060	ug/g	19-OCT-21	21-OCT-21	R5625700
1-Methylnaphthalene	0.179	DLM	0.030	ug/g	19-OCT-21	21-OCT-21	R5625700
2-Methylnaphthalene	0.107	DLM	0.030	ug/g	19-OCT-21	21-OCT-21	R5625700
Naphthalene	0.131	DLM	0.030	ug/g	19-OCT-21	21-OCT-21	R5625700
Phenanthrene	2.51	DLM	0.030	ug/g	19-OCT-21	21-OCT-21	R5625700
Pyrene	5.17	DLM	0.030	ug/g	19-OCT-21	21-OCT-21	R5625700
Quinoline	<0.030	DLM	0.030	ug/g	19-OCT-21	21-OCT-21	R5625700
Surrogate: 2-Fluorobiphenyl	94.1		60-140	%	19-OCT-21	21-OCT-21	R5625700
Surrogate: d14-Terphenyl	92.8		60-140	%	19-OCT-21	21-OCT-21	R5625700
B(a)P Total Potency Equivalent	3.74		0.043	ug/g	19-OCT-21	21-OCT-21	R5625700
IACR (CCME)	42.2		0.60		19-OCT-21	21-OCT-21	R5625700
Polychlorinated Biphenyls							
Aroclor 1016	<0.014	DLHM	0.014	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1221	<0.014	DLHM	0.014	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1232	<0.014	DLHM	0.014	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1242	<0.014	DLHM	0.014	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1248	<0.014	DLHM	0.014	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1254	0.122	DLHM	0.014	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1260	0.172	DLHM	0.014	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1262	<0.014	DLHM	0.014	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1268	<0.014	DLHM	0.014	mg/kg	20-OCT-21	20-OCT-21	R5625592
Total Polychlorinated Biphenyls	0.294		0.041	mg/kg	20-OCT-21	20-OCT-21	R5625592
Surrogate: d14-Terphenyl	80.9		50-140	%	20-OCT-21	20-OCT-21	R5625592
L2650175-14 PCOM-SC-001B Sampled By: CLIENT on 07-OCT-21 @ 10:00 Matrix: SEDIMENT							
Physical Tests							
% Moisture	50.4		0.25	%	14-OCT-21	15-OCT-21	R5617676
Metals							
Aluminum (Al)	5280		50	ug/g	19-OCT-21	20-OCT-21	R5625366
Antimony (Sb)	3.50		0.10	ug/g	19-OCT-21	20-OCT-21	R5625366

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650175-14 PCOM-SC-001B Sampled By: CLIENT on 07-OCT-21 @ 10:00 Matrix: SEDIMENT							
Metals							
Arsenic (As)	2.82		0.10	ug/g	19-OCT-21	20-OCT-21	R5625366
Barium (Ba)	141		0.50	ug/g	19-OCT-21	20-OCT-21	R5625366
Beryllium (Be)	0.28		0.10	ug/g	19-OCT-21	20-OCT-21	R5625366
Bismuth (Bi)	1.84		0.20	ug/g	19-OCT-21	20-OCT-21	R5625366
Boron (B)	8.3		5.0	ug/g	19-OCT-21	20-OCT-21	R5625366
Cadmium (Cd)	0.800		0.020	ug/g	19-OCT-21	20-OCT-21	R5625366
Calcium (Ca)	100000		50	ug/g	19-OCT-21	20-OCT-21	R5625366
Chromium (Cr)	2310	DLHC	10	ug/g	19-OCT-21	20-OCT-21	R5625366
Cobalt (Co)	4.99		0.10	ug/g	19-OCT-21	20-OCT-21	R5625366
Copper (Cu)	66.4		0.50	ug/g	19-OCT-21	20-OCT-21	R5625366
Iron (Fe)	14200		50	ug/g	19-OCT-21	20-OCT-21	R5625366
Lead (Pb)	205		0.50	ug/g	19-OCT-21	20-OCT-21	R5625366
Lithium (Li)	5.9		2.0	ug/g	19-OCT-21	20-OCT-21	R5625366
Magnesium (Mg)	12700		20	ug/g	19-OCT-21	20-OCT-21	R5625366
Manganese (Mn)	231		1.0	ug/g	19-OCT-21	20-OCT-21	R5625366
Mercury (Hg)	0.173		0.0050	ug/g	19-OCT-21	20-OCT-21	R5625185
Molybdenum (Mo)	1.53		0.10	ug/g	19-OCT-21	20-OCT-21	R5625366
Nickel (Ni)	14.3		0.50	ug/g	19-OCT-21	20-OCT-21	R5625366
Phosphorus (P)	1100		50	ug/g	19-OCT-21	20-OCT-21	R5625366
Potassium (K)	1220		100	ug/g	19-OCT-21	20-OCT-21	R5625366
Selenium (Se)	0.47		0.20	ug/g	19-OCT-21	20-OCT-21	R5625366
Silver (Ag)	0.38		0.10	ug/g	19-OCT-21	20-OCT-21	R5625366
Sodium (Na)	288		50	ug/g	19-OCT-21	20-OCT-21	R5625366
Strontium (Sr)	294		0.50	ug/g	19-OCT-21	20-OCT-21	R5625366
Sulfur (S)	3100		1000	ug/g	19-OCT-21	20-OCT-21	R5625366
Thallium (Tl)	0.169		0.050	ug/g	19-OCT-21	20-OCT-21	R5625366
Tin (Sn)	6.4		2.0	ug/g	19-OCT-21	20-OCT-21	R5625366
Titanium (Ti)	284		1.0	ug/g	19-OCT-21	20-OCT-21	R5625366
Tungsten (W)	2.69		0.50	ug/g	19-OCT-21	20-OCT-21	R5625366
Uranium (U)	0.410		0.050	ug/g	19-OCT-21	20-OCT-21	R5625366
Vanadium (V)	20.7		0.20	ug/g	19-OCT-21	20-OCT-21	R5625366
Zinc (Zn)	238		2.0	ug/g	19-OCT-21	20-OCT-21	R5625366
Zirconium (Zr)	<1.0		1.0	ug/g	19-OCT-21	20-OCT-21	R5625366
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.412	DLM	0.019	ug/g	19-OCT-21	21-OCT-21	R5625700
Acenaphthylene	0.591	DLM	0.019	ug/g	19-OCT-21	21-OCT-21	R5625700
Acridine	0.194	AI	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Anthracene	0.631	DLM	0.015	ug/g	19-OCT-21	21-OCT-21	R5625700
Benzo(a)anthracene	1.97	R	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Benzo(a)pyrene	2.26	DLM	0.019	ug/g	19-OCT-21	21-OCT-21	R5625700
Benzo(b&j)fluoranthene	2.50	DLM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650175-14 PCOM-SC-001B Sampled By: CLIENT on 07-OCT-21 @ 10:00 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
Benzo(g,h,i)perylene	1.52	DLM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Benzo(k)fluoranthene	0.976	DLM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Chrysene	2.29	DLM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Dibenz(a,h)anthracene	0.352	DLM	0.019	ug/g	19-OCT-21	21-OCT-21	R5625700
Fluoroanthene	4.27	DLM	0.019	ug/g	19-OCT-21	21-OCT-21	R5625700
Fluorene	0.354	DLM	0.019	ug/g	19-OCT-21	21-OCT-21	R5625700
Indeno(1,2,3-cd)pyrene	1.26	DLM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
1-Methylnaphthalene	0.112	DLM	0.019	ug/g	19-OCT-21	21-OCT-21	R5625700
2-Methylnaphthalene	0.097	DLM	0.019	ug/g	19-OCT-21	21-OCT-21	R5625700
Naphthalene	0.137	DLM	0.019	ug/g	19-OCT-21	21-OCT-21	R5625700
Phenanthrene	2.41	DLM	0.019	ug/g	19-OCT-21	21-OCT-21	R5625700
Pyrene	4.78	DLM	0.019	ug/g	19-OCT-21	21-OCT-21	R5625700
Quinoline	<0.030	DLM	0.030	ug/g	19-OCT-21	21-OCT-21	R5625700
Surrogate: 2-Fluorobiphenyl	87.4		60-140	%	19-OCT-21	21-OCT-21	R5625700
Surrogate: d14-Terphenyl	88.4		60-140	%	19-OCT-21	21-OCT-21	R5625700
B(a)P Total Potency Equivalent	3.32		0.027	ug/g	19-OCT-21	21-OCT-21	R5625700
IACR (CCME)	37.1		0.38		19-OCT-21	21-OCT-21	R5625700
Polychlorinated Biphenyls							
Aroclor 1016	<0.0090	DLHM	0.0090	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1221	<0.0090	DLHM	0.0090	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1232	<0.0090	DLHM	0.0090	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1242	<0.0090	DLHM	0.0090	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1248	<0.0090	DLHM	0.0090	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1254	0.102	DLHM	0.0090	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1260	0.125	DLHM	0.0090	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1262	<0.0090	DLHM	0.0090	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1268	<0.0090	DLHM	0.0090	mg/kg	20-OCT-21	20-OCT-21	R5625592
Total Polychlorinated Biphenyls	0.227		0.027	mg/kg	20-OCT-21	20-OCT-21	R5625592
Surrogate: d14-Terphenyl	86.0		50-140	%	20-OCT-21	20-OCT-21	R5625592
L2650175-15 PCOM-SC-001C Sampled By: CLIENT on 07-OCT-21 @ 10:00 Matrix: SEDIMENT							
Physical Tests							
% Moisture	37.3		0.25	%	14-OCT-21	15-OCT-21	R5617676
Metals							
Aluminum (Al)	4790		50	ug/g	19-OCT-21	20-OCT-21	R5625366
Antimony (Sb)	3.71		0.10	ug/g	19-OCT-21	20-OCT-21	R5625366
Arsenic (As)	2.48		0.10	ug/g	19-OCT-21	20-OCT-21	R5625366
Barium (Ba)	113		0.50	ug/g	19-OCT-21	20-OCT-21	R5625366
Beryllium (Be)	0.22		0.10	ug/g	19-OCT-21	20-OCT-21	R5625366
Bismuth (Bi)	0.34		0.20	ug/g	19-OCT-21	20-OCT-21	R5625366
Boron (B)	7.7		5.0	ug/g	19-OCT-21	20-OCT-21	R5625366

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650175-15 PCOM-SC-001C Sampled By: CLIENT on 07-OCT-21 @ 10:00 Matrix: SEDIMENT							
Metals							
Cadmium (Cd)	0.558		0.020	ug/g	19-OCT-21	20-OCT-21	R5625366
Calcium (Ca)	102000		50	ug/g	19-OCT-21	20-OCT-21	R5625366
Chromium (Cr)	1470	DLHC	10	ug/g	19-OCT-21	20-OCT-21	R5625366
Cobalt (Co)	4.54		0.10	ug/g	19-OCT-21	20-OCT-21	R5625366
Copper (Cu)	77.5		0.50	ug/g	19-OCT-21	20-OCT-21	R5625366
Iron (Fe)	14100		50	ug/g	19-OCT-21	20-OCT-21	R5625366
Lead (Pb)	200		0.50	ug/g	19-OCT-21	20-OCT-21	R5625366
Lithium (Li)	5.8		2.0	ug/g	19-OCT-21	20-OCT-21	R5625366
Magnesium (Mg)	12900		20	ug/g	19-OCT-21	20-OCT-21	R5625366
Manganese (Mn)	225		1.0	ug/g	19-OCT-21	20-OCT-21	R5625366
Mercury (Hg)	0.127		0.0050	ug/g	19-OCT-21	20-OCT-21	R5625185
Molybdenum (Mo)	1.25		0.10	ug/g	19-OCT-21	20-OCT-21	R5625366
Nickel (Ni)	11.9		0.50	ug/g	19-OCT-21	20-OCT-21	R5625366
Phosphorus (P)	1030		50	ug/g	19-OCT-21	20-OCT-21	R5625366
Potassium (K)	1090		100	ug/g	19-OCT-21	20-OCT-21	R5625366
Selenium (Se)	0.34		0.20	ug/g	19-OCT-21	20-OCT-21	R5625366
Silver (Ag)	0.40		0.10	ug/g	19-OCT-21	20-OCT-21	R5625366
Sodium (Na)	241		50	ug/g	19-OCT-21	20-OCT-21	R5625366
Strontium (Sr)	283		0.50	ug/g	19-OCT-21	20-OCT-21	R5625366
Sulfur (S)	2600		1000	ug/g	19-OCT-21	20-OCT-21	R5625366
Thallium (Tl)	0.151		0.050	ug/g	19-OCT-21	20-OCT-21	R5625366
Tin (Sn)	5.4		2.0	ug/g	19-OCT-21	20-OCT-21	R5625366
Titanium (Ti)	274		1.0	ug/g	19-OCT-21	20-OCT-21	R5625366
Tungsten (W)	1.53		0.50	ug/g	19-OCT-21	20-OCT-21	R5625366
Uranium (U)	0.373		0.050	ug/g	19-OCT-21	20-OCT-21	R5625366
Vanadium (V)	19.6		0.20	ug/g	19-OCT-21	20-OCT-21	R5625366
Zinc (Zn)	187		2.0	ug/g	19-OCT-21	20-OCT-21	R5625366
Zirconium (Zr)	<1.0		1.0	ug/g	19-OCT-21	20-OCT-21	R5625366
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.230	DLM	0.013	ug/g	19-OCT-21	21-OCT-21	R5625700
Acenaphthylene	0.185	DLM	0.013	ug/g	19-OCT-21	21-OCT-21	R5625700
Acridine	0.085	AI	0.025	ug/g	19-OCT-21	21-OCT-21	R5625700
Anthracene	0.317	DLM	0.010	ug/g	19-OCT-21	21-OCT-21	R5625700
Benzo(a)anthracene	0.871	DLM	0.025	ug/g	19-OCT-21	21-OCT-21	R5625700
Benzo(a)pyrene	0.962	DLM	0.013	ug/g	19-OCT-21	21-OCT-21	R5625700
Benzo(b&j)fluoranthene	1.13	DLM	0.025	ug/g	19-OCT-21	21-OCT-21	R5625700
Benzo(g,h,i)perylene	0.669	DLM	0.025	ug/g	19-OCT-21	21-OCT-21	R5625700
Benzo(k)fluoranthene	0.428	DLM	0.025	ug/g	19-OCT-21	21-OCT-21	R5625700
Chrysene	1.02	DLM	0.025	ug/g	19-OCT-21	21-OCT-21	R5625700
Dibenz(a,h)anthracene	0.155	DLM	0.013	ug/g	19-OCT-21	21-OCT-21	R5625700
Fluoroanthene	2.10	DLM	0.013	ug/g	19-OCT-21	21-OCT-21	R5625700

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650175-15 PCOM-SC-001C Sampled By: CLIENT on 07-OCT-21 @ 10:00 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
Fluorene	0.164	DLM	0.013	ug/g	19-OCT-21	21-OCT-21	R5625700
Indeno(1,2,3-cd)pyrene	0.553	DLM	0.025	ug/g	19-OCT-21	21-OCT-21	R5625700
1-Methylnaphthalene	0.048	DLM	0.013	ug/g	19-OCT-21	21-OCT-21	R5625700
2-Methylnaphthalene	0.034	DLM	0.013	ug/g	19-OCT-21	21-OCT-21	R5625700
Naphthalene	0.052	DLM	0.013	ug/g	19-OCT-21	21-OCT-21	R5625700
Phenanthrene	1.37	DLM	0.013	ug/g	19-OCT-21	21-OCT-21	R5625700
Pyrene	2.18	DLM	0.013	ug/g	19-OCT-21	21-OCT-21	R5625700
Quinoline	<0.013	DLM	0.013	ug/g	19-OCT-21	21-OCT-21	R5625700
Surrogate: 2-Fluorobiphenyl	86.4		60-140	%	19-OCT-21	21-OCT-21	R5625700
Surrogate: d14-Terphenyl	87.9		60-140	%	19-OCT-21	21-OCT-21	R5625700
B(a)P Total Potency Equivalent	1.43		0.020	ug/g	19-OCT-21	21-OCT-21	R5625700
IACR (CCME)	16.4		0.25		19-OCT-21	21-OCT-21	R5625700
Polychlorinated Biphenyls							
Aroclor 1016	<0.0045	DLM	0.0045	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1221	<0.0045	DLM	0.0045	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1232	<0.0045	DLM	0.0045	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1242	<0.0045	DLM	0.0045	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1248	<0.0045	DLM	0.0045	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1254	0.0465	DLM	0.0045	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1260	0.126	DLM	0.0045	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1262	<0.0045	DLM	0.0045	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1268	<0.0045	DLM	0.0045	mg/kg	20-OCT-21	20-OCT-21	R5625592
Total Polychlorinated Biphenyls	0.172		0.014	mg/kg	20-OCT-21	20-OCT-21	R5625592
Surrogate: d14-Terphenyl	87.8		50-140	%	20-OCT-21	20-OCT-21	R5625592
L2650175-16 PCOM-SC-001D Sampled By: CLIENT on 07-OCT-21 @ 10:00 Matrix: SEDIMENT							
Physical Tests							
% Moisture	23.1		0.25	%	14-OCT-21	15-OCT-21	R5617676
Metals							
Aluminum (Al)	3820		50	ug/g	19-OCT-21	20-OCT-21	R5625366
Antimony (Sb)	4.92		0.10	ug/g	19-OCT-21	20-OCT-21	R5625366
Arsenic (As)	2.23		0.10	ug/g	19-OCT-21	20-OCT-21	R5625366
Barium (Ba)	94.2		0.50	ug/g	19-OCT-21	20-OCT-21	R5625366
Beryllium (Be)	0.21		0.10	ug/g	19-OCT-21	20-OCT-21	R5625366
Bismuth (Bi)	1.72		0.20	ug/g	19-OCT-21	20-OCT-21	R5625366
Boron (B)	6.8		5.0	ug/g	19-OCT-21	20-OCT-21	R5625366
Cadmium (Cd)	0.731		0.020	ug/g	19-OCT-21	20-OCT-21	R5625366
Calcium (Ca)	93500		50	ug/g	19-OCT-21	20-OCT-21	R5625366
Chromium (Cr)	1600	DLHC	10	ug/g	19-OCT-21	20-OCT-21	R5625366
Cobalt (Co)	3.83		0.10	ug/g	19-OCT-21	20-OCT-21	R5625366
Copper (Cu)	70.8		0.50	ug/g	19-OCT-21	20-OCT-21	R5625366

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650175-16 PCOM-SC-001D Sampled By: CLIENT on 07-OCT-21 @ 10:00 Matrix: SEDIMENT							
Metals							
Iron (Fe)	13600		50	ug/g	19-OCT-21	20-OCT-21	R5625366
Lead (Pb)	287		0.50	ug/g	19-OCT-21	20-OCT-21	R5625366
Lithium (Li)	4.9		2.0	ug/g	19-OCT-21	20-OCT-21	R5625366
Magnesium (Mg)	12700		20	ug/g	19-OCT-21	20-OCT-21	R5625366
Manganese (Mn)	216		1.0	ug/g	19-OCT-21	20-OCT-21	R5625366
Mercury (Hg)	0.118		0.0050	ug/g	19-OCT-21	20-OCT-21	R5625185
Molybdenum (Mo)	1.28		0.10	ug/g	19-OCT-21	20-OCT-21	R5625366
Nickel (Ni)	10.6		0.50	ug/g	19-OCT-21	20-OCT-21	R5625366
Phosphorus (P)	995		50	ug/g	19-OCT-21	20-OCT-21	R5625366
Potassium (K)	850		100	ug/g	19-OCT-21	20-OCT-21	R5625366
Selenium (Se)	0.22		0.20	ug/g	19-OCT-21	20-OCT-21	R5625366
Silver (Ag)	0.30		0.10	ug/g	19-OCT-21	20-OCT-21	R5625366
Sodium (Na)	217		50	ug/g	19-OCT-21	20-OCT-21	R5625366
Strontium (Sr)	231		0.50	ug/g	19-OCT-21	20-OCT-21	R5625366
Sulfur (S)	1900		1000	ug/g	19-OCT-21	20-OCT-21	R5625366
Thallium (Tl)	0.115		0.050	ug/g	19-OCT-21	20-OCT-21	R5625366
Tin (Sn)	5.7		2.0	ug/g	19-OCT-21	20-OCT-21	R5625366
Titanium (Ti)	292		1.0	ug/g	19-OCT-21	20-OCT-21	R5625366
Tungsten (W)	0.76		0.50	ug/g	19-OCT-21	20-OCT-21	R5625366
Uranium (U)	0.397		0.050	ug/g	19-OCT-21	20-OCT-21	R5625366
Vanadium (V)	20.0		0.20	ug/g	19-OCT-21	20-OCT-21	R5625366
Zinc (Zn)	166		2.0	ug/g	19-OCT-21	20-OCT-21	R5625366
Zirconium (Zr)	<1.0		1.0	ug/g	19-OCT-21	20-OCT-21	R5625366
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.240	DLM	0.013	ug/g	19-OCT-21	21-OCT-21	R5625700
Acenaphthylene	0.244	DLM	0.013	ug/g	19-OCT-21	21-OCT-21	R5625700
Acridine	0.066	AI	0.025	ug/g	19-OCT-21	21-OCT-21	R5625700
Anthracene	0.312	DLM	0.010	ug/g	19-OCT-21	21-OCT-21	R5625700
Benzo(a)anthracene	0.876	R	0.025	ug/g	19-OCT-21	21-OCT-21	R5625700
Benzo(a)pyrene	0.974	DLM	0.013	ug/g	19-OCT-21	21-OCT-21	R5625700
Benzo(b&j)fluoranthene	1.10	DLM	0.025	ug/g	19-OCT-21	21-OCT-21	R5625700
Benzo(g,h,i)perylene	0.663	DLM	0.025	ug/g	19-OCT-21	21-OCT-21	R5625700
Benzo(k)fluoranthene	0.384	DLM	0.025	ug/g	19-OCT-21	21-OCT-21	R5625700
Chrysene	0.995	DLM	0.025	ug/g	19-OCT-21	21-OCT-21	R5625700
Dibenz(a,h)anthracene	0.149	DLM	0.013	ug/g	19-OCT-21	21-OCT-21	R5625700
Fluoroanthene	1.90	DLM	0.013	ug/g	19-OCT-21	21-OCT-21	R5625700
Fluorene	0.183	DLM	0.013	ug/g	19-OCT-21	21-OCT-21	R5625700
Indeno(1,2,3-cd)pyrene	0.513	DLM	0.025	ug/g	19-OCT-21	21-OCT-21	R5625700
1-Methylnaphthalene	0.040	DLM	0.013	ug/g	19-OCT-21	21-OCT-21	R5625700
2-Methylnaphthalene	0.026	DLM	0.013	ug/g	19-OCT-21	21-OCT-21	R5625700
Naphthalene	0.028	DLM	0.013	ug/g	19-OCT-21	21-OCT-21	R5625700

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650175-16 PCOM-SC-001D Sampled By: CLIENT on 07-OCT-21 @ 10:00 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
Phenanthrene	1.21	DLM	0.013	ug/g	19-OCT-21	21-OCT-21	R5625700
Pyrene	2.13	DLM	0.013	ug/g	19-OCT-21	21-OCT-21	R5625700
Quinoline	<0.013	DLM	0.013	ug/g	19-OCT-21	21-OCT-21	R5625700
Surrogate: 2-Fluorobiphenyl	86.2		60-140	%	19-OCT-21	21-OCT-21	R5625700
Surrogate: d14-Terphenyl	88.5		60-140	%	19-OCT-21	21-OCT-21	R5625700
B(a)P Total Potency Equivalent	1.43		0.020	ug/g	19-OCT-21	21-OCT-21	R5625700
IACR (CCME)	16.0		0.25		19-OCT-21	21-OCT-21	R5625700
Polychlorinated Biphenyls							
Aroclor 1016	<0.0045	DLM	0.0045	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1221	<0.0045	DLM	0.0045	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1232	<0.0045	DLM	0.0045	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1242	<0.0045	DLM	0.0045	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1248	<0.0045	DLM	0.0045	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1254	0.0499	DLM	0.0045	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1260	0.0776	DLM	0.0045	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1262	<0.0045	DLM	0.0045	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1268	<0.0045	DLM	0.0045	mg/kg	20-OCT-21	20-OCT-21	R5625592
Total Polychlorinated Biphenyls	0.127		0.014	mg/kg	20-OCT-21	20-OCT-21	R5625592
Surrogate: d14-Terphenyl	94.4		50-140	%	20-OCT-21	20-OCT-21	R5625592
L2650175-17 PCOM-SC-001E Sampled By: CLIENT on 07-OCT-21 @ 10:00 Matrix: SEDIMENT							
Physical Tests							
% Moisture	33.2		0.25	%	14-OCT-21	15-OCT-21	R5617676
Metals							
Aluminum (Al)	4020		50	ug/g	19-OCT-21	20-OCT-21	R5625366
Antimony (Sb)	5.41		0.10	ug/g	19-OCT-21	20-OCT-21	R5625366
Arsenic (As)	3.10		0.10	ug/g	19-OCT-21	20-OCT-21	R5625366
Barium (Ba)	153		0.50	ug/g	19-OCT-21	20-OCT-21	R5625366
Beryllium (Be)	0.24		0.10	ug/g	19-OCT-21	20-OCT-21	R5625366
Bismuth (Bi)	0.35		0.20	ug/g	19-OCT-21	20-OCT-21	R5625366
Boron (B)	7.0		5.0	ug/g	19-OCT-21	20-OCT-21	R5625366
Cadmium (Cd)	0.951		0.020	ug/g	19-OCT-21	20-OCT-21	R5625366
Calcium (Ca)	87000		50	ug/g	19-OCT-21	20-OCT-21	R5625366
Chromium (Cr)	3490	DLHC	10	ug/g	19-OCT-21	20-OCT-21	R5625366
Cobalt (Co)	4.03		0.10	ug/g	19-OCT-21	20-OCT-21	R5625366
Copper (Cu)	78.2		0.50	ug/g	19-OCT-21	20-OCT-21	R5625366
Iron (Fe)	12500		50	ug/g	19-OCT-21	20-OCT-21	R5625366
Lead (Pb)	310		0.50	ug/g	19-OCT-21	20-OCT-21	R5625366
Lithium (Li)	4.9		2.0	ug/g	19-OCT-21	20-OCT-21	R5625366
Magnesium (Mg)	10700		20	ug/g	19-OCT-21	20-OCT-21	R5625366
Manganese (Mn)	213		1.0	ug/g	19-OCT-21	20-OCT-21	R5625366

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650175-17 PCOM-SC-001E Sampled By: CLIENT on 07-OCT-21 @ 10:00 Matrix: SEDIMENT							
Metals							
Mercury (Hg)	0.199		0.0050	ug/g	19-OCT-21	20-OCT-21	R5625185
Molybdenum (Mo)	1.69		0.10	ug/g	19-OCT-21	20-OCT-21	R5625366
Nickel (Ni)	11.8		0.50	ug/g	19-OCT-21	20-OCT-21	R5625366
Phosphorus (P)	1120		50	ug/g	19-OCT-21	20-OCT-21	R5625366
Potassium (K)	900		100	ug/g	19-OCT-21	20-OCT-21	R5625366
Selenium (Se)	0.36		0.20	ug/g	19-OCT-21	20-OCT-21	R5625366
Silver (Ag)	0.52		0.10	ug/g	19-OCT-21	20-OCT-21	R5625366
Sodium (Na)	262		50	ug/g	19-OCT-21	20-OCT-21	R5625366
Strontium (Sr)	281		0.50	ug/g	19-OCT-21	20-OCT-21	R5625366
Sulfur (S)	2600		1000	ug/g	19-OCT-21	20-OCT-21	R5625366
Thallium (Tl)	0.143		0.050	ug/g	19-OCT-21	20-OCT-21	R5625366
Tin (Sn)	9.6		2.0	ug/g	19-OCT-21	20-OCT-21	R5625366
Titanium (Ti)	225		1.0	ug/g	19-OCT-21	20-OCT-21	R5625366
Tungsten (W)	0.69		0.50	ug/g	19-OCT-21	20-OCT-21	R5625366
Uranium (U)	0.337		0.050	ug/g	19-OCT-21	20-OCT-21	R5625366
Vanadium (V)	16.7		0.20	ug/g	19-OCT-21	20-OCT-21	R5625366
Zinc (Zn)	220		2.0	ug/g	19-OCT-21	20-OCT-21	R5625366
Zirconium (Zr)	<1.0		1.0	ug/g	19-OCT-21	20-OCT-21	R5625366
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.704	DLM	0.013	ug/g	19-OCT-21	21-OCT-21	R5625700
Acenaphthylene	0.616	DLM	0.013	ug/g	19-OCT-21	21-OCT-21	R5625700
Acridine	0.196	AI	0.025	ug/g	19-OCT-21	21-OCT-21	R5625700
Anthracene	0.824	DLM	0.010	ug/g	19-OCT-21	21-OCT-21	R5625700
Benzo(a)anthracene	1.91	R	0.025	ug/g	19-OCT-21	21-OCT-21	R5625700
Benzo(a)pyrene	2.11	DLM	0.013	ug/g	19-OCT-21	21-OCT-21	R5625700
Benzo(b&j)fluoranthene	2.18	DLM	0.025	ug/g	19-OCT-21	21-OCT-21	R5625700
Benzo(g,h,i)perylene	1.37	DLM	0.025	ug/g	19-OCT-21	21-OCT-21	R5625700
Benzo(k)fluoranthene	0.804	DLM	0.025	ug/g	19-OCT-21	21-OCT-21	R5625700
Chrysene	2.09	DLM	0.025	ug/g	19-OCT-21	21-OCT-21	R5625700
Dibenz(a,h)anthracene	0.312	DLM	0.013	ug/g	19-OCT-21	21-OCT-21	R5625700
Fluoroanthene	4.17	DLM	0.013	ug/g	19-OCT-21	21-OCT-21	R5625700
Fluorene	0.506	DLM	0.013	ug/g	19-OCT-21	21-OCT-21	R5625700
Indeno(1,2,3-cd)pyrene	1.08	DLM	0.025	ug/g	19-OCT-21	21-OCT-21	R5625700
1-Methylnaphthalene	0.124	DLM	0.013	ug/g	19-OCT-21	21-OCT-21	R5625700
2-Methylnaphthalene	0.055	DLM	0.013	ug/g	19-OCT-21	21-OCT-21	R5625700
Naphthalene	0.052	DLM	0.013	ug/g	19-OCT-21	21-OCT-21	R5625700
Phenanthrene	3.12	DLM	0.013	ug/g	19-OCT-21	21-OCT-21	R5625700
Pyrene	4.70	DLM	0.013	ug/g	19-OCT-21	21-OCT-21	R5625700
Quinoline	<0.020	DLM	0.020	ug/g	19-OCT-21	21-OCT-21	R5625700
Surrogate: 2-Fluorobiphenyl	87.8		60-140	%	19-OCT-21	21-OCT-21	R5625700
Surrogate: d14-Terphenyl	89.9		60-140	%	19-OCT-21	21-OCT-21	R5625700

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650175-17 PCOM-SC-001E Sampled By: CLIENT on 07-OCT-21 @ 10:00 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
B(a)P Total Potency Equivalent	3.06		0.020	ug/g	19-OCT-21	21-OCT-21	R5625700
IACR (CCME)	33.1		0.25		19-OCT-21	21-OCT-21	R5625700
Polychlorinated Biphenyls							
Aroclor 1016	<0.0045	DLM	0.0045	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1221	<0.0045	DLM	0.0045	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1232	<0.0045	DLM	0.0045	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1242	<0.0045	DLM	0.0045	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1248	<0.0045	DLM	0.0045	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1254	0.0717	DLM	0.0045	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1260	0.0972	DLM	0.0045	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1262	<0.0045	DLM	0.0045	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1268	<0.0045	DLM	0.0045	mg/kg	20-OCT-21	20-OCT-21	R5625592
Total Polychlorinated Biphenyls	0.169		0.014	mg/kg	20-OCT-21	20-OCT-21	R5625592
Surrogate: d14-Terphenyl	97.3		50-140	%	20-OCT-21	20-OCT-21	R5625592
L2650175-18 PCOM-SC-001F Sampled By: CLIENT on 07-OCT-21 @ 10:00 Matrix: SEDIMENT							
Physical Tests							
% Moisture	48.9		0.25	%	14-OCT-21	15-OCT-21	R5617676
Metals							
Aluminum (Al)	4910		50	ug/g	19-OCT-21	20-OCT-21	R5625366
Antimony (Sb)	5.48		0.10	ug/g	19-OCT-21	20-OCT-21	R5625366
Arsenic (As)	3.91		0.10	ug/g	19-OCT-21	20-OCT-21	R5625366
Barium (Ba)	222		0.50	ug/g	19-OCT-21	20-OCT-21	R5625366
Beryllium (Be)	0.28		0.10	ug/g	19-OCT-21	20-OCT-21	R5625366
Bismuth (Bi)	0.53		0.20	ug/g	19-OCT-21	20-OCT-21	R5625366
Boron (B)	8.3		5.0	ug/g	19-OCT-21	20-OCT-21	R5625366
Cadmium (Cd)	1.52		0.020	ug/g	19-OCT-21	20-OCT-21	R5625366
Calcium (Ca)	83800		50	ug/g	19-OCT-21	20-OCT-21	R5625366
Chromium (Cr)	4620	DLHC	10	ug/g	19-OCT-21	20-OCT-21	R5625366
Cobalt (Co)	4.91		0.10	ug/g	19-OCT-21	20-OCT-21	R5625366
Copper (Cu)	76.6		0.50	ug/g	19-OCT-21	20-OCT-21	R5625366
Iron (Fe)	14400		50	ug/g	19-OCT-21	20-OCT-21	R5625366
Lead (Pb)	423		0.50	ug/g	19-OCT-21	20-OCT-21	R5625366
Lithium (Li)	5.1		2.0	ug/g	19-OCT-21	20-OCT-21	R5625366
Magnesium (Mg)	10600		20	ug/g	19-OCT-21	20-OCT-21	R5625366
Manganese (Mn)	247		1.0	ug/g	19-OCT-21	20-OCT-21	R5625366
Mercury (Hg)	0.316		0.0050	ug/g	19-OCT-21	20-OCT-21	R5625185
Molybdenum (Mo)	1.76		0.10	ug/g	19-OCT-21	20-OCT-21	R5625366
Nickel (Ni)	13.6		0.50	ug/g	19-OCT-21	20-OCT-21	R5625366
Phosphorus (P)	1320		50	ug/g	19-OCT-21	20-OCT-21	R5625366
Potassium (K)	1110		100	ug/g	19-OCT-21	20-OCT-21	R5625366

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650175-18 PCOM-SC-001F Sampled By: CLIENT on 07-OCT-21 @ 10:00 Matrix: SEDIMENT							
Metals							
Selenium (Se)	0.42		0.20	ug/g	19-OCT-21	20-OCT-21	R5625366
Silver (Ag)	0.76		0.10	ug/g	19-OCT-21	20-OCT-21	R5625366
Sodium (Na)	338		50	ug/g	19-OCT-21	20-OCT-21	R5625366
Strontium (Sr)	350		0.50	ug/g	19-OCT-21	20-OCT-21	R5625366
Sulfur (S)	2800		1000	ug/g	19-OCT-21	20-OCT-21	R5625366
Thallium (Tl)	0.174		0.050	ug/g	19-OCT-21	20-OCT-21	R5625366
Tin (Sn)	9.0		2.0	ug/g	19-OCT-21	20-OCT-21	R5625366
Titanium (Ti)	250		1.0	ug/g	19-OCT-21	20-OCT-21	R5625366
Tungsten (W)	<0.50		0.50	ug/g	19-OCT-21	20-OCT-21	R5625366
Uranium (U)	0.305		0.050	ug/g	19-OCT-21	20-OCT-21	R5625366
Vanadium (V)	19.5		0.20	ug/g	19-OCT-21	20-OCT-21	R5625366
Zinc (Zn)	299		2.0	ug/g	19-OCT-21	20-OCT-21	R5625366
Zirconium (Zr)	<1.0		1.0	ug/g	19-OCT-21	20-OCT-21	R5625366
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	1.73	DLM	0.013	ug/g	19-OCT-21	21-OCT-21	R5625700
Acenaphthylene	2.12	DLM	0.013	ug/g	19-OCT-21	21-OCT-21	R5625700
Acridine	0.505	AI	0.025	ug/g	19-OCT-21	21-OCT-21	R5625700
Anthracene	2.14	DLM	0.010	ug/g	19-OCT-21	21-OCT-21	R5625700
Benzo(a)anthracene	4.85	R	0.025	ug/g	19-OCT-21	21-OCT-21	R5625700
Benzo(a)pyrene	5.69	DLM	0.013	ug/g	19-OCT-21	21-OCT-21	R5625700
Benzo(b&j)fluoranthene	5.95	DLM	0.025	ug/g	19-OCT-21	21-OCT-21	R5625700
Benzo(g,h,i)perylene	3.81	DLM	0.025	ug/g	19-OCT-21	21-OCT-21	R5625700
Benzo(k)fluoranthene	2.33	DLM	0.025	ug/g	19-OCT-21	21-OCT-21	R5625700
Chrysene	5.16	DLM	0.025	ug/g	19-OCT-21	21-OCT-21	R5625700
Dibenz(a,h)anthracene	0.850	DLM	0.013	ug/g	19-OCT-21	21-OCT-21	R5625700
Fluoroanthene	9.36	DLM	0.013	ug/g	19-OCT-21	21-OCT-21	R5625700
Fluorene	1.22	DLM	0.013	ug/g	19-OCT-21	21-OCT-21	R5625700
Indeno(1,2,3-cd)pyrene	2.83	DLM	0.025	ug/g	19-OCT-21	21-OCT-21	R5625700
1-Methylnaphthalene	0.223	DLM	0.013	ug/g	19-OCT-21	21-OCT-21	R5625700
2-Methylnaphthalene	0.223	DLM	0.013	ug/g	19-OCT-21	21-OCT-21	R5625700
Naphthalene	0.303	DLM	0.013	ug/g	19-OCT-21	21-OCT-21	R5625700
Phenanthrene	7.33	DLM	0.013	ug/g	19-OCT-21	21-OCT-21	R5625700
Pyrene	11.7	DLM	0.013	ug/g	19-OCT-21	21-OCT-21	R5625700
Quinoline	<0.040	DLM	0.040	ug/g	19-OCT-21	21-OCT-21	R5625700
Surrogate: 2-Fluorobiphenyl	87.6		60-140	%	19-OCT-21	21-OCT-21	R5625700
Surrogate: d14-Terphenyl	91.7		60-140	%	19-OCT-21	21-OCT-21	R5625700
B(a)P Total Potency Equivalent	8.23		0.020	ug/g	19-OCT-21	21-OCT-21	R5625700
IACR (CCME)	89.6		0.25		19-OCT-21	21-OCT-21	R5625700
Polychlorinated Biphenyls							
Aroclor 1016	<0.0050	DLM	0.0050	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1221	<0.0050	DLM	0.0050	mg/kg	20-OCT-21	20-OCT-21	R5625592

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650175-18 PCOM-SC-001F Sampled By: CLIENT on 07-OCT-21 @ 10:00 Matrix: SEDIMENT							
Polychlorinated Biphenyls							
Aroclor 1232	<0.0050	DLM	0.0050	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1242	<0.0050	DLM	0.0050	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1248	<0.0050	DLM	0.0050	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1254	0.381	DLM	0.0045	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1260	0.430	DLM	0.0045	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1262	<0.0045	DLM	0.0045	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1268	<0.0045	DLM	0.0045	mg/kg	20-OCT-21	20-OCT-21	R5625592
Total Polychlorinated Biphenyls	0.811		0.014	mg/kg	20-OCT-21	20-OCT-21	R5625592
Surrogate: d14-Terphenyl	103.3		50-140	%	20-OCT-21	20-OCT-21	R5625592
L2650175-19 PCOM-SC-001G Sampled By: CLIENT on 07-OCT-21 @ 10:00 Matrix: SEDIMENT							
Physical Tests							
% Moisture	59.8		0.25	%	14-OCT-21	15-OCT-21	R5617676
Metals							
Aluminum (Al)	5270		50	ug/g	19-OCT-21	20-OCT-21	R5625366
Antimony (Sb)	8.85		0.10	ug/g	19-OCT-21	20-OCT-21	R5625366
Arsenic (As)	6.71		0.10	ug/g	19-OCT-21	20-OCT-21	R5625366
Barium (Ba)	441		0.50	ug/g	19-OCT-21	20-OCT-21	R5625366
Beryllium (Be)	0.25		0.10	ug/g	19-OCT-21	20-OCT-21	R5625366
Bismuth (Bi)	1.49		0.20	ug/g	19-OCT-21	20-OCT-21	R5625366
Boron (B)	10.1		5.0	ug/g	19-OCT-21	20-OCT-21	R5625366
Cadmium (Cd)	1.91		0.020	ug/g	19-OCT-21	20-OCT-21	R5625366
Calcium (Ca)	104000		50	ug/g	19-OCT-21	20-OCT-21	R5625366
Chromium (Cr)	15500	DLHC	10	ug/g	19-OCT-21	20-OCT-21	R5625366
Cobalt (Co)	4.23		0.10	ug/g	19-OCT-21	20-OCT-21	R5625366
Copper (Cu)	89.2		0.50	ug/g	19-OCT-21	20-OCT-21	R5625366
Iron (Fe)	17000		50	ug/g	19-OCT-21	20-OCT-21	R5625366
Lead (Pb)	763		0.50	ug/g	19-OCT-21	20-OCT-21	R5625366
Lithium (Li)	4.3		2.0	ug/g	19-OCT-21	20-OCT-21	R5625366
Magnesium (Mg)	6530		20	ug/g	19-OCT-21	20-OCT-21	R5625366
Manganese (Mn)	349		1.0	ug/g	19-OCT-21	20-OCT-21	R5625366
Mercury (Hg)	0.803		0.0050	ug/g	19-OCT-21	20-OCT-21	R5625185
Molybdenum (Mo)	4.90		0.10	ug/g	19-OCT-21	20-OCT-21	R5625366
Nickel (Ni)	14.9		0.50	ug/g	19-OCT-21	20-OCT-21	R5625366
Phosphorus (P)	2870		50	ug/g	19-OCT-21	20-OCT-21	R5625366
Potassium (K)	1030		100	ug/g	19-OCT-21	20-OCT-21	R5625366
Selenium (Se)	0.53		0.20	ug/g	19-OCT-21	20-OCT-21	R5625366
Silver (Ag)	3.01		0.10	ug/g	19-OCT-21	20-OCT-21	R5625366
Sodium (Na)	592		50	ug/g	19-OCT-21	20-OCT-21	R5625366
Strontium (Sr)	555		0.50	ug/g	19-OCT-21	20-OCT-21	R5625366
Sulfur (S)	7100		1000	ug/g	19-OCT-21	20-OCT-21	R5625366

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650175-19 PCOM-SC-001G Sampled By: CLIENT on 07-OCT-21 @ 10:00 Matrix: SEDIMENT							
Metals							
Thallium (Tl)	0.201		0.050	ug/g	19-OCT-21	20-OCT-21	R5625366
Tin (Sn)	18.2		2.0	ug/g	19-OCT-21	20-OCT-21	R5625366
Titanium (Ti)	210		1.0	ug/g	19-OCT-21	20-OCT-21	R5625366
Tungsten (W)	<0.50		0.50	ug/g	19-OCT-21	20-OCT-21	R5625366
Uranium (U)	0.428		0.050	ug/g	19-OCT-21	20-OCT-21	R5625366
Vanadium (V)	19.7		0.20	ug/g	19-OCT-21	20-OCT-21	R5625366
Zinc (Zn)	401		2.0	ug/g	19-OCT-21	20-OCT-21	R5625366
Zirconium (Zr)	<1.0		1.0	ug/g	19-OCT-21	20-OCT-21	R5625366
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	5.32	DLM	0.019	ug/g	19-OCT-21	21-OCT-21	R5625700
Acenaphthylene	3.26	DLM	0.019	ug/g	19-OCT-21	21-OCT-21	R5625700
Acridine	1.47	AI	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Anthracene	3.41	DLM	0.015	ug/g	19-OCT-21	21-OCT-21	R5625700
Benzo(a)anthracene	6.12	R	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Benzo(a)pyrene	7.51	DLM	0.019	ug/g	19-OCT-21	21-OCT-21	R5625700
Benzo(b&j)fluoranthene	5.85	DLM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Benzo(g,h,i)perylene	4.30	DLM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Benzo(k)fluoranthene	2.23	DLM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Chrysene	5.89	DLM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
Dibenz(a,h)anthracene	0.963	DLM	0.019	ug/g	19-OCT-21	21-OCT-21	R5625700
Fluoroanthene	10.0	DLM	0.019	ug/g	19-OCT-21	21-OCT-21	R5625700
Fluorene	3.30	DLM	0.019	ug/g	19-OCT-21	21-OCT-21	R5625700
Indeno(1,2,3-cd)pyrene	2.89	DLM	0.038	ug/g	19-OCT-21	21-OCT-21	R5625700
1-Methylnaphthalene	0.341	DLM	0.019	ug/g	19-OCT-21	21-OCT-21	R5625700
2-Methylnaphthalene	0.287	DLM	0.019	ug/g	19-OCT-21	21-OCT-21	R5625700
Naphthalene	0.307	DLM	0.019	ug/g	19-OCT-21	21-OCT-21	R5625700
Phenanthrene	13.3	DLM	0.019	ug/g	19-OCT-21	21-OCT-21	R5625700
Pyrene	15.3	DLM	0.019	ug/g	19-OCT-21	21-OCT-21	R5625700
Quinoline	<0.090	DLM	0.090	ug/g	19-OCT-21	21-OCT-21	R5625700
Surrogate: 2-Fluorobiphenyl	87.5		60-140	%	19-OCT-21	21-OCT-21	R5625700
Surrogate: d14-Terphenyl	90.3		60-140	%	19-OCT-21	21-OCT-21	R5625700
B(a)P Total Potency Equivalent	10.3		0.027	ug/g	19-OCT-21	21-OCT-21	R5625700
IACR (CCME)	98.0		0.38		19-OCT-21	21-OCT-21	R5625700
Polychlorinated Biphenyls							
Aroclor 1016	<0.050	DLM	0.050	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1221	<0.050	DLM	0.050	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1232	<0.050	DLM	0.050	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1242	<0.050	DLM	0.050	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1248	<0.050	DLM	0.050	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1254	2.14	DLHM	0.014	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1260	3.04	DLHM	0.014	mg/kg	20-OCT-21	20-OCT-21	R5625592

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650175-19 PCOM-SC-001G Sampled By: CLIENT on 07-OCT-21 @ 10:00 Matrix: SEDIMENT							
Polychlorinated Biphenyls							
Aroclor 1262	<0.014	DLHM	0.014	mg/kg	20-OCT-21	20-OCT-21	R5625592
Aroclor 1268	<0.014	DLHM	0.014	mg/kg	20-OCT-21	20-OCT-21	R5625592
Total Polychlorinated Biphenyls	5.18		0.041	mg/kg	20-OCT-21	20-OCT-21	R5625592
Surrogate: d14-Terphenyl	114.9		50-140	%	20-OCT-21	20-OCT-21	R5625592

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Reference Information

QC Samples with Qualifiers & Comments:

QC Type Description	Parameter	Qualifier	Applies to Sample Number(s)
Matrix Spike	Aroclor 1254	MS-B	L2650175-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Aroclor 1260	MS-B	L2650175-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -3, -4, -5, -6, -7, -8, -9

Sample Parameter Qualifier key listed:

Qualifier	Description
AI	Analytical interferences may be present. Result may be biased high.
DLHC	Detection Limit Raised: Dilution required due to high concentration of test analyte(s).
DLHM	Detection Limit Adjusted: Sample has High Moisture Content
DLM	Detection Limit Adjusted due to sample matrix effects (e.g. chemical interference, colour, turbidity).
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
R	The ion abundance ratio(s) did not meet the acceptance criteria. Value is an estimated maximum.

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
HG-200.2-CVAA-WT	Soil	Mercury in Soil by CVAAS	EPA 200.2/1631E (mod)

Soil samples are digested with nitric and hydrochloric acids, followed by analysis by CVAAS.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

MET-200.2-CCMS-WT	Soil	Metals in Soil by CRC ICPMS	EPA 200.2/6020B (mod)

Soil/sediment is dried, disaggregated, and sieved (2 mm). For tests intended to support Ontario regulations, the <2mm fraction is ground to pass through a 0.355 mm sieve. Strong Acid Leachable Metals in the <2mm fraction are solubilized by heated digestion with nitric and hydrochloric acids. Instrumental analysis is by Collision / Reaction Cell ICPMS.

Limitations: This method is intended to liberate environmentally available metals. Silicate minerals are not solubilized. Some metals may be only partially recovered (matrix dependent), including Al, Ba, Be, Cr, S, Sr, Ti, Tl, V, W, and Zr. Elemental Sulfur may be poorly recovered by this method. Volatile forms of sulfur (e.g. sulfide, H2S) may be excluded if lost during sampling, storage, or digestion.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011), unless a subset of the Analytical Test Group (ATG) has been requested (the Protocol states that all analytes in an ATG must be reported).

MOISTURE-WT	Soil	% Moisture	CCME PHC in Soil - Tier 1 (mod)
PAH-CCME-SQGL-WT	Soil	PAHs in Sediment	SW846 8270

The procedure uses a mechanical shaking technique to extract a representative sub-sample with a mixture of methanol and toluene. The extract is analyzed by GC/MSD. Depending on the analytical GC/MS column used benzo(j)fluoranthene may chromatographically co-elute with benzo(b)fluoranthene or benzo(k)fluoranthene.

PCB9-LOW-WT	Soil	PCBs to meet CCME Sediment Criteria	SW846 8270

A representative sub-sample of a soil sample is mixed with methanol and extracted with toluene using a shaker technique. An aliquot of the separated toluene is analyzed by GC/MSD.

PSA-MUST-SK	Soil	% Particles > 75um (Coarse/Fine)	ASTM D6913

An air-dried sample is reduced to < 2 mm size and mixed with a dispersing agent (Calgon solution). The sample is washed through a 200 mesh (75 µm) sieve. The retained mass of sample is used to determine % sand fraction.

Reference: ASTM D422-63

TOC-WT	Soil	TOC & FOC in Solids	CARTER 21.3.2

Soil is treated with excess acidic dichromate, which reacts with the organic carbon, oxidizing it to CO2. The residual dichromate is titrated with ferrous ammonium sulphate and TOC calculated by difference.

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location

Reference Information

SK	ALS ENVIRONMENTAL - SASKATOON, SASKATCHEWAN, CANADA
WT	ALS ENVIRONMENTAL - WATERLOO, ONTARIO, CANADA

Chain of Custody Numbers:

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.
mg/kg - milligrams per kilogram based on dry weight of sample
mg/kg wwt - milligrams per kilogram based on wet weight of sample
mg/kg lwt - milligrams per kilogram based on lipid weight of sample
mg/L - unit of concentration based on volume, parts per million.
< - Less than.
D.L. - The reporting limit.
N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.
UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.
Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.

Quality Control Report

Workorder: L2650175 Report Date: 25-OCT-21

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
HG-200.2-CVAA-WT	**Soil**							
Batch R5625185								
WG3641244-2 CRM		**WT-SS-2**						
Mercury (Hg)			94.8		%		70-130	20-OCT-21
WG3641244-7 DUP		**WG3641244-6**						
Mercury (Hg)		0.803	0.835		ug/g	3.9	40	20-OCT-21
WG3641244-3 LCS								
Mercury (Hg)			98.5		%		80-120	20-OCT-21
WG3641244-1 MB								
Mercury (Hg)			<0.0050		mg/kg		0.005	20-OCT-21
Batch R5625980								
WG3641359-2 CRM		**WT-SS-2**						
Mercury (Hg)			104.7		%		70-130	21-OCT-21
WG3641359-6 DUP		**WG3641359-5**						
Mercury (Hg)		0.290	0.281		ug/g	3.3	40	21-OCT-21
WG3641359-3 LCS								
Mercury (Hg)			105.0		%		80-120	21-OCT-21
WG3641359-1 MB								
Mercury (Hg)			<0.0050		mg/kg		0.005	21-OCT-21
MET-200.2-CCMS-WT	**Soil**							
Batch R5625366								
WG3641244-2 CRM		**WT-SS-2**						
Aluminum (Al)			105.3		%		70-130	20-OCT-21
Antimony (Sb)			89.5		%		70-130	20-OCT-21
Arsenic (As)			105.7		%		70-130	20-OCT-21
Barium (Ba)			110.7		%		70-130	20-OCT-21
Beryllium (Be)			97.6		%		70-130	20-OCT-21
Bismuth (Bi)			0.14		mg/kg		0-0.34	20-OCT-21
Boron (B)			8.3		mg/kg		3.5-13.5	20-OCT-21
Cadmium (Cd)			101.3		%		70-130	20-OCT-21
Calcium (Ca)			100.5		%		70-130	20-OCT-21
Chromium (Cr)			100.7		%		70-130	20-OCT-21
Cobalt (Co)			103.9		%		70-130	20-OCT-21
Copper (Cu)			106.6		%		70-130	20-OCT-21
Iron (Fe)			104.4		%		70-130	20-OCT-21
Lead (Pb)			97.4		%		70-130	20-OCT-21
Lithium (Li)			92.1		%		70-130	20-OCT-21
Magnesium (Mg)			109.0		%		70-130	20-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5625366								
WG3641244-2 CRM		**WT-SS-2**						
Manganese (Mn)			106.0		%		70-130	20-OCT-21
Molybdenum (Mo)			100.7		%		70-130	20-OCT-21
Nickel (Ni)			104.3		%		70-130	20-OCT-21
Phosphorus (P)			103.2		%		70-130	20-OCT-21
Potassium (K)			100.1		%		70-130	20-OCT-21
Selenium (Se)			0.14		mg/kg		0-0.34	20-OCT-21
Silver (Ag)			94.5		%		70-130	20-OCT-21
Sodium (Na)			100.9		%		70-130	20-OCT-21
Strontium (Sr)			98.5		%		70-130	20-OCT-21
Thallium (Tl)			0.073		mg/kg		0.029-0.129	20-OCT-21
Tin (Sn)			99.5		%		70-130	20-OCT-21
Titanium (Ti)			96.5		%		70-130	20-OCT-21
Uranium (U)			96.0		%		70-130	20-OCT-21
Vanadium (V)			102.7		%		70-130	20-OCT-21
Zinc (Zn)			98.6		%		70-130	20-OCT-21
Zirconium (Zr)			92.7		%		70-130	20-OCT-21
WG3641244-7 DUP		**WG3641244-6**						
Aluminum (Al)		5270	6010		ug/g	13	40	20-OCT-21
Antimony (Sb)		8.85	10.3		ug/g	15	30	20-OCT-21
Arsenic (As)		6.71	7.09		ug/g	5.5	30	20-OCT-21
Barium (Ba)		441	462		ug/g	4.6	40	20-OCT-21
Beryllium (Be)		0.25	0.30		ug/g	17	30	20-OCT-21
Bismuth (Bi)		1.49	1.99		ug/g	29	30	20-OCT-21
Boron (B)		10.1	11.2		ug/g	10	30	20-OCT-21
Cadmium (Cd)		1.91	1.95		ug/g	2.3	30	20-OCT-21
Calcium (Ca)		104000	110000		ug/g	4.9	30	20-OCT-21
Chromium (Cr)		15500	16400		ug/g	5.1	30	20-OCT-21
Cobalt (Co)		4.23	4.49		ug/g	6.1	30	20-OCT-21
Copper (Cu)		89.2	90.8		ug/g	1.7	30	20-OCT-21
Iron (Fe)		17000	17700		ug/g	3.7	30	20-OCT-21
Lead (Pb)		763	818		ug/g	7.0	40	20-OCT-21
Lithium (Li)		4.3	5.2		ug/g	18	30	20-OCT-21
Magnesium (Mg)		6530	6970		ug/g	6.5	30	20-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5625366								
WG3641244-7 DUP		**WG3641244-6**						
Manganese (Mn)		349	339		ug/g	3.0	30	20-OCT-21
Molybdenum (Mo)		4.90	5.73		ug/g	16	40	20-OCT-21
Nickel (Ni)		14.9	15.9		ug/g	6.2	30	20-OCT-21
Phosphorus (P)		2870	2910		ug/g	1.5	30	20-OCT-21
Potassium (K)		1030	1180		ug/g	13	40	20-OCT-21
Selenium (Se)		0.53	0.65		ug/g	20	30	20-OCT-21
Silver (Ag)		3.01	3.42		ug/g	13	40	20-OCT-21
Sodium (Na)		592	600		ug/g	1.4	40	20-OCT-21
Strontium (Sr)		555	590		ug/g	6.1	40	20-OCT-21
Sulfur (S)		7100	7600		ug/g	7.4	30	20-OCT-21
Thallium (Tl)		0.201	0.226		ug/g	12	30	20-OCT-21
Tin (Sn)		18.2	18.4		ug/g	1.0	40	20-OCT-21
Titanium (Ti)		210	240		ug/g	13	40	20-OCT-21
Tungsten (W)		<0.50	<0.50	RPD-NA	ug/g	N/A	30	20-OCT-21
Uranium (U)		0.428	0.479		ug/g	11	30	20-OCT-21
Vanadium (V)		19.7	20.9		ug/g	6.2	30	20-OCT-21
Zinc (Zn)		401	409		ug/g	2.1	30	20-OCT-21
Zirconium (Zr)		<1.0	<1.0	RPD-NA	ug/g	N/A	30	20-OCT-21
WG3641244-4 LCS								
Aluminum (Al)			102.0		%		80-120	20-OCT-21
Antimony (Sb)			92.5		%		80-120	20-OCT-21
Arsenic (As)			104.6		%		80-120	20-OCT-21
Barium (Ba)			108.1		%		80-120	20-OCT-21
Beryllium (Be)			93.2		%		80-120	20-OCT-21
Bismuth (Bi)			93.4		%		80-120	20-OCT-21
Boron (B)			89.7		%		80-120	20-OCT-21
Cadmium (Cd)			102.1		%		80-120	20-OCT-21
Calcium (Ca)			97.1		%		80-120	20-OCT-21
Chromium (Cr)			102.6		%		80-120	20-OCT-21
Cobalt (Co)			103.3		%		80-120	20-OCT-21
Copper (Cu)			102.6		%		80-120	20-OCT-21
Iron (Fe)			104.3		%		80-120	20-OCT-21
Lead (Pb)			98.3		%		80-120	20-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5625366								
WG3641244-4 LCS								
Lithium (Li)			86.5		%		80-120	20-OCT-21
Magnesium (Mg)			105.8		%		80-120	20-OCT-21
Manganese (Mn)			101.8		%		80-120	20-OCT-21
Molybdenum (Mo)			94.3		%		80-120	20-OCT-21
Nickel (Ni)			102.2		%		80-120	20-OCT-21
Phosphorus (P)			105.2		%		80-120	20-OCT-21
Potassium (K)			110.6		%		80-120	20-OCT-21
Selenium (Se)			102.6		%		80-120	20-OCT-21
Silver (Ag)			85.5		%		80-120	20-OCT-21
Sodium (Na)			101.9		%		80-120	20-OCT-21
Strontium (Sr)			102.0		%		80-120	20-OCT-21
Sulfur (S)			100.5		%		80-120	20-OCT-21
Thallium (Tl)			95.7		%		80-120	20-OCT-21
Tin (Sn)			94.6		%		80-120	20-OCT-21
Titanium (Ti)			102.8		%		80-120	20-OCT-21
Tungsten (W)			94.3		%		80-120	20-OCT-21
Uranium (U)			92.5		%		80-120	20-OCT-21
Vanadium (V)			103.9		%		80-120	20-OCT-21
Zinc (Zn)			97.2		%		80-120	20-OCT-21
Zirconium (Zr)			91.6		%		80-120	20-OCT-21
WG3641244-1 MB								
Aluminum (Al)			<50		mg/kg		50	20-OCT-21
Antimony (Sb)			<0.10		mg/kg		0.1	20-OCT-21
Arsenic (As)			<0.10		mg/kg		0.1	20-OCT-21
Barium (Ba)			<0.50		mg/kg		0.5	20-OCT-21
Beryllium (Be)			<0.10		mg/kg		0.1	20-OCT-21
Bismuth (Bi)			<0.20		mg/kg		0.2	20-OCT-21
Boron (B)			<5.0		mg/kg		5	20-OCT-21
Cadmium (Cd)			<0.020		mg/kg		0.02	20-OCT-21
Calcium (Ca)			<50		mg/kg		50	20-OCT-21
Chromium (Cr)			<0.50		mg/kg		0.5	20-OCT-21
Cobalt (Co)			<0.10		mg/kg		0.1	20-OCT-21
Copper (Cu)			<0.50		mg/kg		0.5	20-OCT-21
Iron (Fe)			<50		mg/kg		50	20-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5625366								
WG3641244-1 MB								
Lead (Pb)			<0.50		mg/kg		0.5	20-OCT-21
Lithium (Li)			<2.0		mg/kg		2	20-OCT-21
Magnesium (Mg)			<20		mg/kg		20	20-OCT-21
Manganese (Mn)			<1.0		mg/kg		1	20-OCT-21
Molybdenum (Mo)			<0.10		mg/kg		0.1	20-OCT-21
Nickel (Ni)			<0.50		mg/kg		0.5	20-OCT-21
Phosphorus (P)			<50		mg/kg		50	20-OCT-21
Potassium (K)			<100		mg/kg		100	20-OCT-21
Selenium (Se)			<0.20		mg/kg		0.2	20-OCT-21
Silver (Ag)			<0.10		mg/kg		0.1	20-OCT-21
Sodium (Na)			<50		mg/kg		50	20-OCT-21
Strontium (Sr)			<0.50		mg/kg		0.5	20-OCT-21
Sulfur (S)			<1000		mg/kg		1000	20-OCT-21
Thallium (Tl)			<0.050		mg/kg		0.05	20-OCT-21
Tin (Sn)			<2.0		mg/kg		2	20-OCT-21
Titanium (Ti)			<1.0		mg/kg		1	20-OCT-21
Tungsten (W)			<0.50		mg/kg		0.5	20-OCT-21
Uranium (U)			<0.050		mg/kg		0.05	20-OCT-21
Vanadium (V)			<0.20		mg/kg		0.2	20-OCT-21
Zinc (Zn)			<2.0		mg/kg		2	20-OCT-21
Zirconium (Zr)			<1.0		mg/kg		1	20-OCT-21
Batch R5625485								
WG3641359-2 CRM		**WT-SS-2**						
Aluminum (Al)			116.3		%		70-130	20-OCT-21
Antimony (Sb)			98.5		%		70-130	20-OCT-21
Arsenic (As)			104.1		%		70-130	20-OCT-21
Barium (Ba)			109.8		%		70-130	20-OCT-21
Beryllium (Be)			98.0		%		70-130	20-OCT-21
Boron (B)			8.3		mg/kg		3.5-13.5	20-OCT-21
Cadmium (Cd)			98.4		%		70-130	20-OCT-21
Calcium (Ca)			96.8		%		70-130	20-OCT-21
Chromium (Cr)			109.0		%		70-130	20-OCT-21
Cobalt (Co)			104.9		%		70-130	20-OCT-21
Copper (Cu)			108.2		%		70-130	20-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5625485								
WG3641359-2 CRM		**WT-SS-2**						
Iron (Fe)			108.6		%		70-130	20-OCT-21
Lead (Pb)			107.7		%		70-130	20-OCT-21
Lithium (Li)			88.5		%		70-130	20-OCT-21
Magnesium (Mg)			110.0		%		70-130	20-OCT-21
Manganese (Mn)			110.7		%		70-130	20-OCT-21
Molybdenum (Mo)			102.2		%		70-130	20-OCT-21
Nickel (Ni)			105.2		%		70-130	20-OCT-21
Phosphorus (P)			104.8		%		70-130	20-OCT-21
Potassium (K)			107.0		%		70-130	20-OCT-21
Selenium (Se)			0.13		mg/kg		0-0.34	20-OCT-21
Silver (Ag)			88.9		%		70-130	20-OCT-21
Sodium (Na)			112.7		%		70-130	20-OCT-21
Strontium (Sr)			101.0		%		70-130	20-OCT-21
Thallium (Tl)			0.078		mg/kg		0.029-0.129	20-OCT-21
Tin (Sn)			93.4		%		70-130	20-OCT-21
Titanium (Ti)			105.9		%		70-130	20-OCT-21
Uranium (U)			97.9		%		70-130	20-OCT-21
Vanadium (V)			105.5		%		70-130	20-OCT-21
Zinc (Zn)			100.0		%		70-130	20-OCT-21
Zirconium (Zr)			109.0		%		70-130	20-OCT-21
WG3641359-6 DUP		**WG3641359-5**						
Aluminum (Al)		7780	7810		ug/g	0.4	40	20-OCT-21
Antimony (Sb)		7.15	6.14		ug/g	15	30	20-OCT-21
Arsenic (As)		4.27	4.45		ug/g	4.0	30	20-OCT-21
Barium (Ba)		222	223		ug/g	0.4	40	20-OCT-21
Beryllium (Be)		0.36	0.37		ug/g	0.8	30	20-OCT-21
Bismuth (Bi)		0.66	0.74		ug/g	13	30	20-OCT-21
Boron (B)		13	11		ug/g	14	30	20-OCT-21
Cadmium (Cd)		1.22	1.15		ug/g	5.4	30	20-OCT-21
Calcium (Ca)		132000	136000		ug/g	2.9	30	20-OCT-21
Chromium (Cr)		4690	4690		ug/g	0.1	30	20-OCT-21
Cobalt (Co)		7.35	7.76		ug/g	5.5	30	20-OCT-21
Copper (Cu)		98.6	77.5		ug/g	24	30	20-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5625485								
WG3641359-6 DUP		**WG3641359-5**						
Iron (Fe)		20300	20600		ug/g	1.4	30	20-OCT-21
Lead (Pb)		378	377		ug/g	0.1	40	20-OCT-21
Lithium (Li)		8.0	8.0		ug/g	0.5	30	20-OCT-21
Magnesium (Mg)		16300	17200		ug/g	5.7	30	20-OCT-21
Manganese (Mn)		300	321		ug/g	6.8	30	20-OCT-21
Molybdenum (Mo)		2.27	2.14		ug/g	6.2	40	20-OCT-21
Nickel (Ni)		18.1	19.2		ug/g	6.2	30	20-OCT-21
Phosphorus (P)		1720	1760		ug/g	2.7	30	20-OCT-21
Potassium (K)		1760	1710		ug/g	2.8	40	20-OCT-21
Selenium (Se)		0.69	0.71		ug/g	2.0	30	20-OCT-21
Silver (Ag)		0.93	0.74		ug/g	23	40	20-OCT-21
Sodium (Na)		530	570		ug/g	6.3	40	20-OCT-21
Strontium (Sr)		474	455		ug/g	4.2	40	20-OCT-21
Sulfur (S)		4700	5000		ug/g	6.1	30	20-OCT-21
Thallium (Tl)		0.27	0.26		ug/g	3.8	30	20-OCT-21
Tin (Sn)		9.6	8.5		ug/g	13	40	20-OCT-21
Titanium (Ti)		412	394		ug/g	4.4	40	20-OCT-21
Tungsten (W)		2.9	2.6		ug/g	9.7	30	20-OCT-21
Uranium (U)		0.49	0.47		ug/g	3.4	30	20-OCT-21
Vanadium (V)		26.9	27.4		ug/g	1.7	30	20-OCT-21
Zinc (Zn)		337	354		ug/g	5.0	30	20-OCT-21
Zirconium (Zr)		<2.0	<2.0	RPD-NA	ug/g	N/A	30	20-OCT-21
WG3641359-4 LCS								
Aluminum (Al)			107.8		%		80-120	20-OCT-21
Antimony (Sb)			106.1		%		80-120	20-OCT-21
Arsenic (As)			109.6		%		80-120	20-OCT-21
Barium (Ba)			105.5		%		80-120	20-OCT-21
Beryllium (Be)			93.4		%		80-120	20-OCT-21
Bismuth (Bi)			104.9		%		80-120	20-OCT-21
Boron (B)			90.3		%		80-120	20-OCT-21
Cadmium (Cd)			99.0		%		80-120	20-OCT-21
Calcium (Ca)			95.3		%		80-120	20-OCT-21
Chromium (Cr)			105.6		%		80-120	20-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5625485								
WG3641359-4 LCS								
Cobalt (Co)			105.5		%		80-120	20-OCT-21
Copper (Cu)			103.3		%		80-120	20-OCT-21
Iron (Fe)			100.0		%		80-120	20-OCT-21
Lead (Pb)			105.0		%		80-120	20-OCT-21
Lithium (Li)			86.8		%		80-120	20-OCT-21
Magnesium (Mg)			113.0		%		80-120	20-OCT-21
Manganese (Mn)			106.3		%		80-120	20-OCT-21
Molybdenum (Mo)			104.8		%		80-120	20-OCT-21
Nickel (Ni)			103.8		%		80-120	20-OCT-21
Phosphorus (P)			109.0		%		80-120	20-OCT-21
Potassium (K)			107.2		%		80-120	20-OCT-21
Selenium (Se)			104.5		%		80-120	20-OCT-21
Silver (Ag)			93.7		%		80-120	20-OCT-21
Sodium (Na)			107.6		%		80-120	20-OCT-21
Strontium (Sr)			104.2		%		80-120	20-OCT-21
Sulfur (S)			102.6		%		80-120	20-OCT-21
Thallium (Tl)			103.1		%		80-120	20-OCT-21
Tin (Sn)			100.0		%		80-120	20-OCT-21
Titanium (Ti)			105.4		%		80-120	20-OCT-21
Tungsten (W)			103.8		%		80-120	20-OCT-21
Uranium (U)			104.4		%		80-120	20-OCT-21
Vanadium (V)			109.0		%		80-120	20-OCT-21
Zinc (Zn)			104.0		%		80-120	20-OCT-21
Zirconium (Zr)			101.2		%		80-120	20-OCT-21
WG3641359-1 MB								
Aluminum (Al)			<50		mg/kg		50	20-OCT-21
Antimony (Sb)			<0.10		mg/kg		0.1	20-OCT-21
Arsenic (As)			<0.10		mg/kg		0.1	20-OCT-21
Barium (Ba)			<0.50		mg/kg		0.5	20-OCT-21
Beryllium (Be)			<0.10		mg/kg		0.1	20-OCT-21
Bismuth (Bi)			<0.20		mg/kg		0.2	20-OCT-21
Boron (B)			<5.0		mg/kg		5	20-OCT-21
Cadmium (Cd)			<0.020		mg/kg		0.02	20-OCT-21
Calcium (Ca)			<50		mg/kg		50	20-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5625485								
WG3641359-1 MB								
Chromium (Cr)			<0.50		mg/kg		0.5	20-OCT-21
Cobalt (Co)			<0.10		mg/kg		0.1	20-OCT-21
Copper (Cu)			<0.50		mg/kg		0.5	20-OCT-21
Iron (Fe)			<50		mg/kg		50	20-OCT-21
Lead (Pb)			<0.50		mg/kg		0.5	20-OCT-21
Lithium (Li)			<2.0		mg/kg		2	20-OCT-21
Magnesium (Mg)			<20		mg/kg		20	20-OCT-21
Manganese (Mn)			<1.0		mg/kg		1	20-OCT-21
Molybdenum (Mo)			<0.10		mg/kg		0.1	20-OCT-21
Nickel (Ni)			<0.50		mg/kg		0.5	20-OCT-21
Phosphorus (P)			<50		mg/kg		50	20-OCT-21
Potassium (K)			<100		mg/kg		100	20-OCT-21
Selenium (Se)			<0.20		mg/kg		0.2	20-OCT-21
Silver (Ag)			<0.10		mg/kg		0.1	20-OCT-21
Sodium (Na)			<50		mg/kg		50	20-OCT-21
Strontium (Sr)			<0.50		mg/kg		0.5	20-OCT-21
Sulfur (S)			<1000		mg/kg		1000	20-OCT-21
Thallium (Tl)			<0.050		mg/kg		0.05	20-OCT-21
Tin (Sn)			<2.0		mg/kg		2	20-OCT-21
Titanium (Ti)			<1.0		mg/kg		1	20-OCT-21
Tungsten (W)			<0.50		mg/kg		0.5	20-OCT-21
Uranium (U)			<0.050		mg/kg		0.05	20-OCT-21
Vanadium (V)			<0.20		mg/kg		0.2	20-OCT-21
Zinc (Zn)			<2.0		mg/kg		2	20-OCT-21
Zirconium (Zr)			<1.0		mg/kg		1	20-OCT-21
MOISTURE-WT	**Soil**							
Batch R5617661								
WG3637572-3 DUP		**L2649954-3**						
% Moisture		10.6	9.59		%	9.6	20	15-OCT-21
WG3637572-2 LCS								
% Moisture			100.2		%		90-110	15-OCT-21
WG3637572-1 MB								
% Moisture			<0.25		%		0.25	15-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MOISTURE-WT	**Soil**							
Batch R5617676								
WG3637635-3 DUP		**L2650175-18**						
% Moisture		48.9	46.5		%	5.1	20	15-OCT-21
WG3637635-2 LCS								
% Moisture			99.6		%		90-110	15-OCT-21
WG3637635-1 MB								
% Moisture			<0.25		%		0.25	15-OCT-21
PAH-CCME-SQGL-WT	**Soil**							
Batch R5625700								
WG3640262-8 DUP		**WG3640262-10**						
1-Methylnaphthalene		<0.038	<0.038	RPD-NA	ug/g	N/A	50	21-OCT-21
2-Methylnaphthalene		<0.038	<0.038	RPD-NA	ug/g	N/A	50	21-OCT-21
Acenaphthene		0.041	0.046		ug/g	12	50	21-OCT-21
Acenaphthylene		0.274	0.321		ug/g	16	50	21-OCT-21
Acridine		<0.075	<0.075	RPD-NA	ug/g	N/A	50	21-OCT-21
Anthracene		0.120	0.133		ug/g	10	50	21-OCT-21
Benzo(a)anthracene		0.416	0.570		ug/g	31	50	21-OCT-21
Benzo(a)pyrene		0.698	0.860		ug/g	21	50	21-OCT-21
Benzo(b&j)fluoranthene		0.741	0.909		ug/g	20	50	21-OCT-21
Benzo(g,h,i)perylene		0.397	0.482		ug/g	19	50	21-OCT-21
Benzo(k)fluoranthene		0.257	0.295		ug/g	14	50	21-OCT-21
Chrysene		0.495	0.602		ug/g	20	50	21-OCT-21
Dibenz(a,h)anthracene		0.102	0.130		ug/g	24	50	21-OCT-21
Fluoroanthene		0.504	0.651		ug/g	25	50	21-OCT-21
Fluorene		0.055	0.059		ug/g	8.0	50	21-OCT-21
Indeno(1,2,3-cd)pyrene		0.348	0.464		ug/g	29	50	21-OCT-21
Naphthalene		<0.038	<0.038	RPD-NA	ug/g	N/A	50	21-OCT-21
Phenanthrene		0.209	0.237		ug/g	13	50	21-OCT-21
Pyrene		0.694	0.903		ug/g	26	50	21-OCT-21
Quinoline		<0.038	<0.038	RPD-NA	ug/g	N/A	50	21-OCT-21
WG3640262-7 LCS								
1-Methylnaphthalene			99.8		%		50-140	21-OCT-21
2-Methylnaphthalene			93.6		%		50-140	21-OCT-21
Acenaphthene			92.6		%		50-140	21-OCT-21
Acenaphthylene			86.4		%		50-140	21-OCT-21
Acridine			88.9		%		50-140	21-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-CCME-SQGL-WT	**Soil**							
Batch R5625700								
WG3640262-7 LCS								
Anthracene			83.4		%		50-140	21-OCT-21
Benzo(a)anthracene			95.5		%		50-140	21-OCT-21
Benzo(a)pyrene			84.7		%		50-140	21-OCT-21
Benzo(b&j)fluoranthene			100.5		%		50-150	21-OCT-21
Benzo(g,h,i)perylene			76.0		%		50-140	21-OCT-21
Benzo(k)fluoranthene			99.8		%		50-140	21-OCT-21
Chrysene			103.5		%		50-140	21-OCT-21
Dibenz(a,h)anthracene			86.8		%		50-140	21-OCT-21
Fluoroanthene			95.8		%		50-140	21-OCT-21
Fluorene			90.2		%		50-140	21-OCT-21
Indeno(1,2,3-cd)pyrene			81.9		%		50-140	21-OCT-21
Naphthalene			91.0		%		50-140	21-OCT-21
Phenanthrene			96.2		%		50-140	21-OCT-21
Pyrene			95.6		%		50-140	21-OCT-21
Quinoline			78.2		%		50-140	21-OCT-21
WG3640262-6 MB								
1-Methylnaphthalene			<0.0050		ug/g		0.005	21-OCT-21
2-Methylnaphthalene			<0.0050		ug/g		0.005	21-OCT-21
Acenaphthene			<0.0050		ug/g		0.005	21-OCT-21
Acenaphthylene			<0.0050		ug/g		0.005	21-OCT-21
Acridine			<0.010		ug/g		0.01	21-OCT-21
Anthracene			<0.0040		ug/g		0.004	21-OCT-21
Benzo(a)anthracene			<0.010		ug/g		0.01	21-OCT-21
Benzo(a)pyrene			<0.0050		ug/g		0.005	21-OCT-21
Benzo(b&j)fluoranthene			<0.010		ug/g		0.01	21-OCT-21
Benzo(g,h,i)perylene			<0.010		ug/g		0.01	21-OCT-21
Benzo(k)fluoranthene			<0.010		ug/g		0.01	21-OCT-21
Chrysene			<0.010		ug/g		0.01	21-OCT-21
Dibenz(a,h)anthracene			<0.0050		ug/g		0.005	21-OCT-21
Fluoroanthene			<0.0050		ug/g		0.005	21-OCT-21
Fluorene			<0.0050		ug/g		0.005	21-OCT-21
Indeno(1,2,3-cd)pyrene			<0.010		ug/g		0.01	21-OCT-21
Naphthalene			<0.0050		ug/g		0.005	21-OCT-21
Phenanthrene			<0.0050		ug/g		0.005	21-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-CCME-SQGL-WT	**Soil**							
Batch R5625700								
WG3640262-6 MB								
Pyrene			<0.0050		ug/g		0.005	21-OCT-21
Quinoline			<0.0050		ug/g		0.005	21-OCT-21
Surrogate: 2-Fluorobiphenyl			89.1		%		60-140	21-OCT-21
Surrogate: d14-Terphenyl			92.8		%		60-140	21-OCT-21
WG3640262-9 MS		**WG3640262-10**						
1-Methylnaphthalene			112.0		%		50-150	21-OCT-21
2-Methylnaphthalene			108.1		%		50-150	21-OCT-21
Acenaphthene			105.4		%		50-150	21-OCT-21
Acenaphthylene			51.3		%		50-150	21-OCT-21
Acridine			110.3		%		50-150	21-OCT-21
Anthracene			97.4		%		50-150	21-OCT-21
Benzo(a)anthracene			116.6		%		50-150	21-OCT-21
Benzo(a)pyrene			93.1		%		50-150	21-OCT-21
Benzo(b&j)fluoranthene			103.3		%		50-150	21-OCT-21
Benzo(g,h,i)perylene			83.2		%		50-150	21-OCT-21
Benzo(k)fluoranthene			105.2		%		50-150	21-OCT-21
Chrysene			113.1		%		50-150	21-OCT-21
Dibenz(a,h)anthracene			95.9		%		50-150	21-OCT-21
Fluoroanthene			104.0		%		50-150	21-OCT-21
Fluorene			110.0		%		50-150	21-OCT-21
Indeno(1,2,3-cd)pyrene			89.5		%		50-150	21-OCT-21
Naphthalene			102.9		%		50-150	21-OCT-21
Phenanthrene			110.3		%		50-150	21-OCT-21
Pyrene			100.3		%		50-150	21-OCT-21
Quinoline			102.7		%		50-150	21-OCT-21
Batch R5626548								
WG3642511-3 DUP		**WG3642511-5**						
1-Methylnaphthalene		<0.015	<0.015	RPD-NA	ug/g	N/A	50	22-OCT-21
2-Methylnaphthalene		0.022	0.022		ug/g	1.9	50	22-OCT-21
Acenaphthene		0.016	0.017		ug/g	6.9	50	22-OCT-21
Acenaphthylene		0.044	0.049		ug/g	11	50	22-OCT-21
Acridine		<0.030	<0.030	RPD-NA	ug/g	N/A	50	22-OCT-21
Anthracene		0.053	0.054		ug/g	2.8	50	22-OCT-21
Benzo(a)anthracene		0.182	0.184		ug/g	1.1	50	22-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-CCME-SQGL-WT	**Soil**							
Batch R5626548								
WG3642511-3 DUP		**WG3642511-5**						
Benzo(a)pyrene		0.234	0.237		ug/g	1.1	50	22-OCT-21
Benzo(b&j)fluoranthene		0.343	0.345		ug/g	0.6	50	22-OCT-21
Benzo(g,h,i)perylene		0.230	0.228		ug/g	1.0	50	22-OCT-21
Benzo(k)fluoranthene		0.144	0.146		ug/g	1.0	50	22-OCT-21
Chrysene		0.253	0.259		ug/g	2.1	50	22-OCT-21
Dibenz(a,h)anthracene		0.054	0.054		ug/g	0.8	50	22-OCT-21
Fluoroanthene		0.352	0.360		ug/g	2.3	50	22-OCT-21
Fluorene		0.023	0.023		ug/g	0.5	50	22-OCT-21
Indeno(1,2,3-cd)pyrene		0.189	0.182		ug/g	3.6	50	22-OCT-21
Naphthalene		0.019	0.019		ug/g	1.9	50	22-OCT-21
Phenanthrene		0.160	0.166		ug/g	4.1	50	22-OCT-21
Pyrene		0.374	0.383		ug/g	2.4	50	22-OCT-21
Quinoline		<0.015	<0.015	RPD-NA	ug/g	N/A	50	22-OCT-21
WG3642511-2 LCS								
1-Methylnaphthalene			105.0		%		50-140	22-OCT-21
2-Methylnaphthalene			100.1		%		50-140	22-OCT-21
Acenaphthene			98.0		%		50-140	22-OCT-21
Acenaphthylene			93.7		%		50-140	22-OCT-21
Acridine			96.3		%		50-140	22-OCT-21
Anthracene			90.0		%		50-140	22-OCT-21
Benzo(a)anthracene			99.5		%		50-140	22-OCT-21
Benzo(a)pyrene			86.9		%		50-140	22-OCT-21
Benzo(b&j)fluoranthene			90.5		%		50-150	22-OCT-21
Benzo(g,h,i)perylene			93.5		%		50-140	22-OCT-21
Benzo(k)fluoranthene			106.9		%		50-140	22-OCT-21
Chrysene			106.8		%		50-140	22-OCT-21
Dibenz(a,h)anthracene			100.3		%		50-140	22-OCT-21
Fluoroanthene			99.4		%		50-140	22-OCT-21
Fluorene			94.3		%		50-140	22-OCT-21
Indeno(1,2,3-cd)pyrene			93.8		%		50-140	22-OCT-21
Naphthalene			96.3		%		50-140	22-OCT-21
Phenanthrene			101.0		%		50-140	22-OCT-21
Pyrene			99.4		%		50-140	22-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-CCME-SQGL-WT	**Soil**							
Batch R5626548								
WG3642511-2 LCS								
Quinoline			84.1		%		50-140	22-OCT-21
WG3642511-1 MB								
1-Methylnaphthalene			<0.0050		ug/g		0.005	22-OCT-21
2-Methylnaphthalene			<0.0050		ug/g		0.005	22-OCT-21
Acenaphthene			<0.0050		ug/g		0.005	22-OCT-21
Acenaphthylene			<0.0050		ug/g		0.005	22-OCT-21
Acridine			<0.010		ug/g		0.01	22-OCT-21
Anthracene			<0.0040		ug/g		0.004	22-OCT-21
Benzo(a)anthracene			<0.010		ug/g		0.01	22-OCT-21
Benzo(a)pyrene			<0.0050		ug/g		0.005	22-OCT-21
Benzo(b&j)fluoranthene			<0.010		ug/g		0.01	22-OCT-21
Benzo(g,h,i)perylene			<0.010		ug/g		0.01	22-OCT-21
Benzo(k)fluoranthene			<0.010		ug/g		0.01	22-OCT-21
Chrysene			<0.010		ug/g		0.01	22-OCT-21
Dibenz(a,h)anthracene			<0.0050		ug/g		0.005	22-OCT-21
Fluoroanthene			<0.0050		ug/g		0.005	22-OCT-21
Fluorene			<0.0050		ug/g		0.005	22-OCT-21
Indeno(1,2,3-cd)pyrene			<0.010		ug/g		0.01	22-OCT-21
Naphthalene			<0.0050		ug/g		0.005	22-OCT-21
Phenanthrene			<0.0050		ug/g		0.005	22-OCT-21
Pyrene			<0.0050		ug/g		0.005	22-OCT-21
Quinoline			<0.0050		ug/g		0.005	22-OCT-21
Surrogate: 2-Fluorobiphenyl			89.7		%		60-140	22-OCT-21
Surrogate: d14-Terphenyl			89.5		%		60-140	22-OCT-21
WG3642511-4 MS		**WG3642511-5**						
1-Methylnaphthalene			100.7		%		50-150	22-OCT-21
2-Methylnaphthalene			96.8		%		50-150	22-OCT-21
Acenaphthene			96.0		%		50-150	22-OCT-21
Acenaphthylene			77.7		%		50-150	22-OCT-21
Acridine			68.3		%		50-150	22-OCT-21
Anthracene			81.0		%		50-150	22-OCT-21
Benzo(a)anthracene			99.8		%		50-150	22-OCT-21
Benzo(a)pyrene			77.3		%		50-150	22-OCT-21
Benzo(b&j)fluoranthene			82.1		%		50-150	22-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-CCME-SQGL-WT	**Soil**							
Batch R5626548								
WG3642511-4 MS		**WG3642511-5**						
Benzo(g,h,i)perylene			80.1		%		50-150	22-OCT-21
Benzo(k)fluoranthene			91.5		%		50-150	22-OCT-21
Chrysene			96.1		%		50-150	22-OCT-21
Dibenz(a,h)anthracene			82.7		%		50-150	22-OCT-21
Fluoroanthene			97.3		%		50-150	22-OCT-21
Fluorene			96.5		%		50-150	22-OCT-21
Indeno(1,2,3-cd)pyrene			80.9		%		50-150	22-OCT-21
Naphthalene			92.2		%		50-150	22-OCT-21
Phenanthrene			97.9		%		50-150	22-OCT-21
Pyrene			96.2		%		50-150	22-OCT-21
Quinoline			84.3		%		50-150	22-OCT-21
PCB9-LOW-WT	**Soil**							
Batch R5625592								
WG3640319-3 DUP		**WG3640319-5**						
Aroclor 1016		<0.034	<0.034	RPD-NA	mg/kg	N/A	50	20-OCT-21
Aroclor 1221		<0.034	<0.034	RPD-NA	mg/kg	N/A	50	20-OCT-21
Aroclor 1232		<0.034	<0.034	RPD-NA	mg/kg	N/A	50	20-OCT-21
Aroclor 1242		<0.034	<0.034	RPD-NA	mg/kg	N/A	40	20-OCT-21
Aroclor 1248		<0.034	<0.034	RPD-NA	mg/kg	N/A	40	20-OCT-21
Aroclor 1254		0.158	0.184		mg/kg	16	40	20-OCT-21
Aroclor 1260		0.327	0.343		mg/kg	4.8	40	20-OCT-21
Aroclor 1262		<0.034	<0.034	RPD-NA	mg/kg	N/A	50	20-OCT-21
Aroclor 1268		<0.034	<0.034	RPD-NA	mg/kg	N/A	50	20-OCT-21
WG3640319-2 LCS								
Aroclor 1242			110.7		%		60-140	20-OCT-21
Aroclor 1254			109.7		%		60-140	20-OCT-21
Aroclor 1260			115.0		%		60-140	20-OCT-21
WG3640319-1 MB								
Aroclor 1016			<0.0030		mg/kg		0.003	20-OCT-21
Aroclor 1221			<0.0030		mg/kg		0.003	20-OCT-21
Aroclor 1232			<0.0030		mg/kg		0.003	20-OCT-21
Aroclor 1242			<0.0030		mg/kg		0.003	20-OCT-21
Aroclor 1248			<0.0030		mg/kg		0.003	20-OCT-21
Aroclor 1254			<0.0030		mg/kg		0.003	20-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PCB9-LOW-WT	**Soil**							
Batch R5625592								
WG3640319-1 MB								
Aroclor 1260			<0.0030		mg/kg		0.003	20-OCT-21
Aroclor 1262			<0.0030		mg/kg		0.003	20-OCT-21
Aroclor 1268			<0.0030		mg/kg		0.003	20-OCT-21
Surrogate: d14-Terphenyl			118.6		%		50-140	20-OCT-21
WG3640319-4 MS		**WG3640319-5**						
Aroclor 1242			105.7		%		60-140	20-OCT-21
Aroclor 1254			N/A	MS-B	%		-	20-OCT-21
Aroclor 1260			N/A	MS-B	%		-	20-OCT-21
PSA-MUST-SK	**Soil**							
Batch R5623956								
WG3638494-1 DUP		**L2650174-6**						
MUST PSA % > 75um		1.4	2.4	J	%	0.9	5	18-OCT-21
WG3638494-2 IRM		**2020-PSA_SOIL**						
MUST PSA % > 75um			43.2		%		37.9-47.9	18-OCT-21
Batch R5624753								
WG3638497-1 DUP		**L2650175-13**						
MUST PSA % > 75um		25.9	25.4	J	%	0.6	5	19-OCT-21
WG3638497-2 IRM		**2020-PSA_SOIL**						
MUST PSA % > 75um			43.9		%		37.9-47.9	19-OCT-21
TOC-WT	**Soil**							
Batch R5627061								
WG3643489-3 CRM		**WT-TOC-CRM**						
Total Organic Carbon			108.6		%		70-130	22-OCT-21
WG3643489-4 DUP		**L2643154-9**						
Total Organic Carbon		1.03	0.95		%	7.8	20	22-OCT-21
Fraction Organic Carbon		0.0103	0.0095		g/g	7.8	25	22-OCT-21
WG3643489-2 LCS								
Total Organic Carbon			102.3		%		80-120	22-OCT-21
WG3643489-1 MB								
Total Organic Carbon			<0.10		%		0.1	22-OCT-21
Fraction Organic Carbon			<0.0010		g/g		0.001	22-OCT-21
Batch R5628208								
WG3644604-3 CRM		**WT-TOC-CRM**						
Total Organic Carbon			93.1		%		70-130	25-OCT-21
WG3644604-4 DUP		**L2650162-33**						
Total Organic Carbon		16.1	16.5		%			25-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
TOC-WT	**Soil**							
Batch R5628208								
WG3644604-4 DUP		**L2650162-33**						
Total Organic Carbon		16.1	16.5		%	2.7	20	25-OCT-21
Fraction Organic Carbon		0.161	0.165		g/g	2.7	25	25-OCT-21
WG3644604-2 LCS								
Total Organic Carbon			97.4		%		80-120	25-OCT-21
WG3644604-1 MB								
Total Organic Carbon			<0.10		%		0.1	25-OCT-21
Fraction Organic Carbon			<0.0010		g/g		0.001	25-OCT-21

Quality Control Report

Workorder: L2650175 Report Date: 25-OCT-21

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Legend:

Limit	ALS Control Limit (Data Quality Objectives)
DUP	Duplicate
RPD	Relative Percent Difference
N/A	Not Available
LCS	Laboratory Control Sample
SRM	Standard Reference Material
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ADE	Average Desorption Efficiency
MB	Method Blank
IRM	Internal Reference Material
CRM	Certified Reference Material
CCV	Continuing Calibration Verification
CVS	Calibration Verification Standard
LCSD	Laboratory Control Sample Duplicate

Sample Parameter Qualifier Definitions:

Qualifier	Description
DLHM	Detection Limit Adjusted: Sample has High Moisture Content
DLM	Detection Limit Adjusted due to sample matrix effects (e.g. chemical interference, colour, turbidity).
J	Duplicate results and limits are expressed in terms of absolute difference.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Hold Time Exceedances:

All test results reported with this submission were conducted within ALS recommended hold times.

ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.

ALS www.alsglobal.com

Chain of Custody

Canad

L2650175-COFC

COC Number: 20 - 0129

Page 2 of 2

Report To	Contact and company name below will appear on the final report
Company:	Golder Associates Ltd.
Contact:	Jill LaPorte
Phone:	905-723-2727
	Company address below will appear on the final report
Street:	100 Scotia Court
City/Province:	Whitby, Ontario
Postal Code:	L1N 8Y6
Invoice To	Same as Report To ☑ YES ☐ NO
	Copy of Invoice with Report ☑ YES ☐ NO
Company:	Golder Associates Ltd.
Contact:	Accounts Payables

Reports / Recipients	
Select Report Format:	☑ PDF ☑ EXCEL ☐ EDD (DIGITAL)
Merge QC/QCI Reports with COA	☑ YES ☐ NO ☐ N/A
☐ Compare Results to Criteria on Report - provide details below if box checked	
Select Distribution:	☑ EMAIL ☐ MAIL ☐ FAX
Email 1 or Fax	Jill_LaPorte@golder.com
Email 2	shawn_seguin@golder.com
Email 3	

Invoice Recipients	
Select Invoice Distribution:	☑ EMAIL ☐ MAIL ☐ FAX
Email 1 or Fax	Jill_LaPorte@golder.com
Email 2	canadaaccountspayableinvoices@golder.com

Project Information		Oil and Gas Required Fields (client use)	
ALS Account # / Quote #:	15520 / Q86566	AFE/Cost Center:	PO#
Job #:	1783886-8000-8006	Major/Minor Code:	Routing Code:
PO / AFE:		Requisitioner:	
LSD:		Location:	

ALS Lab Work Order # (ALS use only): L2650175

ALS Contact: Amanda Overholster

Sampler:

Turnaround Time (TAT) Requested

☑ Routine [R] if received by 3pm M-F - no surcharges apply
☐ 4 day [P4] if received by 3pm M-F - 20% rush surcharge minimum
☐ 3 day [P3] if received by 3pm M-F - 25% rush surcharge minimum
☐ 2 day [P2] if received by 3pm M-F - 50% rush surcharge minimum
☐ 1 day [E] if received by 3pm M-F - 100% rush surcharge minimum
☐ Same day [E2] if received by 10am M-S - 200% rush surcharge. Additional fees may apply to rush requests on weekends, statutory holidays and non-routine tests

Date and Time Required for all E&P TATs: dd-mmm-yy hh:mm am/pm

For all tests with rush TATs requested, please contact your AM to confirm availability.

AFFIX ALS BARCODE LABEL HERE (ALS use only)

Analysis Request

Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below

ALS Sample # (ALS use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	NUMBER OF CONTAINERS	HWS-Boron (B-HWS-R511-WT)	Cr3 (CR-CR3-WT)	Cr6 (CR-CR6-IC-WT)	Mercury (HG-200.2-CVAA-WT)	Metals (MET-200.2-CCMS-WT)	PAH (PAH-CCME-SQGL-WT)	MOISTURE-WT	TOC (TOC-WT)	PCB9 (PCB9-LOW-WT)		Specific Gravity (SPECGRAV-CL)	PSA (PSA-MUST-WT-SK)	Atterberg (ATTERBERG-SK)		SAMPLES ON HOLD	EXTENDED STORAGE REQUIRED	SUSPECTED HAZARD (see notes)
	PCOM-SC-001	07-OCT-21	1130	Sediment	4				✓	✓	✓	✓	✓	✓			✓					
	PCOM-SC-001B		1000	Sediment	2				✓	✓	✓			✓								
	PCOM-SC-001C		1000	Sediment	2				✓	✓	✓			✓								
	PCOM-SC-001D		1000	Sediment	2				✓	✓	✓			✓								
	PCOM-SC-001E		1000	Sediment	2				✓	✓	✓			✓								
	PCOM-SC-001F		1000	Sediment	2				✓	✓	✓			✓								
	PCOM-SC-001G	07-OCT-21	1000	Sediment	2				✓	✓	✓			✓								
				Sediment																		
				Sediment																		
				Sediment																		
				Sediment																		
				Sediment																		

Drinking Water (DW) Samples[1] (client use)

Are samples taken from a Regulated DW System? ☐ YES ☑ NO

Are samples for human consumption/ use? ☐ YES ☑ NO

Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only)

SAMPLE RECEIPT DETAILS (ALS use only)

Cooling Method: ☐ NONE ☑ ICE ☐ ICE PACKS ☐ FROZEN ☐ COOLING INITIATED

Submission Comments identified on Sample Receipt Notification: ☐ YES ☐ NO

Cooler Custody Seals Intact: ☐ YES ☐ N/A Sample Custody Seals Intact: ☐ YES ☐ N/A

INITIAL COOLER TEMPERATURES °C			FINAL COOLER TEMPERATURES °C		
			14.2°C		

SHIPMENT RELEASE (client use)			INITIAL SHIPMENT RECEPTION (ALS use only)			FINAL SHIPMENT RECEPTION (ALS use only)		
Released by:	Date: 07-OCT-21	Time:	Received by:	Date:	Time:	Received by:	Date: 08/Oct/2021	Time: 17:40

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION WHITE - LABORATORY COPY YELLOW - CLIENT COPY

AUG 2020 FRONT

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

1. If any water samples are taken from a Regulated Drinking Water (DW) System, please submit using an Authorized DW COC form.

Chain of Custody (

Canada

L2650175-COFC

COC Number: 20 - 028

Page 1 of 2

www.alsglobal.com

Report To	Contact and company name below will appear on the final report
Company:	Golder Associates Ltd.
Contact:	Jill LaPorte
Phone:	905-723-2727
	Company address below will appear on the final report
Street:	100 Scotia Court
City/Province:	Whtby, Ontario
Postal Code:	L1N 8Y6
Invoice To	Same as Report To ☑ YES ☐ NO
	Copy of Invoice with Report ☑ YES ☐ NO
Company:	Golder Associates Ltd.
Contact:	Accounts Payables

Reports / Recipients

Select Report Format: ☑ PDF ☑ EXCEL ☐ EDD (DIGITAL)

Merge QC/QCI Reports with COA ☑ YES ☐ NO ☐ N/A

☐ Compare Results to Criteria on Report - provide details below if box checked

Select Distribution: ☑ EMAIL ☐ MAIL ☐ FAX

Email 1 or Fax: Jill_LaPorte@golder.com

Email 2: shawn_seguin@golder.com

Email 3:

Invoice Recipients

Select Invoice Distribution: ☑ EMAIL ☐ MAIL ☐ FAX

Email 1 or Fax: Jill_LaPorte@golder.com

Email 2: canadaaccountspayableinvoices@golder.com

Time (TAT) Requested

☑ Routine [R] if received by 3pm M-F - no surcharges apply

☐ 4 day [P4] if received by 3pm M-F - 20% rush surcharge minimum

☐ 3 day [P3] if received by 3pm M-F - 25% rush surcharge minimum

☐ 2 day [P2] if received by 3pm M-F - 50% rush surcharge minimum

☐ 1 day [E] if received by 3pm M-F - 100% rush surcharge minimum

☐ Same day [E2] if received by 10am M-S - 200% rush surcharge. Additional fees may apply to rush requests on weekends, statutory holidays and non-routine tests

AFFIX ALS BARCODE LABEL HERE (ALS use only)

Date and Time Required for all E&P TATs: dd-mmm-yy hh:mm am/pm

For all tests with rush TATs requested, please contact your AM to confirm availability.

Project Information

ALS Account # / Quote #:	15520 / Q86566
Job #:	1783886-8000-8006
PO / AFE:	
LSD:	

Oil and Gas Required Fields (client use)

AFE/Cost Center:	PO#
Major/Minor Code:	Routing Code:
Requisitioner:	
Location:	

ALS Lab Work Order # (ALS use only): L2650175

ALS Contact: Amanda Overholster

Sampler:

Analysis Request

Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below

ALS Sample # (ALS use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	NUMBER OF CONTAINERS	HWS-Boron (B-HWS-R511-WT)	Cr3 (CR-CR3-WT)	Cr6 (CR-CR6-IC-WT)	Mercury (HG-200.2-CVAA-WT)	Metals (MET-200.2-CCMS-WT)	PAH (PAH-CCME-SQGL-WT)	MOISTURE-WT	TOC (TOC-WT)	PCB9 (PCB9-LOW-WT)	Specific Gravity (SPECGRAV-CL)	PSA (PSA-MUST-WT-SK)	Atterberg (ATTERBERG-SK)	SAMPLES ON HOLD	EXTENDED STORAGE REQUIRED	SUSPECTED HAZARD (see notes)
	TC1-SG-010	07-OCT-21	0955	Sediment	7				✓	✓	✓	✓	✓	✓		✓				
	TC1-SG-009		0940	Sediment	7				✓	✓	✓	✓	✓	✓		✓				
	TC1-SG-011		1015	Sediment	7				✓	✓	✓	✓	✓	✓		✓				
	TC1-SG-013		1035	Sediment	7				✓	✓	✓	✓	✓	✓		✓				
	TC1-SG-012		1050	Sediment	7				✓	✓	✓	✓	✓	✓		✓				
	TC5-SG-005		1150	Sediment	7				✓	✓	✓	✓	✓	✓		✓				
	TC3A-SG-004		1205	Sediment	7				✓	✓	✓	✓	✓	✓		✓				
	TC2B-SG-002		1015	Sediment	7				✓	✓	✓	✓	✓	✓		✓				
	TC2B-SG-003		1045	Sediment	7				✓	✓	✓	✓	✓	✓		✓				
	TC2B-SG-001		1120	Sediment	7				✓	✓	✓	✓	✓	✓		✓				
	TC3B-SG-001		1200	Sediment	7				✓	✓	✓	✓	✓	✓		✓				
	PCOM-SC-001A	07-OCT-21	10:00	Sediment	2				✓	✓	✓			✓						

Drinking Water (DW) Samples[1] (client use)

Are samples taken from a Regulated DW System? ☐ YES ☑ NO

Are samples for human consumption/ use? ☐ YES ☑ NO

Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only)

SAMPLE RECEIPT DETAILS (ALS use only)

Cooling Method: ☐ NONE ☒ ICE ☐ ICE PACKS ☐ FROZEN ☐ COOLING INITIATED

Submission Comments identified on Sample Receipt Notification: ☐ YES ☐ NO

Cooler Custody Seals Intact: ☐ YES ☐ N/A Sample Custody Seals Intact: ☐ YES ☐ N/A

INITIAL COOLER TEMPERATURES °C				FINAL COOLER TEMPERATURES °C		
17.4	11.9	10.2	13.5	14.2		

SHIPMENT RELEASE (client use)

Released by: Date: 07-OCT-21 Time:

INITIAL SHIPMENT RECEPTION (ALS use only)

Received by: Date: 10/8/2021 Time: 9:09

FINAL SHIPMENT RECEPTION (ALS use only)

Received by: Date: 08/Oct/2021 Time: 17:40

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

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1. If any water samples are taken from a **Regulated Drinking Water (DW) System**, please submit using an **Authorized DW COC form.**

GOLDER ASSOCIATES LTD (Whitby)
ATTN: Jill LaPorte
100 Scotia Court
Whitby ON L1N 8Y6

Date Received: 08-OCT-21
Report Date: 10-NOV-21 18:42 (MT)
Version: FINAL

Client Phone: 905-723-2727

Certificate of Analysis

Lab Work Order #: L2650176

Project P.O. #: NOT SUBMITTED
Job Reference: 1783886-8000-8006
C of C Numbers:
Legal Site Desc:

Amanda Overholster
Account Manager

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650176-1 PCOM-SG-001 Sampled By: CLIENT on 05-OCT-21 @ 12:40 Matrix: SEDIMENT							
Physical Tests							
% Moisture	71.0		0.25	%	14-OCT-21	15-OCT-21	R5617676
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0615		0.0010	g/g	25-OCT-21	25-OCT-21	R5628208
Total Organic Carbon	6.15		0.10	%	25-OCT-21	25-OCT-21	R5628208
Metals							
Aluminum (Al)	8240		50	ug/g	19-OCT-21	20-OCT-21	R5625366
Antimony (Sb)	3.44		0.10	ug/g	19-OCT-21	20-OCT-21	R5625366
Arsenic (As)	4.25		0.10	ug/g	19-OCT-21	20-OCT-21	R5625366
Barium (Ba)	233		0.50	ug/g	19-OCT-21	20-OCT-21	R5625366
Beryllium (Be)	0.44		0.10	ug/g	19-OCT-21	20-OCT-21	R5625366
Bismuth (Bi)	0.68		0.20	ug/g	19-OCT-21	20-OCT-21	R5625366
Boron (B)	11.9		5.0	ug/g	19-OCT-21	20-OCT-21	R5625366
Cadmium (Cd)	1.38		0.020	ug/g	19-OCT-21	20-OCT-21	R5625366
Calcium (Ca)	116000		50	ug/g	19-OCT-21	20-OCT-21	R5625366
Chromium (Cr)	4340	DLHC	10	ug/g	19-OCT-21	20-OCT-21	R5625366
Cobalt (Co)	8.10		0.10	ug/g	19-OCT-21	20-OCT-21	R5625366
Copper (Cu)	79.7		0.50	ug/g	19-OCT-21	20-OCT-21	R5625366
Iron (Fe)	17900		50	ug/g	19-OCT-21	20-OCT-21	R5625366
Lead (Pb)	313		0.50	ug/g	19-OCT-21	20-OCT-21	R5625366
Lithium (Li)	8.8		2.0	ug/g	19-OCT-21	20-OCT-21	R5625366
Magnesium (Mg)	13000		20	ug/g	19-OCT-21	20-OCT-21	R5625366
Manganese (Mn)	324		1.0	ug/g	19-OCT-21	20-OCT-21	R5625366
Mercury (Hg)	0.349		0.0050	ug/g	19-OCT-21	20-OCT-21	R5625185
Molybdenum (Mo)	1.83		0.10	ug/g	19-OCT-21	20-OCT-21	R5625366
Nickel (Ni)	18.2		0.50	ug/g	19-OCT-21	20-OCT-21	R5625366
Phosphorus (P)	1540		50	ug/g	19-OCT-21	20-OCT-21	R5625366
Potassium (K)	2020		100	ug/g	19-OCT-21	20-OCT-21	R5625366
Selenium (Se)	0.72		0.20	ug/g	19-OCT-21	20-OCT-21	R5625366
Silver (Ag)	0.70		0.10	ug/g	19-OCT-21	20-OCT-21	R5625366
Sodium (Na)	437		50	ug/g	19-OCT-21	20-OCT-21	R5625366
Strontium (Sr)	560		0.50	ug/g	19-OCT-21	20-OCT-21	R5625366
Sulfur (S)	4500		1000	ug/g	19-OCT-21	20-OCT-21	R5625366
Thallium (Tl)	0.281		0.050	ug/g	19-OCT-21	20-OCT-21	R5625366
Tin (Sn)	8.6		2.0	ug/g	19-OCT-21	20-OCT-21	R5625366
Titanium (Ti)	402		1.0	ug/g	19-OCT-21	20-OCT-21	R5625366
Tungsten (W)	2.05		0.50	ug/g	19-OCT-21	20-OCT-21	R5625366
Uranium (U)	0.428		0.050	ug/g	19-OCT-21	20-OCT-21	R5625366
Vanadium (V)	26.4		0.20	ug/g	19-OCT-21	20-OCT-21	R5625366
Zinc (Zn)	355		2.0	ug/g	19-OCT-21	20-OCT-21	R5625366
Zirconium (Zr)	1.4		1.0	ug/g	19-OCT-21	20-OCT-21	R5625366
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.420		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650176-1 PCOM-SG-001 Sampled By: CLIENT on 05-OCT-21 @ 12:40 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
Acenaphthylene	1.16		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Acridine	0.216	AI	0.060	ug/g	19-OCT-21	20-OCT-21	R5625547
Anthracene	0.773		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(a)anthracene	2.17	R	0.075	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(a)pyrene	2.97		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(b&j)fluoranthene	3.34		0.060	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(g,h,i)perylene	1.84		0.060	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(k)fluoranthene	1.15		0.060	ug/g	19-OCT-21	20-OCT-21	R5625547
Chrysene	2.70		0.060	ug/g	19-OCT-21	20-OCT-21	R5625547
Dibenz(a,h)anthracene	0.447		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Fluoroanthene	4.03		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Fluorene	0.364	R	0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Indeno(1,2,3-cd)pyrene	1.85		0.060	ug/g	19-OCT-21	20-OCT-21	R5625547
1-Methylnaphthalene	0.105		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
2-Methylnaphthalene	0.098		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Naphthalene	0.102		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Phenanthrene	2.03		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Pyrene	5.13		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Quinoline	<0.030	DLHM	0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Surrogate: 2-Fluorobiphenyl	80.7		60-140	%	19-OCT-21	20-OCT-21	R5625547
Surrogate: d14-Terphenyl	77.8		60-140	%	19-OCT-21	20-OCT-21	R5625547
B(a)P Total Potency Equivalent	4.32		0.043	ug/g	19-OCT-21	20-OCT-21	R5625547
IACR (CCME)	46.9		0.62		19-OCT-21	20-OCT-21	R5625547
Polychlorinated Biphenyls							
Aroclor 1016	<0.0090	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1221	<0.0090	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1232	<0.0090	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1242	<0.120	DLM	0.12	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1248	<0.0090	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1254	0.264	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1260	0.478	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1262	<0.0090	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1268	<0.0090	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Total Polychlorinated Biphenyls	0.742		0.027	mg/kg	21-OCT-21	21-OCT-21	R5625841
Surrogate: d14-Terphenyl	96.2		50-140	%	21-OCT-21	21-OCT-21	R5625841
L2650176-2 PCOM-SG-002 Sampled By: CLIENT on 05-OCT-21 @ 11:50 Matrix: SEDIMENT							
Physical Tests							
% Moisture	68.0		0.25	%	14-OCT-21	15-OCT-21	R5617676
Particle Size							
General Texture Class	Fine				19-OCT-21	19-OCT-21	R5624753

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650176-2 PCOM-SG-002 Sampled By: CLIENT on 05-OCT-21 @ 11:50 Matrix: SEDIMENT							
Particle Size							
MUST PSA % > 75um	18.8		1.0	%	19-OCT-21	19-OCT-21	R5624753
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0609		0.0010	g/g	25-OCT-21	25-OCT-21	R5628208
Total Organic Carbon	6.09		0.10	%	25-OCT-21	25-OCT-21	R5628208
Metals							
Aluminum (Al)	7780	DLM	100	ug/g	20-OCT-21	20-OCT-21	R5625485
Antimony (Sb)	7.15	DLM	0.20	ug/g	20-OCT-21	20-OCT-21	R5625485
Arsenic (As)	4.27	DLM	0.20	ug/g	20-OCT-21	20-OCT-21	R5625485
Barium (Ba)	222	DLM	1.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Beryllium (Be)	0.36	DLM	0.20	ug/g	20-OCT-21	20-OCT-21	R5625485
Bismuth (Bi)	0.66	DLM	0.40	ug/g	20-OCT-21	20-OCT-21	R5625485
Boron (B)	13	DLM	10	ug/g	20-OCT-21	20-OCT-21	R5625485
Boron (B), Hot Water Ext.	1.08	FR4	0.10	ug/g	20-OCT-21	20-OCT-21	R5625469
Cadmium (Cd)	1.22	DLM	0.040	ug/g	20-OCT-21	20-OCT-21	R5625485
Calcium (Ca)	132000	DLM	100	ug/g	20-OCT-21	20-OCT-21	R5625485
Chromium (Cr)	4690	DLM	1.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Cobalt (Co)	7.35	DLM	0.20	ug/g	20-OCT-21	20-OCT-21	R5625485
Copper (Cu)	98.6	DLM	1.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Iron (Fe)	20300	DLM	100	ug/g	20-OCT-21	20-OCT-21	R5625485
Lead (Pb)	378	DLM	1.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Lithium (Li)	8.0	DLM	4.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Magnesium (Mg)	16300	DLM	40	ug/g	20-OCT-21	20-OCT-21	R5625485
Manganese (Mn)	300	DLM	2.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Mercury (Hg)	0.290		0.010	ug/g	20-OCT-21	21-OCT-21	R5625980
Molybdenum (Mo)	2.27	DLM	0.20	ug/g	20-OCT-21	20-OCT-21	R5625485
Nickel (Ni)	18.1	DLM	1.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Phosphorus (P)	1720	DLM	100	ug/g	20-OCT-21	20-OCT-21	R5625485
Potassium (K)	1760	DLM	200	ug/g	20-OCT-21	20-OCT-21	R5625485
Selenium (Se)	0.69	DLM	0.40	ug/g	20-OCT-21	20-OCT-21	R5625485
Silver (Ag)	0.93	DLM	0.20	ug/g	20-OCT-21	20-OCT-21	R5625485
Sodium (Na)	530	DLM	100	ug/g	20-OCT-21	20-OCT-21	R5625485
Strontium (Sr)	474	DLM	1.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Sulfur (S)	4700	DLM	2000	ug/g	20-OCT-21	20-OCT-21	R5625485
Thallium (Tl)	0.27	DLM	0.10	ug/g	20-OCT-21	20-OCT-21	R5625485
Tin (Sn)	9.6	DLM	4.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Titanium (Ti)	412	DLM	2.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Tungsten (W)	2.9	DLM	1.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Uranium (U)	0.49	DLM	0.10	ug/g	20-OCT-21	20-OCT-21	R5625485
Vanadium (V)	26.9	DLM	0.40	ug/g	20-OCT-21	20-OCT-21	R5625485
Zinc (Zn)	337	DLM	4.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Zirconium (Zr)	<2.0	DLM	2.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Speciated Metals							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650176-2 PCOM-SG-002 Sampled By: CLIENT on 05-OCT-21 @ 11:50 Matrix: SEDIMENT							
Speciated Metals							
Chromium, Trivalent	4670		10	ug/g		21-OCT-21	
Chromium, Hexavalent	16.1	DLHM	0.40	ug/g	18-OCT-21	20-OCT-21	R5625247
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	1.12		0.020	ug/g	19-OCT-21	20-OCT-21	R5625547
Acenaphthylene	1.54		0.020	ug/g	19-OCT-21	20-OCT-21	R5625547
Acridine	0.331	AI	0.040	ug/g	19-OCT-21	20-OCT-21	R5625547
Anthracene	1.42		0.020	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(a)anthracene	3.57	R	0.050	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(a)pyrene	4.26		0.020	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(b&j)fluoranthene	4.26		0.040	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(g,h,i)perylene	2.33		0.040	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(k)fluoranthene	1.50		0.040	ug/g	19-OCT-21	20-OCT-21	R5625547
Chrysene	3.84		0.040	ug/g	19-OCT-21	20-OCT-21	R5625547
Dibenz(a,h)anthracene	0.573		0.020	ug/g	19-OCT-21	20-OCT-21	R5625547
Fluoroanthene	6.44		0.020	ug/g	19-OCT-21	20-OCT-21	R5625547
Fluorene	0.839	R	0.020	ug/g	19-OCT-21	20-OCT-21	R5625547
Indeno(1,2,3-cd)pyrene	2.21		0.040	ug/g	19-OCT-21	20-OCT-21	R5625547
1-Methylnaphthalene	0.371		0.020	ug/g	19-OCT-21	20-OCT-21	R5625547
2-Methylnaphthalene	0.189		0.020	ug/g	19-OCT-21	20-OCT-21	R5625547
Naphthalene	0.166		0.020	ug/g	19-OCT-21	20-OCT-21	R5625547
Phenanthrene	4.60		0.020	ug/g	19-OCT-21	20-OCT-21	R5625547
Pyrene	8.75		0.020	ug/g	19-OCT-21	20-OCT-21	R5625547
Quinoline	<0.05	DLQ	0.050	ug/g	19-OCT-21	20-OCT-21	R5625547
Surrogate: 2-Fluorobiphenyl	86.2		60-140	%	19-OCT-21	20-OCT-21	R5625547
Surrogate: d14-Terphenyl	83.0		60-140	%	19-OCT-21	20-OCT-21	R5625547
B(a)P Total Potency Equivalent	6.05		0.029	ug/g	19-OCT-21	20-OCT-21	R5625547
IACR (CCME)	63.8		0.42		19-OCT-21	20-OCT-21	R5625547
Polychlorinated Biphenyls							
Aroclor 1016	<0.0060	DLHM	0.0060	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1221	<0.0060	DLHM	0.0060	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1232	<0.0060	DLHM	0.0060	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1242	<0.0760	DLM	0.076	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1248	<0.0060	DLHM	0.0060	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1254	0.196	DLHM	0.0060	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1260	0.351	DLHM	0.0060	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1262	<0.0060	DLHM	0.0060	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1268	<0.0060	DLHM	0.0060	mg/kg	21-OCT-21	21-OCT-21	R5625841
Total Polychlorinated Biphenyls	0.547		0.018	mg/kg	21-OCT-21	21-OCT-21	R5625841
Surrogate: d14-Terphenyl	97.9		50-140	%	21-OCT-21	21-OCT-21	R5625841
L2650176-3 PCOM-SG-003 Sampled By: CLIENT on 05-OCT-21 @ 13:10 Matrix: SEDIMENT							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650176-3 PCOM-SG-003 Sampled By: CLIENT on 05-OCT-21 @ 13:10 Matrix: SEDIMENT							
Physical Tests							
% Moisture	70.1		0.25	%	14-OCT-21	15-OCT-21	R5617676
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0672		0.0010	g/g	25-OCT-21	25-OCT-21	R5628208
Total Organic Carbon	6.72		0.10	%	25-OCT-21	25-OCT-21	R5628208
Metals							
Aluminum (Al)	6890		50	ug/g	19-OCT-21	20-OCT-21	R5625366
Antimony (Sb)	3.25		0.10	ug/g	19-OCT-21	20-OCT-21	R5625366
Arsenic (As)	3.86		0.10	ug/g	19-OCT-21	20-OCT-21	R5625366
Barium (Ba)	172		0.50	ug/g	19-OCT-21	20-OCT-21	R5625366
Beryllium (Be)	0.32		0.10	ug/g	19-OCT-21	20-OCT-21	R5625366
Bismuth (Bi)	0.71		0.20	ug/g	19-OCT-21	20-OCT-21	R5625366
Boron (B)	9.9		5.0	ug/g	19-OCT-21	20-OCT-21	R5625366
Cadmium (Cd)	0.929		0.020	ug/g	19-OCT-21	20-OCT-21	R5625366
Calcium (Ca)	102000		50	ug/g	19-OCT-21	20-OCT-21	R5625366
Chromium (Cr)	2990	DLHC	10	ug/g	19-OCT-21	20-OCT-21	R5625366
Cobalt (Co)	6.73		0.10	ug/g	19-OCT-21	20-OCT-21	R5625366
Copper (Cu)	68.9		0.50	ug/g	19-OCT-21	20-OCT-21	R5625366
Iron (Fe)	15700		50	ug/g	19-OCT-21	20-OCT-21	R5625366
Lead (Pb)	222		0.50	ug/g	19-OCT-21	20-OCT-21	R5625366
Lithium (Li)	7.4		2.0	ug/g	19-OCT-21	20-OCT-21	R5625366
Magnesium (Mg)	12000		20	ug/g	19-OCT-21	20-OCT-21	R5625366
Manganese (Mn)	312		1.0	ug/g	19-OCT-21	20-OCT-21	R5625366
Mercury (Hg)	0.301		0.0050	ug/g	19-OCT-21	20-OCT-21	R5625185
Molybdenum (Mo)	1.47		0.10	ug/g	19-OCT-21	20-OCT-21	R5625366
Nickel (Ni)	15.0		0.50	ug/g	19-OCT-21	20-OCT-21	R5625366
Phosphorus (P)	1260		50	ug/g	19-OCT-21	20-OCT-21	R5625366
Potassium (K)	1640		100	ug/g	19-OCT-21	20-OCT-21	R5625366
Selenium (Se)	0.57		0.20	ug/g	19-OCT-21	20-OCT-21	R5625366
Silver (Ag)	0.62		0.10	ug/g	19-OCT-21	20-OCT-21	R5625366
Sodium (Na)	377		50	ug/g	19-OCT-21	20-OCT-21	R5625366
Strontium (Sr)	426		0.50	ug/g	19-OCT-21	20-OCT-21	R5625366
Sulfur (S)	3500		1000	ug/g	19-OCT-21	20-OCT-21	R5625366
Thallium (Tl)	0.219		0.050	ug/g	19-OCT-21	20-OCT-21	R5625366
Tin (Sn)	6.5		2.0	ug/g	19-OCT-21	20-OCT-21	R5625366
Titanium (Ti)	336		1.0	ug/g	19-OCT-21	20-OCT-21	R5625366
Tungsten (W)	2.37		0.50	ug/g	19-OCT-21	20-OCT-21	R5625366
Uranium (U)	0.355		0.050	ug/g	19-OCT-21	20-OCT-21	R5625366
Vanadium (V)	22.4		0.20	ug/g	19-OCT-21	20-OCT-21	R5625366
Zinc (Zn)	278		2.0	ug/g	19-OCT-21	20-OCT-21	R5625366
Zirconium (Zr)	1.1		1.0	ug/g	19-OCT-21	20-OCT-21	R5625366
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.386		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650176-3 PCOM-SG-003 Sampled By: CLIENT on 05-OCT-21 @ 13:10 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
Acenaphthylene	0.970		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Acridine	0.145	AI	0.060	ug/g	19-OCT-21	20-OCT-21	R5625547
Anthracene	0.626		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(a)anthracene	2.03	R	0.075	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(a)pyrene	2.84		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(b&j)fluoranthene	2.83		0.060	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(g,h,i)perylene	1.52		0.060	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(k)fluoranthene	0.958		0.060	ug/g	19-OCT-21	20-OCT-21	R5625547
Chrysene	2.37		0.060	ug/g	19-OCT-21	20-OCT-21	R5625547
Dibenz(a,h)anthracene	0.362		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Fluoroanthene	3.16		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Fluorene	0.328	R	0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Indeno(1,2,3-cd)pyrene	1.44		0.060	ug/g	19-OCT-21	20-OCT-21	R5625547
1-Methylnaphthalene	0.124		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
2-Methylnaphthalene	0.075		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Naphthalene	0.063		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Phenanthrene	1.68		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Pyrene	4.34		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Quinoline	<0.030	DLM	0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Surrogate: 2-Fluorobiphenyl	79.3		60-140	%	19-OCT-21	20-OCT-21	R5625547
Surrogate: d14-Terphenyl	71.2		60-140	%	19-OCT-21	20-OCT-21	R5625547
B(a)P Total Potency Equivalent	3.96		0.043	ug/g	19-OCT-21	20-OCT-21	R5625547
IACR (CCME)	40.9		0.62		19-OCT-21	20-OCT-21	R5625547
Polychlorinated Biphenyls							
Aroclor 1016	<0.0090	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1221	<0.0090	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1232	<0.0090	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1242	<0.0550	DLM	0.055	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1248	<0.0090	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1254	0.155	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1260	0.222	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1262	<0.0090	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1268	<0.0090	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Total Polychlorinated Biphenyls	0.377		0.027	mg/kg	21-OCT-21	21-OCT-21	R5625841
Surrogate: d14-Terphenyl	89.1		50-140	%	21-OCT-21	21-OCT-21	R5625841
L2650176-4 WM-SG-003 Sampled By: CLIENT on 05-OCT-21 @ 12:30 Matrix: SEDIMENT							
Physical Tests							
% Moisture	80.8		0.25	%	14-OCT-21	15-OCT-21	R5617676
Liquid Limit (LL)	97		1	%	20-OCT-21	20-OCT-21	R5625105
Moisture at Plastic Limit	63		1	%	20-OCT-21	20-OCT-21	R5625105

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650176-4 WM-SG-003 Sampled By: CLIENT on 05-OCT-21 @ 12:30 Matrix: SEDIMENT							
Physical Tests							
Plasticity Index (PI)	34		1	%	20-OCT-21	20-OCT-21	R5625105
Specific Gravity	1.12		0.010	kg/L		26-OCT-21	R5629385
Particle Size							
General Texture Class	Fine				19-OCT-21	19-OCT-21	R5624753
MUST PSA % > 75um	3.2		1.0	%	19-OCT-21	19-OCT-21	R5624753
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0617		0.0010	g/g	25-OCT-21	25-OCT-21	R5628208
Total Organic Carbon	6.17		0.10	%	25-OCT-21	25-OCT-21	R5628208
Metals							
Aluminum (Al)	15500		50	ug/g	20-OCT-21	21-OCT-21	R5626293
Antimony (Sb)	1.79		0.10	ug/g	20-OCT-21	21-OCT-21	R5626293
Arsenic (As)	25.6		0.10	ug/g	20-OCT-21	21-OCT-21	R5626293
Barium (Ba)	240		0.50	ug/g	20-OCT-21	21-OCT-21	R5626293
Beryllium (Be)	0.59		0.10	ug/g	20-OCT-21	21-OCT-21	R5626293
Bismuth (Bi)	0.64		0.20	ug/g	20-OCT-21	21-OCT-21	R5626293
Boron (B)	8.8		5.0	ug/g	20-OCT-21	21-OCT-21	R5626293
Boron (B), Hot Water Ext.	0.81	FR4	0.10	ug/g	20-OCT-21	21-OCT-21	R5626083
Cadmium (Cd)	0.765		0.020	ug/g	20-OCT-21	21-OCT-21	R5626293
Calcium (Ca)	105000		50	ug/g	20-OCT-21	21-OCT-21	R5626293
Chromium (Cr)	744		0.50	ug/g	20-OCT-21	21-OCT-21	R5626293
Cobalt (Co)	19.6		0.10	ug/g	20-OCT-21	21-OCT-21	R5626293
Copper (Cu)	45.5		0.50	ug/g	20-OCT-21	21-OCT-21	R5626293
Iron (Fe)	23200		50	ug/g	20-OCT-21	21-OCT-21	R5626293
Lead (Pb)	136		0.50	ug/g	20-OCT-21	21-OCT-21	R5626293
Lithium (Li)	14.8		2.0	ug/g	20-OCT-21	21-OCT-21	R5626293
Magnesium (Mg)	12300		20	ug/g	20-OCT-21	21-OCT-21	R5626293
Manganese (Mn)	573		1.0	ug/g	20-OCT-21	21-OCT-21	R5626293
Mercury (Hg)	1.36	DLM	0.010	ug/g	20-OCT-21	21-OCT-21	R5625969
Molybdenum (Mo)	1.03		0.10	ug/g	20-OCT-21	21-OCT-21	R5626293
Nickel (Ni)	28.1		0.50	ug/g	20-OCT-21	21-OCT-21	R5626293
Phosphorus (P)	1030		50	ug/g	20-OCT-21	21-OCT-21	R5626293
Potassium (K)	3240		100	ug/g	20-OCT-21	21-OCT-21	R5626293
Selenium (Se)	0.88		0.20	ug/g	20-OCT-21	21-OCT-21	R5626293
Silver (Ag)	1.06		0.10	ug/g	20-OCT-21	21-OCT-21	R5626293
Sodium (Na)	594		50	ug/g	20-OCT-21	21-OCT-21	R5626293
Strontium (Sr)	551		0.50	ug/g	20-OCT-21	21-OCT-21	R5626293
Sulfur (S)	7100		1000	ug/g	20-OCT-21	21-OCT-21	R5626293
Thallium (Tl)	0.264		0.050	ug/g	20-OCT-21	21-OCT-21	R5626293
Tin (Sn)	8.7		2.0	ug/g	20-OCT-21	21-OCT-21	R5626293
Titanium (Ti)	941		1.0	ug/g	20-OCT-21	21-OCT-21	R5626293
Tungsten (W)	<0.50		0.50	ug/g	20-OCT-21	21-OCT-21	R5626293
Uranium (U)	0.710		0.050	ug/g	20-OCT-21	21-OCT-21	R5626293

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650176-4 WM-SG-003 Sampled By: CLIENT on 05-OCT-21 @ 12:30 Matrix: SEDIMENT							
Metals							
Vanadium (V)	40.3		0.20	ug/g	20-OCT-21	21-OCT-21	R5626293
Zinc (Zn)	169		2.0	ug/g	20-OCT-21	21-OCT-21	R5626293
Zirconium (Zr)	3.8		1.0	ug/g	20-OCT-21	21-OCT-21	R5626293
Speciated Metals							
Chromium, Trivalent	739		10	ug/g		21-OCT-21	
Chromium, Hexavalent	5.0	DLHM	1.0	ug/g	18-OCT-21	20-OCT-21	R5625247
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.059		0.025	ug/g	19-OCT-21	20-OCT-21	R5625547
Acenaphthylene	0.263		0.025	ug/g	19-OCT-21	20-OCT-21	R5625547
Acridine	0.058		0.050	ug/g	19-OCT-21	20-OCT-21	R5625547
Anthracene	0.170		0.020	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(a)anthracene	0.580	R	0.050	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(a)pyrene	0.785		0.025	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(b&j)fluoranthene	0.949		0.050	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(g,h,i)perylene	0.456		0.050	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(k)fluoranthene	0.315		0.050	ug/g	19-OCT-21	20-OCT-21	R5625547
Chrysene	0.684		0.050	ug/g	19-OCT-21	20-OCT-21	R5625547
Dibenz(a,h)anthracene	0.126		0.025	ug/g	19-OCT-21	20-OCT-21	R5625547
Fluoroanthene	0.967		0.025	ug/g	19-OCT-21	20-OCT-21	R5625547
Fluorene	0.076		0.025	ug/g	19-OCT-21	20-OCT-21	R5625547
Indeno(1,2,3-cd)pyrene	0.464		0.050	ug/g	19-OCT-21	20-OCT-21	R5625547
1-Methylnaphthalene	0.025		0.025	ug/g	19-OCT-21	20-OCT-21	R5625547
2-Methylnaphthalene	0.026		0.025	ug/g	19-OCT-21	20-OCT-21	R5625547
Naphthalene	<0.025	DLHM	0.025	ug/g	19-OCT-21	20-OCT-21	R5625547
Phenanthrene	0.446		0.025	ug/g	19-OCT-21	20-OCT-21	R5625547
Pyrene	1.08		0.025	ug/g	19-OCT-21	20-OCT-21	R5625547
Quinoline	<0.025	DLHM	0.025	ug/g	19-OCT-21	20-OCT-21	R5625547
Surrogate: 2-Fluorobiphenyl	92.4		60-140	%	19-OCT-21	20-OCT-21	R5625547
Surrogate: d14-Terphenyl	80.9		60-140	%	19-OCT-21	20-OCT-21	R5625547
B(a)P Total Potency Equivalent	1.15		0.036	ug/g	19-OCT-21	20-OCT-21	R5625547
IACR (CCME)	12.9		0.50		19-OCT-21	20-OCT-21	R5625547
Polychlorinated Biphenyls							
Aroclor 1016	<0.015	DLHM	0.015	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1221	<0.015	DLHM	0.015	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1232	<0.015	DLHM	0.015	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1242	<0.015	DLHM	0.015	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1248	<0.015	DLHM	0.015	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1254	0.214	DLHM	0.015	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1260	0.323	DLHM	0.015	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1262	<0.015	DLHM	0.015	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1268	<0.015	DLHM	0.015	mg/kg	21-OCT-21	21-OCT-21	R5625841
Total Polychlorinated Biphenyls	0.537		0.045	mg/kg	21-OCT-21	21-OCT-21	R5625841

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650176-4 WM-SG-003 Sampled By: CLIENT on 05-OCT-21 @ 12:30 Matrix: SEDIMENT							
Polychlorinated Biphenyls							
Surrogate: d14-Terphenyl	93.3		50-140	%	21-OCT-21	21-OCT-21	R5625841
L2650176-5 WM-SC-003A Sampled By: CLIENT on 05-OCT-21 @ 11:30 Matrix: SEDIMENT							
Physical Tests							
% Moisture	75.1		0.25	%	14-OCT-21	15-OCT-21	R5617676
Liquid Limit (LL)	94		1	%	20-OCT-21	20-OCT-21	R5625105
Moisture at Plastic Limit	66		1	%	20-OCT-21	20-OCT-21	R5625105
Plasticity Index (PI)	27		1	%	20-OCT-21	20-OCT-21	R5625105
Specific Gravity	1.16		0.010	kg/L		26-OCT-21	R5629385
Particle Size							
General Texture Class	Fine				19-OCT-21	19-OCT-21	R5624753
MUST PSA % > 75um	1.4		1.0	%	19-OCT-21	19-OCT-21	R5624753
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0748		0.0010	g/g	25-OCT-21	25-OCT-21	R5628208
Total Organic Carbon	7.48		0.10	%	25-OCT-21	25-OCT-21	R5628208
Metals							
Aluminum (Al)	20100		50	ug/g	20-OCT-21	21-OCT-21	R5626293
Antimony (Sb)	4.69		0.10	ug/g	20-OCT-21	21-OCT-21	R5626293
Arsenic (As)	61.7		0.10	ug/g	20-OCT-21	21-OCT-21	R5626293
Barium (Ba)	298		0.50	ug/g	20-OCT-21	21-OCT-21	R5626293
Beryllium (Be)	0.83		0.10	ug/g	20-OCT-21	21-OCT-21	R5626293
Bismuth (Bi)	1.78		0.20	ug/g	20-OCT-21	21-OCT-21	R5626293
Boron (B)	11.3		5.0	ug/g	20-OCT-21	21-OCT-21	R5626293
Boron (B), Hot Water Ext.	0.94	FR4	0.10	ug/g	20-OCT-21	21-OCT-21	R5626083
Cadmium (Cd)	1.48		0.020	ug/g	20-OCT-21	21-OCT-21	R5626293
Calcium (Ca)	52300		50	ug/g	20-OCT-21	21-OCT-21	R5626293
Chromium (Cr)	1830		0.50	ug/g	20-OCT-21	21-OCT-21	R5626293
Cobalt (Co)	38.8		0.10	ug/g	20-OCT-21	21-OCT-21	R5626293
Copper (Cu)	68.9		0.50	ug/g	20-OCT-21	21-OCT-21	R5626293
Iron (Fe)	30100		50	ug/g	20-OCT-21	21-OCT-21	R5626293
Lead (Pb)	321		0.50	ug/g	20-OCT-21	21-OCT-21	R5626293
Lithium (Li)	20.6		2.0	ug/g	20-OCT-21	21-OCT-21	R5626293
Magnesium (Mg)	15000		20	ug/g	20-OCT-21	21-OCT-21	R5626293
Manganese (Mn)	583		1.0	ug/g	20-OCT-21	21-OCT-21	R5626293
Mercury (Hg)	2.30	DLM	0.10	ug/g	20-OCT-21	21-OCT-21	R5625969
Molybdenum (Mo)	1.15		0.10	ug/g	20-OCT-21	21-OCT-21	R5626293
Nickel (Ni)	45.0		0.50	ug/g	20-OCT-21	21-OCT-21	R5626293
Phosphorus (P)	1260		50	ug/g	20-OCT-21	21-OCT-21	R5626293
Potassium (K)	4320		100	ug/g	20-OCT-21	21-OCT-21	R5626293
Selenium (Se)	1.21		0.20	ug/g	20-OCT-21	21-OCT-21	R5626293
Silver (Ag)	1.98		0.10	ug/g	20-OCT-21	21-OCT-21	R5626293

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650176-5 WM-SC-003A Sampled By: CLIENT on 05-OCT-21 @ 11:30 Matrix: SEDIMENT							
Metals							
Sodium (Na)	607		50	ug/g	20-OCT-21	21-OCT-21	R5626293
Strontium (Sr)	275		0.50	ug/g	20-OCT-21	21-OCT-21	R5626293
Sulfur (S)	7000		1000	ug/g	20-OCT-21	21-OCT-21	R5626293
Thallium (Tl)	0.399		0.050	ug/g	20-OCT-21	21-OCT-21	R5626293
Tin (Sn)	26.6		2.0	ug/g	20-OCT-21	21-OCT-21	R5626293
Titanium (Ti)	1250		1.0	ug/g	20-OCT-21	21-OCT-21	R5626293
Tungsten (W)	<0.50		0.50	ug/g	20-OCT-21	21-OCT-21	R5626293
Uranium (U)	0.853		0.050	ug/g	20-OCT-21	21-OCT-21	R5626293
Vanadium (V)	51.3		0.20	ug/g	20-OCT-21	21-OCT-21	R5626293
Zinc (Zn)	287		2.0	ug/g	20-OCT-21	21-OCT-21	R5626293
Zirconium (Zr)	5.1		1.0	ug/g	20-OCT-21	21-OCT-21	R5626293
Speciated Metals							
Chromium, Trivalent	1820		10	ug/g		21-OCT-21	
Chromium, Hexavalent	8.10	DLHM	0.40	ug/g	18-OCT-21	20-OCT-21	R5625247
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.143		0.015	ug/g	19-OCT-21	20-OCT-21	R5625547
Acenaphthylene	0.557		0.015	ug/g	19-OCT-21	20-OCT-21	R5625547
Acridine	0.521		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Anthracene	0.344		0.012	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(a)anthracene	1.20	R	0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(a)pyrene	1.46		0.015	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(b&j)fluoranthene	1.61		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(g,h,i)perylene	0.788		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(k)fluoranthene	0.593		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Chrysene	1.47		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Dibenz(a,h)anthracene	0.227		0.015	ug/g	19-OCT-21	20-OCT-21	R5625547
Fluoroanthene	1.87		0.015	ug/g	19-OCT-21	20-OCT-21	R5625547
Fluorene	0.148	R	0.015	ug/g	19-OCT-21	20-OCT-21	R5625547
Indeno(1,2,3-cd)pyrene	0.819		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
1-Methylnaphthalene	0.047		0.015	ug/g	19-OCT-21	20-OCT-21	R5625547
2-Methylnaphthalene	0.063		0.015	ug/g	19-OCT-21	20-OCT-21	R5625547
Naphthalene	0.065	R	0.015	ug/g	19-OCT-21	20-OCT-21	R5625547
Phenanthrene	0.887		0.015	ug/g	19-OCT-21	20-OCT-21	R5625547
Pyrene	2.62		0.015	ug/g	19-OCT-21	20-OCT-21	R5625547
Quinoline	<0.015	DLHM	0.015	ug/g	19-OCT-21	20-OCT-21	R5625547
Surrogate: 2-Fluorobiphenyl	87.8		60-140	%	19-OCT-21	20-OCT-21	R5625547
Surrogate: d14-Terphenyl	86.8		60-140	%	19-OCT-21	20-OCT-21	R5625547
B(a)P Total Potency Equivalent	2.13		0.021	ug/g	19-OCT-21	20-OCT-21	R5625547
IACR (CCME)	23.5		0.30		19-OCT-21	20-OCT-21	R5625547
Polychlorinated Biphenyls							
Aroclor 1016	<0.0090	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1221	<0.0090	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650176-5 WM-SC-003A Sampled By: CLIENT on 05-OCT-21 @ 11:30 Matrix: SEDIMENT							
Polychlorinated Biphenyls							
Aroclor 1232	<0.0090	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1242	<0.0550	DLM	0.055	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1248	<0.0090	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1254	0.995	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1260	0.637	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1262	<0.0090	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1268	<0.0090	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Total Polychlorinated Biphenyls	1.632		0.027	mg/kg	21-OCT-21	21-OCT-21	R5625841
Surrogate: d14-Terphenyl	99.3		50-140	%	21-OCT-21	21-OCT-21	R5625841
L2650176-6 WM-SC-003B Sampled By: CLIENT on 05-OCT-21 @ 11:30 Matrix: SEDIMENT							
Physical Tests							
% Moisture	76.9		0.25	%	18-OCT-21	19-OCT-21	R5623898
Particle Size							
General Texture Class	Fine				19-OCT-21	19-OCT-21	R5624753
MUST PSA % > 75um	3.6		1.0	%	19-OCT-21	19-OCT-21	R5624753
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0970		0.0010	g/g	25-OCT-21	25-OCT-21	R5628208
Total Organic Carbon	9.70		0.10	%	25-OCT-21	25-OCT-21	R5628208
Metals							
Aluminum (Al)	15300		50	ug/g	19-OCT-21	20-OCT-21	R5625366
Antimony (Sb)	15.6		0.10	ug/g	19-OCT-21	20-OCT-21	R5625366
Arsenic (As)	349		0.10	ug/g	19-OCT-21	20-OCT-21	R5625366
Barium (Ba)	293		0.50	ug/g	19-OCT-21	20-OCT-21	R5625366
Beryllium (Be)	0.66		0.10	ug/g	19-OCT-21	20-OCT-21	R5625366
Bismuth (Bi)	4.35		0.20	ug/g	19-OCT-21	20-OCT-21	R5625366
Boron (B)	9.4		5.0	ug/g	19-OCT-21	20-OCT-21	R5625366
Cadmium (Cd)	1.41		0.020	ug/g	19-OCT-21	20-OCT-21	R5625366
Calcium (Ca)	42500		50	ug/g	19-OCT-21	20-OCT-21	R5625366
Chromium (Cr)	1140	DLHC	10	ug/g	19-OCT-21	20-OCT-21	R5625366
Cobalt (Co)	153		0.10	ug/g	19-OCT-21	20-OCT-21	R5625366
Copper (Cu)	81.1		0.50	ug/g	19-OCT-21	20-OCT-21	R5625366
Iron (Fe)	25100		50	ug/g	19-OCT-21	20-OCT-21	R5625366
Lead (Pb)	457		0.50	ug/g	19-OCT-21	20-OCT-21	R5625366
Lithium (Li)	12.2		2.0	ug/g	19-OCT-21	20-OCT-21	R5625366
Magnesium (Mg)	10700		20	ug/g	19-OCT-21	20-OCT-21	R5625366
Manganese (Mn)	464		1.0	ug/g	19-OCT-21	20-OCT-21	R5625366
Mercury (Hg)	12.1	DLHC	0.50	ug/g	19-OCT-21	20-OCT-21	R5625185
Molybdenum (Mo)	1.00		0.10	ug/g	19-OCT-21	20-OCT-21	R5625366
Nickel (Ni)	99.9		0.50	ug/g	19-OCT-21	20-OCT-21	R5625366
Phosphorus (P)	1090		50	ug/g	19-OCT-21	20-OCT-21	R5625366

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650176-6 WM-SC-003B Sampled By: CLIENT on 05-OCT-21 @ 11:30 Matrix: SEDIMENT							
Metals							
Potassium (K)	3180		100	ug/g	19-OCT-21	20-OCT-21	R5625366
Selenium (Se)	1.55		0.20	ug/g	19-OCT-21	20-OCT-21	R5625366
Silver (Ag)	3.95		0.10	ug/g	19-OCT-21	20-OCT-21	R5625366
Sodium (Na)	423		50	ug/g	19-OCT-21	20-OCT-21	R5625366
Strontium (Sr)	253		0.50	ug/g	19-OCT-21	20-OCT-21	R5625366
Sulfur (S)	6200		1000	ug/g	19-OCT-21	20-OCT-21	R5625366
Thallium (Tl)	0.463		0.050	ug/g	19-OCT-21	20-OCT-21	R5625366
Tin (Sn)	27.3		2.0	ug/g	19-OCT-21	20-OCT-21	R5625366
Titanium (Ti)	854		1.0	ug/g	19-OCT-21	20-OCT-21	R5625366
Tungsten (W)	<0.50		0.50	ug/g	19-OCT-21	20-OCT-21	R5625366
Uranium (U)	0.735		0.050	ug/g	19-OCT-21	20-OCT-21	R5625366
Vanadium (V)	37.5		0.20	ug/g	19-OCT-21	20-OCT-21	R5625366
Zinc (Zn)	413		2.0	ug/g	19-OCT-21	20-OCT-21	R5625366
Zirconium (Zr)	4.7		1.0	ug/g	19-OCT-21	20-OCT-21	R5625366
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.213		0.015	ug/g	19-OCT-21	20-OCT-21	R5625547
Acenaphthylene	0.734		0.015	ug/g	19-OCT-21	20-OCT-21	R5625547
Acridine	1.08		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Anthracene	0.613		0.012	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(a)anthracene	2.39		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(a)pyrene	2.43		0.015	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(b&j)fluoranthene	2.93		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(g,h,i)perylene	1.33		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(k)fluoranthene	1.05		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Chrysene	3.02		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Dibenz(a,h)anthracene	0.386		0.015	ug/g	19-OCT-21	20-OCT-21	R5625547
Fluoroanthene	4.12		0.015	ug/g	19-OCT-21	20-OCT-21	R5625547
Fluorene	0.360	R	0.015	ug/g	19-OCT-21	20-OCT-21	R5625547
Indeno(1,2,3-cd)pyrene	1.45		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
1-Methylnaphthalene	0.093		0.015	ug/g	19-OCT-21	20-OCT-21	R5625547
2-Methylnaphthalene	0.136		0.015	ug/g	19-OCT-21	20-OCT-21	R5625547
Naphthalene	0.159		0.015	ug/g	19-OCT-21	20-OCT-21	R5625547
Phenanthrene	2.02		0.015	ug/g	19-OCT-21	20-OCT-21	R5625547
Pyrene	5.25		0.015	ug/g	19-OCT-21	20-OCT-21	R5625547
Quinoline	<0.015	DLHM	0.015	ug/g	19-OCT-21	20-OCT-21	R5625547
Surrogate: 2-Fluorobiphenyl	87.3		60-140	%	19-OCT-21	20-OCT-21	R5625547
Surrogate: d14-Terphenyl	86.5		60-140	%	19-OCT-21	20-OCT-21	R5625547
B(a)P Total Potency Equivalent	3.64		0.021	ug/g	19-OCT-21	20-OCT-21	R5625547
IACR (CCME)	42.5		0.30		19-OCT-21	20-OCT-21	R5625547
Polychlorinated Biphenyls							
Aroclor 1016	<0.0090	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650176-6 WM-SC-003B Sampled By: CLIENT on 05-OCT-21 @ 11:30 Matrix: SEDIMENT							
Polychlorinated Biphenyls							
Aroclor 1221	<0.0090	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1232	<0.0090	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1242	<0.0380	DLM	0.038	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1248	<0.0090	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1254	1.05	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1260	0.222	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1262	<0.0090	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1268	<0.0090	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Total Polychlorinated Biphenyls	1.272		0.027	mg/kg	21-OCT-21	21-OCT-21	R5625841
Surrogate: d14-Terphenyl	97.5		50-140	%	21-OCT-21	21-OCT-21	R5625841
L2650176-7 PCW-SG-011 Sampled By: CLIENT on 05-OCT-21 @ 15:20 Matrix: SEDIMENT							
Physical Tests							
% Moisture	74.1		0.25	%	14-OCT-21	15-OCT-21	R5617860
Liquid Limit (LL)	99		1	%	20-OCT-21	20-OCT-21	R5625105
Moisture at Plastic Limit	80		1	%	20-OCT-21	20-OCT-21	R5625105
Plasticity Index (PI)	19		1	%	20-OCT-21	20-OCT-21	R5625105
Specific Gravity	1.15		0.010	kg/L		26-OCT-21	R5629385
Particle Size							
General Texture Class	Fine				19-OCT-21	19-OCT-21	R5624753
MUST PSA % > 75um	1.7		1.0	%	19-OCT-21	19-OCT-21	R5624753
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0802		0.0010	g/g	25-OCT-21	25-OCT-21	R5628208
Total Organic Carbon	8.02		0.10	%	25-OCT-21	25-OCT-21	R5628208
Metals							
Aluminum (Al)	8850		50	ug/g	19-OCT-21	20-OCT-21	R5625253
Antimony (Sb)	3.27		0.10	ug/g	19-OCT-21	20-OCT-21	R5625253
Arsenic (As)	5.35		0.10	ug/g	19-OCT-21	20-OCT-21	R5625253
Barium (Ba)	244		0.50	ug/g	19-OCT-21	20-OCT-21	R5625253
Beryllium (Be)	0.43		0.10	ug/g	19-OCT-21	20-OCT-21	R5625253
Bismuth (Bi)	0.70		0.20	ug/g	19-OCT-21	20-OCT-21	R5625253
Boron (B)	9.6		5.0	ug/g	19-OCT-21	20-OCT-21	R5625253
Boron (B), Hot Water Ext.	0.84	FR4	0.10	ug/g	19-OCT-21	20-OCT-21	R5625176
Cadmium (Cd)	1.37		0.020	ug/g	19-OCT-21	20-OCT-21	R5625253
Calcium (Ca)	102000		50	ug/g	19-OCT-21	20-OCT-21	R5625253
Chromium (Cr)	3910	DLHC	10	ug/g	19-OCT-21	20-OCT-21	R5625253
Cobalt (Co)	8.81		0.10	ug/g	19-OCT-21	20-OCT-21	R5625253
Copper (Cu)	74.4		0.50	ug/g	19-OCT-21	20-OCT-21	R5625253
Iron (Fe)	17900		50	ug/g	19-OCT-21	20-OCT-21	R5625253
Lead (Pb)	304		0.50	ug/g	19-OCT-21	20-OCT-21	R5625253
Lithium (Li)	9.2		2.0	ug/g	19-OCT-21	20-OCT-21	R5625253

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650176-7 PCW-SG-011 Sampled By: CLIENT on 05-OCT-21 @ 15:20 Matrix: SEDIMENT							
Metals							
Magnesium (Mg)	12100		20	ug/g	19-OCT-21	20-OCT-21	R5625253
Manganese (Mn)	373		1.0	ug/g	19-OCT-21	20-OCT-21	R5625253
Mercury (Hg)	0.376		0.0050	ug/g	19-OCT-21	20-OCT-21	R5624980
Molybdenum (Mo)	1.81		0.10	ug/g	19-OCT-21	20-OCT-21	R5625253
Nickel (Ni)	18.7		0.50	ug/g	19-OCT-21	20-OCT-21	R5625253
Phosphorus (P)	1580		50	ug/g	19-OCT-21	20-OCT-21	R5625253
Potassium (K)	2070		100	ug/g	19-OCT-21	20-OCT-21	R5625253
Selenium (Se)	0.75		0.20	ug/g	19-OCT-21	20-OCT-21	R5625253
Silver (Ag)	0.74		0.10	ug/g	19-OCT-21	20-OCT-21	R5625253
Sodium (Na)	457		50	ug/g	19-OCT-21	20-OCT-21	R5625253
Strontium (Sr)	559		0.50	ug/g	19-OCT-21	20-OCT-21	R5625253
Sulfur (S)	4600		1000	ug/g	19-OCT-21	20-OCT-21	R5625253
Thallium (Tl)	0.261		0.050	ug/g	19-OCT-21	20-OCT-21	R5625253
Tin (Sn)	9.4		2.0	ug/g	19-OCT-21	20-OCT-21	R5625253
Titanium (Ti)	443		1.0	ug/g	19-OCT-21	20-OCT-21	R5625253
Tungsten (W)	1.85		0.50	ug/g	19-OCT-21	20-OCT-21	R5625253
Uranium (U)	0.417		0.050	ug/g	19-OCT-21	20-OCT-21	R5625253
Vanadium (V)	27.4		0.20	ug/g	19-OCT-21	20-OCT-21	R5625253
Zinc (Zn)	327		2.0	ug/g	19-OCT-21	20-OCT-21	R5625253
Zirconium (Zr)	1.7		1.0	ug/g	19-OCT-21	20-OCT-21	R5625253
Speciated Metals							
Chromium, Trivalent	3880		10	ug/g		20-OCT-21	
Chromium, Hexavalent	33.3	DLHM	0.40	ug/g	18-OCT-21	20-OCT-21	R5625247
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.241		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Acenaphthylene	0.944		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Acridine	0.125	AI	0.060	ug/g	19-OCT-21	20-OCT-21	R5625547
Anthracene	0.468		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(a)anthracene	1.43	R	0.075	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(a)pyrene	2.18		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(b&j)fluoranthene	2.31		0.060	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(g,h,i)perylene	1.29		0.060	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(k)fluoranthene	0.842		0.060	ug/g	19-OCT-21	20-OCT-21	R5625547
Chrysene	1.84		0.060	ug/g	19-OCT-21	20-OCT-21	R5625547
Dibenz(a,h)anthracene	0.307	R	0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Fluoroanthene	2.16		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Fluorene	0.228	R	0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Indeno(1,2,3-cd)pyrene	1.22		0.060	ug/g	19-OCT-21	20-OCT-21	R5625547
1-Methylnaphthalene	0.071		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
2-Methylnaphthalene	0.080		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Naphthalene	0.078		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650176-7 PCW-SG-011 Sampled By: CLIENT on 05-OCT-21 @ 15:20 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
Phenanthrene	1.07		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Pyrene	3.04		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Quinoline	<0.030	DLM	0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Surrogate: 2-Fluorobiphenyl	78.8		60-140	%	19-OCT-21	20-OCT-21	R5625547
Surrogate: d14-Terphenyl	75.6		60-140	%	19-OCT-21	20-OCT-21	R5625547
B(a)P Total Potency Equivalent	3.10		0.043	ug/g	19-OCT-21	20-OCT-21	R5625547
IACR (CCME)	32.8		0.62		19-OCT-21	20-OCT-21	R5625547
Polychlorinated Biphenyls							
Aroclor 1016	<0.0090	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1221	<0.0090	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1232	<0.0090	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1242	<0.060	DLMDL	0.060	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1248	<0.0090	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1254	0.285	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1260	0.529	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1262	<0.0090	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1268	<0.0090	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Total Polychlorinated Biphenyls	0.814		0.027	mg/kg	21-OCT-21	21-OCT-21	R5625841
Surrogate: d14-Terphenyl	107.7		50-140	%	21-OCT-21	21-OCT-21	R5625841
L2650176-8 PCW-SC-011A Sampled By: CLIENT on 05-OCT-21 @ 13:55 Matrix: SEDIMENT							
Physical Tests							
% Moisture	69.9		0.25	%	14-OCT-21	15-OCT-21	R5617860
Liquid Limit (LL)	97		1	%	20-OCT-21	20-OCT-21	R5625105
Moisture at Plastic Limit	88		1	%	20-OCT-21	20-OCT-21	R5625105
Plasticity Index (PI)	9		1	%	20-OCT-21	20-OCT-21	R5625105
Specific Gravity	1.15		0.010	kg/L		26-OCT-21	R5629385
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0849		0.0010	g/g	25-OCT-21	25-OCT-21	R5628208
Total Organic Carbon	8.49		0.10	%	25-OCT-21	25-OCT-21	R5628208
Metals							
Aluminum (Al)	9840		50	ug/g	19-OCT-21	20-OCT-21	R5625374
Antimony (Sb)	5.63		0.10	ug/g	19-OCT-21	20-OCT-21	R5625374
Arsenic (As)	10.1		0.10	ug/g	19-OCT-21	20-OCT-21	R5625374
Barium (Ba)	320		0.50	ug/g	19-OCT-21	20-OCT-21	R5625374
Beryllium (Be)	0.42		0.10	ug/g	19-OCT-21	20-OCT-21	R5625374
Bismuth (Bi)	1.06		0.20	ug/g	19-OCT-21	20-OCT-21	R5625374
Boron (B)	9.4		5.0	ug/g	19-OCT-21	20-OCT-21	R5625374
Cadmium (Cd)	1.96		0.020	ug/g	19-OCT-21	20-OCT-21	R5625374
Calcium (Ca)	111000		50	ug/g	19-OCT-21	20-OCT-21	R5625374
Chromium (Cr)	9790		0.50	ug/g	19-OCT-21	20-OCT-21	R5625374

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650176-8 PCW-SC-011A Sampled By: CLIENT on 05-OCT-21 @ 13:55 Matrix: SEDIMENT							
Metals							
Cobalt (Co)	9.55		0.10	ug/g	19-OCT-21	20-OCT-21	R5625374
Copper (Cu)	81.2		0.50	ug/g	19-OCT-21	20-OCT-21	R5625374
Iron (Fe)	20000		50	ug/g	19-OCT-21	20-OCT-21	R5625374
Lead (Pb)	545		0.50	ug/g	19-OCT-21	20-OCT-21	R5625374
Lithium (Li)	8.4		2.0	ug/g	19-OCT-21	20-OCT-21	R5625374
Magnesium (Mg)	12000		20	ug/g	19-OCT-21	20-OCT-21	R5625374
Manganese (Mn)	444		1.0	ug/g	19-OCT-21	20-OCT-21	R5625374
Mercury (Hg)	0.554		0.0050	ug/g	19-OCT-21	20-OCT-21	R5625206
Molybdenum (Mo)	2.53		0.10	ug/g	19-OCT-21	20-OCT-21	R5625374
Nickel (Ni)	20.2		0.50	ug/g	19-OCT-21	20-OCT-21	R5625374
Phosphorus (P)	2050		50	ug/g	19-OCT-21	20-OCT-21	R5625374
Potassium (K)	1970		100	ug/g	19-OCT-21	20-OCT-21	R5625374
Selenium (Se)	0.82		0.20	ug/g	19-OCT-21	20-OCT-21	R5625374
Silver (Ag)	1.34		0.10	ug/g	19-OCT-21	20-OCT-21	R5625374
Sodium (Na)	481		50	ug/g	19-OCT-21	20-OCT-21	R5625374
Strontium (Sr)	618		0.50	ug/g	19-OCT-21	20-OCT-21	R5625374
Sulfur (S)	5800		1000	ug/g	19-OCT-21	20-OCT-21	R5625374
Thallium (Tl)	0.279		0.050	ug/g	19-OCT-21	20-OCT-21	R5625374
Tin (Sn)	13.8		2.0	ug/g	19-OCT-21	20-OCT-21	R5625374
Titanium (Ti)	464		1.0	ug/g	19-OCT-21	20-OCT-21	R5625374
Tungsten (W)	1.26		0.50	ug/g	19-OCT-21	20-OCT-21	R5625374
Uranium (U)	0.548		0.050	ug/g	19-OCT-21	20-OCT-21	R5625374
Vanadium (V)	29.4		0.20	ug/g	19-OCT-21	20-OCT-21	R5625374
Zinc (Zn)	386		2.0	ug/g	19-OCT-21	20-OCT-21	R5625374
Zirconium (Zr)	1.6		1.0	ug/g	19-OCT-21	20-OCT-21	R5625374
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.550		0.020	ug/g	19-OCT-21	20-OCT-21	R5625547
Acenaphthylene	1.50		0.020	ug/g	19-OCT-21	20-OCT-21	R5625547
Acridine	0.218	AI	0.040	ug/g	19-OCT-21	20-OCT-21	R5625547
Anthracene	0.794		0.020	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(a)anthracene	2.08	R	0.050	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(a)pyrene	3.05		0.020	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(b&j)fluoranthene	3.04		0.040	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(g,h,i)perylene	1.55		0.040	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(k)fluoranthene	1.00		0.040	ug/g	19-OCT-21	20-OCT-21	R5625547
Chrysene	2.50		0.040	ug/g	19-OCT-21	20-OCT-21	R5625547
Dibenz(a,h)anthracene	0.378		0.020	ug/g	19-OCT-21	20-OCT-21	R5625547
Fluoroanthene	2.95		0.020	ug/g	19-OCT-21	20-OCT-21	R5625547
Fluorene	0.499	R	0.020	ug/g	19-OCT-21	20-OCT-21	R5625547
Indeno(1,2,3-cd)pyrene	1.47		0.040	ug/g	19-OCT-21	20-OCT-21	R5625547
1-Methylnaphthalene	0.122		0.020	ug/g	19-OCT-21	20-OCT-21	R5625547

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650176-8 PCW-SC-011A Sampled By: CLIENT on 05-OCT-21 @ 13:55 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
2-Methylnaphthalene	0.153		0.020	ug/g	19-OCT-21	20-OCT-21	R5625547
Naphthalene	0.172		0.020	ug/g	19-OCT-21	20-OCT-21	R5625547
Phenanthrene	1.93		0.020	ug/g	19-OCT-21	20-OCT-21	R5625547
Pyrene	4.67		0.020	ug/g	19-OCT-21	20-OCT-21	R5625547
Quinoline	<0.03	DLQ	0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Surrogate: 2-Fluorobiphenyl	79.3		60-140	%	19-OCT-21	20-OCT-21	R5625547
Surrogate: d14-Terphenyl	77.8		60-140	%	19-OCT-21	20-OCT-21	R5625547
B(a)P Total Potency Equivalent	4.22		0.029	ug/g	19-OCT-21	20-OCT-21	R5625547
IACR (CCME)	43.4		0.42		19-OCT-21	20-OCT-21	R5625547
Polychlorinated Biphenyls							
Aroclor 1016	<0.0090	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1221	<0.0090	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1232	<0.0090	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1242	<0.020	DLM	0.020	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1248	<0.0090	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1254	0.393	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1260	0.715	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1262	<0.0090	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1268	<0.0090	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Total Polychlorinated Biphenyls	1.108		0.027	mg/kg	21-OCT-21	21-OCT-21	R5625841
Surrogate: d14-Terphenyl	91.9		50-140	%	21-OCT-21	21-OCT-21	R5625841
L2650176-9 PCW-SC-011B Sampled By: CLIENT on 05-OCT-21 @ 13:55 Matrix: SEDIMENT							
Physical Tests							
% Moisture	70.9		0.25	%	26-OCT-21	27-OCT-21	R5629225
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.101		0.0010	g/g	01-NOV-21	01-NOV-21	R5634582
Total Organic Carbon	10.1		0.10	%	01-NOV-21	01-NOV-21	R5634582
Metals							
Aluminum (Al)	8500	DLHC	1000	ug/g	27-OCT-21	28-OCT-21	R5631782
Antimony (Sb)	6.5	DLHC	2.0	ug/g	27-OCT-21	28-OCT-21	R5631782
Arsenic (As)	12.0	DLHC	2.0	ug/g	27-OCT-21	28-OCT-21	R5631782
Barium (Ba)	333	DLHC	10	ug/g	27-OCT-21	28-OCT-21	R5631782
Beryllium (Be)	<2.0	DLHC	2.0	ug/g	27-OCT-21	28-OCT-21	R5631782
Bismuth (Bi)	<4.0	DLHC	4.0	ug/g	27-OCT-21	28-OCT-21	R5631782
Boron (B)	<100	DLHC	100	ug/g	27-OCT-21	28-OCT-21	R5631782
Cadmium (Cd)	2.02	DLHC	0.40	ug/g	27-OCT-21	28-OCT-21	R5631782
Calcium (Ca)	106000	DLHC	1000	ug/g	27-OCT-21	28-OCT-21	R5631782
Chromium (Cr)	10400	DLHC	10	ug/g	27-OCT-21	28-OCT-21	R5631782
Cobalt (Co)	9.3	DLHC	2.0	ug/g	27-OCT-21	28-OCT-21	R5631782
Copper (Cu)	81	DLHC	10	ug/g	27-OCT-21	28-OCT-21	R5631782

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650176-9 PCW-SC-011B Sampled By: CLIENT on 05-OCT-21 @ 13:55 Matrix: SEDIMENT							
Metals							
Iron (Fe)	19100	DLHC	1000	ug/g	27-OCT-21	28-OCT-21	R5631782
Lead (Pb)	624	DLHC	10	ug/g	27-OCT-21	28-OCT-21	R5631782
Lithium (Li)	<40	DLHC	40	ug/g	27-OCT-21	28-OCT-21	R5631782
Magnesium (Mg)	10000	DLHC	400	ug/g	27-OCT-21	28-OCT-21	R5631782
Manganese (Mn)	385	DLHC	20	ug/g	27-OCT-21	28-OCT-21	R5631782
Mercury (Hg)	0.756		0.0050	ug/g	27-OCT-21	28-OCT-21	R5631342
Molybdenum (Mo)	2.7	DLHC	2.0	ug/g	27-OCT-21	28-OCT-21	R5631782
Nickel (Ni)	20	DLHC	10	ug/g	27-OCT-21	28-OCT-21	R5631782
Phosphorus (P)	1800	DLHC	1000	ug/g	27-OCT-21	28-OCT-21	R5631782
Potassium (K)	<2000	DLHC	2000	ug/g	27-OCT-21	28-OCT-21	R5631782
Selenium (Se)	<4.0	DLHC	4.0	ug/g	27-OCT-21	28-OCT-21	R5631782
Silver (Ag)	<2.0	DLHC	2.0	ug/g	27-OCT-21	28-OCT-21	R5631782
Sodium (Na)	<1000	DLHC	1000	ug/g	27-OCT-21	28-OCT-21	R5631782
Strontium (Sr)	631	DLHC	10	ug/g	27-OCT-21	28-OCT-21	R5631782
Sulfur (S)	<20000	DLHC	20000	ug/g	27-OCT-21	28-OCT-21	R5631782
Thallium (Tl)	<1.0	DLHC	1.0	ug/g	27-OCT-21	28-OCT-21	R5631782
Tin (Sn)	<40	DLHC	40	ug/g	27-OCT-21	28-OCT-21	R5631782
Titanium (Ti)	436	DLHC	20	ug/g	27-OCT-21	28-OCT-21	R5631782
Tungsten (W)	<10	DLHC	10	ug/g	27-OCT-21	28-OCT-21	R5631782
Uranium (U)	<1.0	DLHC	1.0	ug/g	27-OCT-21	28-OCT-21	R5631782
Vanadium (V)	26.9	DLHC	4.0	ug/g	27-OCT-21	28-OCT-21	R5631782
Zinc (Zn)	391	DLHC	40	ug/g	27-OCT-21	28-OCT-21	R5631782
Zirconium (Zr)	<20	DLHC	20	ug/g	27-OCT-21	28-OCT-21	R5631782
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	1.17		0.015	ug/g	27-OCT-21	27-OCT-21	R5629651
Acenaphthylene	2.68		0.015	ug/g	27-OCT-21	27-OCT-21	R5629651
Acridine	<0.37	DLM	0.37	ug/g	27-OCT-21	27-OCT-21	R5629651
Anthracene	1.30		0.012	ug/g	27-OCT-21	27-OCT-21	R5629651
Benzo(a)anthracene	4.49	R	0.030	ug/g	27-OCT-21	27-OCT-21	R5629651
Benzo(a)pyrene	5.40		0.015	ug/g	27-OCT-21	27-OCT-21	R5629651
Benzo(b&j)fluoranthene	4.19		0.030	ug/g	27-OCT-21	27-OCT-21	R5629651
Benzo(g,h,i)perylene	3.05		0.030	ug/g	27-OCT-21	27-OCT-21	R5629651
Benzo(k)fluoranthene	1.81		0.030	ug/g	27-OCT-21	27-OCT-21	R5629651
Chrysene	3.88		0.030	ug/g	27-OCT-21	27-OCT-21	R5629651
Dibenz(a,h)anthracene	0.706		0.015	ug/g	27-OCT-21	27-OCT-21	R5629651
Fluoroanthene	4.57		0.015	ug/g	27-OCT-21	27-OCT-21	R5629651
Fluorene	0.803		0.015	ug/g	27-OCT-21	27-OCT-21	R5629651
Indeno(1,2,3-cd)pyrene	2.73		0.030	ug/g	27-OCT-21	27-OCT-21	R5629651
1-Methylnaphthalene	0.148		0.015	ug/g	27-OCT-21	27-OCT-21	R5629651
2-Methylnaphthalene	0.186		0.015	ug/g	27-OCT-21	27-OCT-21	R5629651
Naphthalene	0.172		0.015	ug/g	27-OCT-21	27-OCT-21	R5629651

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650176-9 PCW-SC-011B Sampled By: CLIENT on 05-OCT-21 @ 13:55 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
Phenanthrene	2.49		0.015	ug/g	27-OCT-21	27-OCT-21	R5629651
Pyrene	7.55		0.015	ug/g	27-OCT-21	27-OCT-21	R5629651
Quinoline	<0.05	DLQ	0.050	ug/g	27-OCT-21	27-OCT-21	R5629651
Surrogate: 2-Fluorobiphenyl	89.8		60-140	%	27-OCT-21	27-OCT-21	R5629651
Surrogate: d14-Terphenyl	91.8		60-140	%	27-OCT-21	27-OCT-21	R5629651
B(a)P Total Potency Equivalent	7.50		0.021	ug/g	27-OCT-21	27-OCT-21	R5629651
IACR (CCME)	72.0		0.30		27-OCT-21	27-OCT-21	R5629651
Polychlorinated Biphenyls							
Aroclor 1016	<0.225	RRR	0.23	mg/kg	02-NOV-21	02-NOV-21	R5634429
Aroclor 1221	<0.225	RRR	0.23	mg/kg	02-NOV-21	02-NOV-21	R5634429
Aroclor 1232	<0.225	RRR	0.23	mg/kg	02-NOV-21	02-NOV-21	R5634429
Aroclor 1242	<0.225	RRR	0.23	mg/kg	02-NOV-21	02-NOV-21	R5634429
Aroclor 1248	<0.225	RRR	0.23	mg/kg	02-NOV-21	02-NOV-21	R5634429
Aroclor 1254	0.645	DLR	0.045	mg/kg	02-NOV-21	02-NOV-21	R5634429
Aroclor 1260	1.57	DLR	0.045	mg/kg	02-NOV-21	02-NOV-21	R5634429
Aroclor 1262	<0.045	DLR	0.045	mg/kg	02-NOV-21	02-NOV-21	R5634429
Aroclor 1268	<0.045	DLR	0.045	mg/kg	02-NOV-21	02-NOV-21	R5634429
Total Polychlorinated Biphenyls	2.21		0.50	mg/kg	02-NOV-21	02-NOV-21	R5634429
Surrogate: d14-Terphenyl	92.9		50-140	%	02-NOV-21	02-NOV-21	R5634429
Report Remarks : RRR: Due to sample matrix interferences, PCB recoveries could not be determined in the matrix spike unless spiked with 5X the normal concentration and therefore the detection limit has been raised accordingly.							
L2650176-10 PCW-SG-013 Sampled By: CLIENT on 05-OCT-21 @ 16:20 Matrix: SEDIMENT							
Physical Tests							
% Moisture	81.4		0.25	%	22-OCT-21	22-OCT-21	R5626585
Liquid Limit (LL)	121		1	%	26-OCT-21	26-OCT-21	R5628805
Moisture at Plastic Limit	105		1	%	26-OCT-21	26-OCT-21	R5628805
Plasticity Index (PI)	16		1	%	26-OCT-21	26-OCT-21	R5628805
Specific Gravity	1.08		0.010	kg/L		07-NOV-21	R5637237
Particle Size							
General Texture Class	Fine				25-OCT-21	25-OCT-21	R5628267
MUST PSA % > 75um	2.7		1.0	%	25-OCT-21	25-OCT-21	R5628267
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.118		0.0010	g/g	25-OCT-21	25-OCT-21	R5628208
Total Organic Carbon	11.8		0.10	%	25-OCT-21	25-OCT-21	R5628208
Metals							
Aluminum (Al)	12900	DLM	100	ug/g	25-OCT-21	25-OCT-21	R5628020
Antimony (Sb)	4.66	DLM	0.20	ug/g	25-OCT-21	25-OCT-21	R5628020
Arsenic (As)	10.4	DLM	0.20	ug/g	25-OCT-21	25-OCT-21	R5628020
Barium (Ba)	329	DLM	1.0	ug/g	25-OCT-21	25-OCT-21	R5628020
Beryllium (Be)	0.60	DLM	0.20	ug/g	25-OCT-21	25-OCT-21	R5628020
Bismuth (Bi)	1.69	DLM	0.40	ug/g	25-OCT-21	25-OCT-21	R5628020

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650176-10 PCW-SG-013 Sampled By: CLIENT on 05-OCT-21 @ 16:20 Matrix: SEDIMENT							
Metals							
Boron (B)	14	DLM	10	ug/g	25-OCT-21	25-OCT-21	R5628020
Boron (B), Hot Water Ext.	0.60	FR4	0.10	ug/g	25-OCT-21	25-OCT-21	R5627977
Cadmium (Cd)	1.78	DLM	0.040	ug/g	25-OCT-21	25-OCT-21	R5628020
Calcium (Ca)	87300	DLM	100	ug/g	25-OCT-21	25-OCT-21	R5628020
Chromium (Cr)	7650	DLM	1.0	ug/g	25-OCT-21	25-OCT-21	R5628020
Cobalt (Co)	13.7	DLM	0.20	ug/g	25-OCT-21	25-OCT-21	R5628020
Copper (Cu)	77.4	DLM	1.0	ug/g	25-OCT-21	25-OCT-21	R5628020
Iron (Fe)	23900	DLM	100	ug/g	25-OCT-21	25-OCT-21	R5628020
Lead (Pb)	425	DLM	1.0	ug/g	25-OCT-21	25-OCT-21	R5628020
Lithium (Li)	13.0	DLM	4.0	ug/g	25-OCT-21	25-OCT-21	R5628020
Magnesium (Mg)	11800	DLM	40	ug/g	25-OCT-21	25-OCT-21	R5628020
Manganese (Mn)	552	DLM	2.0	ug/g	25-OCT-21	25-OCT-21	R5628020
Mercury (Hg)	0.681	DLM	0.010	ug/g	25-OCT-21	25-OCT-21	R5627737
Molybdenum (Mo)	2.16	DLM	0.20	ug/g	25-OCT-21	25-OCT-21	R5628020
Nickel (Ni)	24.3	DLM	1.0	ug/g	25-OCT-21	25-OCT-21	R5628020
Phosphorus (P)	2120	DLM	100	ug/g	25-OCT-21	25-OCT-21	R5628020
Potassium (K)	2910	DLM	200	ug/g	25-OCT-21	25-OCT-21	R5628020
Selenium (Se)	1.19	DLM	0.40	ug/g	25-OCT-21	25-OCT-21	R5628020
Silver (Ag)	1.56	DLM	0.20	ug/g	25-OCT-21	25-OCT-21	R5628020
Sodium (Na)	490	DLM	100	ug/g	25-OCT-21	25-OCT-21	R5628020
Strontium (Sr)	516	DLM	1.0	ug/g	25-OCT-21	25-OCT-21	R5628020
Sulfur (S)	8200	DLM	2000	ug/g	25-OCT-21	25-OCT-21	R5628020
Thallium (Tl)	0.33	DLM	0.10	ug/g	25-OCT-21	25-OCT-21	R5628020
Tin (Sn)	15.6	DLM	4.0	ug/g	25-OCT-21	25-OCT-21	R5628020
Titanium (Ti)	671	DLM	2.0	ug/g	25-OCT-21	25-OCT-21	R5628020
Tungsten (W)	1.2	DLM	1.0	ug/g	25-OCT-21	25-OCT-21	R5628020
Uranium (U)	0.59	DLM	0.10	ug/g	25-OCT-21	25-OCT-21	R5628020
Vanadium (V)	36.0	DLM	0.40	ug/g	25-OCT-21	25-OCT-21	R5628020
Zinc (Zn)	387	DLM	4.0	ug/g	25-OCT-21	25-OCT-21	R5628020
Zirconium (Zr)	2.9	DLM	2.0	ug/g	25-OCT-21	25-OCT-21	R5628020
Speciated Metals							
Chromium, Trivalent	7650		10	ug/g		26-OCT-21	
Chromium, Hexavalent	<1.0	DLHM	1.0	ug/g	22-OCT-21	26-OCT-21	R5628617
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.225	DLHM	0.025	ug/g	22-OCT-21	26-OCT-21	R5628437
Acenaphthylene	1.64	DLHM	0.025	ug/g	22-OCT-21	26-OCT-21	R5628437
Acridine	0.132	AI	0.050	ug/g	22-OCT-21	26-OCT-21	R5628437
Anthracene	0.436	DLHM	0.020	ug/g	22-OCT-21	26-OCT-21	R5628437
Benzo(a)anthracene	1.81	R	0.050	ug/g	22-OCT-21	26-OCT-21	R5628437
Benzo(a)pyrene	2.93	DLHM	0.025	ug/g	22-OCT-21	26-OCT-21	R5628437
Benzo(b&j)fluoranthene	2.50	DLHM	0.050	ug/g	22-OCT-21	26-OCT-21	R5628437

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650176-10 PCW-SG-013 Sampled By: CLIENT on 05-OCT-21 @ 16:20 Matrix: SEDIMENT							
Polycyclic Aromatic Hydrocarbons							
Benzo(g,h,i)perylene	1.54	DLHM	0.050	ug/g	22-OCT-21	26-OCT-21	R5628437
Benzo(k)fluoranthene	0.900	DLHM	0.050	ug/g	22-OCT-21	26-OCT-21	R5628437
Chrysene	2.08	DLHM	0.050	ug/g	22-OCT-21	26-OCT-21	R5628437
Dibenz(a,h)anthracene	0.381	DLHM	0.025	ug/g	22-OCT-21	26-OCT-21	R5628437
Fluoroanthene	1.90	DLHM	0.025	ug/g	22-OCT-21	26-OCT-21	R5628437
Fluorene	0.263	DLHM	0.025	ug/g	22-OCT-21	26-OCT-21	R5628437
Indeno(1,2,3-cd)pyrene	1.25	DLHM	0.050	ug/g	22-OCT-21	26-OCT-21	R5628437
1-Methylnaphthalene	0.063	DLHM	0.025	ug/g	22-OCT-21	26-OCT-21	R5628437
2-Methylnaphthalene	0.078	DLHM	0.025	ug/g	22-OCT-21	26-OCT-21	R5628437
Naphthalene	0.059	DLHM	0.025	ug/g	22-OCT-21	26-OCT-21	R5628437
Phenanthrene	0.839	DLHM	0.025	ug/g	22-OCT-21	26-OCT-21	R5628437
Pyrene	3.25	DLHM	0.025	ug/g	22-OCT-21	26-OCT-21	R5628437
Quinoline	<0.025	DLHM	0.025	ug/g	22-OCT-21	26-OCT-21	R5628437
Surrogate: 2-Fluorobiphenyl	91.9		60-140	%	22-OCT-21	26-OCT-21	R5628437
Surrogate: d14-Terphenyl	89.3		60-140	%	22-OCT-21	26-OCT-21	R5628437
B(a)P Total Potency Equivalent	3.99		0.036	ug/g	22-OCT-21	26-OCT-21	R5628437
IACR (CCME)	38.0		0.50		22-OCT-21	26-OCT-21	R5628437
Polychlorinated Biphenyls							
Aroclor 1016	<0.015	DLHM	0.015	mg/kg	26-OCT-21	26-OCT-21	R5628692
Aroclor 1221	<0.015	DLHM	0.015	mg/kg	26-OCT-21	26-OCT-21	R5628692
Aroclor 1232	<0.015	DLHM	0.015	mg/kg	26-OCT-21	26-OCT-21	R5628692
Aroclor 1242	<0.040	DLM	0.040	mg/kg	26-OCT-21	26-OCT-21	R5628692
Aroclor 1248	<0.015	DLHM	0.015	mg/kg	26-OCT-21	26-OCT-21	R5628692
Aroclor 1254	0.391	DLHM	0.015	mg/kg	26-OCT-21	26-OCT-21	R5628692
Aroclor 1260	0.814	DLHM	0.015	mg/kg	26-OCT-21	26-OCT-21	R5628692
Aroclor 1262	<0.015	DLHM	0.015	mg/kg	26-OCT-21	26-OCT-21	R5628692
Aroclor 1268	<0.015	DLHM	0.015	mg/kg	26-OCT-21	26-OCT-21	R5628692
Total Polychlorinated Biphenyls	1.205		0.045	mg/kg	26-OCT-21	26-OCT-21	R5628692
Surrogate: d14-Terphenyl	105.3		50-140	%	26-OCT-21	26-OCT-21	R5628692
L2650176-11 PCW-SC-013A Sampled By: CLIENT on 05-OCT-21 @ 15:45 Matrix: SEDIMENT							
Physical Tests							
% Moisture	76.9		0.25	%	22-OCT-21	22-OCT-21	R5626585
Liquid Limit (LL)	N/A	ICC	1	%	26-OCT-21	26-OCT-21	R5628805
Moisture at Plastic Limit	N/A	ICC	1	%	26-OCT-21	26-OCT-21	R5628805
Plasticity Index (PI)	N/A	ICC	1	%	26-OCT-21	26-OCT-21	R5628805
Specific Gravity	1.11		0.010	kg/L		07-NOV-21	R5637237
Particle Size							
General Texture Class	Fine				25-OCT-21	25-OCT-21	R5628267
MUST PSA % > 75um	2.4		1.0	%	25-OCT-21	25-OCT-21	R5628267
Organic / Inorganic Carbon							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650176-11 PCW-SC-013A Sampled By: CLIENT on 05-OCT-21 @ 15:45 Matrix: SEDIMENT							
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.127		0.0010	g/g	25-OCT-21	25-OCT-21	R5628208
Total Organic Carbon	12.7		0.10	%	25-OCT-21	25-OCT-21	R5628208
Metals							
Aluminum (Al)	13400		50	ug/g	25-OCT-21	25-OCT-21	R5628680
Antimony (Sb)	5.00		0.10	ug/g	25-OCT-21	25-OCT-21	R5628680
Arsenic (As)	14.6		0.10	ug/g	25-OCT-21	25-OCT-21	R5628680
Barium (Ba)	352		0.50	ug/g	25-OCT-21	25-OCT-21	R5628680
Beryllium (Be)	0.63		0.10	ug/g	25-OCT-21	25-OCT-21	R5628680
Bismuth (Bi)	1.01		0.20	ug/g	25-OCT-21	25-OCT-21	R5628680
Boron (B)	12.8		5.0	ug/g	25-OCT-21	25-OCT-21	R5628680
Boron (B), Hot Water Ext.	1.05		0.10	ug/g	25-OCT-21	25-OCT-21	R5628213
Cadmium (Cd)	1.91		0.020	ug/g	25-OCT-21	25-OCT-21	R5628680
Calcium (Ca)	80600		50	ug/g	25-OCT-21	25-OCT-21	R5628680
Chromium (Cr)	5950	DLHC	10	ug/g	25-OCT-21	25-OCT-21	R5628680
Cobalt (Co)	15.2		0.10	ug/g	25-OCT-21	25-OCT-21	R5628680
Copper (Cu)	76.2		0.50	ug/g	25-OCT-21	25-OCT-21	R5628680
Iron (Fe)	24000		50	ug/g	25-OCT-21	25-OCT-21	R5628680
Lead (Pb)	606		0.50	ug/g	25-OCT-21	25-OCT-21	R5628680
Lithium (Li)	11.8		2.0	ug/g	25-OCT-21	25-OCT-21	R5628680
Magnesium (Mg)	11500		20	ug/g	25-OCT-21	25-OCT-21	R5628680
Manganese (Mn)	488		1.0	ug/g	25-OCT-21	25-OCT-21	R5628680
Mercury (Hg)	0.719		0.0050	ug/g	25-OCT-21	26-OCT-21	R5628552
Molybdenum (Mo)	2.60		0.10	ug/g	25-OCT-21	25-OCT-21	R5628680
Nickel (Ni)	25.5		0.50	ug/g	25-OCT-21	25-OCT-21	R5628680
Phosphorus (P)	2340		50	ug/g	25-OCT-21	25-OCT-21	R5628680
Potassium (K)	3010		100	ug/g	25-OCT-21	25-OCT-21	R5628680
Selenium (Se)	1.30		0.20	ug/g	25-OCT-21	25-OCT-21	R5628680
Silver (Ag)	1.44		0.10	ug/g	25-OCT-21	25-OCT-21	R5628680
Sodium (Na)	546		50	ug/g	25-OCT-21	25-OCT-21	R5628680
Strontium (Sr)	533		0.50	ug/g	25-OCT-21	25-OCT-21	R5628680
Sulfur (S)	10700		1000	ug/g	25-OCT-21	25-OCT-21	R5628680
Thallium (Tl)	0.350		0.050	ug/g	25-OCT-21	25-OCT-21	R5628680
Tin (Sn)	17.8		2.0	ug/g	25-OCT-21	25-OCT-21	R5628680
Titanium (Ti)	702		1.0	ug/g	25-OCT-21	25-OCT-21	R5628680
Tungsten (W)	0.81		0.50	ug/g	25-OCT-21	25-OCT-21	R5628680
Uranium (U)	0.759		0.050	ug/g	25-OCT-21	25-OCT-21	R5628680
Vanadium (V)	38.3		0.20	ug/g	25-OCT-21	25-OCT-21	R5628680
Zinc (Zn)	392		2.0	ug/g	25-OCT-21	25-OCT-21	R5628680
Zirconium (Zr)	4.1		1.0	ug/g	25-OCT-21	25-OCT-21	R5628680
Speciated Metals							
Chromium, Trivalent	5940		10	ug/g		26-OCT-21	

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650176-11 PCW-SC-013A Sampled By: CLIENT on 05-OCT-21 @ 15:45 Matrix: SEDIMENT							
Speciated Metals							
Chromium, Hexavalent	14.8	DLHM	0.40	ug/g	22-OCT-21	26-OCT-21	R5628617
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.225	DLHM	0.015	ug/g	22-OCT-21	26-OCT-21	R5628437
Acenaphthylene	2.03	DLHM	0.015	ug/g	22-OCT-21	26-OCT-21	R5628437
Acridine	0.167	AI	0.030	ug/g	22-OCT-21	26-OCT-21	R5628437
Anthracene	0.707	DLHM	0.012	ug/g	22-OCT-21	26-OCT-21	R5628437
Benzo(a)anthracene	2.73	R	0.030	ug/g	22-OCT-21	26-OCT-21	R5628437
Benzo(a)pyrene	3.76	DLHM	0.015	ug/g	22-OCT-21	26-OCT-21	R5628437
Benzo(b&j)fluoranthene	3.19	DLHM	0.030	ug/g	22-OCT-21	26-OCT-21	R5628437
Benzo(g,h,i)perylene	2.00	DLHM	0.030	ug/g	22-OCT-21	26-OCT-21	R5628437
Benzo(k)fluoranthene	1.14	DLHM	0.030	ug/g	22-OCT-21	26-OCT-21	R5628437
Chrysene	2.77	DLHM	0.030	ug/g	22-OCT-21	26-OCT-21	R5628437
Dibenz(a,h)anthracene	0.486	DLHM	0.015	ug/g	22-OCT-21	26-OCT-21	R5628437
Fluoroanthene	2.87	DLHM	0.015	ug/g	22-OCT-21	26-OCT-21	R5628437
Fluorene	0.289	DLHM	0.015	ug/g	22-OCT-21	26-OCT-21	R5628437
Indeno(1,2,3-cd)pyrene	1.61	DLHM	0.030	ug/g	22-OCT-21	26-OCT-21	R5628437
1-Methylnaphthalene	0.059	DLHM	0.015	ug/g	22-OCT-21	26-OCT-21	R5628437
2-Methylnaphthalene	0.073	DLHM	0.015	ug/g	22-OCT-21	26-OCT-21	R5628437
Naphthalene	0.049	DLHM	0.015	ug/g	22-OCT-21	26-OCT-21	R5628437
Phenanthrene	1.16	DLHM	0.015	ug/g	22-OCT-21	26-OCT-21	R5628437
Pyrene	4.38	DLHM	0.015	ug/g	22-OCT-21	26-OCT-21	R5628437
Quinoline	<0.015	DLHM	0.015	ug/g	22-OCT-21	26-OCT-21	R5628437
Surrogate: 2-Fluorobiphenyl	89.3		60-140	%	22-OCT-21	26-OCT-21	R5628437
Surrogate: d14-Terphenyl	81.5		60-140	%	22-OCT-21	26-OCT-21	R5628437
B(a)P Total Potency Equivalent	5.16		0.021	ug/g	22-OCT-21	26-OCT-21	R5628437
IACR (CCME)	49.8		0.30		22-OCT-21	26-OCT-21	R5628437
Polychlorinated Biphenyls							
Aroclor 1016	<0.0090	DLHM	0.0090	mg/kg	26-OCT-21	26-OCT-21	R5628692
Aroclor 1221	<0.0090	DLHM	0.0090	mg/kg	26-OCT-21	26-OCT-21	R5628692
Aroclor 1232	<0.0090	DLHM	0.0090	mg/kg	26-OCT-21	26-OCT-21	R5628692
Aroclor 1242	<0.030	DLM	0.030	mg/kg	26-OCT-21	26-OCT-21	R5628692
Aroclor 1248	<0.0090	DLHM	0.0090	mg/kg	26-OCT-21	26-OCT-21	R5628692
Aroclor 1254	0.259	DLHM	0.0090	mg/kg	26-OCT-21	26-OCT-21	R5628692
Aroclor 1260	0.447	DLHM	0.0090	mg/kg	26-OCT-21	26-OCT-21	R5628692
Aroclor 1262	<0.0090	DLHM	0.0090	mg/kg	26-OCT-21	26-OCT-21	R5628692
Aroclor 1268	<0.0090	DLHM	0.0090	mg/kg	26-OCT-21	26-OCT-21	R5628692
Total Polychlorinated Biphenyls	0.706		0.027	mg/kg	26-OCT-21	26-OCT-21	R5628692
Surrogate: d14-Terphenyl	92.6		50-140	%	26-OCT-21	26-OCT-21	R5628692
L2650176-12 PCW-SC-013B Sampled By: CLIENT on 05-OCT-21 @ 15:45 Matrix: SEDIMENT							
L2650176-13 DUP-204							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650176-13 DUP-204 Sampled By: CLIENT on 05-OCT-21 Matrix: SEDIMENT							
Physical Tests							
% Moisture	74.7		0.25	%	14-OCT-21	15-OCT-21	R5621038
Liquid Limit (LL)	98		1	%	20-OCT-21	20-OCT-21	R5625105
Moisture at Plastic Limit	88		1	%	20-OCT-21	20-OCT-21	R5625105
Plasticity Index (PI)	10		1	%	20-OCT-21	20-OCT-21	R5625105
Specific Gravity	1.20		0.010	kg/L		26-OCT-21	R5629385
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0841		0.0010	g/g	25-OCT-21	25-OCT-21	R5628208
Total Organic Carbon	8.41		0.10	%	25-OCT-21	25-OCT-21	R5628208
Metals							
Aluminum (Al)	9130		50	ug/g	19-OCT-21	20-OCT-21	R5625374
Antimony (Sb)	0.79		0.10	ug/g	19-OCT-21	20-OCT-21	R5625374
Arsenic (As)	5.03		0.10	ug/g	19-OCT-21	20-OCT-21	R5625374
Barium (Ba)	302		0.50	ug/g	19-OCT-21	20-OCT-21	R5625374
Beryllium (Be)	0.39		0.10	ug/g	19-OCT-21	20-OCT-21	R5625374
Bismuth (Bi)	0.65		0.20	ug/g	19-OCT-21	20-OCT-21	R5625374
Boron (B)	8.2		5.0	ug/g	19-OCT-21	20-OCT-21	R5625374
Cadmium (Cd)	1.94		0.020	ug/g	19-OCT-21	20-OCT-21	R5625374
Calcium (Ca)	104000		50	ug/g	19-OCT-21	20-OCT-21	R5625374
Chromium (Cr)	8940		0.50	ug/g	19-OCT-21	20-OCT-21	R5625374
Cobalt (Co)	7.24		0.10	ug/g	19-OCT-21	20-OCT-21	R5625374
Copper (Cu)	69.2		0.50	ug/g	19-OCT-21	20-OCT-21	R5625374
Iron (Fe)	16700		50	ug/g	19-OCT-21	20-OCT-21	R5625374
Lead (Pb)	504		0.50	ug/g	19-OCT-21	20-OCT-21	R5625374
Lithium (Li)	8.2		2.0	ug/g	19-OCT-21	20-OCT-21	R5625374
Magnesium (Mg)	10800		20	ug/g	19-OCT-21	20-OCT-21	R5625374
Manganese (Mn)	393		1.0	ug/g	19-OCT-21	20-OCT-21	R5625374
Mercury (Hg)	0.0845		0.0050	ug/g	19-OCT-21	20-OCT-21	R5625206
Molybdenum (Mo)	0.51		0.10	ug/g	19-OCT-21	20-OCT-21	R5625374
Nickel (Ni)	17.2		0.50	ug/g	19-OCT-21	20-OCT-21	R5625374
Phosphorus (P)	1660		50	ug/g	19-OCT-21	20-OCT-21	R5625374
Potassium (K)	1720		100	ug/g	19-OCT-21	20-OCT-21	R5625374
Selenium (Se)	<0.20		0.20	ug/g	19-OCT-21	20-OCT-21	R5625374
Silver (Ag)	0.79		0.10	ug/g	19-OCT-21	20-OCT-21	R5625374
Sodium (Na)	469		50	ug/g	19-OCT-21	20-OCT-21	R5625374
Strontium (Sr)	562		0.50	ug/g	19-OCT-21	20-OCT-21	R5625374
Sulfur (S)	<1000		1000	ug/g	19-OCT-21	20-OCT-21	R5625374
Thallium (Tl)	0.235		0.050	ug/g	19-OCT-21	20-OCT-21	R5625374
Tin (Sn)	7.9		2.0	ug/g	19-OCT-21	20-OCT-21	R5625374
Titanium (Ti)	376		1.0	ug/g	19-OCT-21	20-OCT-21	R5625374
Tungsten (W)	<0.50		0.50	ug/g	19-OCT-21	20-OCT-21	R5625374
Uranium (U)	0.450		0.050	ug/g	19-OCT-21	20-OCT-21	R5625374

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650176-13 DUP-204 Sampled By: CLIENT on 05-OCT-21 Matrix: SEDIMENT							
Metals							
Vanadium (V)	25.0		0.20	ug/g	19-OCT-21	20-OCT-21	R5625374
Zinc (Zn)	349		2.0	ug/g	19-OCT-21	20-OCT-21	R5625374
Zirconium (Zr)	<1.0		1.0	ug/g	19-OCT-21	20-OCT-21	R5625374
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.655		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Acenaphthylene	1.75		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Acridine	0.275	AI	0.060	ug/g	19-OCT-21	20-OCT-21	R5625547
Anthracene	0.933		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(a)anthracene	2.55	R	0.075	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(a)pyrene	3.86		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(b&j)fluoranthene	3.69		0.060	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(g,h,i)perylene	2.13		0.060	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(k)fluoranthene	1.29		0.060	ug/g	19-OCT-21	20-OCT-21	R5625547
Chrysene	2.93		0.060	ug/g	19-OCT-21	20-OCT-21	R5625547
Dibenz(a,h)anthracene	0.518		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Fluoroanthene	3.42		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Fluorene	0.568	R	0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Indeno(1,2,3-cd)pyrene	2.02		0.060	ug/g	19-OCT-21	20-OCT-21	R5625547
1-Methylnaphthalene	0.147		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
2-Methylnaphthalene	0.176		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Naphthalene	0.213		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Phenanthrene	2.35		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Pyrene	5.44		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Quinoline	<0.030	DLM	0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Surrogate: 2-Fluorobiphenyl	80.5		60-140	%	19-OCT-21	20-OCT-21	R5625547
Surrogate: d14-Terphenyl	77.5		60-140	%	19-OCT-21	20-OCT-21	R5625547
B(a)P Total Potency Equivalent	5.38		0.043	ug/g	19-OCT-21	20-OCT-21	R5625547
IACR (CCME)	54.0		0.62		19-OCT-21	20-OCT-21	R5625547
Polychlorinated Biphenyls							
Aroclor 1016	<0.0090	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1221	<0.0090	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1232	<0.0090	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1242	<0.0350	DLM	0.035	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1248	<0.0090	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1254	0.427	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1260	0.773	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1262	<0.0090	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1268	<0.0090	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Total Polychlorinated Biphenyls	1.20		0.027	mg/kg	21-OCT-21	21-OCT-21	R5625841
Surrogate: d14-Terphenyl	89.3		50-140	%	21-OCT-21	21-OCT-21	R5625841
L2650176-14 DUP-206 CLIENT on 05-OCT-21							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650176-14 DUP-206 Sampled By: CLIENT on 05-OCT-21 Matrix: SEDIMENT							
Physical Tests							
% Moisture	76.8		0.25	%	14-OCT-21	15-OCT-21	R5617685
Liquid Limit (LL)	93		1	%	20-OCT-21	20-OCT-21	R5625105
Moisture at Plastic Limit	61		1	%	20-OCT-21	20-OCT-21	R5625105
Plasticity Index (PI)	32		1	%	20-OCT-21	20-OCT-21	R5625105
Specific Gravity	1.18		0.010	kg/L		26-OCT-21	R5629385
Particle Size							
General Texture Class	Fine				19-OCT-21	19-OCT-21	R5624753
MUST PSA % > 75um	1.2		1.0	%	19-OCT-21	19-OCT-21	R5624753
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0760		0.0010	g/g	25-OCT-21	25-OCT-21	R5628208
Total Organic Carbon	7.60		0.10	%	25-OCT-21	25-OCT-21	R5628208
Metals							
Aluminum (Al)	20400	DLM	100	ug/g	20-OCT-21	20-OCT-21	R5625485
Antimony (Sb)	4.62	DLM	0.20	ug/g	20-OCT-21	20-OCT-21	R5625485
Arsenic (As)	64.2	DLM	0.20	ug/g	20-OCT-21	20-OCT-21	R5625485
Barium (Ba)	314	DLM	1.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Beryllium (Be)	0.71	DLM	0.20	ug/g	20-OCT-21	20-OCT-21	R5625485
Bismuth (Bi)	1.67	DLM	0.40	ug/g	20-OCT-21	20-OCT-21	R5625485
Boron (B)	10	DLM	10	ug/g	20-OCT-21	20-OCT-21	R5625485
Boron (B), Hot Water Ext.	0.31		0.10	ug/g	20-OCT-21	20-OCT-21	R5625469
Cadmium (Cd)	1.46	DLM	0.040	ug/g	20-OCT-21	20-OCT-21	R5625485
Calcium (Ca)	50800	DLM	100	ug/g	20-OCT-21	20-OCT-21	R5625485
Chromium (Cr)	1840	DLM	1.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Cobalt (Co)	40.2	DLM	0.20	ug/g	20-OCT-21	20-OCT-21	R5625485
Copper (Cu)	70.7	DLM	1.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Iron (Fe)	29600	DLM	100	ug/g	20-OCT-21	20-OCT-21	R5625485
Lead (Pb)	321	DLM	1.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Lithium (Li)	14.6	DLM	4.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Magnesium (Mg)	15500	DLM	40	ug/g	20-OCT-21	20-OCT-21	R5625485
Manganese (Mn)	641	DLM	2.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Mercury (Hg)	2.52	DLM	0.050	ug/g	20-OCT-21	21-OCT-21	R5625980
Molybdenum (Mo)	1.11	DLM	0.20	ug/g	20-OCT-21	20-OCT-21	R5625485
Nickel (Ni)	46.1	DLM	1.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Phosphorus (P)	1340	DLM	100	ug/g	20-OCT-21	20-OCT-21	R5625485
Potassium (K)	4910	DLM	200	ug/g	20-OCT-21	20-OCT-21	R5625485
Selenium (Se)	1.25	DLM	0.40	ug/g	20-OCT-21	20-OCT-21	R5625485
Silver (Ag)	1.69	DLM	0.20	ug/g	20-OCT-21	20-OCT-21	R5625485
Sodium (Na)	650	DLM	100	ug/g	20-OCT-21	20-OCT-21	R5625485
Strontium (Sr)	297	DLM	1.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Sulfur (S)	6300	DLM	2000	ug/g	20-OCT-21	20-OCT-21	R5625485
Thallium (Tl)	0.38	DLM	0.10	ug/g	20-OCT-21	20-OCT-21	R5625485
Tin (Sn)	19.3	DLM	4.0	ug/g	20-OCT-21	20-OCT-21	R5625485

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650176-14 DUP-206 Sampled By: CLIENT on 05-OCT-21 Matrix: SEDIMENT							
Metals							
Titanium (Ti)	1360	DLM	2.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Tungsten (W)	<1.0	DLM	1.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Uranium (U)	0.87	DLM	0.10	ug/g	20-OCT-21	20-OCT-21	R5625485
Vanadium (V)	53.7	DLM	0.40	ug/g	20-OCT-21	20-OCT-21	R5625485
Zinc (Zn)	314	DLM	4.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Zirconium (Zr)	4.9	DLM	2.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Speciated Metals							
Chromium, Trivalent	1830		10	ug/g		21-OCT-21	
Chromium, Hexavalent	12.1	DLHM	0.40	ug/g	18-OCT-21	20-OCT-21	R5625247
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.167		0.015	ug/g	19-OCT-21	20-OCT-21	R5625547
Acenaphthylene	0.654		0.015	ug/g	19-OCT-21	20-OCT-21	R5625547
Acridine	0.628		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Anthracene	0.418		0.012	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(a)anthracene	1.42	R	0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(a)pyrene	1.76		0.015	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(b&j)fluoranthene	1.97		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(g,h,i)perylene	1.02		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(k)fluoranthene	0.724		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Chrysene	1.69		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Dibenz(a,h)anthracene	0.272		0.015	ug/g	19-OCT-21	20-OCT-21	R5625547
Fluoroanthene	2.12		0.015	ug/g	19-OCT-21	20-OCT-21	R5625547
Fluorene	0.186	R	0.015	ug/g	19-OCT-21	20-OCT-21	R5625547
Indeno(1,2,3-cd)pyrene	1.03		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
1-Methylnaphthalene	0.070		0.015	ug/g	19-OCT-21	20-OCT-21	R5625547
2-Methylnaphthalene	0.106		0.015	ug/g	19-OCT-21	20-OCT-21	R5625547
Naphthalene	0.115	R	0.015	ug/g	19-OCT-21	20-OCT-21	R5625547
Phenanthrene	1.03		0.015	ug/g	19-OCT-21	20-OCT-21	R5625547
Pyrene	2.94		0.015	ug/g	19-OCT-21	20-OCT-21	R5625547
Quinoline	<0.015	DLHM	0.015	ug/g	19-OCT-21	20-OCT-21	R5625547
Surrogate: 2-Fluorobiphenyl	92.5		60-140	%	19-OCT-21	20-OCT-21	R5625547
Surrogate: d14-Terphenyl	93.2		60-140	%	19-OCT-21	20-OCT-21	R5625547
B(a)P Total Potency Equivalent	2.57		0.021	ug/g	19-OCT-21	20-OCT-21	R5625547
IACR (CCME)	28.4		0.30		19-OCT-21	20-OCT-21	R5625547
Polychlorinated Biphenyls							
Aroclor 1016	<0.0090	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1221	<0.0090	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1232	<0.0090	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1242	<0.0260	DLM	0.026	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1248	<0.0090	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1254	0.917	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1260	0.448	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650176-14 DUP-206 Sampled By: CLIENT on 05-OCT-21 Matrix: SEDIMENT							
Polychlorinated Biphenyls							
Aroclor 1262	<0.0090	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1268	<0.0090	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Total Polychlorinated Biphenyls	1.365		0.027	mg/kg	21-OCT-21	21-OCT-21	R5625841
Surrogate: d14-Terphenyl	96.3		50-140	%	21-OCT-21	21-OCT-21	R5625841
L2650176-15 DUP-207 Sampled By: CLIENT on 05-OCT-21 Matrix: SEDIMENT							
Physical Tests							
% Moisture	70.6		0.25	%	14-OCT-21	15-OCT-21	R5617685
Particle Size							
General Texture Class	Fine				19-OCT-21	19-OCT-21	R5624753
MUST PSA % > 75um	18.6		1.0	%	19-OCT-21	19-OCT-21	R5624753
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0624		0.0010	g/g	25-OCT-21	25-OCT-21	R5628208
Total Organic Carbon	6.24		0.10	%	25-OCT-21	25-OCT-21	R5628208
Metals							
Aluminum (Al)	7350	DLM	100	ug/g	20-OCT-21	20-OCT-21	R5625485
Antimony (Sb)	6.21	DLM	0.20	ug/g	20-OCT-21	20-OCT-21	R5625485
Arsenic (As)	3.96	DLM	0.20	ug/g	20-OCT-21	20-OCT-21	R5625485
Barium (Ba)	189	DLM	1.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Beryllium (Be)	0.30	DLM	0.20	ug/g	20-OCT-21	20-OCT-21	R5625485
Bismuth (Bi)	0.61	DLM	0.40	ug/g	20-OCT-21	20-OCT-21	R5625485
Boron (B)	11	DLM	10	ug/g	20-OCT-21	20-OCT-21	R5625485
Boron (B), Hot Water Ext.	0.39		0.10	ug/g	20-OCT-21	20-OCT-21	R5625469
Cadmium (Cd)	1.03	DLM	0.040	ug/g	20-OCT-21	20-OCT-21	R5625485
Calcium (Ca)	122000	DLM	100	ug/g	20-OCT-21	20-OCT-21	R5625485
Chromium (Cr)	3640	DLM	1.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Cobalt (Co)	6.60	DLM	0.20	ug/g	20-OCT-21	20-OCT-21	R5625485
Copper (Cu)	69.4	DLM	1.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Iron (Fe)	18300	DLM	100	ug/g	20-OCT-21	20-OCT-21	R5625485
Lead (Pb)	352	DLM	1.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Lithium (Li)	7.0	DLM	4.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Magnesium (Mg)	16200	DLM	40	ug/g	20-OCT-21	20-OCT-21	R5625485
Manganese (Mn)	286	DLM	2.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Mercury (Hg)	0.260		0.010	ug/g	20-OCT-21	21-OCT-21	R5625980
Molybdenum (Mo)	1.71	DLM	0.20	ug/g	20-OCT-21	20-OCT-21	R5625485
Nickel (Ni)	16.1	DLM	1.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Phosphorus (P)	1450	DLM	100	ug/g	20-OCT-21	20-OCT-21	R5625485
Potassium (K)	1740	DLM	200	ug/g	20-OCT-21	20-OCT-21	R5625485
Selenium (Se)	0.62	DLM	0.40	ug/g	20-OCT-21	20-OCT-21	R5625485
Silver (Ag)	0.61	DLM	0.20	ug/g	20-OCT-21	20-OCT-21	R5625485
Sodium (Na)	450	DLM	100	ug/g	20-OCT-21	20-OCT-21	R5625485

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

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Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650176-15 DUP-207 Sampled By: CLIENT on 05-OCT-21 Matrix: SEDIMENT							
Metals							
Strontium (Sr)	424	DLM	1.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Sulfur (S)	3800	DLM	2000	ug/g	20-OCT-21	20-OCT-21	R5625485
Thallium (Tl)	0.24	DLM	0.10	ug/g	20-OCT-21	20-OCT-21	R5625485
Tin (Sn)	8.6	DLM	4.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Titanium (Ti)	396	DLM	2.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Tungsten (W)	2.9	DLM	1.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Uranium (U)	0.46	DLM	0.10	ug/g	20-OCT-21	20-OCT-21	R5625485
Vanadium (V)	25.0	DLM	0.40	ug/g	20-OCT-21	20-OCT-21	R5625485
Zinc (Zn)	291	DLM	4.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Zirconium (Zr)	<2.0	DLM	2.0	ug/g	20-OCT-21	20-OCT-21	R5625485
Speciated Metals							
Chromium, Trivalent	3620		10	ug/g		21-OCT-21	
Chromium, Hexavalent	18.1	DLHM	0.40	ug/g	18-OCT-21	20-OCT-21	R5625247
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	1.14		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Acenaphthylene	1.85		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Acridine	0.364	AI	0.060	ug/g	19-OCT-21	20-OCT-21	R5625547
Anthracene	1.73		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(a)anthracene	3.58	R	0.075	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(a)pyrene	4.45		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(b&j)fluoranthene	4.24		0.060	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(g,h,i)perylene	2.23		0.060	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(k)fluoranthene	1.43		0.060	ug/g	19-OCT-21	20-OCT-21	R5625547
Chrysene	3.88		0.060	ug/g	19-OCT-21	20-OCT-21	R5625547
Dibenz(a,h)anthracene	0.564		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Fluoroanthene	6.04		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Fluorene	0.865	R	0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Indeno(1,2,3-cd)pyrene	2.26		0.060	ug/g	19-OCT-21	20-OCT-21	R5625547
1-Methylnaphthalene	0.393		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
2-Methylnaphthalene	0.231		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Naphthalene	0.223		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Phenanthrene	4.54		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Pyrene	8.91		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Quinoline	<0.06	DLQ	0.060	ug/g	19-OCT-21	20-OCT-21	R5625547
Surrogate: 2-Fluorobiphenyl	79.5		60-140	%	19-OCT-21	20-OCT-21	R5625547
Surrogate: d14-Terphenyl	78.7		60-140	%	19-OCT-21	20-OCT-21	R5625547
B(a)P Total Potency Equivalent	6.23		0.043	ug/g	19-OCT-21	20-OCT-21	R5625547
IACR (CCME)	63.7		0.62		19-OCT-21	20-OCT-21	R5625547
Polychlorinated Biphenyls							
Aroclor 1016	<0.0090	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1221	<0.0090	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1232	<0.0090	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650176-15 DUP-207 Sampled By: CLIENT on 05-OCT-21 Matrix: SEDIMENT							
Polychlorinated Biphenyls							
Aroclor 1242	<0.0420	DLM	0.042	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1248	<0.0090	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1254	0.186	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1260	0.286	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1262	<0.0090	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1268	<0.0090	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Total Polychlorinated Biphenyls	0.472		0.027	mg/kg	21-OCT-21	21-OCT-21	R5625841
Surrogate: d14-Terphenyl	89.2		50-140	%	21-OCT-21	21-OCT-21	R5625841
L2650176-16 DUP-208 Sampled By: CLIENT on 05-OCT-21 Matrix: SEDIMENT							
Physical Tests							
% Moisture	70.3		0.25	%	14-OCT-21	15-OCT-21	R5621038
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0790		0.0010	g/g	25-OCT-21	25-OCT-21	R5628208
Total Organic Carbon	7.90		0.10	%	25-OCT-21	25-OCT-21	R5628208
Metals							
Aluminum (Al)	8700		50	ug/g	19-OCT-21	20-OCT-21	R5625374
Antimony (Sb)	0.68		0.10	ug/g	19-OCT-21	20-OCT-21	R5625374
Arsenic (As)	3.11		0.10	ug/g	19-OCT-21	20-OCT-21	R5625374
Barium (Ba)	228		0.50	ug/g	19-OCT-21	20-OCT-21	R5625374
Beryllium (Be)	0.37		0.10	ug/g	19-OCT-21	20-OCT-21	R5625374
Bismuth (Bi)	0.65		0.20	ug/g	19-OCT-21	20-OCT-21	R5625374
Boron (B)	9.1		5.0	ug/g	19-OCT-21	20-OCT-21	R5625374
Cadmium (Cd)	1.66		0.020	ug/g	19-OCT-21	20-OCT-21	R5625374
Calcium (Ca)	116000		50	ug/g	19-OCT-21	20-OCT-21	R5625374
Chromium (Cr)	4100		0.50	ug/g	19-OCT-21	20-OCT-21	R5625374
Cobalt (Co)	6.88		0.10	ug/g	19-OCT-21	20-OCT-21	R5625374
Copper (Cu)	74.6		0.50	ug/g	19-OCT-21	20-OCT-21	R5625374
Iron (Fe)	17600		50	ug/g	19-OCT-21	20-OCT-21	R5625374
Lead (Pb)	320		0.50	ug/g	19-OCT-21	20-OCT-21	R5625374
Lithium (Li)	8.5		2.0	ug/g	19-OCT-21	20-OCT-21	R5625374
Magnesium (Mg)	13900		20	ug/g	19-OCT-21	20-OCT-21	R5625374
Manganese (Mn)	325		1.0	ug/g	19-OCT-21	20-OCT-21	R5625374
Mercury (Hg)	0.160		0.0050	ug/g	19-OCT-21	20-OCT-21	R5625206
Molybdenum (Mo)	0.52		0.10	ug/g	19-OCT-21	20-OCT-21	R5625374
Nickel (Ni)	16.5		0.50	ug/g	19-OCT-21	20-OCT-21	R5625374
Phosphorus (P)	1510		50	ug/g	19-OCT-21	20-OCT-21	R5625374
Potassium (K)	1660		100	ug/g	19-OCT-21	20-OCT-21	R5625374
Selenium (Se)	<0.20		0.20	ug/g	19-OCT-21	20-OCT-21	R5625374
Silver (Ag)	0.73		0.10	ug/g	19-OCT-21	20-OCT-21	R5625374
Sodium (Na)	439		50	ug/g	19-OCT-21	20-OCT-21	R5625374

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650176-16 DUP-208 Sampled By: CLIENT on 05-OCT-21 Matrix: SEDIMENT							
Metals							
Strontium (Sr)	567		0.50	ug/g	19-OCT-21	20-OCT-21	R5625374
Sulfur (S)	<1000		1000	ug/g	19-OCT-21	20-OCT-21	R5625374
Thallium (Tl)	0.263		0.050	ug/g	19-OCT-21	20-OCT-21	R5625374
Tin (Sn)	5.4		2.0	ug/g	19-OCT-21	20-OCT-21	R5625374
Titanium (Ti)	350		1.0	ug/g	19-OCT-21	20-OCT-21	R5625374
Tungsten (W)	<0.50		0.50	ug/g	19-OCT-21	20-OCT-21	R5625374
Uranium (U)	0.375		0.050	ug/g	19-OCT-21	20-OCT-21	R5625374
Vanadium (V)	22.5		0.20	ug/g	19-OCT-21	20-OCT-21	R5625374
Zinc (Zn)	351		2.0	ug/g	19-OCT-21	20-OCT-21	R5625374
Zirconium (Zr)	<1.0		1.0	ug/g	19-OCT-21	20-OCT-21	R5625374
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.508		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Acenaphthylene	1.48		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Acridine	0.242	AI	0.060	ug/g	19-OCT-21	20-OCT-21	R5625547
Anthracene	0.984		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(a)anthracene	2.62	R	0.075	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(a)pyrene	3.60		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(b&j)fluoranthene	3.78		0.060	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(g,h,i)perylene	2.03		0.060	ug/g	19-OCT-21	20-OCT-21	R5625547
Benzo(k)fluoranthene	1.32		0.060	ug/g	19-OCT-21	20-OCT-21	R5625547
Chrysene	3.21		0.060	ug/g	19-OCT-21	20-OCT-21	R5625547
Dibenz(a,h)anthracene	0.492		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Fluoroanthene	4.71		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Fluorene	0.457	R	0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Indeno(1,2,3-cd)pyrene	1.95		0.060	ug/g	19-OCT-21	20-OCT-21	R5625547
1-Methylnaphthalene	0.137		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
2-Methylnaphthalene	0.098		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Naphthalene	0.102		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Phenanthrene	2.44		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Pyrene	6.19		0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Quinoline	<0.030	DLM	0.030	ug/g	19-OCT-21	20-OCT-21	R5625547
Surrogate: 2-Fluorobiphenyl	85.3		60-140	%	19-OCT-21	20-OCT-21	R5625547
Surrogate: d14-Terphenyl	85.5		60-140	%	19-OCT-21	20-OCT-21	R5625547
B(a)P Total Potency Equivalent	5.11		0.043	ug/g	19-OCT-21	20-OCT-21	R5625547
IACR (CCME)	54.3		0.62		19-OCT-21	20-OCT-21	R5625547
Polychlorinated Biphenyls							
Aroclor 1016	<0.0090	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1221	<0.0090	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1232	<0.0090	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1242	<0.0450	DLM	0.045	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1248	<0.0090	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650176-16 DUP-208 Sampled By: CLIENT on 05-OCT-21 Matrix: SEDIMENT							
Polychlorinated Biphenyls							
Aroclor 1254	0.250	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1260	0.403	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1262	<0.0090	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Aroclor 1268	<0.0090	DLHM	0.0090	mg/kg	21-OCT-21	21-OCT-21	R5625841
Total Polychlorinated Biphenyls	0.653		0.027	mg/kg	21-OCT-21	21-OCT-21	R5625841
Surrogate: d14-Terphenyl	92.0		50-140	%	21-OCT-21	21-OCT-21	R5625841
L2650176-17 PCOM-SG-001 Sampled By: CLIENT on 05-OCT-21 Matrix: SEDIMENT							
Physical Tests							
% Moisture	68.5		0.25	%	29-OCT-21	30-OCT-21	R5632330
Organic / Inorganic Carbon							
Fraction Organic Carbon	0.0757		0.0010	g/g	01-NOV-21	01-NOV-21	R5634582
Total Organic Carbon	7.57		0.10	%	01-NOV-21	01-NOV-21	R5634582
Metals							
Aluminum (Al)	9230		50	ug/g	01-NOV-21	01-NOV-21	R5634400
Antimony (Sb)	3.60		0.10	ug/g	01-NOV-21	01-NOV-21	R5634400
Arsenic (As)	5.14		0.10	ug/g	01-NOV-21	01-NOV-21	R5634400
Barium (Ba)	277		0.50	ug/g	01-NOV-21	01-NOV-21	R5634400
Beryllium (Be)	0.43		0.10	ug/g	01-NOV-21	01-NOV-21	R5634400
Bismuth (Bi)	0.81		0.20	ug/g	01-NOV-21	01-NOV-21	R5634400
Boron (B)	11.3		5.0	ug/g	01-NOV-21	01-NOV-21	R5634400
Cadmium (Cd)	1.59		0.020	ug/g	01-NOV-21	01-NOV-21	R5634400
Calcium (Ca)	133000		50	ug/g	01-NOV-21	01-NOV-21	R5634400
Chromium (Cr)	4830	DLHC	10	ug/g	01-NOV-21	01-NOV-21	R5634400
Cobalt (Co)	9.79		0.10	ug/g	01-NOV-21	01-NOV-21	R5634400
Copper (Cu)	93.6		0.50	ug/g	01-NOV-21	01-NOV-21	R5634400
Iron (Fe)	21200		50	ug/g	01-NOV-21	01-NOV-21	R5634400
Lead (Pb)	371		0.50	ug/g	01-NOV-21	01-NOV-21	R5634400
Lithium (Li)	9.9		2.0	ug/g	01-NOV-21	01-NOV-21	R5634400
Magnesium (Mg)	15000		20	ug/g	01-NOV-21	01-NOV-21	R5634400
Manganese (Mn)	356		1.0	ug/g	01-NOV-21	01-NOV-21	R5634400
Mercury (Hg)	0.368		0.0050	ug/g	01-NOV-21	02-NOV-21	R5634163
Molybdenum (Mo)	2.34		0.10	ug/g	01-NOV-21	01-NOV-21	R5634400
Nickel (Ni)	21.4		0.50	ug/g	01-NOV-21	01-NOV-21	R5634400
Phosphorus (P)	1770		50	ug/g	01-NOV-21	01-NOV-21	R5634400
Potassium (K)	2070		100	ug/g	01-NOV-21	01-NOV-21	R5634400
Selenium (Se)	0.94		0.20	ug/g	01-NOV-21	01-NOV-21	R5634400
Silver (Ag)	0.94		0.10	ug/g	01-NOV-21	01-NOV-21	R5634400
Sodium (Na)	507		50	ug/g	01-NOV-21	01-NOV-21	R5634400
Strontium (Sr)	658		0.50	ug/g	01-NOV-21	01-NOV-21	R5634400
Sulfur (S)	6200		1000	ug/g	01-NOV-21	01-NOV-21	R5634400

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650176-17 PCOM-SG-001 Sampled By: CLIENT on 05-OCT-21 Matrix: SEDIMENT							
Metals							
Thallium (Tl)	0.320		0.050	ug/g	01-NOV-21	01-NOV-21	R5634400
Tin (Sn)	10.1		2.0	ug/g	01-NOV-21	01-NOV-21	R5634400
Titanium (Ti)	454		1.0	ug/g	01-NOV-21	01-NOV-21	R5634400
Tungsten (W)	2.47		0.50	ug/g	01-NOV-21	01-NOV-21	R5634400
Uranium (U)	0.482		0.050	ug/g	01-NOV-21	01-NOV-21	R5634400
Vanadium (V)	29.5		0.20	ug/g	01-NOV-21	01-NOV-21	R5634400
Zinc (Zn)	400		2.0	ug/g	01-NOV-21	01-NOV-21	R5634400
Zirconium (Zr)	1.9		1.0	ug/g	01-NOV-21	01-NOV-21	R5634400
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	0.510		0.025	ug/g	29-OCT-21	02-NOV-21	R5634629
Acenaphthylene	1.27		0.025	ug/g	29-OCT-21	02-NOV-21	R5634629
Acridine	<0.29	DLM	0.29	ug/g	29-OCT-21	02-NOV-21	R5634629
Anthracene	0.961		0.020	ug/g	29-OCT-21	02-NOV-21	R5634629
Benzo(a)anthracene	3.03	R	0.050	ug/g	29-OCT-21	02-NOV-21	R5634629
Benzo(a)pyrene	3.22		0.025	ug/g	29-OCT-21	02-NOV-21	R5634629
Benzo(b&j)fluoranthene	3.36		0.050	ug/g	29-OCT-21	02-NOV-21	R5634629
Benzo(g,h,i)perylene	2.06		0.050	ug/g	29-OCT-21	02-NOV-21	R5634629
Benzo(k)fluoranthene	1.39		0.050	ug/g	29-OCT-21	02-NOV-21	R5634629
Chrysene	2.69		0.050	ug/g	29-OCT-21	02-NOV-21	R5634629
Dibenz(a,h)anthracene	0.493		0.025	ug/g	29-OCT-21	02-NOV-21	R5634629
Fluoroanthene	4.44		0.025	ug/g	29-OCT-21	02-NOV-21	R5634629
Fluorene	0.469		0.025	ug/g	29-OCT-21	02-NOV-21	R5634629
Indeno(1,2,3-cd)pyrene	2.00		0.050	ug/g	29-OCT-21	02-NOV-21	R5634629
1-Methylnaphthalene	0.148		0.025	ug/g	29-OCT-21	02-NOV-21	R5634629
2-Methylnaphthalene	0.140		0.025	ug/g	29-OCT-21	02-NOV-21	R5634629
Naphthalene	0.129		0.025	ug/g	29-OCT-21	02-NOV-21	R5634629
Phenanthrene	2.49		0.025	ug/g	29-OCT-21	02-NOV-21	R5634629
Pyrene	5.86		0.025	ug/g	29-OCT-21	02-NOV-21	R5634629
Quinoline	<0.025	DLHM	0.025	ug/g	29-OCT-21	02-NOV-21	R5634629
Surrogate: 2-Fluorobiphenyl	88.4		60-140	%	29-OCT-21	02-NOV-21	R5634629
Surrogate: d14-Terphenyl	89.5		60-140	%	29-OCT-21	02-NOV-21	R5634629
B(a)P Total Potency Equivalent	4.74		0.036	ug/g	29-OCT-21	02-NOV-21	R5634629
IACR (CCME)	52.0		0.50		29-OCT-21	02-NOV-21	R5634629
Polychlorinated Biphenyls							
Aroclor 1016	<0.030	RRR	0.030	mg/kg	03-NOV-21	03-NOV-21	R5634875
Aroclor 1221	<0.030	RRR	0.030	mg/kg	03-NOV-21	03-NOV-21	R5634875
Aroclor 1232	<0.030	RRR	0.030	mg/kg	03-NOV-21	03-NOV-21	R5634875
Aroclor 1242	<0.080	DLM	0.080	mg/kg	03-NOV-21	03-NOV-21	R5634875
Aroclor 1248	<0.030	RRR	0.030	mg/kg	03-NOV-21	03-NOV-21	R5634875
Aroclor 1254	0.351	DLHM	0.0060	mg/kg	03-NOV-21	03-NOV-21	R5634875
Aroclor 1260	0.600	DLHM	0.0060	mg/kg	03-NOV-21	03-NOV-21	R5634875

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650176-17 PCOM-SG-001 Sampled By: CLIENT on 05-OCT-21 Matrix: SEDIMENT							
Polychlorinated Biphenyls							
Aroclor 1262	<0.0060	DLHM	0.0060	mg/kg	03-NOV-21	03-NOV-21	R5634875
Aroclor 1268	<0.0060	DLHM	0.0060	mg/kg	03-NOV-21	03-NOV-21	R5634875
Total Polychlorinated Biphenyls	0.951		0.070	mg/kg	03-NOV-21	03-NOV-21	R5634875
Surrogate: d14-Terphenyl	126.2		50-140	%	03-NOV-21	03-NOV-21	R5634875
Report Remarks : RRR: Due to sample matrix interferences, PCB recoveries could not be determined in the matrix spike unless spiked with 5X the normal concentration and therefore the detection limit has been raised accordingly.							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Reference Information

QC Samples with Qualifiers & Comments:

QC Type Description	Parameter	Qualifier	Applies to Sample Number(s)
Duplicate	Mercury (Hg)	DUP-H	L2650176-13, -16, -8
Duplicate	Antimony (Sb)	DUP-H	L2650176-13, -16, -8
Duplicate	Arsenic (As)	DUP-H	L2650176-13, -16, -8
Matrix Spike	Benzo(g,h,i)perylene	MES	L2650176-1, -13, -14, -15, -16, -2, -3, -4, -5, -6, -7, -8
Matrix Spike	1-Methylnaphthalene	MS-B	L2650176-10, -11
Matrix Spike	2-Methylnaphthalene	MS-B	L2650176-10, -11
Matrix Spike	Benzo(a)pyrene	MS-B	L2650176-1, -13, -14, -15, -16, -2, -3, -4, -5, -6, -7, -8
Matrix Spike	Benzo(b&j)fluoranthene	MS-B	L2650176-1, -13, -14, -15, -16, -2, -3, -4, -5, -6, -7, -8
Matrix Spike	Fluorene	MS-B	L2650176-10, -11
Matrix Spike	Fluoroanthene	MS-B	L2650176-9
Matrix Spike	Phenanthrene	MS-B	L2650176-10, -11
Matrix Spike	Phenanthrene	MS-B	L2650176-9
Matrix Spike	Pyrene	MS-B	L2650176-1, -13, -14, -15, -16, -2, -3, -4, -5, -6, -7, -8
Matrix Spike	Pyrene	MS-B	L2650176-9
Matrix Spike	Aroclor 1254	MS-B	L2650176-1, -13, -14, -15, -16, -2, -3, -4, -5, -6, -7, -8
Matrix Spike	Aroclor 1254	MS-B	L2650176-10, -11
Matrix Spike	Aroclor 1254	MS-B	L2650176-9
Matrix Spike	Aroclor 1254	MS-B	L2650176-17
Matrix Spike	Aroclor 1260	MS-B	L2650176-1, -13, -14, -15, -16, -2, -3, -4, -5, -6, -7, -8
Matrix Spike	Aroclor 1260	MS-B	L2650176-10, -11
Matrix Spike	Aroclor 1260	MS-B	L2650176-9
Matrix Spike	Aroclor 1260	MS-B	L2650176-17

Sample Parameter Qualifier key listed:

Qualifier	Description
AI	Analytical interferences may be present. Result may be biased high.
DLHC	Detection Limit Raised: Dilution required due to high concentration of test analyte(s).
DLHM	Detection Limit Adjusted: Sample has High Moisture Content
DLM	Detection Limit Adjusted due to sample matrix effects (e.g. chemical interference, colour, turbidity).
DLMDL	Reported detection limit is at or near the Method Detection Limit (MDL). Measurement uncertainty is high at this level.
DLQ	Detection Limit raised due to co-eluting interference. GCMS qualifier ion ratio did not meet acceptance criteria.
DLR	Detection Limit Raised due to required dilution, limited sample amount, and/or high moisture content (soil samples)
DUP-H	Duplicate results outside ALS DQO, due to sample heterogeneity.
FR4	As per applicable reference method(s), soil:water ratio for Fixed Ratio Leach was modified to 1:4 due to high soil organic content.
ICC	Insufficient Clay Content for determination of Plastic Limit or Plasticity Index. Soil is non-plastic.
MES	Data Quality Objective was marginally exceeded (by < 10% absolute) for < 10% of analytes in a Multi-Element Scan / Multi-Parameter Scan (considered acceptable as per OMOE & CCME).
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
R	The ion abundance ratio(s) did not meet the acceptance criteria. Value is an estimated maximum.
RRR	Refer to Report Remarks for issues regarding this analysis

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
ATTERBERG-SK	Soil	Atterberg limits	CARTER CSSS 58

The liquid limit (or upper plastic limit) is the point at which the soil becomes semifluid, like softened butter. In operational terms, the liquid limit is defined as the water content at which a trapezoidal groove cut in moist soil is closed after 25 taps on a hard rubber plate (ASTM D-18, 1958).

The plastic limit (or lower plastic limit) is defined as the water content at which soil begins to crumble on being rolled into a thread 1/8 inch (or 3 mm) in diameter. It represents the lowest water content at which soil can be deformed readily without cracking.

The plastic index (which is the difference between the liquid and plastic limits) gives an indication of the "clayeyness" or plasticity of a clay and is employed in engineering classification systems for soils.

This method is equivalent to ASTM D4318-10.

B-HWS-R511-WT	Soil	Boron-HWE-O.Reg 153/04 (July 2011)	HW EXTR, EPA 6010B

Reference Information

A dried solid sample is extracted with calcium chloride, the sample undergoes a heating process. After cooling the sample is filtered and analyzed by ICP/OES.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011 and as of November 30, 2020), unless a subset of the Analytical Test Group (ATG) has been requested (the Protocol states that all analytes in an ATG must be reported).

CR-CR3-WT	Soil	Trivalent Chromium in Soil Calculation	BC WLAP LAB MANUAL / EPA 3060A & 7196A

This analysis is carried out using the method "Trivalent Chromium in Solids", as published in the BC WLAP Laboratory Methods Manual (2003). Chromium (III) is determined by subtraction of chromium (VI) from total chromium. Chromium (VI) is determined by the alkaline leach method, and total chromium is determined using CSR Analytical Method 8 "Strong Acid Leachable Metals (SALM) in Soil", BC Ministry of Environment, Lands and Parks, 26 June 2001. All results are reported as milligrams per dry kilogram of sediment/soil.

CR-CR6-IC-WT	Soil	Hexavalent Chromium in Soil	SW846 3060A/7199

This analysis is carried out using procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846, Method 7199, published by the United States Environmental Protection Agency (EPA). The procedure involves analysis for chromium (VI) by ion chromatography using diphenylcarbazide in a sulphuric acid solution.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

HG-200.2-CVAA-WT	Soil	Mercury in Soil by CVAAS	EPA 200.2/1631E (mod)

Soil samples are digested with nitric and hydrochloric acids, followed by analysis by CVAAS.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

MET-200.2-CCMS-WT	Soil	Metals in Soil by CRC ICPMS	EPA 200.2/6020B (mod)

Soil/sediment is dried, disaggregated, and sieved (2 mm). For tests intended to support Ontario regulations, the <2mm fraction is ground to pass through a 0.355 mm sieve. Strong Acid Leachable Metals in the <2mm fraction are solubilized by heated digestion with nitric and hydrochloric acids. Instrumental analysis is by Collision / Reaction Cell ICPMS.

Limitations: This method is intended to liberate environmentally available metals. Silicate minerals are not solubilized. Some metals may be only partially recovered (matrix dependent), including Al, Ba, Be, Cr, S, Sr, Ti, Tl, V, W, and Zr. Elemental Sulfur may be poorly recovered by this method. Volatile forms of sulfur (e.g. sulfide, H2S) may be excluded if lost during sampling, storage, or digestion.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011), unless a subset of the Analytical Test Group (ATG) has been requested (the Protocol states that all analytes in an ATG must be reported).

MOISTURE-WT	Soil	% Moisture	CCME PHC in Soil - Tier 1 (mod)

PAH-CCME-SQGL-WT	Soil	PAHs in Sediment	SW846 8270

The procedure uses a mechanical shaking technique to extract a representative sub-sample with a mixture of methanol and toluene. The extract is analyzed by GC/MSD. Depending on the analytical GC/MS column used benzo(j)fluoranthene may chromatographically co-elute with benzo(b)fluoranthene or benzo(k)fluoranthene.

PCB9-LOW-WT	Soil	PCBs to meet CCME Sediment Criteria	SW846 8270

A representative sub-sample of a soil sample is mixed with methanol and extracted with toluene using a shaker technique. An aliquot of the separated toluene is analyzed by GC/MSD.

PSA-MUST-SK	Soil	% Particles > 75um (Coarse/Fine)	ASTM D6913

An air-dried sample is reduced to < 2 mm size and mixed with a dispersing agent (Calgon solution). The sample is washed through a 200 mesh (75 µm) sieve. The retained mass of sample is used to determine % sand fraction.

Reference: ASTM D422-63

SPECGRAV-CL	Soil	Specific Gravity	ASTM D 5057

A portion of sample is weighed in a container that is calibrated for volume. Specific Gravity is reported as the mass of sample per mass of an equal volume of pure water, where the density of pure water is taken to be 1.00 g/mL.

TOC-WT	Soil	TOC & FOC in Solids	CARTER 21.3.2

Soil is treated with excess acidic dichromate, which reacts with the organic carbon, oxidizing it to CO2. The residual dichromate is titrated with ferrous ammonium sulphate and TOC calculated by difference.

Reference Information

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
SK	ALS ENVIRONMENTAL - SASKATOON, SASKATCHEWAN, CANADA
WT	ALS ENVIRONMENTAL - WATERLOO, ONTARIO, CANADA
CL	ALS ENVIRONMENTAL - CALGARY, ALBERTA, CANADA

Chain of Custody Numbers:

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.
mg/kg - milligrams per kilogram based on dry weight of sample
mg/kg wwt - milligrams per kilogram based on wet weight of sample
mg/kg lwt - milligrams per kilogram based on lipid weight of sample
mg/L - unit of concentration based on volume, parts per million.
< - Less than.
D.L. - The reporting limit.
N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.
UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.
Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.

Quality Control Report

Workorder: L2650176 Report Date: 10-NOV-21

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
ATTERBERG-SK	**Soil**							
Batch R5625105								
WG3638823-1 DUP		**L2650176-7**						
Liquid Limit (LL)		99	100		%	0.7	20	20-OCT-21
Moisture at Plastic Limit		80	81		%	1.4	20	20-OCT-21
Plasticity Index (PI)		19	19		%	2.1	20	20-OCT-21
WG3638823-2 IRM		**ATB-1_SOIL**						
Liquid Limit (LL)			103.9		%		80-120	20-OCT-21
Moisture at Plastic Limit			107.9		%		80-120	20-OCT-21
Plasticity Index (PI)			97.4		%		80-120	20-OCT-21
Batch R5628805								
WG3644849-1 DUP		**L2650176-10**						
Liquid Limit (LL)		121	121		%	0.4	20	26-OCT-21
Moisture at Plastic Limit		105	103		%	1.2	20	26-OCT-21
Plasticity Index (PI)		16	18		%	10	20	26-OCT-21
WG3644849-2 IRM		**ATB-1_SOIL**						
Liquid Limit (LL)			103.8		%		80-120	26-OCT-21
Moisture at Plastic Limit			112.0		%		80-120	26-OCT-21
Plasticity Index (PI)			91.1		%		80-120	26-OCT-21
B-HWS-R511-WT	**Soil**							
Batch R5625176								
WG3641204-4 DUP		**L2652950-1**						
Boron (B), Hot Water Ext.		0.27	0.26		ug/g	2.3	30	20-OCT-21
WG3641204-2 IRM		**WT SAR4**						
Boron (B), Hot Water Ext.			104.9		%		70-130	20-OCT-21
WG3641204-3 LCS								
Boron (B), Hot Water Ext.			100.0		%		70-130	20-OCT-21
WG3641204-1 MB								
Boron (B), Hot Water Ext.			<0.10		ug/g		0.1	20-OCT-21
Batch R5625469								
WG3641531-4 DUP		**L2650176-15**						
Boron (B), Hot Water Ext.		0.39	0.38		ug/g	0.2	30	20-OCT-21
WG3641531-2 IRM		**WT SAR4**						
Boron (B), Hot Water Ext.			112.0		%		70-130	20-OCT-21
WG3641531-3 LCS								
Boron (B), Hot Water Ext.			106.0		%		70-130	20-OCT-21
WG3641531-1 MB								
Boron (B), Hot Water Ext.			<0.10		ug/g		0.1	20-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
B-HWS-R511-WT	**Soil**							
Batch R5626083								
WG3642170-4 DUP		**L2652400-2**						
Boron (B), Hot Water Ext.		1.02	1.02		ug/g	0.2	30	21-OCT-21
WG3642170-2 IRM		**WT SAR4**						
Boron (B), Hot Water Ext.			122.0		%		70-130	21-OCT-21
WG3642170-3 LCS								
Boron (B), Hot Water Ext.			106.0		%		70-130	21-OCT-21
WG3642170-1 MB								
Boron (B), Hot Water Ext.			<0.10		ug/g		0.1	21-OCT-21
Batch R5627977								
WG3644508-4 DUP		**L2654679-21**						
Boron (B), Hot Water Ext.		2.85	2.83		ug/g	0.7	30	25-OCT-21
WG3644508-2 IRM		**WT SAR4**						
Boron (B), Hot Water Ext.			94.4		%		70-130	25-OCT-21
WG3644508-3 LCS								
Boron (B), Hot Water Ext.			107.0		%		70-130	25-OCT-21
WG3644508-1 MB								
Boron (B), Hot Water Ext.			<0.10		ug/g		0.1	25-OCT-21
Batch R5628213								
WG3644997-4 DUP		**L2652738-1**						
Boron (B), Hot Water Ext.		0.26	0.27		ug/g	3.7	30	25-OCT-21
WG3644997-2 IRM		**WT SAR4**						
Boron (B), Hot Water Ext.			108.3		%		70-130	25-OCT-21
WG3644997-3 LCS								
Boron (B), Hot Water Ext.			108.0		%		70-130	25-OCT-21
WG3644997-1 MB								
Boron (B), Hot Water Ext.			<0.10		ug/g		0.1	25-OCT-21
CR-CR6-IC-WT	**Soil**							
Batch R5625247								
WG3639995-4 CRM		**WT-SQC012**						
Chromium, Hexavalent			82.0		%		70-130	20-OCT-21
WG3639995-3 DUP		**L2649482-2**						
Chromium, Hexavalent		<0.20	<0.20	RPD-NA	ug/g	N/A	35	20-OCT-21
WG3639995-2 LCS								
Chromium, Hexavalent			96.6		%		80-120	20-OCT-21
WG3639995-1 MB								
Chromium, Hexavalent			<0.20		ug/g		0.2	20-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CR-CR6-IC-WT	**Soil**							
Batch R5628617								
WG3643150-4 CRM		**WT-SQC012**						
Chromium, Hexavalent			77.7		%		70-130	26-OCT-21
WG3643150-3 DUP		**L2652743-2**						
Chromium, Hexavalent		<0.20	0.27	RPD-NA	ug/g	N/A	35	26-OCT-21
WG3643150-2 LCS								
Chromium, Hexavalent			85.6		%		80-120	26-OCT-21
WG3643150-1 MB								
Chromium, Hexavalent			<0.20		ug/g		0.2	26-OCT-21
HG-200.2-CVAA-WT	**Soil**							
Batch R5624980								
WG3641203-2 CRM		**WT-SS-2**						
Mercury (Hg)			96.4		%		70-130	20-OCT-21
WG3641203-6 DUP		**WG3641203-5**						
Mercury (Hg)		0.0057	0.0062		ug/g	7.6	40	20-OCT-21
WG3641203-3 LCS								
Mercury (Hg)			100.5		%		80-120	20-OCT-21
WG3641203-1 MB								
Mercury (Hg)			<0.0050		mg/kg		0.005	20-OCT-21
Batch R5625185								
WG3641244-2 CRM		**WT-SS-2**						
Mercury (Hg)			94.8		%		70-130	20-OCT-21
WG3641244-7 DUP		**WG3641244-6**						
Mercury (Hg)		0.803	0.835		ug/g	3.9	40	20-OCT-21
WG3641244-3 LCS								
Mercury (Hg)			98.5		%		80-120	20-OCT-21
WG3641244-1 MB								
Mercury (Hg)			<0.0050		mg/kg		0.005	20-OCT-21
Batch R5625206								
WG3641234-2 CRM		**WT-SS-2**						
Mercury (Hg)			108.5		%		70-130	20-OCT-21
WG3641234-7 DUP		**WG3641234-6**						
Mercury (Hg)		0.0845	0.185	DUP-H	ug/g	74	40	20-OCT-21
WG3641234-3 LCS								
Mercury (Hg)			105.5		%		80-120	20-OCT-21
WG3641234-1 MB								
Mercury (Hg)			<0.0050		mg/kg		0.005	20-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
HG-200.2-CVAA-WT	**Soil**							
Batch R5625969								
WG3642161-2 CRM		**WT-SS-2**						
Mercury (Hg)			105.0		%		70-130	21-OCT-21
WG3642161-6 DUP		**WG3642161-5**						
Mercury (Hg)		0.0089	0.0099		ug/g	11	40	21-OCT-21
WG3642161-3 LCS								
Mercury (Hg)			104.5		%		80-120	21-OCT-21
WG3642161-1 MB								
Mercury (Hg)			<0.0050		mg/kg		0.005	21-OCT-21
Batch R5625980								
WG3641359-2 CRM		**WT-SS-2**						
Mercury (Hg)			104.7		%		70-130	21-OCT-21
WG3641359-6 DUP		**WG3641359-5**						
Mercury (Hg)		0.290	0.281		ug/g	3.3	40	21-OCT-21
WG3641359-3 LCS								
Mercury (Hg)			105.0		%		80-120	21-OCT-21
WG3641359-1 MB								
Mercury (Hg)			<0.0050		mg/kg		0.005	21-OCT-21
Batch R5627737								
WG3644502-2 CRM		**WT-SS-2**						
Mercury (Hg)			93.2		%		70-130	25-OCT-21
WG3644502-6 DUP		**WG3644502-5**						
Mercury (Hg)		0.0471	0.0419		ug/g	12	40	25-OCT-21
WG3644502-3 LCS								
Mercury (Hg)			101.0		%		80-120	25-OCT-21
WG3644502-1 MB								
Mercury (Hg)			<0.0050		mg/kg		0.005	25-OCT-21
Batch R5628552								
WG3644943-2 CRM		**WT-SS-2**						
Mercury (Hg)			105.9		%		70-130	26-OCT-21
WG3644943-6 DUP		**WG3644943-5**						
Mercury (Hg)		0.0207	0.0221		ug/g	6.7	40	26-OCT-21
WG3644943-3 LCS								
Mercury (Hg)			106.5		%		80-120	26-OCT-21
WG3644943-1 MB								
Mercury (Hg)			<0.0050		mg/kg		0.005	26-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
HG-200.2-CVAA-WT	**Soil**							
Batch R5631342								
WG3646804-2 CRM		**WT-SS-2**						
Mercury (Hg)			100.8		%		70-130	28-OCT-21
WG3646804-6 DUP		**WG3646804-5**						
Mercury (Hg)		0.0150	0.0158		ug/g	5.1	40	28-OCT-21
WG3646804-3 LCS								
Mercury (Hg)			116.5		%		80-120	28-OCT-21
WG3646804-1 MB								
Mercury (Hg)			<0.0050		mg/kg		0.005	28-OCT-21
Batch R5634163								
WG3649841-2 CRM		**WT-SS-2**						
Mercury (Hg)			96.6		%		70-130	02-NOV-21
WG3649841-6 DUP		**WG3649841-5**						
Mercury (Hg)		0.0176	0.0164		ug/g	6.9	40	02-NOV-21
WG3649841-3 LCS								
Mercury (Hg)			101.0		%		80-120	02-NOV-21
WG3649841-1 MB								
Mercury (Hg)			<0.0050		mg/kg		0.005	02-NOV-21
MET-200.2-CCMS-WT	**Soil**							
Batch R5625253								
WG3641203-2 CRM		**WT-SS-2**						
Aluminum (Al)			99.6		%		70-130	20-OCT-21
Antimony (Sb)			101.7		%		70-130	20-OCT-21
Arsenic (As)			108.1		%		70-130	20-OCT-21
Barium (Ba)			108.0		%		70-130	20-OCT-21
Beryllium (Be)			99.9		%		70-130	20-OCT-21
Bismuth (Bi)			0.14		mg/kg		0-0.34	20-OCT-21
Boron (B)			8.8		mg/kg		3.5-13.5	20-OCT-21
Cadmium (Cd)			98.1		%		70-130	20-OCT-21
Calcium (Ca)			99.6		%		70-130	20-OCT-21
Chromium (Cr)			98.9		%		70-130	20-OCT-21
Cobalt (Co)			102.9		%		70-130	20-OCT-21
Copper (Cu)			104.9		%		70-130	20-OCT-21
Iron (Fe)			100.7		%		70-130	20-OCT-21
Lead (Pb)			100.8		%		70-130	20-OCT-21
Lithium (Li)			94.4		%		70-130	20-OCT-21
Magnesium (Mg)			102.8		%		70-130	20-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5625253								
WG3641203-2 CRM		**WT-SS-2**						
Manganese (Mn)			101.0		%		70-130	20-OCT-21
Molybdenum (Mo)			107.2		%		70-130	20-OCT-21
Nickel (Ni)			103.5		%		70-130	20-OCT-21
Phosphorus (P)			96.4		%		70-130	20-OCT-21
Potassium (K)			99.8		%		70-130	20-OCT-21
Selenium (Se)			0.14		mg/kg		0-0.34	20-OCT-21
Sodium (Na)			99.4		%		70-130	20-OCT-21
Strontium (Sr)			105.0		%		70-130	20-OCT-21
Thallium (Tl)			0.080		mg/kg		0.029-0.129	20-OCT-21
Tin (Sn)			97.9		%		70-130	20-OCT-21
Titanium (Ti)			97.1		%		70-130	20-OCT-21
Uranium (U)			104.0		%		70-130	20-OCT-21
Vanadium (V)			101.1		%		70-130	20-OCT-21
Zinc (Zn)			96.8		%		70-130	20-OCT-21
Zirconium (Zr)			102.8		%		70-130	20-OCT-21
WG3641203-6 DUP		**WG3641203-5**						
Aluminum (Al)		16300	17500		ug/g	7.1	40	20-OCT-21
Antimony (Sb)		<0.10	<0.10	RPD-NA	ug/g	N/A	30	20-OCT-21
Arsenic (As)		3.15	3.25		ug/g	3.2	30	20-OCT-21
Barium (Ba)		162	164		ug/g	1.4	40	20-OCT-21
Beryllium (Be)		0.71	0.75		ug/g	5.1	30	20-OCT-21
Bismuth (Bi)		<0.20	<0.20	RPD-NA	ug/g	N/A	30	20-OCT-21
Boron (B)		13.1	14.4		ug/g	8.8	30	20-OCT-21
Cadmium (Cd)		0.078	0.087		ug/g	11	30	20-OCT-21
Calcium (Ca)		113000	119000		ug/g	5.8	30	20-OCT-21
Chromium (Cr)		31.2	32.2		ug/g	3.3	30	20-OCT-21
Cobalt (Co)		9.82	10.1		ug/g	3.2	30	20-OCT-21
Copper (Cu)		20.6	21.2		ug/g	2.5	30	20-OCT-21
Iron (Fe)		23100	23900		ug/g	3.2	30	20-OCT-21
Lead (Pb)		7.50	7.92		ug/g	5.4	40	20-OCT-21
Lithium (Li)		19.6	20.2		ug/g	2.9	30	20-OCT-21
Magnesium (Mg)		16500	16500		ug/g	0.1	30	20-OCT-21
Manganese (Mn)		542	548		ug/g	1.1	30	20-OCT-21

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5625253								
WG3641203-6 DUP		**WG3641203-5**						
Molybdenum (Mo)		0.42	0.47		ug/g	11	40	20-OCT-21
Nickel (Ni)		21.8	22.6		ug/g	3.4	30	20-OCT-21
Phosphorus (P)		767	772		ug/g	0.6	30	20-OCT-21
Potassium (K)		3800	3940		ug/g	3.6	40	20-OCT-21
Selenium (Se)		<0.20	<0.20	RPD-NA	ug/g	N/A	30	20-OCT-21
Silver (Ag)		<0.10	<0.10	RPD-NA	ug/g	N/A	40	20-OCT-21
Sodium (Na)		486	509		ug/g	4.6	40	20-OCT-21
Strontium (Sr)		184	193		ug/g	4.7	40	20-OCT-21
Sulfur (S)		<1000	<1000	RPD-NA	ug/g	N/A	30	20-OCT-21
Thallium (Tl)		0.179	0.194		ug/g	7.9	30	20-OCT-21
Tin (Sn)		<2.0	<2.0	RPD-NA	ug/g	N/A	40	20-OCT-21
Titanium (Ti)		862	918		ug/g	6.2	40	20-OCT-21
Tungsten (W)		<0.50	<0.50	RPD-NA	ug/g	N/A	30	20-OCT-21
Uranium (U)		0.835	0.861		ug/g	3.1	30	20-OCT-21
Vanadium (V)		41.3	43.3		ug/g	4.5	30	20-OCT-21
Zinc (Zn)		47.5	48.9		ug/g	2.9	30	20-OCT-21
Zirconium (Zr)		11.2	11.8		ug/g	4.9	30	20-OCT-21
WG3641203-4 LCS								
Aluminum (Al)			103.2		%		80-120	20-OCT-21
Antimony (Sb)			104.0		%		80-120	20-OCT-21
Arsenic (As)			105.6		%		80-120	20-OCT-21
Barium (Ba)			106.0		%		80-120	20-OCT-21
Beryllium (Be)			103.3		%		80-120	20-OCT-21
Bismuth (Bi)			98.9		%		80-120	20-OCT-21
Boron (B)			97.2		%		80-120	20-OCT-21
Cadmium (Cd)			101.8		%		80-120	20-OCT-21
Calcium (Ca)			104.6		%		80-120	20-OCT-21
Chromium (Cr)			103.6		%		80-120	20-OCT-21
Cobalt (Co)			104.0		%		80-120	20-OCT-21
Copper (Cu)			103.6		%		80-120	20-OCT-21
Iron (Fe)			104.0		%		80-120	20-OCT-21
Lead (Pb)			104.6		%		80-120	20-OCT-21
Lithium (Li)			95.3		%		80-120	20-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5625253								
WG3641203-4 LCS								
Magnesium (Mg)			107.3		%		80-120	20-OCT-21
Manganese (Mn)			104.5		%		80-120	20-OCT-21
Molybdenum (Mo)			106.6		%		80-120	20-OCT-21
Nickel (Ni)			103.4		%		80-120	20-OCT-21
Phosphorus (P)			106.6		%		80-120	20-OCT-21
Potassium (K)			107.0		%		80-120	20-OCT-21
Selenium (Se)			101.6		%		80-120	20-OCT-21
Silver (Ag)			97.1		%		80-120	20-OCT-21
Sodium (Na)			104.2		%		80-120	20-OCT-21
Strontium (Sr)			104.9		%		80-120	20-OCT-21
Sulfur (S)			99.6		%		80-120	20-OCT-21
Thallium (Tl)			102.1		%		80-120	20-OCT-21
Tin (Sn)			102.4		%		80-120	20-OCT-21
Titanium (Ti)			103.5		%		80-120	20-OCT-21
Tungsten (W)			103.8		%		80-120	20-OCT-21
Uranium (U)			102.5		%		80-120	20-OCT-21
Vanadium (V)			105.3		%		80-120	20-OCT-21
Zinc (Zn)			98.3		%		80-120	20-OCT-21
Zirconium (Zr)			103.5		%		80-120	20-OCT-21
WG3641203-1 MB								
Aluminum (Al)			<50		mg/kg		50	20-OCT-21
Antimony (Sb)			<0.10		mg/kg		0.1	20-OCT-21
Arsenic (As)			<0.10		mg/kg		0.1	20-OCT-21
Barium (Ba)			<0.50		mg/kg		0.5	20-OCT-21
Beryllium (Be)			<0.10		mg/kg		0.1	20-OCT-21
Bismuth (Bi)			<0.20		mg/kg		0.2	20-OCT-21
Boron (B)			<5.0		mg/kg		5	20-OCT-21
Cadmium (Cd)			<0.020		mg/kg		0.02	20-OCT-21
Calcium (Ca)			<50		mg/kg		50	20-OCT-21
Chromium (Cr)			<0.50		mg/kg		0.5	20-OCT-21
Cobalt (Co)			<0.10		mg/kg		0.1	20-OCT-21
Copper (Cu)			<0.50		mg/kg		0.5	20-OCT-21
Iron (Fe)			<50		mg/kg		50	20-OCT-21
Lead (Pb)			<0.50		mg/kg		0.5	20-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5625253								
WG3641203-1 MB								
Lithium (Li)			<2.0		mg/kg		2	20-OCT-21
Magnesium (Mg)			<20		mg/kg		20	20-OCT-21
Manganese (Mn)			<1.0		mg/kg		1	20-OCT-21
Molybdenum (Mo)			<0.10		mg/kg		0.1	20-OCT-21
Nickel (Ni)			<0.50		mg/kg		0.5	20-OCT-21
Phosphorus (P)			<50		mg/kg		50	20-OCT-21
Potassium (K)			<100		mg/kg		100	20-OCT-21
Selenium (Se)			<0.20		mg/kg		0.2	20-OCT-21
Silver (Ag)			<0.10		mg/kg		0.1	20-OCT-21
Sodium (Na)			<50		mg/kg		50	20-OCT-21
Strontium (Sr)			<0.50		mg/kg		0.5	20-OCT-21
Sulfur (S)			<1000		mg/kg		1000	20-OCT-21
Thallium (Tl)			<0.050		mg/kg		0.05	20-OCT-21
Tin (Sn)			<2.0		mg/kg		2	20-OCT-21
Titanium (Ti)			<1.0		mg/kg		1	20-OCT-21
Tungsten (W)			<0.50		mg/kg		0.5	20-OCT-21
Uranium (U)			<0.050		mg/kg		0.05	20-OCT-21
Vanadium (V)			<0.20		mg/kg		0.2	20-OCT-21
Zinc (Zn)			<2.0		mg/kg		2	20-OCT-21
Zirconium (Zr)			<1.0		mg/kg		1	20-OCT-21
Batch R5625366								
WG3641244-2 CRM		**WT-SS-2**						
Aluminum (Al)			105.3		%		70-130	20-OCT-21
Antimony (Sb)			89.5		%		70-130	20-OCT-21
Arsenic (As)			105.7		%		70-130	20-OCT-21
Barium (Ba)			110.7		%		70-130	20-OCT-21
Beryllium (Be)			97.6		%		70-130	20-OCT-21
Bismuth (Bi)			0.14		mg/kg		0-0.34	20-OCT-21
Boron (B)			8.3		mg/kg		3.5-13.5	20-OCT-21
Cadmium (Cd)			101.3		%		70-130	20-OCT-21
Calcium (Ca)			100.5		%		70-130	20-OCT-21
Chromium (Cr)			100.7		%		70-130	20-OCT-21
Cobalt (Co)			103.9		%		70-130	20-OCT-21
Copper (Cu)			106.6		%		70-130	20-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5625366								
WG3641244-2 CRM		**WT-SS-2**						
Iron (Fe)			104.4		%		70-130	20-OCT-21
Lead (Pb)			97.4		%		70-130	20-OCT-21
Lithium (Li)			92.1		%		70-130	20-OCT-21
Magnesium (Mg)			109.0		%		70-130	20-OCT-21
Manganese (Mn)			106.0		%		70-130	20-OCT-21
Molybdenum (Mo)			100.7		%		70-130	20-OCT-21
Nickel (Ni)			104.3		%		70-130	20-OCT-21
Phosphorus (P)			103.2		%		70-130	20-OCT-21
Potassium (K)			100.1		%		70-130	20-OCT-21
Selenium (Se)			0.14		mg/kg		0-0.34	20-OCT-21
Silver (Ag)			94.5		%		70-130	20-OCT-21
Sodium (Na)			100.9		%		70-130	20-OCT-21
Strontium (Sr)			98.5		%		70-130	20-OCT-21
Thallium (Tl)			0.073		mg/kg		0.029-0.129	20-OCT-21
Tin (Sn)			99.5		%		70-130	20-OCT-21
Titanium (Ti)			96.5		%		70-130	20-OCT-21
Uranium (U)			96.0		%		70-130	20-OCT-21
Vanadium (V)			102.7		%		70-130	20-OCT-21
Zinc (Zn)			98.6		%		70-130	20-OCT-21
Zirconium (Zr)			92.7		%		70-130	20-OCT-21
WG3641244-7 DUP		**WG3641244-6**						
Aluminum (Al)		5270	6010		ug/g	13	40	20-OCT-21
Antimony (Sb)		8.85	10.3		ug/g	15	30	20-OCT-21
Arsenic (As)		6.71	7.09		ug/g	5.5	30	20-OCT-21
Barium (Ba)		441	462		ug/g	4.6	40	20-OCT-21
Beryllium (Be)		0.25	0.30		ug/g	17	30	20-OCT-21
Bismuth (Bi)		1.49	1.99		ug/g	29	30	20-OCT-21
Boron (B)		10.1	11.2		ug/g	10	30	20-OCT-21
Cadmium (Cd)		1.91	1.95		ug/g	2.3	30	20-OCT-21
Calcium (Ca)		104000	110000		ug/g	4.9	30	20-OCT-21
Chromium (Cr)		15500	16400		ug/g	5.1	30	20-OCT-21
Cobalt (Co)		4.23	4.49		ug/g	6.1	30	20-OCT-21
Copper (Cu)		89.2	90.8		ug/g	1.7	30	20-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5625366								
WG3641244-7 DUP		**WG3641244-6**						
Iron (Fe)		17000	17700		ug/g	3.7	30	20-OCT-21
Lead (Pb)		763	818		ug/g	7.0	40	20-OCT-21
Lithium (Li)		4.3	5.2		ug/g	18	30	20-OCT-21
Magnesium (Mg)		6530	6970		ug/g	6.5	30	20-OCT-21
Manganese (Mn)		349	339		ug/g	3.0	30	20-OCT-21
Molybdenum (Mo)		4.90	5.73		ug/g	16	40	20-OCT-21
Nickel (Ni)		14.9	15.9		ug/g	6.2	30	20-OCT-21
Phosphorus (P)		2870	2910		ug/g	1.5	30	20-OCT-21
Potassium (K)		1030	1180		ug/g	13	40	20-OCT-21
Selenium (Se)		0.53	0.65		ug/g	20	30	20-OCT-21
Silver (Ag)		3.01	3.42		ug/g	13	40	20-OCT-21
Sodium (Na)		592	600		ug/g	1.4	40	20-OCT-21
Strontium (Sr)		555	590		ug/g	6.1	40	20-OCT-21
Sulfur (S)		7100	7600		ug/g	7.4	30	20-OCT-21
Thallium (Tl)		0.201	0.226		ug/g	12	30	20-OCT-21
Tin (Sn)		18.2	18.4		ug/g	1.0	40	20-OCT-21
Titanium (Ti)		210	240		ug/g	13	40	20-OCT-21
Tungsten (W)		<0.50	<0.50	RPD-NA	ug/g	N/A	30	20-OCT-21
Uranium (U)		0.428	0.479		ug/g	11	30	20-OCT-21
Vanadium (V)		19.7	20.9		ug/g	6.2	30	20-OCT-21
Zinc (Zn)		401	409		ug/g	2.1	30	20-OCT-21
Zirconium (Zr)		<1.0	<1.0	RPD-NA	ug/g	N/A	30	20-OCT-21
WG3641244-4 LCS								
Aluminum (Al)			102.0		%		80-120	20-OCT-21
Antimony (Sb)			92.5		%		80-120	20-OCT-21
Arsenic (As)			104.6		%		80-120	20-OCT-21
Barium (Ba)			108.1		%		80-120	20-OCT-21
Beryllium (Be)			93.2		%		80-120	20-OCT-21
Bismuth (Bi)			93.4		%		80-120	20-OCT-21
Boron (B)			89.7		%		80-120	20-OCT-21
Cadmium (Cd)			102.1		%		80-120	20-OCT-21
Calcium (Ca)			97.1		%		80-120	20-OCT-21
Chromium (Cr)			102.6		%		80-120	20-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5625366								
WG3641244-4 LCS								
Cobalt (Co)			103.3		%		80-120	20-OCT-21
Copper (Cu)			102.6		%		80-120	20-OCT-21
Iron (Fe)			104.3		%		80-120	20-OCT-21
Lead (Pb)			98.3		%		80-120	20-OCT-21
Lithium (Li)			86.5		%		80-120	20-OCT-21
Magnesium (Mg)			105.8		%		80-120	20-OCT-21
Manganese (Mn)			101.8		%		80-120	20-OCT-21
Molybdenum (Mo)			94.3		%		80-120	20-OCT-21
Nickel (Ni)			102.2		%		80-120	20-OCT-21
Phosphorus (P)			105.2		%		80-120	20-OCT-21
Potassium (K)			110.6		%		80-120	20-OCT-21
Selenium (Se)			102.6		%		80-120	20-OCT-21
Silver (Ag)			85.5		%		80-120	20-OCT-21
Sodium (Na)			101.9		%		80-120	20-OCT-21
Strontium (Sr)			102.0		%		80-120	20-OCT-21
Sulfur (S)			100.5		%		80-120	20-OCT-21
Thallium (Tl)			95.7		%		80-120	20-OCT-21
Tin (Sn)			94.6		%		80-120	20-OCT-21
Titanium (Ti)			102.8		%		80-120	20-OCT-21
Tungsten (W)			94.3		%		80-120	20-OCT-21
Uranium (U)			92.5		%		80-120	20-OCT-21
Vanadium (V)			103.9		%		80-120	20-OCT-21
Zinc (Zn)			97.2		%		80-120	20-OCT-21
Zirconium (Zr)			91.6		%		80-120	20-OCT-21
WG3641244-1 MB								
Aluminum (Al)			<50		mg/kg		50	20-OCT-21
Antimony (Sb)			<0.10		mg/kg		0.1	20-OCT-21
Arsenic (As)			<0.10		mg/kg		0.1	20-OCT-21
Barium (Ba)			<0.50		mg/kg		0.5	20-OCT-21
Beryllium (Be)			<0.10		mg/kg		0.1	20-OCT-21
Bismuth (Bi)			<0.20		mg/kg		0.2	20-OCT-21
Boron (B)			<5.0		mg/kg		5	20-OCT-21
Cadmium (Cd)			<0.020		mg/kg		0.02	20-OCT-21
Calcium (Ca)			<50		mg/kg		50	20-OCT-21

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5625366								
WG3641244-1 MB								
Chromium (Cr)			<0.50		mg/kg		0.5	20-OCT-21
Cobalt (Co)			<0.10		mg/kg		0.1	20-OCT-21
Copper (Cu)			<0.50		mg/kg		0.5	20-OCT-21
Iron (Fe)			<50		mg/kg		50	20-OCT-21
Lead (Pb)			<0.50		mg/kg		0.5	20-OCT-21
Lithium (Li)			<2.0		mg/kg		2	20-OCT-21
Magnesium (Mg)			<20		mg/kg		20	20-OCT-21
Manganese (Mn)			<1.0		mg/kg		1	20-OCT-21
Molybdenum (Mo)			<0.10		mg/kg		0.1	20-OCT-21
Nickel (Ni)			<0.50		mg/kg		0.5	20-OCT-21
Phosphorus (P)			<50		mg/kg		50	20-OCT-21
Potassium (K)			<100		mg/kg		100	20-OCT-21
Selenium (Se)			<0.20		mg/kg		0.2	20-OCT-21
Silver (Ag)			<0.10		mg/kg		0.1	20-OCT-21
Sodium (Na)			<50		mg/kg		50	20-OCT-21
Strontium (Sr)			<0.50		mg/kg		0.5	20-OCT-21
Sulfur (S)			<1000		mg/kg		1000	20-OCT-21
Thallium (Tl)			<0.050		mg/kg		0.05	20-OCT-21
Tin (Sn)			<2.0		mg/kg		2	20-OCT-21
Titanium (Ti)			<1.0		mg/kg		1	20-OCT-21
Tungsten (W)			<0.50		mg/kg		0.5	20-OCT-21
Uranium (U)			<0.050		mg/kg		0.05	20-OCT-21
Vanadium (V)			<0.20		mg/kg		0.2	20-OCT-21
Zinc (Zn)			<2.0		mg/kg		2	20-OCT-21
Zirconium (Zr)			<1.0		mg/kg		1	20-OCT-21
Batch R5625374								
WG3641234-2 CRM		**WT-SS-2**						
Aluminum (Al)			104.6		%		70-130	20-OCT-21
Antimony (Sb)			90.9		%		70-130	20-OCT-21
Arsenic (As)			102.8		%		70-130	20-OCT-21
Barium (Ba)			102.9		%		70-130	20-OCT-21
Beryllium (Be)			93.4		%		70-130	20-OCT-21
Bismuth (Bi)			0.13		mg/kg		0-0.34	20-OCT-21
Boron (B)			7.9		mg/kg		3.5-13.5	20-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5625374								
WG3641234-2 CRM		**WT-SS-2**						
Cadmium (Cd)			94.0		%		70-130	20-OCT-21
Calcium (Ca)			92.9		%		70-130	20-OCT-21
Chromium (Cr)			95.9		%		70-130	20-OCT-21
Cobalt (Co)			98.5		%		70-130	20-OCT-21
Copper (Cu)			101.2		%		70-130	20-OCT-21
Iron (Fe)			103.0		%		70-130	20-OCT-21
Lead (Pb)			101.7		%		70-130	20-OCT-21
Lithium (Li)			84.4		%		70-130	20-OCT-21
Magnesium (Mg)			104.7		%		70-130	20-OCT-21
Manganese (Mn)			106.4		%		70-130	20-OCT-21
Molybdenum (Mo)			97.0		%		70-130	20-OCT-21
Nickel (Ni)			99.8		%		70-130	20-OCT-21
Phosphorus (P)			99.2		%		70-130	20-OCT-21
Potassium (K)			94.9		%		70-130	20-OCT-21
Selenium (Se)			0.11		mg/kg		0-0.34	20-OCT-21
Silver (Ag)			127.9		%		70-130	20-OCT-21
Sodium (Na)			97.8		%		70-130	20-OCT-21
Strontium (Sr)			97.6		%		70-130	20-OCT-21
Thallium (Tl)			0.069		mg/kg		0.029-0.129	20-OCT-21
Tin (Sn)			88.8		%		70-130	20-OCT-21
Titanium (Ti)			94.6		%		70-130	20-OCT-21
Uranium (U)			99.1		%		70-130	20-OCT-21
Vanadium (V)			99.1		%		70-130	20-OCT-21
Zinc (Zn)			94.1		%		70-130	20-OCT-21
Zirconium (Zr)			90.3		%		70-130	20-OCT-21
WG3641234-7 DUP		**WG3641234-6**						
Aluminum (Al)		9130	9600		ug/g	5.0	40	20-OCT-21
Antimony (Sb)		0.79	1.18	DUP-H	ug/g	40	30	20-OCT-21
Arsenic (As)		5.03	7.35	DUP-H	ug/g	37	30	20-OCT-21
Barium (Ba)		302	328		ug/g	8.5	40	20-OCT-21
Beryllium (Be)		0.39	0.45		ug/g	13	30	20-OCT-21
Bismuth (Bi)		0.65	0.87		ug/g	28	30	20-OCT-21
Boron (B)		8.2	8.8		ug/g	6.3	30	20-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5625374								
WG3641234-7 DUP		**WG3641234-6**						
Cadmium (Cd)		1.94	1.98		ug/g	1.9	30	20-OCT-21
Calcium (Ca)		104000	113000		ug/g	8.2	30	20-OCT-21
Chromium (Cr)		8940	9920		ug/g	10	30	20-OCT-21
Cobalt (Co)		7.24	8.14		ug/g	12	30	20-OCT-21
Copper (Cu)		69.2	76.6		ug/g	10	30	20-OCT-21
Iron (Fe)		16700	17900		ug/g	6.7	30	20-OCT-21
Lead (Pb)		504	556		ug/g	9.8	40	20-OCT-21
Lithium (Li)		8.2	8.9		ug/g	8.1	30	20-OCT-21
Magnesium (Mg)		10800	11700		ug/g	7.9	30	20-OCT-21
Manganese (Mn)		393	437		ug/g	11	30	20-OCT-21
Molybdenum (Mo)		0.51	0.70		ug/g	31	40	20-OCT-21
Nickel (Ni)		17.2	18.4		ug/g	7.1	30	20-OCT-21
Phosphorus (P)		1660	1980		ug/g	18	30	20-OCT-21
Potassium (K)		1720	1780		ug/g	2.9	40	20-OCT-21
Selenium (Se)		<0.20	<0.20	RPD-NA	ug/g	N/A	30	20-OCT-21
Silver (Ag)		0.79	0.93		ug/g	16	40	20-OCT-21
Sodium (Na)		469	511		ug/g	8.5	40	20-OCT-21
Strontium (Sr)		562	625		ug/g	11	40	20-OCT-21
Sulfur (S)		<1000	<1000	RPD-NA	ug/g	N/A	30	20-OCT-21
Thallium (Tl)		0.235	0.279		ug/g	17	30	20-OCT-21
Tin (Sn)		7.9	10.3		ug/g	27	40	20-OCT-21
Titanium (Ti)		376	411		ug/g	8.8	40	20-OCT-21
Tungsten (W)		<0.50	<0.50	RPD-NA	ug/g	N/A	30	20-OCT-21
Uranium (U)		0.450	0.499		ug/g	10	30	20-OCT-21
Vanadium (V)		25.0	26.8		ug/g	6.7	30	20-OCT-21
Zinc (Zn)		349	386		ug/g	10	30	20-OCT-21
Zirconium (Zr)		<1.0	<1.0	RPD-NA	ug/g	N/A	30	20-OCT-21
WG3641234-4 LCS								
Aluminum (Al)			100.6		%		80-120	20-OCT-21
Antimony (Sb)			105.1		%		80-120	20-OCT-21
Arsenic (As)			102.2		%		80-120	20-OCT-21
Barium (Ba)			99.0		%		80-120	20-OCT-21
Beryllium (Be)			94.6		%		80-120	20-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5625374								
WG3641234-4 LCS								
Bismuth (Bi)			102.1		%		80-120	20-OCT-21
Boron (B)			92.5		%		80-120	20-OCT-21
Cadmium (Cd)			96.7		%		80-120	20-OCT-21
Calcium (Ca)			96.8		%		80-120	20-OCT-21
Chromium (Cr)			99.2		%		80-120	20-OCT-21
Cobalt (Co)			100.5		%		80-120	20-OCT-21
Copper (Cu)			98.3		%		80-120	20-OCT-21
Iron (Fe)			94.9		%		80-120	20-OCT-21
Lead (Pb)			99.0		%		80-120	20-OCT-21
Lithium (Li)			92.7		%		80-120	20-OCT-21
Magnesium (Mg)			104.1		%		80-120	20-OCT-21
Manganese (Mn)			100.2		%		80-120	20-OCT-21
Molybdenum (Mo)			101.2		%		80-120	20-OCT-21
Nickel (Ni)			98.0		%		80-120	20-OCT-21
Phosphorus (P)			103.2		%		80-120	20-OCT-21
Potassium (K)			101.0		%		80-120	20-OCT-21
Selenium (Se)			100.7		%		80-120	20-OCT-21
Silver (Ag)			92.0		%		80-120	20-OCT-21
Sodium (Na)			101.8		%		80-120	20-OCT-21
Strontium (Sr)			102.1		%		80-120	20-OCT-21
Sulfur (S)			101.7		%		80-120	20-OCT-21
Thallium (Tl)			98.9		%		80-120	20-OCT-21
Tin (Sn)			98.0		%		80-120	20-OCT-21
Titanium (Ti)			99.4		%		80-120	20-OCT-21
Tungsten (W)			100.0		%		80-120	20-OCT-21
Uranium (U)			99.7		%		80-120	20-OCT-21
Vanadium (V)			102.9		%		80-120	20-OCT-21
Zinc (Zn)			95.7		%		80-120	20-OCT-21
Zirconium (Zr)			98.5		%		80-120	20-OCT-21
WG3641234-1 MB								
Aluminum (Al)			<50		mg/kg		50	20-OCT-21
Antimony (Sb)			<0.10		mg/kg		0.1	20-OCT-21
Arsenic (As)			<0.10		mg/kg		0.1	20-OCT-21
Barium (Ba)			<0.50		mg/kg		0.5	20-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5625374								
WG3641234-1 MB								
Beryllium (Be)			<0.10		mg/kg		0.1	20-OCT-21
Bismuth (Bi)			<0.20		mg/kg		0.2	20-OCT-21
Boron (B)			<5.0		mg/kg		5	20-OCT-21
Cadmium (Cd)			<0.020		mg/kg		0.02	20-OCT-21
Calcium (Ca)			<50		mg/kg		50	20-OCT-21
Chromium (Cr)			<0.50		mg/kg		0.5	20-OCT-21
Cobalt (Co)			<0.10		mg/kg		0.1	20-OCT-21
Copper (Cu)			<0.50		mg/kg		0.5	20-OCT-21
Iron (Fe)			<50		mg/kg		50	20-OCT-21
Lead (Pb)			<0.50		mg/kg		0.5	20-OCT-21
Lithium (Li)			<2.0		mg/kg		2	20-OCT-21
Magnesium (Mg)			<20		mg/kg		20	20-OCT-21
Manganese (Mn)			<1.0		mg/kg		1	20-OCT-21
Molybdenum (Mo)			<0.10		mg/kg		0.1	20-OCT-21
Nickel (Ni)			<0.50		mg/kg		0.5	20-OCT-21
Phosphorus (P)			<50		mg/kg		50	20-OCT-21
Potassium (K)			<100		mg/kg		100	20-OCT-21
Selenium (Se)			<0.20		mg/kg		0.2	20-OCT-21
Silver (Ag)			<0.10		mg/kg		0.1	20-OCT-21
Sodium (Na)			<50		mg/kg		50	20-OCT-21
Strontium (Sr)			<0.50		mg/kg		0.5	20-OCT-21
Sulfur (S)			<1000		mg/kg		1000	20-OCT-21
Thallium (Tl)			<0.050		mg/kg		0.05	20-OCT-21
Tin (Sn)			<2.0		mg/kg		2	20-OCT-21
Titanium (Ti)			<1.0		mg/kg		1	20-OCT-21
Tungsten (W)			<0.50		mg/kg		0.5	20-OCT-21
Uranium (U)			<0.050		mg/kg		0.05	20-OCT-21
Vanadium (V)			<0.20		mg/kg		0.2	20-OCT-21
Zinc (Zn)			<2.0		mg/kg		2	20-OCT-21
Zirconium (Zr)			<1.0		mg/kg		1	20-OCT-21
Batch R5625485								
WG3641359-2 CRM		**WT-SS-2**						
Aluminum (Al)			116.3		%		70-130	20-OCT-21
Antimony (Sb)			98.5		%		70-130	20-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5625485								
WG3641359-2 CRM		**WT-SS-2**						
Arsenic (As)			104.1		%		70-130	20-OCT-21
Barium (Ba)			109.8		%		70-130	20-OCT-21
Beryllium (Be)			98.0		%		70-130	20-OCT-21
Boron (B)			8.3		mg/kg		3.5-13.5	20-OCT-21
Cadmium (Cd)			98.4		%		70-130	20-OCT-21
Calcium (Ca)			96.8		%		70-130	20-OCT-21
Chromium (Cr)			109.0		%		70-130	20-OCT-21
Cobalt (Co)			104.9		%		70-130	20-OCT-21
Copper (Cu)			108.2		%		70-130	20-OCT-21
Iron (Fe)			108.6		%		70-130	20-OCT-21
Lead (Pb)			107.7		%		70-130	20-OCT-21
Lithium (Li)			88.5		%		70-130	20-OCT-21
Magnesium (Mg)			110.0		%		70-130	20-OCT-21
Manganese (Mn)			110.7		%		70-130	20-OCT-21
Molybdenum (Mo)			102.2		%		70-130	20-OCT-21
Nickel (Ni)			105.2		%		70-130	20-OCT-21
Phosphorus (P)			104.8		%		70-130	20-OCT-21
Potassium (K)			107.0		%		70-130	20-OCT-21
Selenium (Se)			0.13		mg/kg		0-0.34	20-OCT-21
Silver (Ag)			88.9		%		70-130	20-OCT-21
Sodium (Na)			112.7		%		70-130	20-OCT-21
Strontium (Sr)			101.0		%		70-130	20-OCT-21
Thallium (Tl)			0.078		mg/kg		0.029-0.129	20-OCT-21
Tin (Sn)			93.4		%		70-130	20-OCT-21
Titanium (Ti)			105.9		%		70-130	20-OCT-21
Uranium (U)			97.9		%		70-130	20-OCT-21
Vanadium (V)			105.5		%		70-130	20-OCT-21
Zinc (Zn)			100.0		%		70-130	20-OCT-21
Zirconium (Zr)			109.0		%		70-130	20-OCT-21
WG3641359-6 DUP		**WG3641359-5**						
Aluminum (Al)		7780	7810		ug/g	0.4	40	20-OCT-21
Antimony (Sb)		7.15	6.14		ug/g	15	30	20-OCT-21
Arsenic (As)		4.27	4.45		ug/g	4.0	30	20-OCT-21
Barium (Ba)		222	223					

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5625485								
WG3641359-6 DUP		**WG3641359-5**						
Barium (Ba)		222	223		ug/g	0.4	40	20-OCT-21
Beryllium (Be)		0.36	0.37		ug/g	0.8	30	20-OCT-21
Bismuth (Bi)		0.66	0.74		ug/g	13	30	20-OCT-21
Boron (B)		13	11		ug/g	14	30	20-OCT-21
Cadmium (Cd)		1.22	1.15		ug/g	5.4	30	20-OCT-21
Calcium (Ca)		132000	136000		ug/g	2.9	30	20-OCT-21
Chromium (Cr)		4690	4690		ug/g	0.1	30	20-OCT-21
Cobalt (Co)		7.35	7.76		ug/g	5.5	30	20-OCT-21
Copper (Cu)		98.6	77.5		ug/g	24	30	20-OCT-21
Iron (Fe)		20300	20600		ug/g	1.4	30	20-OCT-21
Lead (Pb)		378	377		ug/g	0.1	40	20-OCT-21
Lithium (Li)		8.0	8.0		ug/g	0.5	30	20-OCT-21
Magnesium (Mg)		16300	17200		ug/g	5.7	30	20-OCT-21
Manganese (Mn)		300	321		ug/g	6.8	30	20-OCT-21
Molybdenum (Mo)		2.27	2.14		ug/g	6.2	40	20-OCT-21
Nickel (Ni)		18.1	19.2		ug/g	6.2	30	20-OCT-21
Phosphorus (P)		1720	1760		ug/g	2.7	30	20-OCT-21
Potassium (K)		1760	1710		ug/g	2.8	40	20-OCT-21
Selenium (Se)		0.69	0.71		ug/g	2.0	30	20-OCT-21
Silver (Ag)		0.93	0.74		ug/g	23	40	20-OCT-21
Sodium (Na)		530	570		ug/g	6.3	40	20-OCT-21
Strontium (Sr)		474	455		ug/g	4.2	40	20-OCT-21
Sulfur (S)		4700	5000		ug/g	6.1	30	20-OCT-21
Thallium (Tl)		0.27	0.26		ug/g	3.8	30	20-OCT-21
Tin (Sn)		9.6	8.5		ug/g	13	40	20-OCT-21
Titanium (Ti)		412	394		ug/g	4.4	40	20-OCT-21
Tungsten (W)		2.9	2.6		ug/g	9.7	30	20-OCT-21
Uranium (U)		0.49	0.47		ug/g	3.4	30	20-OCT-21
Vanadium (V)		26.9	27.4		ug/g	1.7	30	20-OCT-21
Zinc (Zn)		337	354		ug/g	5.0	30	20-OCT-21
Zirconium (Zr)		<2.0	<2.0	RPD-NA	ug/g	N/A	30	20-OCT-21
WG3641359-4 LCS								
Aluminum (Al)			107.8		%		80-120	20-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5625485								
WG3641359-4 LCS								
Antimony (Sb)			106.1		%		80-120	20-OCT-21
Arsenic (As)			109.6		%		80-120	20-OCT-21
Barium (Ba)			105.5		%		80-120	20-OCT-21
Beryllium (Be)			93.4		%		80-120	20-OCT-21
Bismuth (Bi)			104.9		%		80-120	20-OCT-21
Boron (B)			90.3		%		80-120	20-OCT-21
Cadmium (Cd)			99.0		%		80-120	20-OCT-21
Calcium (Ca)			95.3		%		80-120	20-OCT-21
Chromium (Cr)			105.6		%		80-120	20-OCT-21
Cobalt (Co)			105.5		%		80-120	20-OCT-21
Copper (Cu)			103.3		%		80-120	20-OCT-21
Iron (Fe)			100.0		%		80-120	20-OCT-21
Lead (Pb)			105.0		%		80-120	20-OCT-21
Lithium (Li)			86.8		%		80-120	20-OCT-21
Magnesium (Mg)			113.0		%		80-120	20-OCT-21
Manganese (Mn)			106.3		%		80-120	20-OCT-21
Molybdenum (Mo)			104.8		%		80-120	20-OCT-21
Nickel (Ni)			103.8		%		80-120	20-OCT-21
Phosphorus (P)			109.0		%		80-120	20-OCT-21
Potassium (K)			107.2		%		80-120	20-OCT-21
Selenium (Se)			104.5		%		80-120	20-OCT-21
Silver (Ag)			93.7		%		80-120	20-OCT-21
Sodium (Na)			107.6		%		80-120	20-OCT-21
Strontium (Sr)			104.2		%		80-120	20-OCT-21
Sulfur (S)			102.6		%		80-120	20-OCT-21
Thallium (Tl)			103.1		%		80-120	20-OCT-21
Tin (Sn)			100.0		%		80-120	20-OCT-21
Titanium (Ti)			105.4		%		80-120	20-OCT-21
Tungsten (W)			103.8		%		80-120	20-OCT-21
Uranium (U)			104.4		%		80-120	20-OCT-21
Vanadium (V)			109.0		%		80-120	20-OCT-21
Zinc (Zn)			104.0		%		80-120	20-OCT-21
Zirconium (Zr)			101.2		%		80-120	20-OCT-21
WG3641359-1 MB								

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5625485								
WG3641359-1 MB								
Aluminum (Al)			<50		mg/kg		50	20-OCT-21
Antimony (Sb)			<0.10		mg/kg		0.1	20-OCT-21
Arsenic (As)			<0.10		mg/kg		0.1	20-OCT-21
Barium (Ba)			<0.50		mg/kg		0.5	20-OCT-21
Beryllium (Be)			<0.10		mg/kg		0.1	20-OCT-21
Bismuth (Bi)			<0.20		mg/kg		0.2	20-OCT-21
Boron (B)			<5.0		mg/kg		5	20-OCT-21
Cadmium (Cd)			<0.020		mg/kg		0.02	20-OCT-21
Calcium (Ca)			<50		mg/kg		50	20-OCT-21
Chromium (Cr)			<0.50		mg/kg		0.5	20-OCT-21
Cobalt (Co)			<0.10		mg/kg		0.1	20-OCT-21
Copper (Cu)			<0.50		mg/kg		0.5	20-OCT-21
Iron (Fe)			<50		mg/kg		50	20-OCT-21
Lead (Pb)			<0.50		mg/kg		0.5	20-OCT-21
Lithium (Li)			<2.0		mg/kg		2	20-OCT-21
Magnesium (Mg)			<20		mg/kg		20	20-OCT-21
Manganese (Mn)			<1.0		mg/kg		1	20-OCT-21
Molybdenum (Mo)			<0.10		mg/kg		0.1	20-OCT-21
Nickel (Ni)			<0.50		mg/kg		0.5	20-OCT-21
Phosphorus (P)			<50		mg/kg		50	20-OCT-21
Potassium (K)			<100		mg/kg		100	20-OCT-21
Selenium (Se)			<0.20		mg/kg		0.2	20-OCT-21
Silver (Ag)			<0.10		mg/kg		0.1	20-OCT-21
Sodium (Na)			<50		mg/kg		50	20-OCT-21
Strontium (Sr)			<0.50		mg/kg		0.5	20-OCT-21
Sulfur (S)			<1000		mg/kg		1000	20-OCT-21
Thallium (Tl)			<0.050		mg/kg		0.05	20-OCT-21
Tin (Sn)			<2.0		mg/kg		2	20-OCT-21
Titanium (Ti)			<1.0		mg/kg		1	20-OCT-21
Tungsten (W)			<0.50		mg/kg		0.5	20-OCT-21
Uranium (U)			<0.050		mg/kg		0.05	20-OCT-21
Vanadium (V)			<0.20		mg/kg		0.2	20-OCT-21
Zinc (Zn)			<2.0		mg/kg		2	20-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5625485								
WG3641359-1 MB								
Zirconium (Zr)			<1.0		mg/kg		1	20-OCT-21
Batch R5626293								
WG3642161-2 CRM		**WT-SS-2**						
Aluminum (Al)			106.9		%		70-130	21-OCT-21
Antimony (Sb)			95.0		%		70-130	21-OCT-21
Arsenic (As)			100.7		%		70-130	21-OCT-21
Barium (Ba)			104.3		%		70-130	21-OCT-21
Beryllium (Be)			103.7		%		70-130	21-OCT-21
Bismuth (Bi)			0.13		mg/kg		0-0.34	21-OCT-21
Boron (B)			8.7		mg/kg		3.5-13.5	21-OCT-21
Cadmium (Cd)			94.9		%		70-130	21-OCT-21
Calcium (Ca)			108.5		%		70-130	21-OCT-21
Chromium (Cr)			97.0		%		70-130	21-OCT-21
Cobalt (Co)			100.9		%		70-130	21-OCT-21
Copper (Cu)			103.7		%		70-130	21-OCT-21
Iron (Fe)			103.3		%		70-130	21-OCT-21
Lead (Pb)			98.5		%		70-130	21-OCT-21
Lithium (Li)			109.4		%		70-130	21-OCT-21
Magnesium (Mg)			106.3		%		70-130	21-OCT-21
Manganese (Mn)			100.0		%		70-130	21-OCT-21
Molybdenum (Mo)			104.1		%		70-130	21-OCT-21
Nickel (Ni)			100.7		%		70-130	21-OCT-21
Phosphorus (P)			100.9		%		70-130	21-OCT-21
Potassium (K)			90.9		%		70-130	21-OCT-21
Selenium (Se)			0.14		mg/kg		0-0.34	21-OCT-21
Silver (Ag)			103.2		%		70-130	21-OCT-21
Sodium (Na)			100.7		%		70-130	21-OCT-21
Strontium (Sr)			99.3		%		70-130	21-OCT-21
Thallium (Tl)			0.073		mg/kg		0.029-0.129	21-OCT-21
Tin (Sn)			96.3		%		70-130	21-OCT-21
Titanium (Ti)			97.6		%		70-130	21-OCT-21
Uranium (U)			93.4		%		70-130	21-OCT-21
Vanadium (V)			100.5		%		70-130	21-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5626293								
WG3642161-2 CRM		**WT-SS-2**						
Zinc (Zn)			92.8		%		70-130	21-OCT-21
Zirconium (Zr)			93.7		%		70-130	21-OCT-21
WG3642161-6 DUP		**WG3642161-5**						
Aluminum (Al)		11200	11700		ug/g	4.0	40	21-OCT-21
Antimony (Sb)		<0.10	<0.10	RPD-NA	ug/g	N/A	30	21-OCT-21
Arsenic (As)		3.27	3.51		ug/g	7.3	30	21-OCT-21
Barium (Ba)		56.3	62.9		ug/g	11	40	21-OCT-21
Beryllium (Be)		0.52	0.53		ug/g	2.5	30	21-OCT-21
Bismuth (Bi)		<0.20	<0.20	RPD-NA	ug/g	N/A	30	21-OCT-21
Boron (B)		9.4	9.9		ug/g	4.9	30	21-OCT-21
Cadmium (Cd)		0.105	0.118		ug/g	12	30	21-OCT-21
Calcium (Ca)		117000	126000		ug/g	7.6	30	21-OCT-21
Chromium (Cr)		17.7	19.0		ug/g	7.4	30	21-OCT-21
Cobalt (Co)		7.03	7.65		ug/g	8.4	30	21-OCT-21
Copper (Cu)		14.3	15.4		ug/g	7.7	30	21-OCT-21
Iron (Fe)		17400	18900		ug/g	8.3	30	21-OCT-21
Lead (Pb)		8.94	9.74		ug/g	8.6	40	21-OCT-21
Lithium (Li)		13.5	14.6		ug/g	7.9	30	21-OCT-21
Magnesium (Mg)		28100	30200		ug/g	7.4	30	21-OCT-21
Manganese (Mn)		534	586		ug/g	9.3	30	21-OCT-21
Molybdenum (Mo)		0.24	0.23		ug/g	4.0	40	21-OCT-21
Nickel (Ni)		14.6	15.7		ug/g	7.1	30	21-OCT-21
Phosphorus (P)		614	667		ug/g	8.3	30	21-OCT-21
Potassium (K)		1800	1850		ug/g	3.1	40	21-OCT-21
Selenium (Se)		<0.20	<0.20	RPD-NA	ug/g	N/A	30	21-OCT-21
Silver (Ag)		<0.10	<0.10	RPD-NA	ug/g	N/A	40	21-OCT-21
Sodium (Na)		1580	1680		ug/g	6.1	40	21-OCT-21
Strontium (Sr)		146	157		ug/g	7.3	40	21-OCT-21
Sulfur (S)		<1000	<1000	RPD-NA	ug/g	N/A	30	21-OCT-21
Thallium (Tl)		0.106	0.110		ug/g	4.2	30	21-OCT-21
Tin (Sn)		<2.0	<2.0	RPD-NA	ug/g	N/A	40	21-OCT-21
Titanium (Ti)		388	408		ug/g	5.1	40	21-OCT-21
Tungsten (W)		<0.50	<0.50	RPD-NA	ug/g	N/A	30	21-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5626293								
WG3642161-6 DUP		**WG3642161-5**						
Uranium (U)		0.470	0.558		ug/g	17	30	21-OCT-21
Vanadium (V)		26.5	28.0		ug/g	5.4	30	21-OCT-21
Zinc (Zn)		42.4	46.9		ug/g	10	30	21-OCT-21
Zirconium (Zr)		6.5	7.2		ug/g	10	30	21-OCT-21
WG3642161-4 LCS								
Aluminum (Al)			101.5		%		80-120	21-OCT-21
Antimony (Sb)			104.3		%		80-120	21-OCT-21
Arsenic (As)			102.3		%		80-120	21-OCT-21
Barium (Ba)			99.7		%		80-120	21-OCT-21
Beryllium (Be)			100.5		%		80-120	21-OCT-21
Bismuth (Bi)			99.8		%		80-120	21-OCT-21
Boron (B)			92.2		%		80-120	21-OCT-21
Cadmium (Cd)			95.5		%		80-120	21-OCT-21
Calcium (Ca)			98.6		%		80-120	21-OCT-21
Chromium (Cr)			99.9		%		80-120	21-OCT-21
Cobalt (Co)			99.98		%		80-120	21-OCT-21
Copper (Cu)			98.0		%		80-120	21-OCT-21
Iron (Fe)			101.4		%		80-120	21-OCT-21
Lead (Pb)			98.3		%		80-120	21-OCT-21
Lithium (Li)			100.2		%		80-120	21-OCT-21
Magnesium (Mg)			104.5		%		80-120	21-OCT-21
Manganese (Mn)			98.9		%		80-120	21-OCT-21
Molybdenum (Mo)			103.2		%		80-120	21-OCT-21
Nickel (Ni)			97.8		%		80-120	21-OCT-21
Phosphorus (P)			103.8		%		80-120	21-OCT-21
Potassium (K)			100.0		%		80-120	21-OCT-21
Selenium (Se)			100.3		%		80-120	21-OCT-21
Silver (Ag)			93.6		%		80-120	21-OCT-21
Sodium (Na)			103.8		%		80-120	21-OCT-21
Strontium (Sr)			100.1		%		80-120	21-OCT-21
Sulfur (S)			102.6		%		80-120	21-OCT-21
Thallium (Tl)			102.2		%		80-120	21-OCT-21
Tin (Sn)			97.9		%		80-120	21-OCT-21
Titanium (Ti)			98.7				80-120	

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5626293								
WG3642161-4 LCS								
Titanium (Ti)			98.7		%		80-120	21-OCT-21
Tungsten (W)			100.3		%		80-120	21-OCT-21
Uranium (U)			100.2		%		80-120	21-OCT-21
Vanadium (V)			102.7		%		80-120	21-OCT-21
Zinc (Zn)			91.1		%		80-120	21-OCT-21
Zirconium (Zr)			97.6		%		80-120	21-OCT-21
WG3642161-1 MB								
Aluminum (Al)			<50		mg/kg		50	21-OCT-21
Antimony (Sb)			<0.10		mg/kg		0.1	21-OCT-21
Arsenic (As)			<0.10		mg/kg		0.1	21-OCT-21
Barium (Ba)			<0.50		mg/kg		0.5	21-OCT-21
Beryllium (Be)			<0.10		mg/kg		0.1	21-OCT-21
Bismuth (Bi)			<0.20		mg/kg		0.2	21-OCT-21
Boron (B)			<5.0		mg/kg		5	21-OCT-21
Cadmium (Cd)			<0.020		mg/kg		0.02	21-OCT-21
Calcium (Ca)			<50		mg/kg		50	21-OCT-21
Chromium (Cr)			<0.50		mg/kg		0.5	21-OCT-21
Cobalt (Co)			<0.10		mg/kg		0.1	21-OCT-21
Copper (Cu)			<0.50		mg/kg		0.5	21-OCT-21
Iron (Fe)			<50		mg/kg		50	21-OCT-21
Lead (Pb)			<0.50		mg/kg		0.5	21-OCT-21
Lithium (Li)			<2.0		mg/kg		2	21-OCT-21
Magnesium (Mg)			<20		mg/kg		20	21-OCT-21
Manganese (Mn)			<1.0		mg/kg		1	21-OCT-21
Molybdenum (Mo)			<0.10		mg/kg		0.1	21-OCT-21
Nickel (Ni)			<0.50		mg/kg		0.5	21-OCT-21
Phosphorus (P)			<50		mg/kg		50	21-OCT-21
Potassium (K)			<100		mg/kg		100	21-OCT-21
Selenium (Se)			<0.20		mg/kg		0.2	21-OCT-21
Silver (Ag)			<0.10		mg/kg		0.1	21-OCT-21
Sodium (Na)			<50		mg/kg		50	21-OCT-21
Strontium (Sr)			<0.50		mg/kg		0.5	21-OCT-21
Sulfur (S)			<1000		mg/kg		1000	21-OCT-21
Thallium (Tl)			<0.050		mg/kg		0.05	21-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5626293								
WG3642161-1 MB								
Tin (Sn)			<2.0		mg/kg		2	21-OCT-21
Titanium (Ti)			<1.0		mg/kg		1	21-OCT-21
Tungsten (W)			<0.50		mg/kg		0.5	21-OCT-21
Uranium (U)			<0.050		mg/kg		0.05	21-OCT-21
Vanadium (V)			<0.20		mg/kg		0.2	21-OCT-21
Zinc (Zn)			<2.0		mg/kg		2	21-OCT-21
Zirconium (Zr)			<1.0		mg/kg		1	21-OCT-21
Batch R5628020								
WG3644502-2 CRM		**WT-SS-2**						
Aluminum (Al)			100.4		%		70-130	25-OCT-21
Antimony (Sb)			85.5		%		70-130	25-OCT-21
Arsenic (As)			96.4		%		70-130	25-OCT-21
Barium (Ba)			104.3		%		70-130	25-OCT-21
Beryllium (Be)			90.3		%		70-130	25-OCT-21
Bismuth (Bi)			0.14		mg/kg		0-0.34	25-OCT-21
Boron (B)			8.0		mg/kg		3.5-13.5	25-OCT-21
Cadmium (Cd)			91.8		%		70-130	25-OCT-21
Calcium (Ca)			100.2		%		70-130	25-OCT-21
Chromium (Cr)			94.8		%		70-130	25-OCT-21
Cobalt (Co)			100.2		%		70-130	25-OCT-21
Copper (Cu)			98.9		%		70-130	25-OCT-21
Iron (Fe)			101.2		%		70-130	25-OCT-21
Lead (Pb)			102.5		%		70-130	25-OCT-21
Lithium (Li)			98.1		%		70-130	25-OCT-21
Magnesium (Mg)			101.8		%		70-130	25-OCT-21
Manganese (Mn)			103.8		%		70-130	25-OCT-21
Molybdenum (Mo)			100.2		%		70-130	25-OCT-21
Nickel (Ni)			100.9		%		70-130	25-OCT-21
Phosphorus (P)			100.8		%		70-130	25-OCT-21
Potassium (K)			99.4		%		70-130	25-OCT-21
Selenium (Se)			0.13		mg/kg		0-0.34	25-OCT-21
Silver (Ag)			75.6		%		70-130	25-OCT-21
Sodium (Na)			97.1		%		70-130	25-OCT-21
Strontium (Sr)			92.6		%		70-130	25-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5628020								
WG3644502-2 CRM		**WT-SS-2**						
Thallium (Tl)			0.072		mg/kg		0.029-0.129	25-OCT-21
Tin (Sn)			90.1		%		70-130	25-OCT-21
Titanium (Ti)			88.0		%		70-130	25-OCT-21
Uranium (U)			93.8		%		70-130	25-OCT-21
Vanadium (V)			99.4		%		70-130	25-OCT-21
Zinc (Zn)			95.7		%		70-130	25-OCT-21
Zirconium (Zr)			92.0		%		70-130	25-OCT-21
WG3644502-6 DUP		**WG3644502-5**						
Aluminum (Al)		17900	18600		ug/g	3.3	40	25-OCT-21
Antimony (Sb)		0.30	0.32		ug/g	7.9	30	25-OCT-21
Arsenic (As)		5.95	6.46		ug/g	8.2	30	25-OCT-21
Barium (Ba)		112	119		ug/g	6.6	40	25-OCT-21
Beryllium (Be)		0.74	0.79		ug/g	6.7	30	25-OCT-21
Bismuth (Bi)		<0.20	<0.20	RPD-NA	ug/g	N/A	30	25-OCT-21
Boron (B)		15.8	16.9		ug/g	6.7	30	25-OCT-21
Cadmium (Cd)		0.406	0.445		ug/g	9.3	30	25-OCT-21
Calcium (Ca)		35200	38800		ug/g	9.6	30	25-OCT-21
Chromium (Cr)		32.0	34.3		ug/g	7.1	30	25-OCT-21
Cobalt (Co)		9.70	10.5		ug/g	8.4	30	25-OCT-21
Copper (Cu)		30.8	34.0		ug/g	9.8	30	25-OCT-21
Iron (Fe)		23200	24800		ug/g	6.4	30	25-OCT-21
Lead (Pb)		36.3	41.2		ug/g	13	40	25-OCT-21
Lithium (Li)		23.3	27.1		ug/g	15	30	25-OCT-21
Magnesium (Mg)		12900	13800		ug/g	6.1	30	25-OCT-21
Manganese (Mn)		476	507		ug/g	6.2	30	25-OCT-21
Molybdenum (Mo)		0.68	0.77		ug/g	11	40	25-OCT-21
Nickel (Ni)		28.2	30.1		ug/g	6.6	30	25-OCT-21
Phosphorus (P)		562	559		ug/g	0.7	30	25-OCT-21
Potassium (K)		2780	2710		ug/g	2.3	40	25-OCT-21
Selenium (Se)		0.39	0.43		ug/g	10	30	25-OCT-21
Silver (Ag)		<0.10	<0.10	RPD-NA	ug/g	N/A	40	25-OCT-21
Sodium (Na)		99	107		ug/g	8.0	40	25-OCT-21
Strontium (Sr)		43.9	49.0		ug/g	11	40	25-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5628020								
WG3644502-6 DUP		**WG3644502-5**						
Sulfur (S)		<1000	<1000	RPD-NA	ug/g	N/A	30	25-OCT-21
Thallium (Tl)		0.155	0.176		ug/g	13	30	25-OCT-21
Tin (Sn)		<2.0	<2.0	RPD-NA	ug/g	N/A	40	25-OCT-21
Titanium (Ti)		102	116		ug/g	13	40	25-OCT-21
Tungsten (W)		<0.50	<0.50	RPD-NA	ug/g	N/A	30	25-OCT-21
Uranium (U)		0.686	0.792		ug/g	14	30	25-OCT-21
Vanadium (V)		32.3	34.7		ug/g	7.3	30	25-OCT-21
Zinc (Zn)		162	171		ug/g	5.4	30	25-OCT-21
Zirconium (Zr)		3.0	3.5		ug/g	16	30	25-OCT-21
WG3644502-4 LCS								
Aluminum (Al)			103.7		%		80-120	25-OCT-21
Antimony (Sb)			108.7		%		80-120	25-OCT-21
Arsenic (As)			105.7		%		80-120	25-OCT-21
Barium (Ba)			104.8		%		80-120	25-OCT-21
Beryllium (Be)			100.1		%		80-120	25-OCT-21
Bismuth (Bi)			96.3		%		80-120	25-OCT-21
Boron (B)			97.2		%		80-120	25-OCT-21
Cadmium (Cd)			97.3		%		80-120	25-OCT-21
Calcium (Ca)			101.2		%		80-120	25-OCT-21
Chromium (Cr)			105.3		%		80-120	25-OCT-21
Cobalt (Co)			103.8		%		80-120	25-OCT-21
Copper (Cu)			100.0		%		80-120	25-OCT-21
Iron (Fe)			102.4		%		80-120	25-OCT-21
Lead (Pb)			94.2		%		80-120	25-OCT-21
Lithium (Li)			99.8		%		80-120	25-OCT-21
Magnesium (Mg)			108.8		%		80-120	25-OCT-21
Manganese (Mn)			102.3		%		80-120	25-OCT-21
Molybdenum (Mo)			102.2		%		80-120	25-OCT-21
Nickel (Ni)			99.6		%		80-120	25-OCT-21
Phosphorus (P)			104.9		%		80-120	25-OCT-21
Potassium (K)			106.3		%		80-120	25-OCT-21
Selenium (Se)			100.5		%		80-120	25-OCT-21
Silver (Ag)			93.9		%		80-120	25-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5628020								
WG3644502-4 LCS								
Sodium (Na)			102.3		%		80-120	25-OCT-21
Strontium (Sr)			100.8		%		80-120	25-OCT-21
Sulfur (S)			98.7		%		80-120	25-OCT-21
Thallium (Tl)			97.2		%		80-120	25-OCT-21
Tin (Sn)			99.8		%		80-120	25-OCT-21
Titanium (Ti)			100.1		%		80-120	25-OCT-21
Tungsten (W)			96.8		%		80-120	25-OCT-21
Uranium (U)			93.8		%		80-120	25-OCT-21
Vanadium (V)			106.0		%		80-120	25-OCT-21
Zinc (Zn)			97.1		%		80-120	25-OCT-21
Zirconium (Zr)			103.2		%		80-120	25-OCT-21
WG3644502-1 MB								
Aluminum (Al)			<50		mg/kg		50	25-OCT-21
Antimony (Sb)			<0.10		mg/kg		0.1	25-OCT-21
Arsenic (As)			<0.10		mg/kg		0.1	25-OCT-21
Barium (Ba)			<0.50		mg/kg		0.5	25-OCT-21
Beryllium (Be)			<0.10		mg/kg		0.1	25-OCT-21
Bismuth (Bi)			<0.20		mg/kg		0.2	25-OCT-21
Boron (B)			<5.0		mg/kg		5	25-OCT-21
Cadmium (Cd)			<0.020		mg/kg		0.02	25-OCT-21
Calcium (Ca)			<50		mg/kg		50	25-OCT-21
Chromium (Cr)			<0.50		mg/kg		0.5	25-OCT-21
Cobalt (Co)			<0.10		mg/kg		0.1	25-OCT-21
Copper (Cu)			<0.50		mg/kg		0.5	25-OCT-21
Iron (Fe)			<50		mg/kg		50	25-OCT-21
Lead (Pb)			<0.50		mg/kg		0.5	25-OCT-21
Lithium (Li)			<2.0		mg/kg		2	25-OCT-21
Magnesium (Mg)			<20		mg/kg		20	25-OCT-21
Manganese (Mn)			<1.0		mg/kg		1	25-OCT-21
Molybdenum (Mo)			<0.10		mg/kg		0.1	25-OCT-21
Nickel (Ni)			<0.50		mg/kg		0.5	25-OCT-21
Phosphorus (P)			<50		mg/kg		50	25-OCT-21
Potassium (K)			<100		mg/kg		100	25-OCT-21
Selenium (Se)			<0.20		mg/kg		0.2	25-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5628020								
WG3644502-1 MB								
Silver (Ag)			<0.10		mg/kg		0.1	25-OCT-21
Sodium (Na)			<50		mg/kg		50	25-OCT-21
Strontium (Sr)			<0.50		mg/kg		0.5	25-OCT-21
Sulfur (S)			<1000		mg/kg		1000	25-OCT-21
Thallium (Tl)			<0.050		mg/kg		0.05	25-OCT-21
Tin (Sn)			<2.0		mg/kg		2	25-OCT-21
Titanium (Ti)			<1.0		mg/kg		1	25-OCT-21
Tungsten (W)			<0.50		mg/kg		0.5	25-OCT-21
Uranium (U)			<0.050		mg/kg		0.05	25-OCT-21
Vanadium (V)			<0.20		mg/kg		0.2	25-OCT-21
Zinc (Zn)			<2.0		mg/kg		2	25-OCT-21
Zirconium (Zr)			<1.0		mg/kg		1	25-OCT-21
Batch R5628680								
WG3644943-2 CRM		**WT-SS-2**						
Aluminum (Al)			115.1		%		70-130	25-OCT-21
Antimony (Sb)			104.7		%		70-130	25-OCT-21
Arsenic (As)			118.0		%		70-130	25-OCT-21
Barium (Ba)			124.5		%		70-130	25-OCT-21
Beryllium (Be)			106.6		%		70-130	25-OCT-21
Bismuth (Bi)			0.20		mg/kg		0-0.34	25-OCT-21
Boron (B)			8.6		mg/kg		3.5-13.5	25-OCT-21
Cadmium (Cd)			108.4		%		70-130	25-OCT-21
Calcium (Ca)			109.2		%		70-130	25-OCT-21
Chromium (Cr)			108.0		%		70-130	25-OCT-21
Cobalt (Co)			111.6		%		70-130	25-OCT-21
Copper (Cu)			110.5		%		70-130	25-OCT-21
Iron (Fe)			113.4		%		70-130	25-OCT-21
Lead (Pb)			111.3		%		70-130	25-OCT-21
Lithium (Li)			96.9		%		70-130	25-OCT-21
Magnesium (Mg)			115.4		%		70-130	25-OCT-21
Manganese (Mn)			110.6		%		70-130	25-OCT-21
Molybdenum (Mo)			111.8		%		70-130	25-OCT-21
Nickel (Ni)			113.1		%		70-130	25-OCT-21
Phosphorus (P)			109.9		%		70-130	25-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5628680								
WG3644943-2 CRM		**WT-SS-2**						
Potassium (K)			122.2		%		70-130	25-OCT-21
Selenium (Se)			0.14		mg/kg		0-0.34	25-OCT-21
Silver (Ag)			105.6		%		70-130	25-OCT-21
Sodium (Na)			115.6		%		70-130	25-OCT-21
Strontium (Sr)			115.8		%		70-130	25-OCT-21
Thallium (Tl)			0.078		mg/kg		0.029-0.129	25-OCT-21
Tin (Sn)			107.1		%		70-130	25-OCT-21
Titanium (Ti)			111.6		%		70-130	25-OCT-21
Uranium (U)			108.1		%		70-130	25-OCT-21
Vanadium (V)			111.9		%		70-130	25-OCT-21
Zinc (Zn)			109.2		%		70-130	25-OCT-21
Zirconium (Zr)			115.5		%		70-130	25-OCT-21
WG3644943-6 DUP		**WG3644943-5**						
Aluminum (Al)		10600	10700		ug/g	0.8	40	25-OCT-21
Antimony (Sb)		0.18	0.18		ug/g	0.4	30	25-OCT-21
Arsenic (As)		6.11	6.38		ug/g	4.3	30	25-OCT-21
Barium (Ba)		67.4	68.0		ug/g	0.8	40	25-OCT-21
Beryllium (Be)		0.50	0.53		ug/g	6.6	30	25-OCT-21
Bismuth (Bi)		<0.20	<0.20	RPD-NA	ug/g	N/A	30	25-OCT-21
Boron (B)		7.3	7.1		ug/g	3.1	30	25-OCT-21
Cadmium (Cd)		0.079	0.089		ug/g	12	30	25-OCT-21
Calcium (Ca)		3620	3710		ug/g	2.3	30	25-OCT-21
Chromium (Cr)		16.7	16.1		ug/g	4.1	30	25-OCT-21
Cobalt (Co)		7.29	7.49		ug/g	2.8	30	25-OCT-21
Copper (Cu)		27.2	28.7		ug/g	5.5	30	25-OCT-21
Iron (Fe)		23500	23800		ug/g	1.4	30	25-OCT-21
Lead (Pb)		9.62	9.82		ug/g	2.0	40	25-OCT-21
Lithium (Li)		17.0	17.7		ug/g	4.3	30	25-OCT-21
Magnesium (Mg)		3300	3350		ug/g	1.6	30	25-OCT-21
Manganese (Mn)		486	481		ug/g	0.9	30	25-OCT-21
Molybdenum (Mo)		0.58	0.59		ug/g	1.9	40	25-OCT-21
Nickel (Ni)		14.3	14.7		ug/g	2.4	30	25-OCT-21
Phosphorus (P)		844	800		ug/g	5.4	30	25-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5628680								
WG3644943-6 DUP		**WG3644943-5**						
Potassium (K)		1670	1640		ug/g	2.0	40	25-OCT-21
Selenium (Se)		<0.20	<0.20	RPD-NA	ug/g	N/A	30	25-OCT-21
Silver (Ag)		<0.10	<0.10	RPD-NA	ug/g	N/A	40	25-OCT-21
Sodium (Na)		103	103		ug/g	0.5	40	25-OCT-21
Strontium (Sr)		23.0	22.3		ug/g	3.0	40	25-OCT-21
Sulfur (S)		<1000	<1000	RPD-NA	ug/g	N/A	30	25-OCT-21
Thallium (Tl)		0.066	0.069		ug/g	3.5	30	25-OCT-21
Tin (Sn)		<2.0	<2.0	RPD-NA	ug/g	N/A	40	25-OCT-21
Titanium (Ti)		199	167		ug/g	18	40	25-OCT-21
Tungsten (W)		<0.50	<0.50	RPD-NA	ug/g	N/A	30	25-OCT-21
Uranium (U)		0.545	0.521		ug/g	4.5	30	25-OCT-21
Vanadium (V)		33.6	35.1		ug/g	4.4	30	25-OCT-21
Zinc (Zn)		48.3	50.8		ug/g	5.0	30	25-OCT-21
Zirconium (Zr)		3.0	2.7		ug/g	8.0	30	25-OCT-21
WG3644943-4 LCS								
Aluminum (Al)			95.1		%		80-120	25-OCT-21
Antimony (Sb)			100.2		%		80-120	25-OCT-21
Arsenic (As)			103.0		%		80-120	25-OCT-21
Barium (Ba)			104.6		%		80-120	25-OCT-21
Beryllium (Be)			94.6		%		80-120	25-OCT-21
Bismuth (Bi)			100.8		%		80-120	25-OCT-21
Boron (B)			89.9		%		80-120	25-OCT-21
Cadmium (Cd)			96.0		%		80-120	25-OCT-21
Calcium (Ca)			98.2		%		80-120	25-OCT-21
Chromium (Cr)			99.0		%		80-120	25-OCT-21
Cobalt (Co)			99.1		%		80-120	25-OCT-21
Copper (Cu)			96.1		%		80-120	25-OCT-21
Iron (Fe)			97.2		%		80-120	25-OCT-21
Lead (Pb)			101.0		%		80-120	25-OCT-21
Lithium (Li)			85.3		%		80-120	25-OCT-21
Magnesium (Mg)			102.0		%		80-120	25-OCT-21
Manganese (Mn)			98.1		%		80-120	25-OCT-21
Molybdenum (Mo)			99.2		%		80-120	25-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5628680								
WG3644943-4 LCS								
Nickel (Ni)			97.1		%		80-120	25-OCT-21
Phosphorus (P)			103.0		%		80-120	25-OCT-21
Potassium (K)			104.0		%		80-120	25-OCT-21
Selenium (Se)			95.2		%		80-120	25-OCT-21
Silver (Ag)			90.1		%		80-120	25-OCT-21
Sodium (Na)			96.3		%		80-120	25-OCT-21
Strontium (Sr)			102.4		%		80-120	25-OCT-21
Sulfur (S)			96.7		%		80-120	25-OCT-21
Thallium (Tl)			101.3		%		80-120	25-OCT-21
Tin (Sn)			97.5		%		80-120	25-OCT-21
Titanium (Ti)			98.6		%		80-120	25-OCT-21
Tungsten (W)			106.5		%		80-120	25-OCT-21
Uranium (U)			100.7		%		80-120	25-OCT-21
Vanadium (V)			100.9		%		80-120	25-OCT-21
Zinc (Zn)			94.4		%		80-120	25-OCT-21
Zirconium (Zr)			96.8		%		80-120	25-OCT-21
WG3644943-1 MB								
Aluminum (Al)			<50		mg/kg		50	25-OCT-21
Antimony (Sb)			<0.10		mg/kg		0.1	25-OCT-21
Arsenic (As)			<0.10		mg/kg		0.1	25-OCT-21
Barium (Ba)			<0.50		mg/kg		0.5	25-OCT-21
Beryllium (Be)			<0.10		mg/kg		0.1	25-OCT-21
Bismuth (Bi)			<0.20		mg/kg		0.2	25-OCT-21
Boron (B)			<5.0		mg/kg		5	25-OCT-21
Cadmium (Cd)			<0.020		mg/kg		0.02	25-OCT-21
Calcium (Ca)			<50		mg/kg		50	25-OCT-21
Chromium (Cr)			<0.50		mg/kg		0.5	25-OCT-21
Cobalt (Co)			<0.10		mg/kg		0.1	25-OCT-21
Copper (Cu)			<0.50		mg/kg		0.5	25-OCT-21
Iron (Fe)			<50		mg/kg		50	25-OCT-21
Lead (Pb)			<0.50		mg/kg		0.5	25-OCT-21
Lithium (Li)			<2.0		mg/kg		2	25-OCT-21
Magnesium (Mg)			<20		mg/kg		20	25-OCT-21
Manganese (Mn)			<1.0		mg/kg		1	25-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5628680								
WG3644943-1 MB								
Molybdenum (Mo)			<0.10		mg/kg		0.1	25-OCT-21
Nickel (Ni)			<0.50		mg/kg		0.5	25-OCT-21
Phosphorus (P)			<50		mg/kg		50	25-OCT-21
Potassium (K)			<100		mg/kg		100	25-OCT-21
Selenium (Se)			<0.20		mg/kg		0.2	25-OCT-21
Silver (Ag)			<0.10		mg/kg		0.1	25-OCT-21
Sodium (Na)			<50		mg/kg		50	25-OCT-21
Strontium (Sr)			<0.50		mg/kg		0.5	25-OCT-21
Sulfur (S)			<1000		mg/kg		1000	25-OCT-21
Thallium (Tl)			<0.050		mg/kg		0.05	25-OCT-21
Tin (Sn)			<2.0		mg/kg		2	25-OCT-21
Titanium (Ti)			<1.0		mg/kg		1	25-OCT-21
Tungsten (W)			<0.50		mg/kg		0.5	25-OCT-21
Uranium (U)			<0.050		mg/kg		0.05	25-OCT-21
Vanadium (V)			<0.20		mg/kg		0.2	25-OCT-21
Zinc (Zn)			<2.0		mg/kg		2	25-OCT-21
Zirconium (Zr)			<1.0		mg/kg		1	25-OCT-21
Batch R5631782								
WG3646804-2 CRM		**WT-SS-2**						
Aluminum (Al)			105.5		%		70-130	28-OCT-21
Antimony (Sb)			102.7		%		70-130	28-OCT-21
Arsenic (As)			98.7		%		70-130	28-OCT-21
Barium (Ba)			102.4		%		70-130	28-OCT-21
Beryllium (Be)			93.0		%		70-130	28-OCT-21
Bismuth (Bi)			0.14		mg/kg		0-0.34	28-OCT-21
Boron (B)			8.3		mg/kg		3.5-13.5	28-OCT-21
Cadmium (Cd)			103.7		%		70-130	28-OCT-21
Calcium (Ca)			102.4		%		70-130	28-OCT-21
Chromium (Cr)			96.3		%		70-130	28-OCT-21
Cobalt (Co)			99.5		%		70-130	28-OCT-21
Copper (Cu)			105.6		%		70-130	28-OCT-21
Iron (Fe)			100.2		%		70-130	28-OCT-21
Lead (Pb)			103.9		%		70-130	28-OCT-21
Lithium (Li)			91.2		%		70-130	28-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5631782								
WG3646804-2 CRM		**WT-SS-2**						
Magnesium (Mg)			101.5		%		70-130	28-OCT-21
Manganese (Mn)			101.9		%		70-130	28-OCT-21
Molybdenum (Mo)			106.8		%		70-130	28-OCT-21
Nickel (Ni)			100.6		%		70-130	28-OCT-21
Phosphorus (P)			98.1		%		70-130	28-OCT-21
Potassium (K)			99.3		%		70-130	28-OCT-21
Selenium (Se)			0.15		mg/kg		0-0.34	28-OCT-21
Silver (Ag)			82.9		%		70-130	28-OCT-21
Sodium (Na)			100.0		%		70-130	28-OCT-21
Strontium (Sr)			101.3		%		70-130	28-OCT-21
Thallium (Tl)			0.075		mg/kg		0.029-0.129	28-OCT-21
Tin (Sn)			98.3		%		70-130	28-OCT-21
Titanium (Ti)			98.1		%		70-130	28-OCT-21
Uranium (U)			96.7		%		70-130	28-OCT-21
Vanadium (V)			101.3		%		70-130	28-OCT-21
Zinc (Zn)			95.3		%		70-130	28-OCT-21
Zirconium (Zr)			103.0		%		70-130	28-OCT-21
WG3646804-6 DUP		**WG3646804-5**						
Aluminum (Al)		13100	13900		ug/g	6.1	40	28-OCT-21
Antimony (Sb)		0.23	0.24		ug/g	4.9	30	28-OCT-21
Arsenic (As)		6.53	7.10		ug/g	8.5	30	28-OCT-21
Barium (Ba)		59.4	66.1		ug/g	11	40	28-OCT-21
Beryllium (Be)		0.54	0.60		ug/g	10	30	28-OCT-21
Bismuth (Bi)		<0.20	<0.20	RPD-NA	ug/g	N/A	30	28-OCT-21
Boron (B)		9.9	10.1		ug/g	2.5	30	28-OCT-21
Cadmium (Cd)		0.145	0.154		ug/g	5.9	30	28-OCT-21
Calcium (Ca)		69500	72800		ug/g	4.6	30	28-OCT-21
Chromium (Cr)		18.3	19.2		ug/g	4.5	30	28-OCT-21
Cobalt (Co)		8.14	8.73		ug/g	7.0	30	28-OCT-21
Copper (Cu)		27.2	28.8		ug/g	5.7	30	28-OCT-21
Iron (Fe)		21900	23200		ug/g	5.6	30	28-OCT-21
Lead (Pb)		11.8	12.9		ug/g	9.4	40	28-OCT-21
Lithium (Li)		18.6	20.7		ug/g	11	30	28-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5631782								
WG3646804-6 DUP		**WG3646804-5**						
Magnesium (Mg)		27100	29800		ug/g	9.2	30	28-OCT-21
Manganese (Mn)		786	871		ug/g	10	30	28-OCT-21
Molybdenum (Mo)		0.59	0.62		ug/g	5.1	40	28-OCT-21
Nickel (Ni)		18.1	19.1		ug/g	5.3	30	28-OCT-21
Phosphorus (P)		607	657		ug/g	7.9	30	28-OCT-21
Potassium (K)		2120	2000		ug/g	5.8	40	28-OCT-21
Selenium (Se)		0.24	0.25		ug/g	4.4	30	28-OCT-21
Silver (Ag)		<0.10	<0.10	RPD-NA	ug/g	N/A	40	28-OCT-21
Sodium (Na)		156	161		ug/g	2.8	40	28-OCT-21
Strontium (Sr)		86.2	90.3		ug/g	4.6	40	28-OCT-21
Sulfur (S)		<1000	<1000	RPD-NA	ug/g	N/A	30	28-OCT-21
Thallium (Tl)		0.189	0.214		ug/g	12	30	28-OCT-21
Tin (Sn)		<2.0	<2.0	RPD-NA	ug/g	N/A	40	28-OCT-21
Titanium (Ti)		146	153		ug/g	4.9	40	28-OCT-21
Tungsten (W)		<0.50	<0.50	RPD-NA	ug/g	N/A	30	28-OCT-21
Uranium (U)		0.487	0.544		ug/g	11	30	28-OCT-21
Vanadium (V)		28.9	30.2		ug/g	4.2	30	28-OCT-21
Zinc (Zn)		81.4	87.3		ug/g	7.0	30	28-OCT-21
Zirconium (Zr)		3.1	3.3		ug/g	5.0	30	28-OCT-21
WG3646804-4 LCS								
Aluminum (Al)			99.2		%		80-120	28-OCT-21
Antimony (Sb)			100.8		%		80-120	28-OCT-21
Arsenic (As)			100.5		%		80-120	28-OCT-21
Barium (Ba)			98.9		%		80-120	28-OCT-21
Beryllium (Be)			90.3		%		80-120	28-OCT-21
Bismuth (Bi)			96.9		%		80-120	28-OCT-21
Boron (B)			90.0		%		80-120	28-OCT-21
Cadmium (Cd)			96.7		%		80-120	28-OCT-21
Calcium (Ca)			98.7		%		80-120	28-OCT-21
Chromium (Cr)			99.1		%		80-120	28-OCT-21
Cobalt (Co)			97.2		%		80-120	28-OCT-21
Copper (Cu)			97.9		%		80-120	28-OCT-21
Iron (Fe)			101.3		%		80-120	28-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5631782								
WG3646804-4 LCS								
Lead (Pb)			98.7		%		80-120	28-OCT-21
Lithium (Li)			88.4		%		80-120	28-OCT-21
Magnesium (Mg)			98.7		%		80-120	28-OCT-21
Manganese (Mn)			97.8		%		80-120	28-OCT-21
Molybdenum (Mo)			100.5		%		80-120	28-OCT-21
Nickel (Ni)			96.1		%		80-120	28-OCT-21
Phosphorus (P)			100.7		%		80-120	28-OCT-21
Potassium (K)			100.1		%		80-120	28-OCT-21
Selenium (Se)			99.5		%		80-120	28-OCT-21
Silver (Ag)			91.7		%		80-120	28-OCT-21
Sodium (Na)			96.6		%		80-120	28-OCT-21
Strontium (Sr)			99.2		%		80-120	28-OCT-21
Sulfur (S)			100.1		%		80-120	28-OCT-21
Thallium (Tl)			97.8		%		80-120	28-OCT-21
Tin (Sn)			97.2		%		80-120	28-OCT-21
Titanium (Ti)			97.1		%		80-120	28-OCT-21
Tungsten (W)			96.6		%		80-120	28-OCT-21
Uranium (U)			99.1		%		80-120	28-OCT-21
Vanadium (V)			102.6		%		80-120	28-OCT-21
Zinc (Zn)			91.9		%		80-120	28-OCT-21
Zirconium (Zr)			96.4		%		80-120	28-OCT-21
WG3646804-1 MB								
Aluminum (Al)			<50		mg/kg		50	28-OCT-21
Antimony (Sb)			<0.10		mg/kg		0.1	28-OCT-21
Arsenic (As)			<0.10		mg/kg		0.1	28-OCT-21
Barium (Ba)			<0.50		mg/kg		0.5	28-OCT-21
Beryllium (Be)			<0.10		mg/kg		0.1	28-OCT-21
Bismuth (Bi)			<0.20		mg/kg		0.2	28-OCT-21
Boron (B)			<5.0		mg/kg		5	28-OCT-21
Cadmium (Cd)			<0.020		mg/kg		0.02	28-OCT-21
Calcium (Ca)			<50		mg/kg		50	28-OCT-21
Chromium (Cr)			<0.50		mg/kg		0.5	28-OCT-21
Cobalt (Co)			<0.10		mg/kg		0.1	28-OCT-21
Copper (Cu)			<0.50		mg/kg		0.5	28-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5631782								
WG3646804-1 MB								
Iron (Fe)			<50		mg/kg		50	28-OCT-21
Lead (Pb)			<0.50		mg/kg		0.5	28-OCT-21
Lithium (Li)			<2.0		mg/kg		2	28-OCT-21
Magnesium (Mg)			<20		mg/kg		20	28-OCT-21
Manganese (Mn)			<1.0		mg/kg		1	28-OCT-21
Molybdenum (Mo)			<0.10		mg/kg		0.1	28-OCT-21
Nickel (Ni)			<0.50		mg/kg		0.5	28-OCT-21
Phosphorus (P)			<50		mg/kg		50	28-OCT-21
Potassium (K)			<100		mg/kg		100	28-OCT-21
Selenium (Se)			<0.20		mg/kg		0.2	28-OCT-21
Silver (Ag)			<0.10		mg/kg		0.1	28-OCT-21
Sodium (Na)			<50		mg/kg		50	28-OCT-21
Strontium (Sr)			<0.50		mg/kg		0.5	28-OCT-21
Sulfur (S)			<1000		mg/kg		1000	28-OCT-21
Thallium (Tl)			<0.050		mg/kg		0.05	28-OCT-21
Tin (Sn)			<2.0		mg/kg		2	28-OCT-21
Titanium (Ti)			<1.0		mg/kg		1	28-OCT-21
Tungsten (W)			<0.50		mg/kg		0.5	28-OCT-21
Uranium (U)			<0.050		mg/kg		0.05	28-OCT-21
Vanadium (V)			<0.20		mg/kg		0.2	28-OCT-21
Zinc (Zn)			<2.0		mg/kg		2	28-OCT-21
Zirconium (Zr)			<1.0		mg/kg		1	28-OCT-21
Batch R5634400								
WG3649841-2 CRM		**WT-SS-2**						
Aluminum (Al)			93.2		%		70-130	01-NOV-21
Antimony (Sb)			99.7		%		70-130	01-NOV-21
Arsenic (As)			103.9		%		70-130	01-NOV-21
Barium (Ba)			107.1		%		70-130	01-NOV-21
Beryllium (Be)			93.4		%		70-130	01-NOV-21
Bismuth (Bi)			0.14		mg/kg		0-0.34	01-NOV-21
Boron (B)			7.3		mg/kg		3.5-13.5	01-NOV-21
Cadmium (Cd)			101.7		%		70-130	01-NOV-21
Calcium (Ca)			99.4		%		70-130	01-NOV-21
Chromium (Cr)			96.6		%		70-130	01-NOV-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5634400								
WG3649841-2 CRM		**WT-SS-2**						
Cobalt (Co)			102.8		%		70-130	01-NOV-21
Copper (Cu)			103.8		%		70-130	01-NOV-21
Iron (Fe)			101.7		%		70-130	01-NOV-21
Lead (Pb)			105.8		%		70-130	01-NOV-21
Lithium (Li)			86.9		%		70-130	01-NOV-21
Magnesium (Mg)			102.6		%		70-130	01-NOV-21
Manganese (Mn)			99.4		%		70-130	01-NOV-21
Molybdenum (Mo)			100.6		%		70-130	01-NOV-21
Nickel (Ni)			104.2		%		70-130	01-NOV-21
Phosphorus (P)			99.5		%		70-130	01-NOV-21
Potassium (K)			96.9		%		70-130	01-NOV-21
Selenium (Se)			0.12		mg/kg		0-0.34	01-NOV-21
Silver (Ag)			91.7		%		70-130	01-NOV-21
Sodium (Na)			107.1		%		70-130	01-NOV-21
Strontium (Sr)			103.4		%		70-130	01-NOV-21
Thallium (Tl)			0.070		mg/kg		0.029-0.129	01-NOV-21
Tin (Sn)			98.5		%		70-130	01-NOV-21
Titanium (Ti)			90.7		%		70-130	01-NOV-21
Uranium (U)			90.2		%		70-130	01-NOV-21
Vanadium (V)			97.2		%		70-130	01-NOV-21
Zinc (Zn)			96.4		%		70-130	01-NOV-21
Zirconium (Zr)			100.9		%		70-130	01-NOV-21
WG3649841-6 DUP		**WG3649841-5**						
Aluminum (Al)		14600	14000		ug/g	4.2	40	01-NOV-21
Antimony (Sb)		0.16	0.16		ug/g	2.8	30	01-NOV-21
Arsenic (As)		5.25	5.11		ug/g	2.6	30	01-NOV-21
Barium (Ba)		79.9	78.8		ug/g	1.3	40	01-NOV-21
Beryllium (Be)		0.57	0.58		ug/g	1.5	30	01-NOV-21
Bismuth (Bi)		<0.20	<0.20	RPD-NA	ug/g	N/A	30	01-NOV-21
Boron (B)		17.2	17.0		ug/g	0.8	30	01-NOV-21
Cadmium (Cd)		0.079	0.078		ug/g	1.2	30	01-NOV-21
Calcium (Ca)		106000	102000		ug/g	3.4	30	01-NOV-21
Chromium (Cr)		27.8	26.7		ug/g	4.1	30	01-NOV-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5634400								
WG3649841-6 DUP		**WG3649841-5**						
Cobalt (Co)		10.4	10.2		ug/g	2.0	30	01-NOV-21
Copper (Cu)		18.2	17.8		ug/g	2.2	30	01-NOV-21
Iron (Fe)		21100	20300		ug/g	4.0	30	01-NOV-21
Lead (Pb)		7.51	7.42		ug/g	1.3	40	01-NOV-21
Lithium (Li)		23.6	22.6		ug/g	4.2	30	01-NOV-21
Magnesium (Mg)		31700	30800		ug/g	2.9	30	01-NOV-21
Manganese (Mn)		468	486		ug/g	3.8	30	01-NOV-21
Molybdenum (Mo)		0.92	0.92		ug/g	0.1	40	01-NOV-21
Nickel (Ni)		29.1	28.2		ug/g	3.2	30	01-NOV-21
Phosphorus (P)		381	371		ug/g	2.8	30	01-NOV-21
Potassium (K)		2920	2790		ug/g	4.7	40	01-NOV-21
Selenium (Se)		<0.20	<0.20	RPD-NA	ug/g	N/A	30	01-NOV-21
Silver (Ag)		<0.10	<0.10	RPD-NA	ug/g	N/A	40	01-NOV-21
Sodium (Na)		195	188		ug/g	3.5	40	01-NOV-21
Strontium (Sr)		101	101		ug/g	0.7	40	01-NOV-21
Sulfur (S)		<1000	<1000	RPD-NA	ug/g	N/A	30	01-NOV-21
Thallium (Tl)		0.156	0.154		ug/g	1.3	30	01-NOV-21
Tin (Sn)		<2.0	<2.0	RPD-NA	ug/g	N/A	40	01-NOV-21
Titanium (Ti)		258	263		ug/g	2.2	40	01-NOV-21
Tungsten (W)		<0.50	<0.50	RPD-NA	ug/g	N/A	30	01-NOV-21
Uranium (U)		0.699	0.716		ug/g	2.3	30	01-NOV-21
Vanadium (V)		30.4	29.1		ug/g	4.6	30	01-NOV-21
Zinc (Zn)		39.5	39.5		ug/g	0.2	30	01-NOV-21
Zirconium (Zr)		10.8	11.3		ug/g	4.2	30	01-NOV-21
WG3649841-4 LCS								
Aluminum (Al)			104.2		%		80-120	01-NOV-21
Antimony (Sb)			111.7		%		80-120	01-NOV-21
Arsenic (As)			111.6		%		80-120	01-NOV-21
Barium (Ba)			104.6		%		80-120	01-NOV-21
Beryllium (Be)			100.1		%		80-120	01-NOV-21
Bismuth (Bi)			112.8		%		80-120	01-NOV-21
Boron (B)			94.8		%		80-120	01-NOV-21
Cadmium (Cd)			104.3		%		80-120	01-NOV-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5634400								
WG3649841-4 LCS								
Calcium (Ca)			104.0		%		80-120	01-NOV-21
Chromium (Cr)			109.3		%		80-120	01-NOV-21
Cobalt (Co)			109.4		%		80-120	01-NOV-21
Copper (Cu)			106.2		%		80-120	01-NOV-21
Iron (Fe)			108.0		%		80-120	01-NOV-21
Lead (Pb)			111.7		%		80-120	01-NOV-21
Lithium (Li)			96.2		%		80-120	01-NOV-21
Magnesium (Mg)			111.6		%		80-120	01-NOV-21
Manganese (Mn)			109.3		%		80-120	01-NOV-21
Molybdenum (Mo)			110.4		%		80-120	01-NOV-21
Nickel (Ni)			107.8		%		80-120	01-NOV-21
Phosphorus (P)			110.2		%		80-120	01-NOV-21
Potassium (K)			111.9		%		80-120	01-NOV-21
Selenium (Se)			113.3		%		80-120	01-NOV-21
Silver (Ag)			101.6		%		80-120	01-NOV-21
Sodium (Na)			115.5		%		80-120	01-NOV-21
Strontium (Sr)			114.4		%		80-120	01-NOV-21
Sulfur (S)			105.5		%		80-120	01-NOV-21
Thallium (Tl)			110.0		%		80-120	01-NOV-21
Tin (Sn)			104.3		%		80-120	01-NOV-21
Titanium (Ti)			107.0		%		80-120	01-NOV-21
Tungsten (W)			106.4		%		80-120	01-NOV-21
Uranium (U)			102.2		%		80-120	01-NOV-21
Vanadium (V)			110.9		%		80-120	01-NOV-21
Zinc (Zn)			102.2		%		80-120	01-NOV-21
Zirconium (Zr)			111.0		%		80-120	01-NOV-21
WG3649841-1 MB								
Aluminum (Al)			<50		mg/kg		50	01-NOV-21
Antimony (Sb)			<0.10		mg/kg		0.1	01-NOV-21
Arsenic (As)			<0.10		mg/kg		0.1	01-NOV-21
Barium (Ba)			<0.50		mg/kg		0.5	01-NOV-21
Beryllium (Be)			<0.10		mg/kg		0.1	01-NOV-21
Bismuth (Bi)			<0.20		mg/kg		0.2	01-NOV-21
Boron (B)			<5.0		mg/kg		5	01-NOV-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5634400								
WG3649841-1 MB								
Cadmium (Cd)			<0.020		mg/kg		0.02	01-NOV-21
Calcium (Ca)			<50		mg/kg		50	01-NOV-21
Chromium (Cr)			<0.50		mg/kg		0.5	01-NOV-21
Cobalt (Co)			<0.10		mg/kg		0.1	01-NOV-21
Copper (Cu)			<0.50		mg/kg		0.5	01-NOV-21
Iron (Fe)			<50		mg/kg		50	01-NOV-21
Lead (Pb)			<0.50		mg/kg		0.5	01-NOV-21
Lithium (Li)			<2.0		mg/kg		2	01-NOV-21
Magnesium (Mg)			<20		mg/kg		20	01-NOV-21
Manganese (Mn)			<1.0		mg/kg		1	01-NOV-21
Molybdenum (Mo)			<0.10		mg/kg		0.1	01-NOV-21
Nickel (Ni)			<0.50		mg/kg		0.5	01-NOV-21
Phosphorus (P)			<50		mg/kg		50	01-NOV-21
Potassium (K)			<100		mg/kg		100	01-NOV-21
Selenium (Se)			<0.20		mg/kg		0.2	01-NOV-21
Silver (Ag)			<0.10		mg/kg		0.1	01-NOV-21
Sodium (Na)			<50		mg/kg		50	01-NOV-21
Strontium (Sr)			<0.50		mg/kg		0.5	01-NOV-21
Sulfur (S)			<1000		mg/kg		1000	01-NOV-21
Thallium (Tl)			<0.050		mg/kg		0.05	01-NOV-21
Tin (Sn)			<2.0		mg/kg		2	01-NOV-21
Titanium (Ti)			<1.0		mg/kg		1	01-NOV-21
Tungsten (W)			<0.50		mg/kg		0.5	01-NOV-21
Uranium (U)			<0.050		mg/kg		0.05	01-NOV-21
Vanadium (V)			<0.20		mg/kg		0.2	01-NOV-21
Zinc (Zn)			<2.0		mg/kg		2	01-NOV-21
Zirconium (Zr)			<1.0		mg/kg		1	01-NOV-21
MOISTURE-WT	**Soil**							
Batch R5617676								
WG3637635-3 DUP		**L2650175-18**						
% Moisture		48.9	46.5		%	5.1	20	15-OCT-21
WG3637635-2 LCS								
% Moisture			99.6		%		90-110	15-OCT-21
WG3637635-1 MB								

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MOISTURE-WT	**Soil**							
Batch R5617676								
WG3637635-1 MB								
% Moisture			<0.25		%		0.25	15-OCT-21
Batch R5617685								
WG3637718-3 DUP		**L2650176-14**						
% Moisture		76.8	76.6		%	0.3	20	15-OCT-21
WG3637718-2 LCS								
% Moisture			100.8		%		90-110	15-OCT-21
WG3637718-1 MB								
% Moisture			<0.25		%		0.25	15-OCT-21
Batch R5617860								
WG3637931-3 DUP		**L2651175-1**						
% Moisture		7.93	8.18		%	3.1	20	15-OCT-21
WG3637931-2 LCS								
% Moisture			100.6		%		90-110	15-OCT-21
WG3637931-1 MB								
% Moisture			<0.25		%		0.25	15-OCT-21
Batch R5621038								
WG3637840-3 DUP		**L2650176-13**						
% Moisture		74.7	72.8		%	2.6	20	15-OCT-21
WG3637840-2 LCS								
% Moisture			99.7		%		90-110	15-OCT-21
WG3637840-1 MB								
% Moisture			<0.25		%		0.25	15-OCT-21
Batch R5623898								
WG3639481-3 DUP		**L2645184-13**						
% Moisture		10.7	10.8		%	1.4	20	19-OCT-21
WG3639481-2 LCS								
% Moisture			97.3		%		90-110	19-OCT-21
WG3639481-1 MB								
% Moisture			<0.25		%		0.25	19-OCT-21
Batch R5626585								
WG3643119-2 LCS								
% Moisture			99.9		%		90-110	22-OCT-21
WG3643119-1 MB								
% Moisture			<0.25		%		0.25	22-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MOISTURE-WT	**Soil**							
Batch R5629225								
WG3645860-3 DUP		**L2650176-9**						
% Moisture		70.9	69.9		%	1.5	20	27-OCT-21
WG3645860-2 LCS								
% Moisture			100.0		%		90-110	27-OCT-21
WG3645860-1 MB								
% Moisture			<0.25		%		0.25	27-OCT-21
Batch R5632330								
WG3648179-3 DUP		**L2656842-4**						
% Moisture		5.78	5.58		%	3.6	20	30-OCT-21
WG3648179-2 LCS								
% Moisture			99.3		%		90-110	30-OCT-21
WG3648179-1 MB								
% Moisture			<0.25		%		0.25	30-OCT-21
PAH-CCME-SQGL-WT	**Soil**							
Batch R5625547								
WG3640266-3 DUP		**WG3640266-5**						
1-Methylnaphthalene		0.050	0.047		ug/g	7.3	50	20-OCT-21
2-Methylnaphthalene		0.070	0.064		ug/g	8.6	50	20-OCT-21
Acenaphthene		0.091	0.083		ug/g	9.4	50	20-OCT-21
Acenaphthylene		0.775	0.753		ug/g	3.0	50	20-OCT-21
Acridine		0.075	0.074		ug/g	1.5	50	20-OCT-21
Anthracene		0.319	0.342		ug/g	6.7	50	20-OCT-21
Benzo(a)anthracene		0.956	0.941		ug/g	1.5	50	20-OCT-21
Benzo(a)pyrene		1.47	1.42		ug/g	3.8	50	20-OCT-21
Benzo(b&j)fluoranthene		1.32	1.33		ug/g	1.0	50	20-OCT-21
Benzo(g,h,i)perylene		0.787	0.767		ug/g	2.6	50	20-OCT-21
Benzo(k)fluoranthene		0.480	0.473		ug/g	1.4	50	20-OCT-21
Chrysene		1.10	1.14		ug/g	3.1	50	20-OCT-21
Dibenz(a,h)anthracene		0.205	0.200		ug/g	2.6	50	20-OCT-21
Fluoroanthene		1.07	1.14		ug/g	6.0	50	20-OCT-21
Fluorene		0.135	0.130		ug/g	3.6	50	20-OCT-21
Indeno(1,2,3-cd)pyrene		0.752	0.739		ug/g	1.8	50	20-OCT-21
Naphthalene		0.075	0.065		ug/g	14	50	20-OCT-21
Phenanthrene		0.468	0.491		ug/g	4.9	50	20-OCT-21
Pyrene		1.85	1.88		ug/g	1.6	50	20-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-CCME-SQGL-WT	**Soil**							
Batch R5625547								
WG3640266-3 DUP		**WG3640266-5**						
Quinoline		<0.02	0.010		ug/g	5.6	50	20-OCT-21
WG3640266-2 LCS								
1-Methylnaphthalene			97.4		%		50-140	20-OCT-21
2-Methylnaphthalene			92.3		%		50-140	20-OCT-21
Acenaphthene			90.5		%		50-140	20-OCT-21
Acenaphthylene			83.5		%		50-140	20-OCT-21
Acridine			87.9		%		50-140	20-OCT-21
Anthracene			81.6		%		50-140	20-OCT-21
Benzo(a)anthracene			92.0		%		50-140	20-OCT-21
Benzo(a)pyrene			82.2		%		50-140	20-OCT-21
Benzo(b&j)fluoranthene			94.9		%		50-150	20-OCT-21
Benzo(g,h,i)perylene			79.3		%		50-140	20-OCT-21
Benzo(k)fluoranthene			98.1		%		50-140	20-OCT-21
Chrysene			102.5		%		50-140	20-OCT-21
Dibenz(a,h)anthracene			86.5		%		50-140	20-OCT-21
Fluoroanthene			93.9		%		50-140	20-OCT-21
Fluorene			87.4		%		50-140	20-OCT-21
Indeno(1,2,3-cd)pyrene			82.6		%		50-140	20-OCT-21
Naphthalene			89.0		%		50-140	20-OCT-21
Phenanthrene			94.4		%		50-140	20-OCT-21
Pyrene			93.4		%		50-140	20-OCT-21
Quinoline			79.3		%		50-140	20-OCT-21
WG3640266-1 MB								
1-Methylnaphthalene			<0.0050		ug/g		0.005	20-OCT-21
2-Methylnaphthalene			<0.0050		ug/g		0.005	20-OCT-21
Acenaphthene			<0.0050		ug/g		0.005	20-OCT-21
Acenaphthylene			<0.0050		ug/g		0.005	20-OCT-21
Acridine			<0.010		ug/g		0.01	20-OCT-21
Anthracene			<0.0040		ug/g		0.004	20-OCT-21
Benzo(a)anthracene			<0.010		ug/g		0.01	20-OCT-21
Benzo(a)pyrene			<0.0050		ug/g		0.005	20-OCT-21
Benzo(b&j)fluoranthene			<0.010		ug/g		0.01	20-OCT-21
Benzo(g,h,i)perylene			<0.010		ug/g		0.01	20-OCT-21
Benzo(k)fluoranthene			<0.010		ug/g		0.01	20-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-CCME-SQGL-WT	**Soil**							
Batch R5625547								
WG3640266-1 MB								
Chrysene			<0.010		ug/g		0.01	20-OCT-21
Dibenz(a,h)anthracene			<0.0050		ug/g		0.005	20-OCT-21
Fluoroanthene			<0.0050		ug/g		0.005	20-OCT-21
Fluorene			<0.0050		ug/g		0.005	20-OCT-21
Indeno(1,2,3-cd)pyrene			<0.010		ug/g		0.01	20-OCT-21
Naphthalene			<0.0050		ug/g		0.005	20-OCT-21
Phenanthrene			<0.0050		ug/g		0.005	20-OCT-21
Pyrene			<0.0050		ug/g		0.005	20-OCT-21
Quinoline			<0.0050		ug/g		0.005	20-OCT-21
Surrogate: 2-Fluorobiphenyl			90.3		%		60-140	20-OCT-21
Surrogate: d14-Terphenyl			92.8		%		60-140	20-OCT-21
WG3640266-4 MS		**WG3640266-5**						
1-Methylnaphthalene			95.0		%		50-150	20-OCT-21
2-Methylnaphthalene			91.8		%		50-150	20-OCT-21
Acenaphthene			92.9		%		50-150	20-OCT-21
Acenaphthylene			52.1		%		50-150	20-OCT-21
Acridine			93.1		%		50-150	20-OCT-21
Anthracene			78.3		%		50-150	20-OCT-21
Benzo(a)anthracene			93.5		%		50-150	20-OCT-21
Benzo(a)pyrene			N/A	MS-B	%		-	20-OCT-21
Benzo(b&j)fluoranthene			N/A	MS-B	%		-	20-OCT-21
Benzo(g,h,i)perylene			49.7	MES	%		50-150	20-OCT-21
Benzo(k)fluoranthene			86.9		%		50-150	20-OCT-21
Chrysene			94.2		%		50-150	20-OCT-21
Dibenz(a,h)anthracene			63.1		%		50-150	20-OCT-21
Fluoroanthene			93.3		%		50-150	20-OCT-21
Fluorene			96.7		%		50-150	20-OCT-21
Indeno(1,2,3-cd)pyrene			63.0		%		50-150	20-OCT-21
Naphthalene			86.8		%		50-150	20-OCT-21
Phenanthrene			94.0		%		50-150	20-OCT-21
Pyrene			N/A	MS-B	%		-	20-OCT-21
Quinoline			83.6		%		50-150	20-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-CCME-SQGL-WT	**Soil**							
Batch R5628437								
WG3643416-12 DUP		**WG3643416-14**						
1-Methylnaphthalene		1.94	1.89		ug/g	2.6	50	26-OCT-21
2-Methylnaphthalene		1.94	1.83		ug/g	5.7	50	26-OCT-21
Acenaphthene		0.433	0.448		ug/g	3.4	50	26-OCT-21
Acenaphthylene		0.0581	0.0528		ug/g	9.5	50	26-OCT-21
Acridine		0.399	0.436		ug/g	8.9	50	26-OCT-21
Anthracene		<0.0620	<0.0510		ug/g	18	50	26-OCT-21
Benzo(a)anthracene		<0.010	<0.010	RPD-NA	ug/g	N/A	50	26-OCT-21
Benzo(a)pyrene		<0.0050	<0.0050	RPD-NA	ug/g	N/A	50	26-OCT-21
Benzo(b&j)fluoranthene		<0.010	<0.010	RPD-NA	ug/g	N/A	50	26-OCT-21
Benzo(g,h,i)perylene		<0.010	<0.010	RPD-NA	ug/g	N/A	50	26-OCT-21
Benzo(k)fluoranthene		<0.010	<0.010	RPD-NA	ug/g	N/A	50	26-OCT-21
Chrysene		0.012	0.013		ug/g	5.9	50	26-OCT-21
Dibenz(a,h)anthracene		<0.0050	<0.0050	RPD-NA	ug/g	N/A	50	26-OCT-21
Fluoroanthene		0.0133	0.0148		ug/g	11	50	26-OCT-21
Fluorene		0.540	0.551		ug/g	2.1	50	26-OCT-21
Indeno(1,2,3-cd)pyrene		<0.010	<0.010	RPD-NA	ug/g	N/A	50	26-OCT-21
Naphthalene		0.169	0.165		ug/g	2.6	50	26-OCT-21
Phenanthrene		0.567	0.624		ug/g	9.6	50	26-OCT-21
Pyrene		0.0463	0.0542		ug/g	16	50	26-OCT-21
Quinoline		0.0979	0.0908		ug/g	7.6	50	26-OCT-21
WG3643416-11 LCS								
1-Methylnaphthalene			100.5		%		50-140	26-OCT-21
2-Methylnaphthalene			93.0		%		50-140	26-OCT-21
Acenaphthene			91.3		%		50-140	26-OCT-21
Acenaphthylene			87.2		%		50-140	26-OCT-21
Acridine			89.5		%		50-140	26-OCT-21
Anthracene			85.2		%		50-140	26-OCT-21
Benzo(a)anthracene			89.5		%		50-140	26-OCT-21
Benzo(a)pyrene			84.2		%		50-140	26-OCT-21
Benzo(b&j)fluoranthene			80.8		%		50-150	26-OCT-21
Benzo(g,h,i)perylene			76.8		%		50-140	26-OCT-21
Benzo(k)fluoranthene			110.1		%		50-140	26-OCT-21
Chrysene			107.9		%		50-140	26-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-CCME-SQGL-WT	**Soil**							
Batch R5628437								
WG3643416-11 LCS								
Dibenz(a,h)anthracene			87.4		%		50-140	26-OCT-21
Fluoroanthene			94.9		%		50-140	26-OCT-21
Fluorene			84.3		%		50-140	26-OCT-21
Indeno(1,2,3-cd)pyrene			74.7		%		50-140	26-OCT-21
Naphthalene			92.2		%		50-140	26-OCT-21
Phenanthrene			93.6		%		50-140	26-OCT-21
Pyrene			95.3		%		50-140	26-OCT-21
Quinoline			74.5		%		50-140	26-OCT-21
WG3643416-10 MB								
1-Methylnaphthalene			<0.0050		ug/g		0.005	26-OCT-21
2-Methylnaphthalene			<0.0050		ug/g		0.005	26-OCT-21
Acenaphthene			<0.0050		ug/g		0.005	26-OCT-21
Acenaphthylene			<0.0050		ug/g		0.005	26-OCT-21
Acridine			<0.010		ug/g		0.01	26-OCT-21
Anthracene			<0.0040		ug/g		0.004	26-OCT-21
Benzo(a)anthracene			<0.010		ug/g		0.01	26-OCT-21
Benzo(a)pyrene			<0.0050		ug/g		0.005	26-OCT-21
Benzo(b&j)fluoranthene			<0.010		ug/g		0.01	26-OCT-21
Benzo(g,h,i)perylene			<0.010		ug/g		0.01	26-OCT-21
Benzo(k)fluoranthene			<0.010		ug/g		0.01	26-OCT-21
Chrysene			<0.010		ug/g		0.01	26-OCT-21
Dibenz(a,h)anthracene			<0.0050		ug/g		0.005	26-OCT-21
Fluoroanthene			<0.0050		ug/g		0.005	26-OCT-21
Fluorene			<0.0050		ug/g		0.005	26-OCT-21
Indeno(1,2,3-cd)pyrene			<0.010		ug/g		0.01	26-OCT-21
Naphthalene			<0.0050		ug/g		0.005	26-OCT-21
Phenanthrene			<0.0050		ug/g		0.005	26-OCT-21
Pyrene			<0.0050		ug/g		0.005	26-OCT-21
Quinoline			<0.0050		ug/g		0.005	26-OCT-21
Surrogate: 2-Fluorobiphenyl			88.0		%		60-140	26-OCT-21
Surrogate: d14-Terphenyl			91.5		%		60-140	26-OCT-21
WG3643416-13 MS		**WG3643416-14**						
1-Methylnaphthalene			N/A	MS-B	%		-	26-OCT-21
2-Methylnaphthalene			N/A	MS-B	%		-	26-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-CCME-SQGL-WT	**Soil**							
Batch R5628437								
WG3643416-13 MS		**WG3643416-14**						
Acenaphthene			94.6		%		50-150	26-OCT-21
Acenaphthylene			88.2		%		50-150	26-OCT-21
Acridine			118.6		%		50-150	26-OCT-21
Anthracene			70.6		%		50-150	26-OCT-21
Benzo(a)anthracene			100.2		%		50-150	26-OCT-21
Benzo(a)pyrene			84.0		%		50-150	26-OCT-21
Benzo(b&j)fluoranthene			93.7		%		50-150	26-OCT-21
Benzo(g,h,i)perylene			80.0		%		50-150	26-OCT-21
Benzo(k)fluoranthene			96.1		%		50-150	26-OCT-21
Chrysene			101.1		%		50-150	26-OCT-21
Dibenz(a,h)anthracene			90.9		%		50-150	26-OCT-21
Fluoroanthene			97.2		%		50-150	26-OCT-21
Fluorene			N/A	MS-B	%		-	26-OCT-21
Indeno(1,2,3-cd)pyrene			79.6		%		50-150	26-OCT-21
Naphthalene			81.9		%		50-150	26-OCT-21
Phenanthrene			N/A	MS-B	%		-	26-OCT-21
Pyrene			103.2		%		50-150	26-OCT-21
Quinoline			54.8		%		50-150	26-OCT-21
Batch R5629651								
WG3646251-3 DUP		**WG3646251-5**						
1-Methylnaphthalene		0.0303	0.0327		ug/g	7.8	50	27-OCT-21
2-Methylnaphthalene		0.0223	0.0242		ug/g	8.2	50	27-OCT-21
Acenaphthene		0.0715	0.0738		ug/g	3.1	50	27-OCT-21
Acenaphthylene		0.0095	0.0072		ug/g	28	50	27-OCT-21
Acridine		<0.07	0.059		ug/g	0.9	50	27-OCT-21
Anthracene		0.295	0.328		ug/g	11	50	27-OCT-21
Benzo(a)anthracene		0.415	0.424		ug/g	2.2	50	27-OCT-21
Benzo(a)pyrene		0.270	0.275		ug/g	2.1	50	27-OCT-21
Benzo(b&j)fluoranthene		0.353	0.360		ug/g	2.1	50	27-OCT-21
Benzo(g,h,i)perylene		0.143	0.145		ug/g	1.1	50	27-OCT-21
Benzo(k)fluoranthene		0.141	0.137		ug/g	3.0	50	27-OCT-21
Chrysene		0.280	0.285		ug/g	1.5	50	27-OCT-21
Dibenz(a,h)anthracene		0.0453	0.0454		ug/g	0.2	50	27-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-CCME-SQGL-WT	**Soil**							
Batch R5629651								
WG3646251-3 DUP		**WG3646251-5**						
Fluoroanthene		0.890	0.916		ug/g	2.9	50	27-OCT-21
Fluorene		0.0963	0.112		ug/g	15	50	27-OCT-21
Indeno(1,2,3-cd)pyrene		0.178	0.174		ug/g	2.6	50	27-OCT-21
Naphthalene		0.0361	0.0362		ug/g	0.4	50	27-OCT-21
Phenanthrene		0.779	0.847		ug/g	8.3	50	27-OCT-21
Pyrene		0.664	0.677		ug/g	1.8	50	27-OCT-21
Quinoline		<0.0050	<0.0050	RPD-NA	ug/g	N/A	50	27-OCT-21
WG3646251-2 LCS								
1-Methylnaphthalene			99.98		%		50-140	27-OCT-21
2-Methylnaphthalene			90.1		%		50-140	27-OCT-21
Acenaphthene			93.1		%		50-140	27-OCT-21
Acenaphthylene			83.9		%		50-140	27-OCT-21
Acridine			85.3		%		50-140	27-OCT-21
Anthracene			86.1		%		50-140	27-OCT-21
Benzo(a)anthracene			86.5		%		50-140	27-OCT-21
Benzo(a)pyrene			80.2		%		50-140	27-OCT-21
Benzo(b&j)fluoranthene			84.6		%		50-150	27-OCT-21
Benzo(g,h,i)perylene			89.8		%		50-140	27-OCT-21
Benzo(k)fluoranthene			99.0		%		50-140	27-OCT-21
Chrysene			109.7		%		50-140	27-OCT-21
Dibenz(a,h)anthracene			88.6		%		50-140	27-OCT-21
Fluoroanthene			96.4		%		50-140	27-OCT-21
Fluorene			84.6		%		50-140	27-OCT-21
Indeno(1,2,3-cd)pyrene			79.0		%		50-140	27-OCT-21
Naphthalene			92.3		%		50-140	27-OCT-21
Phenanthrene			94.6		%		50-140	27-OCT-21
Pyrene			97.2		%		50-140	27-OCT-21
Quinoline			71.9		%		50-140	27-OCT-21
WG3646251-1 MB								
1-Methylnaphthalene			<0.0050		ug/g		0.005	27-OCT-21
2-Methylnaphthalene			<0.0050		ug/g		0.005	27-OCT-21
Acenaphthene			<0.0050		ug/g		0.005	27-OCT-21
Acenaphthylene			<0.0050		ug/g		0.005	27-OCT-21
Acridine			<0.010		ug/g		0.01	27-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-CCME-SQGL-WT	**Soil**							
Batch R5629651								
WG3646251-1 MB								
Anthracene			<0.0040		ug/g		0.004	27-OCT-21
Benzo(a)anthracene			<0.010		ug/g		0.01	27-OCT-21
Benzo(a)pyrene			<0.0050		ug/g		0.005	27-OCT-21
Benzo(b&j)fluoranthene			<0.010		ug/g		0.01	27-OCT-21
Benzo(g,h,i)perylene			<0.010		ug/g		0.01	27-OCT-21
Benzo(k)fluoranthene			<0.010		ug/g		0.01	27-OCT-21
Chrysene			<0.010		ug/g		0.01	27-OCT-21
Dibenz(a,h)anthracene			<0.0050		ug/g		0.005	27-OCT-21
Fluoroanthene			<0.0050		ug/g		0.005	27-OCT-21
Fluorene			<0.0050		ug/g		0.005	27-OCT-21
Indeno(1,2,3-cd)pyrene			<0.010		ug/g		0.01	27-OCT-21
Naphthalene			<0.0050		ug/g		0.005	27-OCT-21
Phenanthrene			<0.0050		ug/g		0.005	27-OCT-21
Pyrene			<0.0050		ug/g		0.005	27-OCT-21
Quinoline			<0.0050		ug/g		0.005	27-OCT-21
Surrogate: 2-Fluorobiphenyl			87.0		%		60-140	27-OCT-21
Surrogate: d14-Terphenyl			96.5		%		60-140	27-OCT-21
WG3646251-4 MS		**WG3646251-5**						
1-Methylnaphthalene			100.3		%		50-150	27-OCT-21
2-Methylnaphthalene			96.2		%		50-150	27-OCT-21
Acenaphthene			98.4		%		50-150	27-OCT-21
Acenaphthylene			102.4		%		50-150	27-OCT-21
Acridine			106.5		%		50-150	27-OCT-21
Anthracene			85.4		%		50-150	27-OCT-21
Benzo(a)anthracene			113.1		%		50-150	27-OCT-21
Benzo(a)pyrene			84.6		%		50-150	27-OCT-21
Benzo(b&j)fluoranthene			85.9		%		50-150	27-OCT-21
Benzo(g,h,i)perylene			81.1		%		50-150	27-OCT-21
Benzo(k)fluoranthene			88.1		%		50-150	27-OCT-21
Chrysene			100.2		%		50-150	27-OCT-21
Dibenz(a,h)anthracene			91.9		%		50-150	27-OCT-21
Fluoroanthene			N/A	MS-B	%		-	27-OCT-21
Fluorene			98.2		%		50-150	27-OCT-21
Indeno(1,2,3-cd)pyrene			100.5		%		50-150	27-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-CCME-SQGL-WT	**Soil**							
Batch R5629651								
WG3646251-4 MS		**WG3646251-5**						
Naphthalene			93.0		%		50-150	27-OCT-21
Phenanthrene			N/A	MS-B	%		-	27-OCT-21
Pyrene			N/A	MS-B	%		-	27-OCT-21
Quinoline			75.3		%		50-150	27-OCT-21
Batch R5634629								
WG3648225-3 DUP		**WG3648225-5**						
1-Methylnaphthalene		<0.0050	<0.0050	RPD-NA	ug/g	N/A	50	02-NOV-21
2-Methylnaphthalene		<0.0050	<0.0050	RPD-NA	ug/g	N/A	50	02-NOV-21
Acenaphthene		<0.0050	<0.0050	RPD-NA	ug/g	N/A	50	02-NOV-21
Acenaphthylene		<0.0050	<0.0050	RPD-NA	ug/g	N/A	50	02-NOV-21
Acridine		<0.010	<0.010	RPD-NA	ug/g	N/A	50	02-NOV-21
Anthracene		<0.0040	<0.0040	RPD-NA	ug/g	N/A	50	02-NOV-21
Benzo(a)anthracene		<0.010	<0.010	RPD-NA	ug/g	N/A	50	02-NOV-21
Benzo(a)pyrene		<0.0050	<0.0050	RPD-NA	ug/g	N/A	50	02-NOV-21
Benzo(b&j)fluoranthene		<0.010	<0.010	RPD-NA	ug/g	N/A	50	02-NOV-21
Benzo(g,h,i)perylene		<0.010	<0.010	RPD-NA	ug/g	N/A	50	02-NOV-21
Benzo(k)fluoranthene		<0.010	<0.010	RPD-NA	ug/g	N/A	50	02-NOV-21
Chrysene		<0.010	<0.010	RPD-NA	ug/g	N/A	50	02-NOV-21
Dibenz(a,h)anthracene		<0.0050	<0.0050	RPD-NA	ug/g	N/A	50	02-NOV-21
Fluoroanthene		<0.0050	<0.0050	RPD-NA	ug/g	N/A	50	02-NOV-21
Fluorene		<0.0050	<0.0050	RPD-NA	ug/g	N/A	50	02-NOV-21
Indeno(1,2,3-cd)pyrene		<0.010	<0.010	RPD-NA	ug/g	N/A	50	02-NOV-21
Naphthalene		<0.0050	<0.0050	RPD-NA	ug/g	N/A	50	02-NOV-21
Phenanthrene		<0.0050	<0.0050	RPD-NA	ug/g	N/A	50	02-NOV-21
Pyrene		<0.0050	<0.0050	RPD-NA	ug/g	N/A	50	02-NOV-21
Quinoline		<0.0050	<0.0050	RPD-NA	ug/g	N/A	50	02-NOV-21
WG3648225-2 LCS								
1-Methylnaphthalene			101.9		%		50-140	02-NOV-21
2-Methylnaphthalene			91.0		%		50-140	02-NOV-21
Acenaphthene			93.9		%		50-140	02-NOV-21
Acenaphthylene			85.3		%		50-140	02-NOV-21
Acridine			86.7		%		50-140	02-NOV-21
Anthracene			78.4		%		50-140	02-NOV-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-CCME-SQGL-WT	**Soil**							
Batch R5634629								
WG3648225-2 LCS								
Benzo(a)anthracene			89.8		%		50-140	02-NOV-21
Benzo(a)pyrene			79.7		%		50-140	02-NOV-21
Benzo(b&j)fluoranthene			85.4		%		50-150	02-NOV-21
Benzo(g,h,i)perylene			82.3		%		50-140	02-NOV-21
Benzo(k)fluoranthene			97.2		%		50-140	02-NOV-21
Chrysene			104.9		%		50-140	02-NOV-21
Dibenz(a,h)anthracene			87.9		%		50-140	02-NOV-21
Fluoroanthene			95.0		%		50-140	02-NOV-21
Fluorene			89.2		%		50-140	02-NOV-21
Indeno(1,2,3-cd)pyrene			90.6		%		50-140	02-NOV-21
Naphthalene			92.0		%		50-140	02-NOV-21
Phenanthrene			94.7		%		50-140	02-NOV-21
Pyrene			94.9		%		50-140	02-NOV-21
Quinoline			74.4		%		50-140	02-NOV-21
WG3648225-1 MB								
1-Methylnaphthalene			<0.0050		ug/g		0.005	02-NOV-21
2-Methylnaphthalene			<0.0050		ug/g		0.005	02-NOV-21
Acenaphthene			<0.0050		ug/g		0.005	02-NOV-21
Acenaphthylene			<0.0050		ug/g		0.005	02-NOV-21
Acridine			<0.010		ug/g		0.01	02-NOV-21
Anthracene			<0.0040		ug/g		0.004	02-NOV-21
Benzo(a)anthracene			<0.010		ug/g		0.01	02-NOV-21
Benzo(a)pyrene			<0.0050		ug/g		0.005	02-NOV-21
Benzo(b&j)fluoranthene			<0.010		ug/g		0.01	02-NOV-21
Benzo(g,h,i)perylene			<0.010		ug/g		0.01	02-NOV-21
Benzo(k)fluoranthene			<0.010		ug/g		0.01	02-NOV-21
Chrysene			<0.010		ug/g		0.01	02-NOV-21
Dibenz(a,h)anthracene			<0.0050		ug/g		0.005	02-NOV-21
Fluoroanthene			<0.0050		ug/g		0.005	02-NOV-21
Fluorene			<0.0050		ug/g		0.005	02-NOV-21
Indeno(1,2,3-cd)pyrene			<0.010		ug/g		0.01	02-NOV-21
Naphthalene			<0.0050		ug/g		0.005	02-NOV-21
Phenanthrene			<0.0050		ug/g		0.005	02-NOV-21
Pyrene			<0.0050		ug/g		0.005	02-NOV-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-CCME-SQGL-WT	**Soil**							
Batch	**R5634629**							
WG3648225-1	**MB**							
Quinoline			<0.0050		ug/g		0.005	02-NOV-21
Surrogate: 2-Fluorobiphenyl			86.9		%		60-140	02-NOV-21
Surrogate: d14-Terphenyl			95.4		%		60-140	02-NOV-21
WG3648225-4	**MS**	**WG3648225-5**						
1-Methylnaphthalene			98.2		%		50-150	02-NOV-21
2-Methylnaphthalene			91.2		%		50-150	02-NOV-21
Acenaphthene			92.6		%		50-150	02-NOV-21
Acenaphthylene			86.4		%		50-150	02-NOV-21
Acridine			88.5		%		50-150	02-NOV-21
Anthracene			78.5		%		50-150	02-NOV-21
Benzo(a)anthracene			90.9		%		50-150	02-NOV-21
Benzo(a)pyrene			79.3		%		50-150	02-NOV-21
Benzo(b&j)fluoranthene			86.1		%		50-150	02-NOV-21
Benzo(g,h,i)perylene			76.8		%		50-150	02-NOV-21
Benzo(k)fluoranthene			96.2		%		50-150	02-NOV-21
Chrysene			104.1		%		50-150	02-NOV-21
Dibenz(a,h)anthracene			84.3		%		50-150	02-NOV-21
Fluoroanthene			93.0		%		50-150	02-NOV-21
Fluorene			89.1		%		50-150	02-NOV-21
Indeno(1,2,3-cd)pyrene			78.1		%		50-150	02-NOV-21
Naphthalene			90.7		%		50-150	02-NOV-21
Phenanthrene			91.3		%		50-150	02-NOV-21
Pyrene			92.9		%		50-150	02-NOV-21
Quinoline			75.3		%		50-150	02-NOV-21
PCB9-LOW-WT	**Soil**							
Batch	**R5625841**							
WG3640271-3	**DUP**	**WG3640271-5**						
Aroclor 1016		<0.0060	<0.0060	RPD-NA	mg/kg	N/A	50	21-OCT-21
Aroclor 1221		N/A	<0.0060	RPD-NA	%	N/A	50	21-OCT-21
Aroclor 1232		N/A	<0.0060	RPD-NA	%	N/A	50	21-OCT-21
Aroclor 1242		<0.0350	<0.0330	RPD-NA	mg/kg	N/A	40	21-OCT-21
Aroclor 1248		<0.0060	<0.0060	RPD-NA	mg/kg	N/A	40	21-OCT-21
Aroclor 1254		0.409	0.446		mg/kg	8.9	40	21-OCT-21
Aroclor 1260		0.743	0.803		mg/kg	7.7	40	21-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PCB9-LOW-WT	**Soil**							
Batch R5625841								
WG3640271-3 DUP		**WG3640271-5**						
Aroclor 1262		<0.0060	<0.0060	RPD-NA	mg/kg	N/A	50	21-OCT-21
Aroclor 1268		<0.0060	<0.0060	RPD-NA	mg/kg	N/A	50	21-OCT-21
WG3640271-2 LCS								
Aroclor 1242			99.9		%		60-140	21-OCT-21
Aroclor 1248			94.9		%		-	21-OCT-21
Aroclor 1254			108.0		%		60-140	21-OCT-21
Aroclor 1260			108.0		%		60-140	21-OCT-21
WG3640271-1 MB								
Aroclor 1016			<0.0030		mg/kg		0.003	21-OCT-21
Aroclor 1221			<0.0030		mg/kg		0.003	21-OCT-21
Aroclor 1232			<0.0030		mg/kg		0.003	21-OCT-21
Aroclor 1242			<0.0030		mg/kg		0.003	21-OCT-21
Aroclor 1248			<0.0030		mg/kg		0.003	21-OCT-21
Aroclor 1254			<0.0030		mg/kg		0.003	21-OCT-21
Aroclor 1260			<0.0030		mg/kg		0.003	21-OCT-21
Aroclor 1262			<0.0030		mg/kg		0.003	21-OCT-21
Aroclor 1268			<0.0030		mg/kg		0.003	21-OCT-21
Surrogate: d14-Terphenyl			108.6		%		50-140	21-OCT-21
WG3640271-4 MS		**WG3640271-5**						
Aroclor 1242			119.3		%		60-140	21-OCT-21
Aroclor 1254			N/A	MS-B	%		-	21-OCT-21
Aroclor 1260			N/A	MS-B	%		-	21-OCT-21
Batch R5628692								
WG3643398-10 DUP		**WG3643398-9**						
Aroclor 1016		<0.015	<0.015	RPD-NA	mg/kg	N/A	50	26-OCT-21
Aroclor 1221		<0.015	<0.015	RPD-NA	mg/kg	N/A	50	26-OCT-21
Aroclor 1232		<0.015	<0.015	RPD-NA	mg/kg	N/A	50	26-OCT-21
Aroclor 1242		<0.040	<0.040	RPD-NA	mg/kg	N/A	40	26-OCT-21
Aroclor 1248		<0.015	<0.015	RPD-NA	mg/kg	N/A	40	26-OCT-21
Aroclor 1254		0.391	0.350		mg/kg	11	40	26-OCT-21
Aroclor 1260		0.814	0.765		mg/kg	6.2	40	26-OCT-21
Aroclor 1262		<0.015	<0.015	RPD-NA	mg/kg	N/A	50	26-OCT-21
Aroclor 1268		<0.015	<0.015	RPD-NA	mg/kg	N/A	50	26-OCT-21
WG3643398-7 DUP		**WG3643398-6**						

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PCB9-LOW-WT	**Soil**							
Batch R5628692								
WG3643398-7 DUP		**WG3643398-6**						
Aroclor 1016		<0.015	<0.015	RPD-NA	mg/kg	N/A	50	26-OCT-21
Aroclor 1221		<0.015	<0.015	RPD-NA	mg/kg	N/A	50	26-OCT-21
Aroclor 1232		<0.015	<0.015	RPD-NA	mg/kg	N/A	50	26-OCT-21
Aroclor 1242		<0.015	<0.015	RPD-NA	mg/kg	N/A	40	26-OCT-21
Aroclor 1248		<0.015	<0.015	RPD-NA	mg/kg	N/A	40	26-OCT-21
Aroclor 1254		<0.015	<0.015	RPD-NA	mg/kg	N/A	40	26-OCT-21
Aroclor 1260		<0.015	<0.015	RPD-NA	mg/kg	N/A	40	26-OCT-21
Aroclor 1262		<0.015	<0.015	RPD-NA	mg/kg	N/A	50	26-OCT-21
Aroclor 1268		<0.015	<0.015	RPD-NA	mg/kg	N/A	50	26-OCT-21
WG3643398-2 LCS								
Aroclor 1242			89.6		%		60-140	26-OCT-21
Aroclor 1248			83.2		%		60-140	26-OCT-21
Aroclor 1254			93.2		%		60-140	26-OCT-21
Aroclor 1260			84.0		%		60-140	26-OCT-21
WG3643398-1 MB								
Aroclor 1016			<0.0030		mg/kg		0.003	26-OCT-21
Aroclor 1221			<0.0030		mg/kg		0.003	26-OCT-21
Aroclor 1232			<0.0030		mg/kg		0.003	26-OCT-21
Aroclor 1242			<0.0030		mg/kg		0.003	26-OCT-21
Aroclor 1248			<0.0030		mg/kg		0.003	26-OCT-21
Aroclor 1254			<0.0030		mg/kg		0.003	26-OCT-21
Aroclor 1260			<0.0030		mg/kg		0.003	26-OCT-21
Aroclor 1262			<0.0030		mg/kg		0.003	26-OCT-21
Aroclor 1268			<0.0030		mg/kg		0.003	26-OCT-21
Surrogate: d14-Terphenyl			88.7		%		50-140	26-OCT-21
WG3643398-11 MS		**WG3643398-9**						
Aroclor 1242			87.3		%		60-140	26-OCT-21
Aroclor 1254			N/A	MS-B	%		-	26-OCT-21
Aroclor 1260			N/A	MS-B	%		-	26-OCT-21
WG3643398-8 MS		**WG3643398-6**						
Aroclor 1242			95.8		%		60-140	26-OCT-21
Aroclor 1254			96.9		%		60-140	26-OCT-21
Aroclor 1260			87.7		%		60-140	26-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PCB9-LOW-WT	**Soil**							
Batch R5634429								
WG3646916-7 DUP		**WG3646916-6**						
Aroclor 1016		<0.225	<0.225	RPD-NA	mg/kg	N/A	50	02-NOV-21
Aroclor 1221		<0.225	<0.225	RPD-NA	mg/kg	N/A	50	02-NOV-21
Aroclor 1232		<0.225	<0.225	RPD-NA	mg/kg	N/A	50	02-NOV-21
Aroclor 1242		<0.225	<0.225	RPD-NA	mg/kg	N/A	40	02-NOV-21
Aroclor 1248		<0.225	<0.225	RPD-NA	mg/kg	N/A	40	02-NOV-21
Aroclor 1254		0.645	0.599		mg/kg	7.4	40	02-NOV-21
Aroclor 1260		1.57	1.19		mg/kg	27	40	02-NOV-21
Aroclor 1262		<0.045	<0.045	RPD-NA	mg/kg	N/A	50	02-NOV-21
Aroclor 1268		<0.045	<0.045	RPD-NA	mg/kg	N/A	50	02-NOV-21
WG3646916-2 LCS								
Aroclor 1242			98.2		%		60-140	02-NOV-21
Aroclor 1248			109.6		%		60-140	02-NOV-21
Aroclor 1254			95.1		%		60-140	02-NOV-21
Aroclor 1260			114.2		%		60-140	02-NOV-21
WG3646916-1 MB								
Aroclor 1016			<0.0030		mg/kg		0.003	02-NOV-21
Aroclor 1221			<0.0030		mg/kg		0.003	02-NOV-21
Aroclor 1232			<0.0030		mg/kg		0.003	02-NOV-21
Aroclor 1242			<0.0030		mg/kg		0.003	02-NOV-21
Aroclor 1248			<0.0030		mg/kg		0.003	02-NOV-21
Aroclor 1254			<0.0030		mg/kg		0.003	02-NOV-21
Aroclor 1260			<0.0030		mg/kg		0.003	02-NOV-21
Aroclor 1262			<0.0030		mg/kg		0.003	02-NOV-21
Aroclor 1268			<0.0030		mg/kg		0.003	02-NOV-21
Surrogate: d14-Terphenyl			94.8		%		50-140	02-NOV-21
WG3646916-8 MS		**WG3646916-6**						
Aroclor 1242			104.7		%		60-140	02-NOV-21
Aroclor 1254			N/A	MS-B	%		-	02-NOV-21
Aroclor 1260			N/A	MS-B	%		-	02-NOV-21
Batch R5634875								
WG3648226-7 DUP		**WG3648226-6**						
Aroclor 1016		<0.030	<0.030	RPD-NA	mg/kg	N/A	50	03-NOV-21
Aroclor 1221		<0.030	<0.030	RPD-NA	mg/kg	N/A	50	03-NOV-21
Aroclor 1232		<0.030	<0.030	RPD-NA	mg/kg	N/A	50	03-NOV-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PCB9-LOW-WT	**Soil**							
Batch R5634875								
WG3648226-7 DUP		**WG3648226-6**						
Aroclor 1242		<0.080	<0.070	RPD-NA	mg/kg	N/A	40	03-NOV-21
Aroclor 1248		<0.030	<0.030	RPD-NA	mg/kg	N/A	40	03-NOV-21
Aroclor 1254		0.351	0.267		mg/kg	27	40	03-NOV-21
Aroclor 1260		0.600	0.557		mg/kg	7.4	40	03-NOV-21
Aroclor 1262		<0.0060	<0.0060	RPD-NA	mg/kg	N/A	50	03-NOV-21
Aroclor 1268		<0.0060	<0.0060	RPD-NA	mg/kg	N/A	50	03-NOV-21
WG3648226-2 LCS								
Aroclor 1242			95.0		%		60-140	03-NOV-21
Aroclor 1248			84.6		%		60-140	03-NOV-21
Aroclor 1254			92.8		%		60-140	03-NOV-21
Aroclor 1260			117.5		%		60-140	03-NOV-21
WG3648226-1 MB								
Aroclor 1016			<0.0030		mg/kg		0.003	03-NOV-21
Aroclor 1221			<0.0030		mg/kg		0.003	03-NOV-21
Aroclor 1232			<0.0030		mg/kg		0.003	03-NOV-21
Aroclor 1242			<0.0030		mg/kg		0.003	03-NOV-21
Aroclor 1248			<0.0030		mg/kg		0.003	03-NOV-21
Aroclor 1254			<0.0030		mg/kg		0.003	03-NOV-21
Aroclor 1260			<0.0030		mg/kg		0.003	03-NOV-21
Aroclor 1262			<0.0030		mg/kg		0.003	03-NOV-21
Aroclor 1268			<0.0030		mg/kg		0.003	03-NOV-21
Surrogate: d14-Terphenyl			98.9		%		50-140	03-NOV-21
WG3648226-8 MS		**WG3648226-6**						
Aroclor 1242			80.3		%		60-140	03-NOV-21
Aroclor 1254			N/A	MS-B	%		-	03-NOV-21
Aroclor 1260			N/A	MS-B	%		-	03-NOV-21
PSA-MUST-SK	**Soil**							
Batch R5624753								
WG3638497-1 DUP		**L2650175-13**						
MUST PSA % > 75um		25.9	25.4	J	%	0.6	5	19-OCT-21
WG3638497-2 IRM		**2020-PSA_SOIL**						
MUST PSA % > 75um			43.9		%		37.9-47.9	19-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PSA-MUST-SK	**Soil**							
Batch R5628267								
WG3644203-1 DUP		**L2653130-1**						
MUST PSA % > 75um		46.7	44.0	J	%	2.7	5	25-OCT-21
WG3644203-2 IRM		**2020-PSA_SOIL**						
MUST PSA % > 75um			44.7		%		37.9-47.9	25-OCT-21
SPECGRAV-CL	**Soil**							
Batch R5629385								
WG3646192-2 DUP		**L2648161-10**						
Specific Gravity		1.05	1.06		kg/L	0.9	20	26-OCT-21
WG3646192-1 IRM		**DI_H2O**						
Specific Gravity			100.0		%		90-110	26-OCT-21
Batch R5637237								
WG3653838-2 DUP		**L2648161-4**						
Specific Gravity		1.21	1.22		kg/L	0.8	20	07-NOV-21
WG3653838-1 IRM		**DI_H2O**						
Specific Gravity			101.0		%		90-110	07-NOV-21
TOC-WT	**Soil**							
Batch R5628208								
WG3644604-3 CRM		**WT-TOC-CRM**						
Total Organic Carbon			93.1		%		70-130	25-OCT-21
WG3644604-4 DUP		**L2650162-33**						
Total Organic Carbon		16.1	16.5		%	2.7	20	25-OCT-21
Fraction Organic Carbon		0.161	0.165		g/g	2.7	25	25-OCT-21
WG3644604-2 LCS								
Total Organic Carbon			97.4		%		80-120	25-OCT-21
WG3644604-1 MB								
Total Organic Carbon			<0.10		%		0.1	25-OCT-21
Fraction Organic Carbon			<0.0010		g/g		0.001	25-OCT-21
Batch R5634582								
WG3649816-3 CRM		**WT-TOC-CRM**						
Total Organic Carbon			107.7		%		70-130	01-NOV-21
WG3649816-4 DUP		**L2654242-5**						
Total Organic Carbon		21.1	20.4		%	3.4	20	02-NOV-21
Fraction Organic Carbon		0.211	0.204		g/g	3.4	25	02-NOV-21
WG3649816-2 LCS								
Total Organic Carbon			100.5		%		80-120	01-NOV-21
WG3649816-1 MB								
Total Organic Carbon			<0.10		%		0.1	01-NOV-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
TOC-WT	**Soil**							
Batch R5634582								
WG3649816-1 MB								
Fraction Organic Carbon			<0.0010		g/g		0.001	01-NOV-21

Quality Control Report

Workorder: L2650176 Report Date: 10-NOV-21

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Legend:

Limit	ALS Control Limit (Data Quality Objectives)
DUP	Duplicate
RPD	Relative Percent Difference
N/A	Not Available
LCS	Laboratory Control Sample
SRM	Standard Reference Material
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ADE	Average Desorption Efficiency
MB	Method Blank
IRM	Internal Reference Material
CRM	Certified Reference Material
CCV	Continuing Calibration Verification
CVS	Calibration Verification Standard
LCSD	Laboratory Control Sample Duplicate

Sample Parameter Qualifier Definitions:

Qualifier	Description
DLHM	Detection Limit Adjusted: Sample has High Moisture Content
DLM	Detection Limit Adjusted due to sample matrix effects (e.g. chemical interference, colour, turbidity).
DUP-H	Duplicate results outside ALS DQO, due to sample heterogeneity.
J	Duplicate results and limits are expressed in terms of absolute difference.
MES	Data Quality Objective was marginally exceeded (by < 10% absolute) for < 10% of analytes in a Multi-Element Scan / Multi-Parameter Scan (considered acceptable as per OMOE & CCME).
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Quality Control Report

Workorder: L2650176 Report Date: 10-NOV-21

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Hold Time Exceedances:

ALS Product Description	Sample ID	Sampling Date	Date Processed	Rec. HT	Actual HT	Units	Qualifier
Polycyclic Aromatic Hydrocarbons							
PAHs in Sediment							
	9	05-OCT-21 13:55	27-OCT-21 04:00	14	22	days	EHT
	10	05-OCT-21 16:20	22-OCT-21 12:00	14	17	days	EHT
	11	05-OCT-21 15:45	22-OCT-21 12:00	14	17	days	EHT
	17	05-OCT-21	29-OCT-21 02:00	14	24	days	EHT
Polychlorinated Biphenyls							
PCBs to meet CCME Sediment Criteria							
	9	05-OCT-21 13:55	27-OCT-21 15:00	14	22	days	EHT
	10	05-OCT-21 16:20	22-OCT-21 11:00	14	17	days	EHT
	11	05-OCT-21 15:45	22-OCT-21 11:00	14	17	days	EHT
	17	05-OCT-21	29-OCT-21 01:00	14	24	days	EHT

Legend & Qualifier Definitions:

EHTR-FM: Exceeded ALS recommended hold time prior to sample receipt. Field Measurement recommended.
EHTR: Exceeded ALS recommended hold time prior to sample receipt.
EHTL: Exceeded ALS recommended hold time prior to analysis. Sample was received less than 24 hours prior to expiry.
EHT: Exceeded ALS recommended hold time prior to analysis.
Rec. HT: ALS recommended hold time (see units).

Notes*:
Where actual sampling date is not provided to ALS, the date (& time) of receipt is used for calculation purposes.
Where actual sampling time is not provided to ALS, the earlier of 12 noon on the sampling date or the time (& date) of receipt is used for calculation purposes. Samples for L2650176 were received on 08-OCT-21 09:09.

ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.

Chain of Custody

Canada

L2650176-COFC

COC Number: 20 - 023

Page 2 of 3

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Report To	Contact and company name below will appear on the final report
Company:	Golder Associates Ltd.
Contact:	Jill LaPorte
Phone:	905-723-2727
	Company address below will appear on the final report
Street:	100 Scotia Court
City/Province:	Whtby, Ontario
Postal Code:	L1N 8Y6
Invoice To	Same as Report To ☐ YES ☐ NO
	Copy of Invoice with Report ☐ YES ☐ NO
Company:	Golder Associates Ltd.
Contact:	Accounts Payables

Reports / Recipients

Select Report Format: ☑ PDF ☑ EXCEL ☐ EDD (DIGITAL)

Merge QC/QCI Reports with COA ☑ YES ☐ NO ☐ N/A

☐ Compare Results to Criteria on Report - provide details below if box checked

Select Distribution: ☑ EMAIL ☐ MAIL ☐ FAX

Email 1 or Fax: Jill_LaPorte@golder.com

Email 2: shawn_seguin@golder.com

Email 3:

Invoice Recipients

Select Invoice Distribution: ☑ EMAIL ☐ MAIL ☐ FAX

Email 1 or Fax: Jill_LaPorte@golder.com

Email 2: canadaaccountspayableinvoices@golder.com

Turnaround Time (TAT) Requested

☑ Routine [R] if received by 3pm M-F - no surcharges apply

☐ 4 day [P4] if received by 3pm M-F - 20% rush surcharge minimum

☐ 3 day [P3] if received by 3pm M-F - 25% rush surcharge minimum

☐ 2 day [P2] if received by 3pm M-F - 50% rush surcharge minimum

☐ 1 day [E] if received by 3pm M-F - 100% rush surcharge minimum

☐ Same day [E2] if received by 10am M-S - 200% rush surcharge. Additional fees may apply to rush requests on weekends, statutory holidays and non-routine tests

AFFIX ALS BARCODE LABEL HERE (ALS use only)

Date and Time Required for all E&P TATs: dd-mmm-yy hh:mm am/pm

For all tests with rush TATs requested, please contact your AM to confirm availability.

Project Information		Oil and Gas Required Fields (client use)	
ALS Account # / Quote #:	15520 / Q86566	AFE/Cost Center:	PO#:
Job #:	1783886-8000-8006	Major/Minor Code:	Routing Code:
PO / AFE:		Requisitioner:	
LSD:		Location:	

ALS Lab Work Order # (ALS use only): L2650176

ALS Contact: Amanda Overholster

Sampler:

Analysis Request

Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below

ALS Sample # (ALS use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	NUMBER OF CONTAINERS	HWS-Boron (B-HWS-R511-WT)	Cr3 (CR-CR3-WT)	Cr6 (CR-CR6-IC-WT)	Mercury (HG-200.2-CVAA-WT)	Metals (MET-200.2-CCMS-WT)	PAH (PAH-CCME-SQG-WT)	MOISTURE-WT	TOC (TOC-WT)	PCB9 (PCB9-LOW-WT)		Specific Gravity (SPECGRAV-CL)	PSA (PSA-MUST-WT-SK)	Atterberg (ATTERBERG-SK)		SAMPLES ON HOLD	EXTENDED STORAGE REQUIRED	SUSPECTED HAZARD (see notes)
	DUP-204	05-Oct-21	—	Sediment	7				✓	✓	✓	✓	✓	✓		✓		✓				
	DUP-206	↓	—	Sediment	9	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓				
	DUP-207		—	Sediment	5	✓	✓	✓	✓	✓	✓	✓	✓	✓			✓					
	DUP-208		—	Sediment	3				✓	✓	✓	✓	✓	✓								
				Sediment																		
				Sediment																		
				Sediment																		
				Sediment																		
				Sediment																		
				Sediment																		
				Sediment																		
				Sediment																		
				Sediment																		

Drinking Water (DW) Samples[1] (client use)

Are samples taken from a Regulated DW System? ☐ YES ☑ NO

Are samples for human consumption/ use? ☐ YES ☑ NO

Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only)

SAMPLE RECEIPT DETAILS (ALS use only)

Cooling Method: ☐ NONE ☒ ICE ☐ ICE PACKS ☐ FROZEN ☐ COOLING INITIATED

Submission Comments identified on Sample Receipt Notification: ☐ YES ☐ NO

Cooler Custody Seals Intact: ☐ YES ☐ N/A Sample Custody Seals Intact: ☐ YES ☐ N/A

INITIAL COOLER TEMPERATURES °C			FINAL COOLER TEMPERATURES °C		
			14.2		

SHIPMENT RELEASE (client use)			INITIAL SHIPMENT RECEPTION (ALS use only)			FINAL SHIPMENT RECEPTION (ALS use only)		
Released by:	Date:	Time:	Received by:	Date:	Time:	Received by:	Date:	Time:
							05/Oct/2021	17:40

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

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Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

1. If any water samples are taken from a **Regulated Drinking Water (DW) System**, please submit using an **Authorized** DW COC form.

Chain of Custody (

Canada

L2650176-COFC

COC Number: 20 - 022

Page 1 of 3

www.alsglobal.com

Report To	Contact and company name below will appear on the final report
Company:	Golder Associates Ltd.
Contact:	Jill LaPorte
Phone:	905-723-2727
	Company address below will appear on the final report
Street:	100 Scotia Court
City/Province:	Whtby, Ontario
Postal Code:	L1N 8Y6
Invoice To	Same as Report To ☐ YES ☐ NO
	Copy of Invoice with Report ☐ YES ☐ NO
Company:	Golder Associates Ltd.
Contact:	Accounts Payables

Project Information

ALS Account # / Quote #:	15520 / Q86566
Job #:	1783886-8000-8006
PO / AFE:	
LSD:	

ALS Lab Work Order # (ALS use only): L2650176

Report

Select Report Format: ☑ PDF ☑ EXCEL ☐ EDD (DIGITAL)

Merge QC/QCI Reports with COA ☑ YES ☐ NO ☐ N/A

☐ Compare Results to Criteria on Report - provide details below if box checked

Select Distribution: ☑ EMAIL ☐ MAIL ☐ FAX

Email 1 or Fax: Jill_LaPorte@golder.com

Email 2: shawn_seguin@golder.com

Email 3:

Invoice Recipients

Select Invoice Distribution: ☑ EMAIL ☐ MAIL ☐ FAX

Email 1 or Fax: Jill_LaPorte@golder.com

Email 2: canadaaccountspayableinvoices@golder.com

Oil and Gas Required Fields (client use)

AFE/Cost Center:	PO#
Major/Minor Code:	Routing Code:
Requisitioner:	
Location:	

ALS Contact: Amanda Overholster **Sampler:**

Time (TAT) Requested

☑ Routine [R] if received by 3pm M-F - no surcharges apply

☐ 4 day [P4] if received by 3pm M-F - 20% rush surcharge minimum

☐ 3 day [P3] if received by 3pm M-F - 25% rush surcharge minimum

☐ 2 day [P2] if received by 3pm M-F - 50% rush surcharge minimum

☐ 1 day [E] if received by 3pm M-F - 100% rush surcharge minimum

☐ Same day [E2] if received by 10am M-S - 200% rush surcharge. Additional fees may apply to rush requests on weekends, statutory holidays and non-routine tests

AFFIX ALS BARCODE LABEL HERE (ALS use only)

Date and Time Required for all E&P TATs: dd-mmm-yy hh:mm am/pm

For all tests with rush TATs requested, please contact your AM to confirm availability.

Analysis Request

ALS Sample # (ALS use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	NUMBER OF CONTAINERS	HWS-Boron (B-HWS-R511-WT)	Cr3 (CR-CR3-WT)	Cr6 (CR-CR6-IC-WT)	Mercury (HG-200.2-CVAA-WT)	Metals (MET-200.2-CCMS-WT)	PAH (PAH-CCME-SQGL-WT)	MOISTURE-WT	TOC (TOC-WT)	PCB9 (PCB9-LOW-WT)		Specific Gravity (SPECGRAV-CL)	PSA (PSA-MUST-WT-SK)	Atterberg (ATTERBERG-SK)		SAMPLES ON HOLD	EXTENDED STORAGE REQUIRED	SUSPECTED HAZARD (see notes)
	PCOM-SG-001	05-Oct-21	12:40	Sediment	3				✓	✓	✓	✓	✓	✓								
	PCOM-SG-002		11:50	Sediment	5	✓	✓	✓	✓	✓	✓	✓	✓	✓			✓					
	PCOM-SG-003		13:10	Sediment	3				✓	✓	✓	✓	✓	✓								
	WM-SG-003		12:30	Sediment	9	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓				
	WM-SC-003A		11:30	Sediment	9	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓				
	WM-SC-003B		11:30	Sediment	4				✓	✓	✓	✓	✓	✓			✓					
	PCW-SG-011		15:20	Sediment	9	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓				
	PCW-SC-011A		13:55	Sediment	7				✓	✓	✓	✓	✓	✓		✓		✓				
	PCW-SC-011B		13:55	Sediment	3				✓	✓	✓	✓	✓	✓								
	PCW-SG-013		16:20	Sediment	9	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓				
	PCW-SC-013A		15:45	Sediment	9	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓				
	PCW-SC-013B		15:45	Sediment	4				✓	✓	✓	✓	✓	✓			✓					

Drinking Water (DW) Samples[1] (client use)

Are samples taken from a Regulated DW System? ☐ YES ☑ NO

Are samples for human consumption/ use? ☐ YES ☑ NO

Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only)

SAMPLE RECEIPT DETAILS (ALS use only)

Cooling Method: ☐ NONE ☒ ICE ☐ ICE PACKS ☐ FROZEN ☐ COOLING INITIATED

Submission Comments identified on Sample Receipt Notification: ☐ YES ☐ NO

Cooler Custody Seals Intact: ☐ YES ☐ N/A Sample Custody Seals Intact: ☐ YES ☐ N/A

INITIAL COOLER TEMPERATURES °C				FINAL COOLER TEMPERATURES °C			
17.4	11.9	10.2	13.5	14.2			

SHIPMENT RELEASE (client use)

Released by:	Date:	Time:

INITIAL SHIPMENT RECEPTION (ALS use only)

Received by:	Date:	Time:
Kieran	10/8/2021	9:09

FINAL SHIPMENT RECEPTION (ALS use only)

Received by:	Date:	Time:
	08/Oct/2021	17:40

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

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Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

1. If any water samples are taken from a **Regulated Drinking Water (DW) System**, please submit using an **Authorized DW COC form.**

GOLDER ASSOCIATES LTD (Whitby)
ATTN: Jill LaPorte
100 Scotia Court
Whitby ON L1N 8Y6

Date Received: 08-OCT-21
Report Date: 19-OCT-21 14:37 (MT)
Version: FINAL

Client Phone: 905-723-2727

Certificate of Analysis

Lab Work Order #: L2650177

Project P.O. #: NOT SUBMITTED
Job Reference: 1783886-8000-8006
C of C Numbers:
Legal Site Desc:

Amanda Overholster
Account Manager

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650177-1 PCOM-SG-002 Sampled By: CLIENT on 05-OCT-21 @ 11:50 Matrix: SEDIMENT							
Sample Preparation							
Initial pH	7.98		0.10	pH units		15-OCT-21	R5618181
Final pH	5.89		0.10	pH units		15-OCT-21	R5618181
TCLP Extractables							
Acenaphthene	<0.0050		0.0050	mg/L	15-OCT-21	18-OCT-21	R5623317
Acenaphthylene	<0.0050		0.0050	mg/L	15-OCT-21	18-OCT-21	R5623317
Anthracene	<0.0050		0.0050	mg/L	15-OCT-21	18-OCT-21	R5623317
Benzo(a)anthracene	<0.0050		0.0050	mg/L	15-OCT-21	18-OCT-21	R5623317
Benzo(a)pyrene	<0.0010		0.0010	mg/L	15-OCT-21	18-OCT-21	R5623317
Benzo(b&j)fluoranthene	<0.0050		0.0050	mg/L	15-OCT-21	18-OCT-21	R5623317
Benzo(g,h,i)perylene	<0.0050		0.0050	mg/L	15-OCT-21	18-OCT-21	R5623317
Benzo(k)fluoranthene	<0.0050		0.0050	mg/L	15-OCT-21	18-OCT-21	R5623317
Chrysene	<0.0050		0.0050	mg/L	15-OCT-21	18-OCT-21	R5623317
Dibenz(a,h)anthracene	<0.0050		0.0050	mg/L	15-OCT-21	18-OCT-21	R5623317
Fluoranthene	<0.0050		0.0050	mg/L	15-OCT-21	18-OCT-21	R5623317
Fluorene	<0.0050		0.0050	mg/L	15-OCT-21	18-OCT-21	R5623317
Indeno(1,2,3-cd)pyrene	<0.0050		0.0050	mg/L	15-OCT-21	18-OCT-21	R5623317
Naphthalene	<0.0050		0.0050	mg/L	15-OCT-21	18-OCT-21	R5623317
Phenanthrene	<0.0050		0.0050	mg/L	15-OCT-21	18-OCT-21	R5623317
Pyrene	<0.0050		0.0050	mg/L	15-OCT-21	18-OCT-21	R5623317
Surrogate: Chrysene d12	105.2		60-130	%	15-OCT-21	18-OCT-21	R5623317
Surrogate: Naphthalene d8	102.3		50-130	%	15-OCT-21	18-OCT-21	R5623317
Surrogate: Phenanthrene d10	106.1		60-130	%	15-OCT-21	18-OCT-21	R5623317
Quinoline	<0.0050		0.0050	mg/L	15-OCT-21	18-OCT-21	R5623317
TCLP Metals							
Arsenic (As)	<0.050		0.050	mg/L		15-OCT-21	R5619476
Barium (Ba)	1.04		0.50	mg/L		15-OCT-21	R5619476
Boron (B)	<2.5		2.5	mg/L		15-OCT-21	R5619476
Cadmium (Cd)	<0.0050		0.0050	mg/L		15-OCT-21	R5619476
Chromium (Cr)	<0.050		0.050	mg/L		15-OCT-21	R5619476
Lead (Pb)	<0.025		0.025	mg/L		15-OCT-21	R5619476
Mercury (Hg)	<0.00010		0.00010	mg/L		15-OCT-21	R5618677
Selenium (Se)	<0.025		0.025	mg/L		15-OCT-21	R5619476
Silver (Ag)	<0.0050		0.0050	mg/L		15-OCT-21	R5619476
Uranium (U)	<0.25		0.25	mg/L		15-OCT-21	R5619476
L2650177-2 WM-SG-003 Sampled By: CLIENT on 05-OCT-21 @ 12:30 Matrix: SEDIMENT							
Sample Preparation							
Initial pH	8.23		0.10	pH units		15-OCT-21	R5618181
Final pH	5.84		0.10	pH units		15-OCT-21	R5618181
TCLP Extractables							
Acenaphthene	<0.0050		0.0050	mg/L	15-OCT-21	18-OCT-21	R5623317

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650177-2 WM-SG-003 Sampled By: CLIENT on 05-OCT-21 @ 12:30 Matrix: SEDIMENT							
TCLP Extractables							
Acenaphthylene	<0.0050		0.0050	mg/L	15-OCT-21	18-OCT-21	R5623317
Anthracene	<0.0050		0.0050	mg/L	15-OCT-21	18-OCT-21	R5623317
Benzo(a)anthracene	<0.0050		0.0050	mg/L	15-OCT-21	18-OCT-21	R5623317
Benzo(a)pyrene	<0.0010		0.0010	mg/L	15-OCT-21	18-OCT-21	R5623317
Benzo(b&j)fluoranthene	<0.0050		0.0050	mg/L	15-OCT-21	18-OCT-21	R5623317
Benzo(g,h,i)perylene	<0.0050		0.0050	mg/L	15-OCT-21	18-OCT-21	R5623317
Benzo(k)fluoranthene	<0.0050		0.0050	mg/L	15-OCT-21	18-OCT-21	R5623317
Chrysene	<0.0050		0.0050	mg/L	15-OCT-21	18-OCT-21	R5623317
Dibenz(a,h)anthracene	<0.0050		0.0050	mg/L	15-OCT-21	18-OCT-21	R5623317
Fluoranthene	<0.0050		0.0050	mg/L	15-OCT-21	18-OCT-21	R5623317
Fluorene	<0.0050		0.0050	mg/L	15-OCT-21	18-OCT-21	R5623317
Indeno(1,2,3-cd)pyrene	<0.0050		0.0050	mg/L	15-OCT-21	18-OCT-21	R5623317
Naphthalene	<0.0050		0.0050	mg/L	15-OCT-21	18-OCT-21	R5623317
Phenanthrene	<0.0050		0.0050	mg/L	15-OCT-21	18-OCT-21	R5623317
Pyrene	<0.0050		0.0050	mg/L	15-OCT-21	18-OCT-21	R5623317
Surrogate: Chrysene d12	94.8		60-130	%	15-OCT-21	18-OCT-21	R5623317
Surrogate: Naphthalene d8	90.7		50-130	%	15-OCT-21	18-OCT-21	R5623317
Surrogate: Phenanthrene d10	95.6		60-130	%	15-OCT-21	18-OCT-21	R5623317
Quinoline	<0.0050		0.0050	mg/L	15-OCT-21	18-OCT-21	R5623317
TCLP Metals							
Arsenic (As)	<0.050		0.050	mg/L		15-OCT-21	R5619476
Barium (Ba)	0.90		0.50	mg/L		15-OCT-21	R5619476
Boron (B)	<2.5		2.5	mg/L		15-OCT-21	R5619476
Cadmium (Cd)	<0.0050		0.0050	mg/L		15-OCT-21	R5619476
Chromium (Cr)	<0.050		0.050	mg/L		15-OCT-21	R5619476
Lead (Pb)	0.040		0.025	mg/L		15-OCT-21	R5619476
Mercury (Hg)	<0.00010		0.00010	mg/L		15-OCT-21	R5618677
Selenium (Se)	<0.025		0.025	mg/L		15-OCT-21	R5619476
Silver (Ag)	<0.0050		0.0050	mg/L		15-OCT-21	R5619476
Uranium (U)	<0.25		0.25	mg/L		15-OCT-21	R5619476
L2650177-3 WM-SG-003A Sampled By: CLIENT on 05-OCT-21 @ 11:30 Matrix: SEDIMENT							
Sample Preparation							
Initial pH	7.82		0.10	pH units		15-OCT-21	R5618181
Final pH	5.47		0.10	pH units		15-OCT-21	R5618181
TCLP Extractables							
Acenaphthene	<0.0050		0.0050	mg/L	15-OCT-21	18-OCT-21	R5623317
Acenaphthylene	<0.0050		0.0050	mg/L	15-OCT-21	18-OCT-21	R5623317
Anthracene	<0.0050		0.0050	mg/L	15-OCT-21	18-OCT-21	R5623317
Benzo(a)anthracene	<0.0050		0.0050	mg/L	15-OCT-21	18-OCT-21	R5623317
Benzo(a)pyrene	<0.0010		0.0010	mg/L	15-OCT-21	18-OCT-21	R5623317

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650177-3 WM-SG-003A Sampled By: CLIENT on 05-OCT-21 @ 11:30 Matrix: SEDIMENT							
TCLP Extractables							
Benzo(b&j)fluoranthene	<0.0050		0.0050	mg/L	15-OCT-21	18-OCT-21	R5623317
Benzo(g,h,i)perylene	<0.0050		0.0050	mg/L	15-OCT-21	18-OCT-21	R5623317
Benzo(k)fluoranthene	<0.0050		0.0050	mg/L	15-OCT-21	18-OCT-21	R5623317
Chrysene	<0.0050		0.0050	mg/L	15-OCT-21	18-OCT-21	R5623317
Dibenz(a,h)anthracene	<0.0050		0.0050	mg/L	15-OCT-21	18-OCT-21	R5623317
Fluoranthene	<0.0050		0.0050	mg/L	15-OCT-21	18-OCT-21	R5623317
Fluorene	<0.0050		0.0050	mg/L	15-OCT-21	18-OCT-21	R5623317
Indeno(1,2,3-cd)pyrene	<0.0050		0.0050	mg/L	15-OCT-21	18-OCT-21	R5623317
Naphthalene	<0.0050		0.0050	mg/L	15-OCT-21	18-OCT-21	R5623317
Phenanthrene	<0.0050		0.0050	mg/L	15-OCT-21	18-OCT-21	R5623317
Pyrene	<0.0050		0.0050	mg/L	15-OCT-21	18-OCT-21	R5623317
Surrogate: Chrysene d12	102.0		60-130	%	15-OCT-21	18-OCT-21	R5623317
Surrogate: Naphthalene d8	100.1		50-130	%	15-OCT-21	18-OCT-21	R5623317
Surrogate: Phenanthrene d10	104.0		60-130	%	15-OCT-21	18-OCT-21	R5623317
Quinoline	<0.0050		0.0050	mg/L	15-OCT-21	18-OCT-21	R5623317
TCLP Metals							
Arsenic (As)	0.179		0.050	mg/L		15-OCT-21	R5619476
Barium (Ba)	0.96		0.50	mg/L		15-OCT-21	R5619476
Boron (B)	<2.5		2.5	mg/L		15-OCT-21	R5619476
Cadmium (Cd)	<0.0050		0.0050	mg/L		15-OCT-21	R5619476
Chromium (Cr)	<0.050		0.050	mg/L		15-OCT-21	R5619476
Lead (Pb)	0.104		0.025	mg/L		15-OCT-21	R5619476
Mercury (Hg)	<0.00010		0.00010	mg/L		15-OCT-21	R5618677
Selenium (Se)	<0.025		0.025	mg/L		15-OCT-21	R5619476
Silver (Ag)	<0.0050		0.0050	mg/L		15-OCT-21	R5619476
Uranium (U)	<0.25		0.25	mg/L		15-OCT-21	R5619476
L2650177-4 PCW-SG-011 Sampled By: CLIENT on 05-OCT-21 @ 15:20 Matrix: SEDIMENT							
Sample Preparation							
Initial pH	7.77		0.10	pH units		15-OCT-21	R5618181
Final pH	5.65		0.10	pH units		15-OCT-21	R5618181
TCLP Extractables							
Acenaphthene	<0.0050		0.0050	mg/L	15-OCT-21	18-OCT-21	R5623317
Acenaphthylene	<0.0050		0.0050	mg/L	15-OCT-21	18-OCT-21	R5623317
Anthracene	<0.0050		0.0050	mg/L	15-OCT-21	18-OCT-21	R5623317
Benzo(a)anthracene	<0.0050		0.0050	mg/L	15-OCT-21	18-OCT-21	R5623317
Benzo(a)pyrene	<0.0010		0.0010	mg/L	15-OCT-21	18-OCT-21	R5623317
Benzo(b&j)fluoranthene	<0.0050		0.0050	mg/L	15-OCT-21	18-OCT-21	R5623317
Benzo(g,h,i)perylene	<0.0050		0.0050	mg/L	15-OCT-21	18-OCT-21	R5623317
Benzo(k)fluoranthene	<0.0050		0.0050	mg/L	15-OCT-21	18-OCT-21	R5623317
Chrysene	<0.0050		0.0050	mg/L	15-OCT-21	18-OCT-21	R5623317

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650177-4 PCW-SG-011 Sampled By: CLIENT on 05-OCT-21 @ 15:20 Matrix: SEDIMENT							
TCLP Extractables							
Dibenz(a,h)anthracene	<0.0050		0.0050	mg/L	15-OCT-21	18-OCT-21	R5623317
Fluoranthene	<0.0050		0.0050	mg/L	15-OCT-21	18-OCT-21	R5623317
Fluorene	<0.0050		0.0050	mg/L	15-OCT-21	18-OCT-21	R5623317
Indeno(1,2,3-cd)pyrene	<0.0050		0.0050	mg/L	15-OCT-21	18-OCT-21	R5623317
Naphthalene	<0.0050		0.0050	mg/L	15-OCT-21	18-OCT-21	R5623317
Phenanthrene	<0.0050		0.0050	mg/L	15-OCT-21	18-OCT-21	R5623317
Pyrene	<0.0050		0.0050	mg/L	15-OCT-21	18-OCT-21	R5623317
Surrogate: Chrysene d12	111.8		60-130	%	15-OCT-21	18-OCT-21	R5623317
Surrogate: Naphthalene d8	106.8		50-130	%	15-OCT-21	18-OCT-21	R5623317
Surrogate: Phenanthrene d10	111.7		60-130	%	15-OCT-21	18-OCT-21	R5623317
Quinoline	<0.0050		0.0050	mg/L	15-OCT-21	18-OCT-21	R5623317
TCLP Metals							
Arsenic (As)	<0.050		0.050	mg/L		15-OCT-21	R5619476
Barium (Ba)	1.06		0.50	mg/L		15-OCT-21	R5619476
Boron (B)	<2.5		2.5	mg/L		15-OCT-21	R5619476
Cadmium (Cd)	<0.0050		0.0050	mg/L		15-OCT-21	R5619476
Chromium (Cr)	<0.050		0.050	mg/L		15-OCT-21	R5619476
Lead (Pb)	<0.025		0.025	mg/L		15-OCT-21	R5619476
Mercury (Hg)	<0.00010		0.00010	mg/L		15-OCT-21	R5618677
Selenium (Se)	<0.025		0.025	mg/L		15-OCT-21	R5619476
Silver (Ag)	<0.0050		0.0050	mg/L		15-OCT-21	R5619476
Uranium (U)	<0.25		0.25	mg/L		15-OCT-21	R5619476
L2650177-5 PCW-SG-013 Sampled By: CLIENT on 05-OCT-21 @ 16:20 Matrix: SEDIMENT							
Sample Preparation							
Initial pH	7.78		0.10	pH units		16-OCT-21	R5620669
Final pH	4.69		0.10	pH units		16-OCT-21	R5620669
TCLP Extractables							
Acenaphthene	<0.0050		0.0050	mg/L	18-OCT-21	19-OCT-21	R5624387
Acenaphthylene	<0.0050		0.0050	mg/L	18-OCT-21	19-OCT-21	R5624387
Anthracene	<0.0050		0.0050	mg/L	18-OCT-21	19-OCT-21	R5624387
Benzo(a)anthracene	<0.0050		0.0050	mg/L	18-OCT-21	19-OCT-21	R5624387
Benzo(a)pyrene	<0.0010		0.0010	mg/L	18-OCT-21	19-OCT-21	R5624387
Benzo(b&j)fluoranthene	<0.0050		0.0050	mg/L	18-OCT-21	19-OCT-21	R5624387
Benzo(g,h,i)perylene	<0.0050		0.0050	mg/L	18-OCT-21	19-OCT-21	R5624387
Benzo(k)fluoranthene	<0.0050		0.0050	mg/L	18-OCT-21	19-OCT-21	R5624387
Chrysene	<0.0050		0.0050	mg/L	18-OCT-21	19-OCT-21	R5624387
Dibenz(a,h)anthracene	<0.0050		0.0050	mg/L	18-OCT-21	19-OCT-21	R5624387
Fluoranthene	<0.0050		0.0050	mg/L	18-OCT-21	19-OCT-21	R5624387
Fluorene	<0.0050		0.0050	mg/L	18-OCT-21	19-OCT-21	R5624387
Indeno(1,2,3-cd)pyrene	<0.0050		0.0050	mg/L	18-OCT-21	19-OCT-21	R5624387

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650177-5 PCW-SG-013 Sampled By: CLIENT on 05-OCT-21 @ 16:20 Matrix: SEDIMENT							
TCLP Extractables							
Naphthalene	<0.0050		0.0050	mg/L	18-OCT-21	19-OCT-21	R5624387
Phenanthrene	<0.0050		0.0050	mg/L	18-OCT-21	19-OCT-21	R5624387
Pyrene	<0.0050		0.0050	mg/L	18-OCT-21	19-OCT-21	R5624387
Surrogate: Chrysene d12	91.3		60-130	%	18-OCT-21	19-OCT-21	R5624387
Surrogate: Naphthalene d8	92.5		50-130	%	18-OCT-21	19-OCT-21	R5624387
Surrogate: Phenanthrene d10	97.0		60-130	%	18-OCT-21	19-OCT-21	R5624387
Quinoline	<0.0050		0.0050	mg/L	18-OCT-21	19-OCT-21	R5624387
TCLP Metals							
Arsenic (As)	<0.050		0.050	mg/L		18-OCT-21	R5622480
Barium (Ba)	1.09		0.50	mg/L		18-OCT-21	R5622480
Boron (B)	<2.5		2.5	mg/L		18-OCT-21	R5622480
Cadmium (Cd)	<0.0050		0.0050	mg/L		18-OCT-21	R5622480
Chromium (Cr)	0.126		0.050	mg/L		18-OCT-21	R5622480
Lead (Pb)	0.089		0.025	mg/L		18-OCT-21	R5622480
Mercury (Hg)	<0.00010		0.00010	mg/L		18-OCT-21	R5622645
Selenium (Se)	<0.025		0.025	mg/L		18-OCT-21	R5622480
Silver (Ag)	<0.0050		0.0050	mg/L		18-OCT-21	R5622480
Uranium (U)	<0.25		0.25	mg/L		18-OCT-21	R5622480
L2650177-6 DUP-206 Sampled By: CLIENT on 05-OCT-21 Matrix: SEDIMENT							
Sample Preparation							
Initial pH	7.82		0.10	pH units		15-OCT-21	R5618181
Final pH	5.49		0.10	pH units		15-OCT-21	R5618181
TCLP Extractables							
Acenaphthene	<0.0050		0.0050	mg/L	15-OCT-21	18-OCT-21	R5623317
Acenaphthylene	<0.0050		0.0050	mg/L	15-OCT-21	18-OCT-21	R5623317
Anthracene	<0.0050		0.0050	mg/L	15-OCT-21	18-OCT-21	R5623317
Benzo(a)anthracene	<0.0050		0.0050	mg/L	15-OCT-21	18-OCT-21	R5623317
Benzo(a)pyrene	<0.0010		0.0010	mg/L	15-OCT-21	18-OCT-21	R5623317
Benzo(b&j)fluoranthene	<0.0050		0.0050	mg/L	15-OCT-21	18-OCT-21	R5623317
Benzo(g,h,i)perylene	<0.0050		0.0050	mg/L	15-OCT-21	18-OCT-21	R5623317
Benzo(k)fluoranthene	<0.0050		0.0050	mg/L	15-OCT-21	18-OCT-21	R5623317
Chrysene	<0.0050		0.0050	mg/L	15-OCT-21	18-OCT-21	R5623317
Dibenz(a,h)anthracene	<0.0050		0.0050	mg/L	15-OCT-21	18-OCT-21	R5623317
Fluoranthene	<0.0050		0.0050	mg/L	15-OCT-21	18-OCT-21	R5623317
Fluorene	<0.0050		0.0050	mg/L	15-OCT-21	18-OCT-21	R5623317
Indeno(1,2,3-cd)pyrene	<0.0050		0.0050	mg/L	15-OCT-21	18-OCT-21	R5623317
Naphthalene	<0.0050		0.0050	mg/L	15-OCT-21	18-OCT-21	R5623317
Phenanthrene	<0.0050		0.0050	mg/L	15-OCT-21	18-OCT-21	R5623317
Pyrene	<0.0050		0.0050	mg/L	15-OCT-21	18-OCT-21	R5623317
Surrogate: Chrysene d12	99.3		60-130	%	15-OCT-21	18-OCT-21	R5623317

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650177-6 DUP-206 Sampled By: CLIENT on 05-OCT-21 Matrix: SEDIMENT							
TCLP Extractables							
Surrogate: Naphthalene d8	97.4		50-130	%	15-OCT-21	18-OCT-21	R5623317
Surrogate: Phenanthrene d10	100.8		60-130	%	15-OCT-21	18-OCT-21	R5623317
Quinoline	<0.0050		0.0050	mg/L	15-OCT-21	18-OCT-21	R5623317
TCLP Metals							
Arsenic (As)	0.177		0.050	mg/L		15-OCT-21	R5619476
Barium (Ba)	1.03		0.50	mg/L		15-OCT-21	R5619476
Boron (B)	<2.5		2.5	mg/L		15-OCT-21	R5619476
Cadmium (Cd)	<0.0050		0.0050	mg/L		15-OCT-21	R5619476
Chromium (Cr)	<0.050		0.050	mg/L		15-OCT-21	R5619476
Lead (Pb)	0.109		0.025	mg/L		15-OCT-21	R5619476
Mercury (Hg)	<0.00010		0.00010	mg/L		15-OCT-21	R5618677
Selenium (Se)	<0.025		0.025	mg/L		15-OCT-21	R5619476
Silver (Ag)	<0.0050		0.0050	mg/L		15-OCT-21	R5619476
Uranium (U)	<0.25		0.25	mg/L		15-OCT-21	R5619476
L2650177-7 PCW-SC-013A Sampled By: CLIENT on 05-OCT-21 @ 15:45 Matrix: SEDIMENT							
Sample Preparation							
Initial pH	8.13		0.10	pH units		16-OCT-21	R5620669
Final pH	5.70		0.10	pH units		16-OCT-21	R5620669
TCLP Extractables							
Acenaphthene	<0.0050		0.0050	mg/L	18-OCT-21	19-OCT-21	R5624387
Acenaphthylene	<0.0050		0.0050	mg/L	18-OCT-21	19-OCT-21	R5624387
Anthracene	<0.0050		0.0050	mg/L	18-OCT-21	19-OCT-21	R5624387
Benzo(a)anthracene	<0.0050		0.0050	mg/L	18-OCT-21	19-OCT-21	R5624387
Benzo(a)pyrene	<0.0010		0.0010	mg/L	18-OCT-21	19-OCT-21	R5624387
Benzo(b&j)fluoranthene	<0.0050		0.0050	mg/L	18-OCT-21	19-OCT-21	R5624387
Benzo(g,h,i)perylene	<0.0050		0.0050	mg/L	18-OCT-21	19-OCT-21	R5624387
Benzo(k)fluoranthene	<0.0050		0.0050	mg/L	18-OCT-21	19-OCT-21	R5624387
Chrysene	<0.0050		0.0050	mg/L	18-OCT-21	19-OCT-21	R5624387
Dibenz(a,h)anthracene	<0.0050		0.0050	mg/L	18-OCT-21	19-OCT-21	R5624387
Fluoranthene	<0.0050		0.0050	mg/L	18-OCT-21	19-OCT-21	R5624387
Fluorene	<0.0050		0.0050	mg/L	18-OCT-21	19-OCT-21	R5624387
Indeno(1,2,3-cd)pyrene	<0.0050		0.0050	mg/L	18-OCT-21	19-OCT-21	R5624387
Naphthalene	<0.0050		0.0050	mg/L	18-OCT-21	19-OCT-21	R5624387
Phenanthrene	<0.0050		0.0050	mg/L	18-OCT-21	19-OCT-21	R5624387
Pyrene	<0.0050		0.0050	mg/L	18-OCT-21	19-OCT-21	R5624387
Surrogate: Chrysene d12	93.4		60-130	%	18-OCT-21	19-OCT-21	R5624387
Surrogate: Naphthalene d8	96.5		50-130	%	18-OCT-21	19-OCT-21	R5624387
Surrogate: Phenanthrene d10	99.5		60-130	%	18-OCT-21	19-OCT-21	R5624387
Quinoline	<0.0050		0.0050	mg/L	18-OCT-21	19-OCT-21	R5624387
TCLP Metals							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650177-7 PCW-SC-013A Sampled By: CLIENT on 05-OCT-21 @ 15:45 Matrix: SEDIMENT							
TCLP Metals							
Arsenic (As)	<0.050		0.050	mg/L		18-OCT-21	R5622480
Barium (Ba)	0.75		0.50	mg/L		18-OCT-21	R5622480
Boron (B)	<2.5		2.5	mg/L		18-OCT-21	R5622480
Cadmium (Cd)	<0.0050		0.0050	mg/L		18-OCT-21	R5622480
Chromium (Cr)	<0.050		0.050	mg/L		18-OCT-21	R5622480
Lead (Pb)	0.028		0.025	mg/L		18-OCT-21	R5622480
Mercury (Hg)	<0.00010		0.00010	mg/L		18-OCT-21	R5622645
Selenium (Se)	<0.025		0.025	mg/L		18-OCT-21	R5622480
Silver (Ag)	<0.0050		0.0050	mg/L		18-OCT-21	R5622480
Uranium (U)	<0.25		0.25	mg/L		18-OCT-21	R5622480
L2650177-8 DUP-207 Sampled By: CLIENT on 05-OCT-21 Matrix: SEDIMENT							
Sample Preparation							
Initial pH	7.76		0.10	pH units		15-OCT-21	R5618181
Final pH	5.86		0.10	pH units		15-OCT-21	R5618181
TCLP Extractables							
Acenaphthene	<0.0050		0.0050	mg/L	15-OCT-21	18-OCT-21	R5623317
Acenaphthylene	<0.0050		0.0050	mg/L	15-OCT-21	18-OCT-21	R5623317
Anthracene	<0.0050		0.0050	mg/L	15-OCT-21	18-OCT-21	R5623317
Benzo(a)anthracene	<0.0050		0.0050	mg/L	15-OCT-21	18-OCT-21	R5623317
Benzo(a)pyrene	<0.0010		0.0010	mg/L	15-OCT-21	18-OCT-21	R5623317
Benzo(b&j)fluoranthene	<0.0050		0.0050	mg/L	15-OCT-21	18-OCT-21	R5623317
Benzo(g,h,i)perylene	<0.0050		0.0050	mg/L	15-OCT-21	18-OCT-21	R5623317
Benzo(k)fluoranthene	<0.0050		0.0050	mg/L	15-OCT-21	18-OCT-21	R5623317
Chrysene	<0.0050		0.0050	mg/L	15-OCT-21	18-OCT-21	R5623317
Dibenz(a,h)anthracene	<0.0050		0.0050	mg/L	15-OCT-21	18-OCT-21	R5623317
Fluoranthene	<0.0050		0.0050	mg/L	15-OCT-21	18-OCT-21	R5623317
Fluorene	<0.0050		0.0050	mg/L	15-OCT-21	18-OCT-21	R5623317
Indeno(1,2,3-cd)pyrene	<0.0050		0.0050	mg/L	15-OCT-21	18-OCT-21	R5623317
Naphthalene	<0.0050		0.0050	mg/L	15-OCT-21	18-OCT-21	R5623317
Phenanthrene	<0.0050		0.0050	mg/L	15-OCT-21	18-OCT-21	R5623317
Pyrene	<0.0050		0.0050	mg/L	15-OCT-21	18-OCT-21	R5623317
Surrogate: Chrysene d12	105.4		60-130	%	15-OCT-21	18-OCT-21	R5623317
Surrogate: Naphthalene d8	101.2		50-130	%	15-OCT-21	18-OCT-21	R5623317
Surrogate: Phenanthrene d10	106.6		60-130	%	15-OCT-21	18-OCT-21	R5623317
Quinoline	<0.0050		0.0050	mg/L	15-OCT-21	18-OCT-21	R5623317
TCLP Metals							
Arsenic (As)	<0.050		0.050	mg/L		15-OCT-21	R5619476
Barium (Ba)	0.88		0.50	mg/L		15-OCT-21	R5619476
Boron (B)	<2.5		2.5	mg/L		15-OCT-21	R5619476
Cadmium (Cd)	<0.0050		0.0050	mg/L		15-OCT-21	R5619476

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2650177-8 DUP-207 Sampled By: CLIENT on 05-OCT-21 Matrix: SEDIMENT							
TCLP Metals							
Chromium (Cr)	<0.050		0.050	mg/L		15-OCT-21	R5619476
Lead (Pb)	<0.025		0.025	mg/L		15-OCT-21	R5619476
Mercury (Hg)	<0.00010		0.00010	mg/L		15-OCT-21	R5618677
Selenium (Se)	<0.025		0.025	mg/L		15-OCT-21	R5619476
Silver (Ag)	<0.0050		0.0050	mg/L		15-OCT-21	R5619476
Uranium (U)	<0.25		0.25	mg/L		15-OCT-21	R5619476

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Reference Information

QC Samples with Qualifiers & Comments:

QC Type Description	Parameter	Qualifier	Applies to Sample Number(s)
Matrix Spike	Acenaphthene	MS-B	L2650177-1, -2, -3, -4, -6, -8
Matrix Spike	Phenanthrene	MS-B	L2650177-1, -2, -3, -4, -6, -8

Sample Parameter Qualifier key listed:

Qualifier	Description
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
HG-TCLP-WT	Waste	Mercury (CVAA) for O.Reg 347	EPA 1631E

This analysis is carried out in accordance with the extraction procedure outlined in "Test Methods for Evaluating Solid Waste - Physical/Chemical Methods Volume 1C" SW-846 EPA Method 1311, published by the United States Environmental Protection Agency (EPA). In summary, the sample is extracted at a 20:1 liquid to solids ratio for 16 to 20 hours using either extraction fluid #1 (glacial acetic acid, water and sodium hydroxide) or extraction fluid #2 (glacial acetic acid), depending on the pH of the original sample. The extract is then filtered through a 0.6 to 0.8 micron glass fibre filter and analysed using atomic absorption spectrophotometry (EPA 1631E).

LEACH-TCLP-WT	Waste	Leachate Procedure for Reg 347	EPA 1311

Inorganic and Semi-Volatile Organic contaminants are leached from waste samples in strict accordance with US EPA Method 1311, "Toxicity Characteristic Leaching Procedure" (TCLP). Test results are reported in leachate concentration units (normally mg/L).

MET-TCLP-WT	Waste	O.Reg 347 TCLP Leachable Metals	EPA 6020B

This analysis is carried out in accordance with the extraction procedure outlined in "Test Methods for Evaluating Solid Waste - Physical/Chemical Methods Volume 1C" SW-846 EPA Method 1311, published by the United States Environmental Protection Agency (EPA). In summary, the sample is extracted at a 20:1 liquid to solids ratio for 16 to 20 hours using either extraction fluid #1 (glacial acetic acid, water and sodium hydroxide) or extraction fluid #2 (glacial acetic acid), depending on the pH of the original sample. The extract is then filtered through a 0.6 to 0.8 micron glass fibre filter. Instrumental analysis of the digested extract is by collision cell inductively coupled plasma - mass spectrometry (modifed from EPA Method 6020B).

PAH-TCLP-WT	Waste	PAH for O. Reg 347	SW846 8270 (PAH)

Samples are leached according to TCLP protocol and then the aqueous leachate is extracted and the resulting extracts are analyzed on GC/MSD. Depending on the analytical GC/MS column used benzo(j)fluoranthene may chromatographically co-elute with benzo(b)fluoranthene or benzo(k)fluoranthene.

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
WT	ALS ENVIRONMENTAL - WATERLOO, ONTARIO, CANADA

Chain of Custody Numbers:

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.
mg/kg - milligrams per kilogram based on dry weight of sample
mg/kg wwt - milligrams per kilogram based on wet weight of sample
mg/kg lwt - milligrams per kilogram based on lipid weight of sample
mg/L - unit of concentration based on volume, parts per million.
< - Less than.
D.L. - The reporting limit.
N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.
UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.
Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.

Quality Control Report

Workorder: L2650177 Report Date: 19-OCT-21

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
HG-TCLP-WT	**Waste**							
Batch R5618677								
WG3638437-3 DUP		**L2650684-1**						
Mercury (Hg)		<0.00010	<0.00010	RPD-NA	mg/L	N/A	50	15-OCT-21
WG3638437-2 LCS								
Mercury (Hg)			97.2		%		70-130	15-OCT-21
WG3638437-1 MB								
Mercury (Hg)			<0.00010		mg/L		0.0001	15-OCT-21
WG3638437-4 MS		**L2650684-1**						
Mercury (Hg)			96.3		%		50-140	15-OCT-21
Batch R5622645								
WG3639584-3 DUP		**L2650172-6**						
Mercury (Hg)		<0.00010	<0.00010	RPD-NA	mg/L	N/A	50	18-OCT-21
WG3639584-2 LCS								
Mercury (Hg)			93.7		%		70-130	18-OCT-21
WG3639584-1 MB								
Mercury (Hg)			<0.00010		mg/L		0.0001	18-OCT-21
WG3639584-4 MS		**L2650172-6**						
Mercury (Hg)			93.7		%		50-140	18-OCT-21
MET-TCLP-WT	**Waste**							
Batch R5619476								
WG3638289-4 DUP		**WG3638289-3**						
Silver (Ag)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	15-OCT-21
Arsenic (As)		<0.050	<0.050	RPD-NA	mg/L	N/A	50	15-OCT-21
Boron (B)		<2.5	<2.5	RPD-NA	mg/L	N/A	50	15-OCT-21
Barium (Ba)		<0.50	<0.50	RPD-NA	mg/L	N/A	50	15-OCT-21
Cadmium (Cd)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	15-OCT-21
Chromium (Cr)		<0.050	<0.050	RPD-NA	mg/L	N/A	50	15-OCT-21
Lead (Pb)		<0.025	<0.025	RPD-NA	mg/L	N/A	50	15-OCT-21
Selenium (Se)		<0.025	<0.025	RPD-NA	mg/L	N/A	50	15-OCT-21
Uranium (U)		<0.25	<0.25	RPD-NA	mg/L	N/A	50	15-OCT-21
WG3638289-2 LCS								
Silver (Ag)			97.3		%		70-130	15-OCT-21
Arsenic (As)			97.7		%		70-130	15-OCT-21
Boron (B)			94.3		%		70-130	15-OCT-21
Barium (Ba)			97.5		%		70-130	15-OCT-21
Cadmium (Cd)			94.4		%		70-130	15-OCT-21
Chromium (Cr)			96.7		%		70-130	15-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-TCLP-WT	**Waste**							
Batch R5619476								
WG3638289-2 LCS								
Lead (Pb)			96.4		%		70-130	15-OCT-21
Selenium (Se)			99.1		%		70-130	15-OCT-21
Uranium (U)			100.7		%		70-130	15-OCT-21
WG3638289-1 MB								
Silver (Ag)			<0.0050		mg/L		0.005	15-OCT-21
Arsenic (As)			<0.050		mg/L		0.05	15-OCT-21
Boron (B)			<2.5		mg/L		2.5	15-OCT-21
Barium (Ba)			<0.50		mg/L		0.5	15-OCT-21
Cadmium (Cd)			<0.0050		mg/L		0.005	15-OCT-21
Chromium (Cr)			<0.050		mg/L		0.05	15-OCT-21
Lead (Pb)			<0.025		mg/L		0.025	15-OCT-21
Selenium (Se)			<0.025		mg/L		0.025	15-OCT-21
Uranium (U)			<0.25		mg/L		0.25	15-OCT-21
WG3638289-5 MS		**WG3638289-3**						
Silver (Ag)			113.9		%		50-140	15-OCT-21
Arsenic (As)			106.9		%		50-140	15-OCT-21
Boron (B)			100.7		%		50-140	15-OCT-21
Barium (Ba)			112.1		%		50-140	15-OCT-21
Cadmium (Cd)			104.3		%		50-140	15-OCT-21
Chromium (Cr)			108.0		%		50-140	15-OCT-21
Lead (Pb)			102.1		%		50-140	15-OCT-21
Selenium (Se)			110.9		%		50-140	15-OCT-21
Uranium (U)			106.5		%		50-140	15-OCT-21
Batch R5622480								
WG3639410-4 DUP		**WG3639410-3**						
Silver (Ag)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	18-OCT-21
Arsenic (As)		<0.050	<0.050	RPD-NA	mg/L	N/A	50	18-OCT-21
Boron (B)		<2.5	<2.5	RPD-NA	mg/L	N/A	50	18-OCT-21
Barium (Ba)		0.69	0.72		mg/L	4.3	50	18-OCT-21
Cadmium (Cd)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	18-OCT-21
Chromium (Cr)		<0.050	<0.050	RPD-NA	mg/L	N/A	50	18-OCT-21
Lead (Pb)		<0.025	<0.025	RPD-NA	mg/L	N/A	50	18-OCT-21
Selenium (Se)		<0.025	<0.025	RPD-NA	mg/L	N/A	50	18-OCT-21
Uranium (U)		<0.25	<0.25	RPD-NA	mg/L	N/A	50	18-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-TCLP-WT	**Waste**							
Batch R5622480								
WG3639410-2 LCS								
Silver (Ag)			100.0		%		70-130	18-OCT-21
Arsenic (As)			103.0		%		70-130	18-OCT-21
Boron (B)			96.6		%		70-130	18-OCT-21
Barium (Ba)			102.2		%		70-130	18-OCT-21
Cadmium (Cd)			99.7		%		70-130	18-OCT-21
Chromium (Cr)			103.6		%		70-130	18-OCT-21
Lead (Pb)			100.3		%		70-130	18-OCT-21
Selenium (Se)			101.4		%		70-130	18-OCT-21
Uranium (U)			102.0		%		70-130	18-OCT-21
WG3639410-1 MB								
Silver (Ag)			<0.0050		mg/L		0.005	18-OCT-21
Arsenic (As)			<0.050		mg/L		0.05	18-OCT-21
Boron (B)			<2.5		mg/L		2.5	18-OCT-21
Barium (Ba)			<0.50		mg/L		0.5	18-OCT-21
Cadmium (Cd)			<0.0050		mg/L		0.005	18-OCT-21
Chromium (Cr)			<0.050		mg/L		0.05	18-OCT-21
Lead (Pb)			<0.025		mg/L		0.025	18-OCT-21
Selenium (Se)			<0.025		mg/L		0.025	18-OCT-21
Uranium (U)			<0.25		mg/L		0.25	18-OCT-21
WG3639410-5 MS		**WG3639410-3**						
Silver (Ag)			102.8		%		50-140	18-OCT-21
Arsenic (As)			99.4		%		50-140	18-OCT-21
Boron (B)			93.4		%		50-140	18-OCT-21
Barium (Ba)			101.1		%		50-140	18-OCT-21
Cadmium (Cd)			96.8		%		50-140	18-OCT-21
Chromium (Cr)			98.5		%		50-140	18-OCT-21
Lead (Pb)			96.5		%		50-140	18-OCT-21
Selenium (Se)			103.2		%		50-140	18-OCT-21
Uranium (U)			96.1		%		50-140	18-OCT-21
PAH-TCLP-WT	**Waste**							
Batch R5623317								
WG3638887-5 DUP		**WG3638887-4**						
Acenaphthene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	18-OCT-21
Acenaphthylene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	18-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-TCLP-WT	**Waste**							
Batch R5623317								
WG3638887-5 DUP		**WG3638887-4**						
Anthracene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	18-OCT-21
Benzo(a)anthracene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	18-OCT-21
Benzo(a)pyrene		<0.0010	<0.0010	RPD-NA	mg/L	N/A	50	18-OCT-21
Benzo(b&j)fluoranthene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	18-OCT-21
Benzo(g,h,i)perylene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	18-OCT-21
Benzo(k)fluoranthene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	18-OCT-21
Chrysene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	18-OCT-21
Dibenz(a,h)anthracene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	18-OCT-21
Fluoranthene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	18-OCT-21
Fluorene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	18-OCT-21
Indeno(1,2,3-cd)pyrene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	18-OCT-21
Naphthalene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	18-OCT-21
Phenanthrene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	18-OCT-21
Pyrene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	18-OCT-21
Quinoline		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	18-OCT-21
WG3638887-2 LCS								
Acenaphthene			101.2		%		50-130	18-OCT-21
Acenaphthylene			96.7		%		50-130	18-OCT-21
Anthracene			94.3		%		50-130	18-OCT-21
Benzo(a)anthracene			103.6		%		50-140	18-OCT-21
Benzo(a)pyrene			91.6		%		60-140	18-OCT-21
Benzo(b&j)fluoranthene			102.2		%		50-130	18-OCT-21
Benzo(g,h,i)perylene			107.3		%		50-140	18-OCT-21
Benzo(k)fluoranthene			102.4		%		50-150	18-OCT-21
Chrysene			103.6		%		50-140	18-OCT-21
Dibenz(a,h)anthracene			96.0		%		50-140	18-OCT-21
Fluoranthene			102.8		%		50-130	18-OCT-21
Fluorene			101.1		%		50-130	18-OCT-21
Indeno(1,2,3-cd)pyrene			101.8		%		50-140	18-OCT-21
Naphthalene			90.5		%		50-130	18-OCT-21
Phenanthrene			105.4		%		50-130	18-OCT-21
Pyrene			103.2		%		50-140	18-OCT-21
Quinoline			109.3		%		50-130	18-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-TCLP-WT	**Waste**							
Batch R5623317								
WG3638887-1 MB								
Acenaphthene			<0.0050		mg/L		0.005	18-OCT-21
Acenaphthylene			<0.0050		mg/L		0.005	18-OCT-21
Anthracene			<0.0050		mg/L		0.005	18-OCT-21
Benzo(a)anthracene			<0.0050		mg/L		0.005	18-OCT-21
Benzo(a)pyrene			<0.0010		mg/L		0.001	18-OCT-21
Benzo(b&j)fluoranthene			<0.0050		mg/L		0.005	18-OCT-21
Benzo(g,h,i)perylene			<0.0050		mg/L		0.005	18-OCT-21
Benzo(k)fluoranthene			<0.0050		mg/L		0.005	18-OCT-21
Chrysene			<0.0050		mg/L		0.005	18-OCT-21
Dibenz(a,h)anthracene			<0.0050		mg/L		0.005	18-OCT-21
Fluoranthene			<0.0050		mg/L		0.005	18-OCT-21
Fluorene			<0.0050		mg/L		0.005	18-OCT-21
Indeno(1,2,3-cd)pyrene			<0.0050		mg/L		0.005	18-OCT-21
Naphthalene			<0.0050		mg/L		0.005	18-OCT-21
Phenanthrene			<0.0050		mg/L		0.005	18-OCT-21
Pyrene			<0.0050		mg/L		0.005	18-OCT-21
Quinoline			<0.0050		mg/L		0.005	18-OCT-21
Surrogate: Naphthalene d8			107.0		%		50-130	18-OCT-21
Surrogate: Phenanthrene d10			106.6		%		60-130	18-OCT-21
Surrogate: Chrysene d12			96.4		%		60-130	18-OCT-21
WG3638887-3 MB								
Acenaphthene			<0.0050		mg/L		0.005	18-OCT-21
Acenaphthylene			<0.0050		mg/L		0.005	18-OCT-21
Anthracene			<0.0050		mg/L		0.005	18-OCT-21
Benzo(a)anthracene			<0.0050		mg/L		0.005	18-OCT-21
Benzo(a)pyrene			<0.0010		mg/L		0.001	18-OCT-21
Benzo(b&j)fluoranthene			<0.0050		mg/L		0.005	18-OCT-21
Benzo(g,h,i)perylene			<0.0050		mg/L		0.005	18-OCT-21
Benzo(k)fluoranthene			<0.0050		mg/L		0.005	18-OCT-21
Chrysene			<0.0050		mg/L		0.005	18-OCT-21
Dibenz(a,h)anthracene			<0.0050		mg/L		0.005	18-OCT-21
Fluoranthene			<0.0050		mg/L		0.005	18-OCT-21
Fluorene			<0.0050		mg/L		0.005	18-OCT-21
Indeno(1,2,3-cd)pyrene			<0.0050		mg/L		0.005	18-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-TCLP-WT	**Waste**							
Batch R5623317								
WG3638887-3 MB								
Naphthalene			<0.0050		mg/L		0.005	18-OCT-21
Phenanthrene			<0.0050		mg/L		0.005	18-OCT-21
Pyrene			<0.0050		mg/L		0.005	18-OCT-21
Quinoline			<0.0050		mg/L		0.005	18-OCT-21
Surrogate: Naphthalene d8			98.1		%		50-130	18-OCT-21
Surrogate: Phenanthrene d10			101.7		%		60-130	18-OCT-21
Surrogate: Chrysene d12			99.9		%		60-130	18-OCT-21
WG3638887-6 MS		**WG3638887-4**						
Acenaphthene			N/A	MS-B	%		-	18-OCT-21
Acenaphthylene			91.6		%		50-140	18-OCT-21
Anthracene			86.1		%		50-150	18-OCT-21
Benzo(a)anthracene			93.8		%		50-140	18-OCT-21
Benzo(a)pyrene			79.0		%		50-140	18-OCT-21
Benzo(b&j)fluoranthene			88.1		%		50-150	18-OCT-21
Benzo(g,h,i)perylene			92.9		%		50-140	18-OCT-21
Benzo(k)fluoranthene			87.0		%		50-150	18-OCT-21
Chrysene			91.3		%		50-140	18-OCT-21
Dibenz(a,h)anthracene			85.1		%		50-140	18-OCT-21
Fluoranthene			93.3		%		50-140	18-OCT-21
Fluorene			92.3		%		50-140	18-OCT-21
Indeno(1,2,3-cd)pyrene			88.5		%		50-140	18-OCT-21
Naphthalene			85.1		%		50-140	18-OCT-21
Phenanthrene			N/A	MS-B	%		-	18-OCT-21
Pyrene			93.1		%		50-150	18-OCT-21
Quinoline			103.6		%		50-150	18-OCT-21
Batch R5624387								
WG3639574-5 DUP		**WG3639574-3**						
Acenaphthene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	19-OCT-21
Acenaphthylene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	19-OCT-21
Anthracene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	19-OCT-21
Benzo(a)anthracene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	19-OCT-21
Benzo(a)pyrene		<0.0010	<0.0010	RPD-NA	mg/L	N/A	50	19-OCT-21
Benzo(b&j)fluoranthene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	19-OCT-21
Benzo(g,h,i)perylene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	19-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-TCLP-WT	**Waste**							
Batch R5624387								
WG3639574-5 DUP		**WG3639574-3**						
Benzo(k)fluoranthene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	19-OCT-21
Chrysene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	19-OCT-21
Dibenz(a,h)anthracene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	19-OCT-21
Fluoranthene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	19-OCT-21
Fluorene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	19-OCT-21
Indeno(1,2,3-cd)pyrene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	19-OCT-21
Naphthalene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	19-OCT-21
Phenanthrene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	19-OCT-21
Pyrene		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	19-OCT-21
Quinoline		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	19-OCT-21
WG3639574-2 LCS								
Acenaphthene			90.6		%		50-130	19-OCT-21
Acenaphthylene			87.0		%		50-130	19-OCT-21
Anthracene			83.2		%		50-130	19-OCT-21
Benzo(a)anthracene			90.8		%		50-140	19-OCT-21
Benzo(a)pyrene			81.1		%		60-140	19-OCT-21
Benzo(b&j)fluoranthene			89.4		%		50-130	19-OCT-21
Benzo(g,h,i)perylene			98.1		%		50-140	19-OCT-21
Benzo(k)fluoranthene			91.7		%		50-150	19-OCT-21
Chrysene			91.6		%		50-140	19-OCT-21
Dibenz(a,h)anthracene			86.3		%		50-140	19-OCT-21
Fluoranthene			90.6		%		50-130	19-OCT-21
Fluorene			89.8		%		50-130	19-OCT-21
Indeno(1,2,3-cd)pyrene			93.7		%		50-140	19-OCT-21
Naphthalene			80.1		%		50-130	19-OCT-21
Phenanthrene			92.4		%		50-130	19-OCT-21
Pyrene			91.1		%		50-140	19-OCT-21
Quinoline			106.0		%		50-130	19-OCT-21
WG3639574-1 MB								
Acenaphthene			<0.0050		mg/L		0.005	19-OCT-21
Acenaphthylene			<0.0050		mg/L		0.005	19-OCT-21
Anthracene			<0.0050		mg/L		0.005	19-OCT-21
Benzo(a)anthracene			<0.0050		mg/L		0.005	19-OCT-21
Benzo(a)pyrene			<0.0010		mg/L		0.001	19-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-TCLP-WT	**Waste**							
Batch R5624387								
WG3639574-1 MB								
Benzo(b&j)fluoranthene			<0.0050		mg/L		0.005	19-OCT-21
Benzo(g,h,i)perylene			<0.0050		mg/L		0.005	19-OCT-21
Benzo(k)fluoranthene			<0.0050		mg/L		0.005	19-OCT-21
Chrysene			<0.0050		mg/L		0.005	19-OCT-21
Dibenz(a,h)anthracene			<0.0050		mg/L		0.005	19-OCT-21
Fluoranthene			<0.0050		mg/L		0.005	19-OCT-21
Fluorene			<0.0050		mg/L		0.005	19-OCT-21
Indeno(1,2,3-cd)pyrene			<0.0050		mg/L		0.005	19-OCT-21
Naphthalene			<0.0050		mg/L		0.005	19-OCT-21
Phenanthrene			<0.0050		mg/L		0.005	19-OCT-21
Pyrene			<0.0050		mg/L		0.005	19-OCT-21
Quinoline			<0.0050		mg/L		0.005	19-OCT-21
Surrogate: Naphthalene d8			93.9		%		50-130	19-OCT-21
Surrogate: Phenanthrene d10			99.5		%		60-130	19-OCT-21
Surrogate: Chrysene d12			95.2		%		60-130	19-OCT-21
WG3639574-6 MB								
Acenaphthene			<0.0050		mg/L		0.005	19-OCT-21
Acenaphthylene			<0.0050		mg/L		0.005	19-OCT-21
Anthracene			<0.0050		mg/L		0.005	19-OCT-21
Benzo(a)anthracene			<0.0050		mg/L		0.005	19-OCT-21
Benzo(a)pyrene			<0.0010		mg/L		0.001	19-OCT-21
Benzo(b&j)fluoranthene			<0.0050		mg/L		0.005	19-OCT-21
Benzo(g,h,i)perylene			<0.0050		mg/L		0.005	19-OCT-21
Benzo(k)fluoranthene			<0.0050		mg/L		0.005	19-OCT-21
Chrysene			<0.0050		mg/L		0.005	19-OCT-21
Dibenz(a,h)anthracene			<0.0050		mg/L		0.005	19-OCT-21
Fluoranthene			<0.0050		mg/L		0.005	19-OCT-21
Fluorene			<0.0050		mg/L		0.005	19-OCT-21
Indeno(1,2,3-cd)pyrene			<0.0050		mg/L		0.005	19-OCT-21
Naphthalene			<0.0050		mg/L		0.005	19-OCT-21
Phenanthrene			<0.0050		mg/L		0.005	19-OCT-21
Pyrene			<0.0050		mg/L		0.005	19-OCT-21
Quinoline			<0.0050		mg/L		0.005	19-OCT-21
Surrogate: Naphthalene d8			97.9		%		50-130	19-OCT-21

Quality Control Report

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-TCLP-WT	**Waste**							
Batch R5624387								
WG3639574-6 MB								
Surrogate: Phenanthrene d10			103.9		%		60-130	19-OCT-21
Surrogate: Chrysene d12			99.3		%		60-130	19-OCT-21
WG3639574-4 MS		**WG3639574-3**						
Acenaphthene			89.5		%		50-140	19-OCT-21
Acenaphthylene			86.3		%		50-140	19-OCT-21
Anthracene			81.6		%		50-150	19-OCT-21
Benzo(a)anthracene			89.8		%		50-140	19-OCT-21
Benzo(a)pyrene			79.3		%		50-140	19-OCT-21
Benzo(b&j)fluoranthene			88.5		%		50-150	19-OCT-21
Benzo(g,h,i)perylene			97.4		%		50-140	19-OCT-21
Benzo(k)fluoranthene			90.4		%		50-150	19-OCT-21
Chrysene			90.4		%		50-140	19-OCT-21
Dibenz(a,h)anthracene			84.7		%		50-140	19-OCT-21
Fluoranthene			90.5		%		50-140	19-OCT-21
Fluorene			89.0		%		50-140	19-OCT-21
Indeno(1,2,3-cd)pyrene			92.4		%		50-140	19-OCT-21
Naphthalene			80.7		%		50-140	19-OCT-21
Phenanthrene			91.3		%		50-150	19-OCT-21
Pyrene			91.4		%		50-150	19-OCT-21
Quinoline			111.4		%		50-150	19-OCT-21

Quality Control Report

Workorder: L2650177 Report Date: 19-OCT-21

Client: GOLDER ASSOCIATES LTD (Whitby)
100 Scotia Court
Whitby ON L1N 8Y6
Contact: Jill LaPorte

Legend:

Limit	ALS Control Limit (Data Quality Objectives)
DUP	Duplicate
RPD	Relative Percent Difference
N/A	Not Available
LCS	Laboratory Control Sample
SRM	Standard Reference Material
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ADE	Average Desorption Efficiency
MB	Method Blank
IRM	Internal Reference Material
CRM	Certified Reference Material
CCV	Continuing Calibration Verification
CVS	Calibration Verification Standard
LCSD	Laboratory Control Sample Duplicate

Sample Parameter Qualifier Definitions:

Qualifier	Description
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Hold Time Exceedances:

All test results reported with this submission were conducted within ALS recommended hold times.

ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.

ALS www.alsglobal.com

Chain of Custo Ca

L2650177-COFC

COC Number: 20 - 024

Page 3 of 3

Report To	Contact and company name below will appear on the final report
Company:	Golder Associates Ltd.
Contact:	Jill LaPorte
Phone:	905-723-2727
	Company address below will appear on the final report
Street:	100 Scotia Court
City/Province:	Whitby, Ontario
Postal Code:	L1N 8Y6
Invoice To	Same as Report To ☐ YES ☑ NO
	Copy of Invoice with Report ☑ YES ☐ NO
Company:	Golder Associates Ltd.
Contact:	Accounts Payable

Reports / Recipients

Select Report Format: ☑ PDF ☑ EXCEL ☐ EDD (DIGITAL)

Merge QC/QCI Reports with COA ☑ YES ☐ NO ☐ N/A

☐ Compare Results to Criteria on Report - provide details below if box checked

Select Distribution: ☑ EMAIL ☐ MAIL ☐ FAX

Email 1 or Fax: Jill_LaPorte@golder.com

Email 2: shawn_seguin@golder.com

Email 3:

Invoice Recipients

Select Invoice Distribution: ☑ EMAIL ☐ MAIL ☐ FAX

Email 1 or Fax: Jill_LaPorte@golder.com

Email 2: canadaaccountspayableinvoices@golder.com

Turnaround Time (TAT) Requested

☐ Routine [R] if received by 3pm M-F - no surcharges apply

☐ 4 day [P4] if received by 3pm M-F - 25% rush surcharge minimum

☐ 3 day [P3] if received by 12pm M-F - 50% rush surcharge minimum

☐ 2 day [P2] if received by 12pm M-F - 100% rush surcharge minimum

☐ *1 day [E] if received by 12pm M-F - 200% rush surcharge minimum

*1 day only available for Inorganics, Metals, & VOC

• Same day [E2] unavailable for TCLP/SPLP

AFFIX ALS BARCODE LABEL HERE (ALS use only)

Date and Time Required for all E&P TATs: dd-mmm-yy hh:mm am/pm

For all tests with rush TATs requested, please contact your AM to confirm availability.

Project Information		Oil and Gas Required Fields (client use)	
ALS Account # / Quote #:	15520 / Q86566	AFE/Cost Center:	PO#:
Job #:	1783886-8000-8006	Major/Minor Code:	Routing Code:
PO / AFE:		Requisitioner:	
LSD:		Location:	

ALS Lab Work Order # (ALS use only): L2650177

ALS Contact: Amanda Overholster

Sampler:

Analysis Request

ALS Sample # (ALS use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	NUMBER OF CONTAINERS	TCLP (EPA 1311) PAH (PAH-TCLP-WT)	TCLP (EPA 1311) Metals (MET-TCLP-P-WT)	TCLP (EPA 1311) LEACH (LEACH-TCLP-WT)	MISC	SAMPLES ON HOLD	EXTENDED STORAGE REQUIRED	SUSPECTED HAZARD (see notes)
	PCOM-SG-002	05-Oct-21	11:50	Sediment	3	✓	✓	✓				
	WM-SG-003		12:30	Sediment	3	✓	✓	✓				
	WM-SG-003A		11:30	Sediment	3	✓	✓	✓				
	PCW-SG-011		15:20	Sediment	3	✓	✓	✓				
	PCW-SG-013		16:20	Sediment	3	✓	✓	✓				
	DUP-206		—	Sediment	3	✓	✓	✓				
	PCW-SC-013A	05-Oct-21	15:45	Sediment	3	✓	✓	✓				
	DUP-207	05-Oct-21	—	Sediment	3	✓	✓	✓				
				Sediment								
				Sediment								
				Sediment								
				Sediment								
				Sediment								

Limited Sample Size Authorization

If the sample provided contains less than the minimum required weight, the samples may be leached at a lower volume and qualified as Limited Sample Size:

☐ YES ☐ NO

Minimum Sample Size: 1X250 mL - No Headspace

Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only)

Please provide 2X250 mL sample if both mSPLP and TCLP leaching procedures are requested or if Dioxins and Furans are required.

SAMPLE RECEIPT DETAILS (ALS use only)

Cooling Method: ☐ NONE ☒ ICE ☐ ICE PACKS ☐ FROZEN ☐ COOLING INITIATED

Submission Comments identified on Sample Receipt Notification: ☐ YES ☐ NO

Cooler Custody Seals Intact: ☐ YES ☐ N/A Sample Custody Seals Intact: ☐ YES ☐ N/A

INITIAL COOLER TEMPERATURES °C				FINAL COOLER TEMPERATURES °C			
				14.2			

SHIPMENT RELEASE (client use)			INITIAL SHIPMENT RECEPTION (ALS use only)			FINAL SHIPMENT RECEPTION (ALS use only)		
Released by:	Date:	Time:	Received by:	Date:	Time:	Received by:	Date:	Time:
							08/Oct/2021	17:40

Refer to the Locations Tab for ALS Locations and Sampling Information

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions.

Reg. 406 mSPLP Metals scan includes: Sb,As,Ba,Be,B,Cd,Cr,Co,Cu,Pb,Mo,Ni,Se,Ag,Tl,U,V,Zn. Reg. 347/558 TCLP Metals+Inorganics includes: As,Ba,B,Cd,Cr,Pb,Se,Ag,U,Hg,Fluoride,CN (WAD),Nitrate+Nitrite as N

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APPENDIX G

QA/QC RPD Tables

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APPENDIX G
Results of Water Quality QAQC Duplicate Sample Results
Milne Port, 2021

Sample Name			PCE-SG-005	DUP-004					PCE-SG-010	DUP-005					PCE-SG-011	DUP-006					PCOM-SG-001	DUP-208				
Sample Date			2021-10-03	2021-10-03					2021-10-03	2021-10-03					2021-10-03	2021-10-03					2021-10-05	2021-10-05				
PARENT_SAMPLE_CODE			L2648161	L2648161					L2648161	L2648161					L2648161	L2648161					L2650176	L2650176				
Parameter		Units	-	-	Reported Detection Limit	Mean	Relative Percent Difference (RPD)	Difference Factor (DF)	-	-	Reported Detection Limit	Mean	Relative Percent Difference (RPD)	Difference Factor (DF)	-	-	Reported Detection Limit	Mean	Relative Percent Difference (RPD)	Difference Factor (DF)	-	-	Reported Detection Limit	Mean	Relative Percent Difference (RPD)	Difference Factor (DF)
Field and Physical																										
pH		pH Units	-	-	0.1	NC	NC	NC	-	-	0.1	NC	NC	NC	-	-	0.1	NC	NC	NC	-	-	0.1	NC	NC	NC
Total Organic Carbon		ug/L	7.41	7.61	500	8	NA	0.0	2.93	2.81	500	3	NA	0.0	8.01	8.12	500	8	NA	0.0	**7.57**	**7.90**	500	8	NA	0.0
Metals, Dissolved																										
Aluminum (Al)		ug/L	15200.00	15500.00	5	15350	2%	NA	11300.00	15900.00	5	13600	**34%**	NA	14600.00	15300.00	5	14950	5%	NA	9230.00	8700.00	5	8965	6%	NA
Antimony (Sb)		ug/L	0.63	0.69	1	0.7	NA	0.1	0.66	0.66	1	1	NA	0.0	1.15	1.17	1	1.16	NA	0.0	3.60	0.68	1	2.14	NA	**2.9**
Arsenic (As)		ug/L	4.95	5.03	0.4	4.99	2%	NA	3.45	5.09	0.4	4.27	**38%**	NA	5.90	**6.07**	0.4	5.99	3%	NA	5.14	3.11	0.4	4.13	**49%**	NA
Barium (Ba)		ug/L	243.00	241.00	1	242.0	1%	NA	144.00	212.00	1	178.0	**38%**	NA	244.00	254.00	1	249.0	4%	NA	277.00	228.00	1	252.5	19%	NA
Beryllium (Be)		ug/L	0.54	0.58	0.5	0.56	NA	0.1	0.45	0.56	0.5	1	NA	0.2	0.52	0.63	0.5	0.58	NA	0.2	0.43	0.37	0.5	0.40	NA	0.1
Bismuth (Bi)		ug/L	0.21	0.23	0.5	0.2	NA	0.0	0.20	0.10	0.5	0	NA	0.2	0.20	0.20	0.5	0.2	NA	0.0	0.81	0.65	0.5	0.7	NA	0.3
Boron (B)		ug/L	7.70	8.80	300	8	NA	0.0	5.00	8.00	300	7	NA	0.0	11.00	11.00	300	11	NA	0.0	11.30	9.10	300	10	NA	0.0
Cadmium (Cd)		ug/L	0.49	0.49	0.01	0.492	1%	NA	0.28	0.36	0.01	0.321	**25%**	NA	**0.64**	**0.67**	0.01	0.654	4%	NA	**1.59**	**1.66**	0.01	1.625	4%	NA
Calcium (Ca)		ug/L	72200.00	69900.00	1000	71050	3%	NA	27500.00	37100.00	1000	32300	**30%**	NA	102000.00	111000.00	1000	106500	8%	NA	133000.00	116000.00	1000	124500	14%	NA
Chromium (Cr)		ug/L	913.00	885.00	0.5	899.000	3%	NA	858.00	739.00	0.5	799	15%	NA	1170.00	1190.00	0.5	1180	2%	NA	**4830.00**	**4100.00**	0.5	4465	16%	NA
Cobalt (Co)		ug/L	10.00	10.40	0.05	10.200	4%	NA	10.50	13.30	0.05	12	**24%**	NA	11.00	11.20	0.05	11	2%	NA	9.79	6.88	0.05	8	**35%**	NA
Copper (Cu)		ug/L	31.60	32.40	0.2	32.00	2%	NA	23.80	35.10	0.2	29.45	**38%**	NA	**40.30**	**42.50**	0.2	41.40	5%	NA	**93.60**	**74.60**	0.2	84.10	**23%**	NA
Iron (Fe)		ug/L	22200.00	23500.00	10	22850.000	6%	NA	19500.00	25900.00	10	22700	**28%**	NA	24000.00	25000.00	10	24500	4%	NA	**21200.00**	17600.00	10	19400	19%	NA
Lead (Pb)		ug/L	**71.20**	**71.40**	0.05	71.300	0%	NA	**70.30**	**97.80**	0.05	84	**33%**	NA	**106.00**	**111.00**	0.05	109	5%	NA	**371.00**	**320.00**	0.05	346	15%	NA
Lithium (Li)		ug/L	10.20	10.90	20	11	NA	0.0	9.60	11.20	20	10	NA	0.1	11.30	12.40	20	12	NA	0.1	9.90	8.50	20	9	NA	0.1
Magnesium (Mg)		ug/L	13300.00	13400.00	1000	13350	1%	NA	11900.00	16300.00	1000	14100	**31%**	NA	12900.00	13100.00	1000	13000	2%	NA	15000.00	13900.00	1000	14450	8%	NA
Manganese (Mn)		ug/L	658.00	670.00	0.1	664.00	2%	NA	286.00	428.00	0.1	357.00	**40%**	NA	723.00	761.00	0.1	742.00	5%	NA	356.00	325.00	0.1	340.50	9%	NA
Mercury (Hg)		ug/L	0.15	0.15	0.005	0.154	1%	NA	0.16	0.17	0.005	0	3%	NA	**0.29**	**0.25**	0.005	0	13%	NA	**0.37**	0.16	0.005	0	**79%**	NA
Molybdenum (Mo)		ug/L	0.80	0.84	0.1	0.82	5%	NA	0.61	0.73	0.1	0.7	18%	NA	0.89	0.93	0.1	0.91	4%	NA	2.34	0.52	0.1	1.43	**127%**	NA
Nickel (Ni)		ug/L	20.70	21.60	0.5	21.150	4%	NA	17.40	23.20	0.5	20	**29%**	NA	21.70	22.50	0.5	22	4%	NA	**21.40**	**16.50**	0.5	19	**26%**	NA
Phosphorus (P)		ug/L	1080.00	1090.00	50	1085.000	1%	NA	970.00	1340.00	50	1155	**32%**	NA	1210.00	1160.00	50	1185	4%	NA	**1770.00**	**1510.00**	50	1640	16%	NA
Potassium (K)		ug/L	3230.00	3550.00	1000	3390	NA	0.3	2900.00	3820.00	1000	3360	NA	0.9	3350.00	3350.00	1000	3350	NA	0.0	2070.00	1660.00	1000	1865	NA	0.4
Selenium (Se)		ug/L	0.72	0.74	0.5	0.730	NA	0.0	0.20	0.48	0.5	0	NA	0.6	1.05	0.98	0.5	1	NA	0.1	0.94	0.10	0.5	1	NA	1.7
Silver (Ag)		ug/L	0.25	0.26	0.1	0.255	NA	0.1	0.10	0.16	0.1	0	NA	0.6	0.31	0.34	0.1	0	NA	0.3	0.94	0.73	0.1	1	**25%**	NA
Sodium (Na)		ug/L	514.00	527.00	2500	521	NA	0.0	410.00	517.00	2500	464	NA	0.0	600.00	600.00	2500	600	NA	0.0	507.00	439.00	2500	473	NA	0.0
Strontium (Sr)		ug/L	427.00	434.00	10	431	2%	NA	113.00	150.00	10	132	**28%**	NA	636.00	670.00	10	653	5%	NA	658.00	567.00	10	613	15%	NA
Sulfur (S)		ug/L	5300.00	5200.00	5000	5250	NA	0.0	2600.00	3600.00	5000	3100	NA	0.2	6400.00	6800.00	5000	6600	NA	0.1	6200.00	500.00	5000	3350	NA	1.1
Thallium (Tl)		ug/L	0.22	0.23	0.05	0.229	NA	0.2	0.21	0.26	0.05	0	**22%**	NA	0.24	0.24	0.05	0	NA	0.0	0.32	0.26	0.05	0	20%	NA
Tin (Sn)		ug/L	3.40	3.60	1	3.500	NA	0.2	4.70	6.40	1	6	**31%**	NA	4.10	4.30	1	4	NA	0.2	10.10	5.40	1	8	**61%**	NA
Titanium (Ti)		ug/L	967.00	1030.00	5	998.500	6%	NA	860.00	1030.00	5	945	18%	NA	877.00	913.00	5	895	4%	NA	454.00	350.00	5	402	**26%**	NA
Tungsten (W)		ug/L	0.25	0.25	1	0.250	NA	0.0	0.50	0.25	1	0	NA	0.3	0.50	0.50	1	1	NA	0.0	2.47	0.25	1	1	NA	**2.2**
Uranium (U)		ug/L	0.66	0.70	0.05	0.68	6%	NA	0.55	0.56	0.05	0.55	1%	NA	0.62	0.62	0.05	0.62	0%	NA	0.48	0.38	0.05	0.43	**25%**	NA
Vanadium (V)		ug/L	38.70	41.60	0.5	40.150	7%	NA	30.20	39.10	0.5	34.65	**26%**	NA	40.10	41.90	0.5	41	4%	NA	29.50	22.50	0.5	26.00	**27%**	NA
Zinc (Zn)		ug/L	119.00	**125.00**	1	122.0	5%	NA	110.00	**145.00**	1	127.5	**27%**	NA	**158.00**	**166.00**	1	162	5%	NA	**400.00**	**351.00**	1	376	13%	NA
Zirconium (Zr)		ug/L	3.70	4.30	0.5	4.000	15%	NA	3.20	4.60	0.5	4	**36%**	NA	3.30	3.20	0.5	3	3%	NA	1.90	0.50	0.5	1	NA	**2.8**
Hydrocarbons																										
Acenaphthene		ug/L	**0.06**	**0.05**	0.01	0.1	19%	NA	**0.16**	**0.09**	0.01	0	**58%**	NA	**0.03**	**0.04**	0.01	0.0	NA	0.9	**0.51**	**0.51**	0.01	0.5	0%	NA
Acenaphthylene		ug/L	**0.41**	**0.40**	0.01	0.4	1%	NA	**0.99**	**0.89**	0.01	1	10%	NA	**0.23**	**0.33**	0.01	0.3	**35%**	NA	**1.27**	**1.48**	0.01	1.4	15%	NA
Acridine		ug/L	0.03	0.03	0.01	0.0	NA	0.0	0.12	0.03	0.01	0	**119%**	NA	0.02	0.03	0.01	0.0	NA	1.0	0.15	0.24	0.01	0.2	**47%**	NA
Anthracene		ug/L	**0.21**	**0.21**	0.01	0.2	1%	NA	**0.80**	**0.48**	0.01	1	**50%**	NA	**0.08**	**0.13**	0.01	0.1	**46%**	NA	**0.96**	**0.98**	0.01	1.0	2%	NA
Benz(a)anthracene		ug/L	**0.84**	**0.71**	0.01	0.8	17%	NA	**2.64**	**2.17**	0.01	2	20%	NA	**0.41**	**0.66**	0.01	0.5	**46%**	NA	**3.03**	**2.62**	0.01	2.8	15%	NA
Benzo(a)pyrene		ug/L	**1.01**	**0.98**	0.05	1.0	3%	NA	**2.82**	**2.44**	0.05	3	14%	NA	**0.57**	**0.87**	0.05	0.7	**41%**	NA	**3.22**	**3.60**	0.05	3.4	11%	NA
Benzo(g,h,i)perylene		ug/L	0.62	0.62	0.01	0.6	0%	NA	1.58	1.35	0.01	1	16%	NA	0.40	0.58	0.01	0.5	**38%**	NA	**2.06**	**2.03**	0.01	2.0	1%	NA
Benzo(k)fluoranthene		ug/L	0.30	0.35	0.01	0.3	16%	NA	0.81	0.70	0.01	1	15%	NA	0.16	0.24	0.01	0.2	**40%**	NA	**1.39**	**1.32**	0.01	1.4	5%	NA
Chrysene		ug/L	**0.78**	**0.78**	0.01	0.8	0%	NA	**2.30**	**1.89**	0.01	2	20%	NA	**0.44**	**0.69**	0.01	0.6	**44%**	NA	**2.69**	**3.21**	0.01	3.0	18%	NA
Dibenz(a,h)anthracene		ug/L	**0.16**	**0.15**	0.05	0.2	NA	0.2	**0.44**	**0.37**	0.05	0	17%	NA	**0.10**	**0.14**	0.05	0.1	NA	0.9	**0.49**	**0.49**	0.05	0.5	0%	NA
Fluoranthene		ug/L	**0.88**	**0.68**	0.01	0.8	**26%**	NA	**2.53**	**1.87**	0.01	2	**30%**	NA	**0.42**	**0.65**	0.01	0.5	**43%**	NA	**4.44**	**4.71**	0.01	4.6	6%	NA
Benzo(b,j) fluoranthene		ug/L	0.95	0.87	0.01	0.9	9%	NA	2.45	2.08	0.01	2	16%	NA	0.55	0.85	0.01	0.7	**42%**	NA	3.36	3.78	0.01	3.6	12%	NA
Fluorene		ug/L	**0.09**	**0.07**	0.01	0.1	**30%**	NA	**0.26**	**0.14**	0.01	0	**60%**	NA	**0.04**	**0.06**	0.01	0.1	**40%**	NA	**0.47**	**0.46**	0.01	0.5	3%	NA
Indeno(1,2,3-c,d)pyrene		ug/L	0.55	0.46	0.01	0.5	17%	NA	1.32	1.26	0.01	1	5%	NA	0.31	0.47	0.01	0.4	**41%**	NA	**2.00**	**1.95**	0.01	2.0	3%	NA
Naphthalene		ug/L	0.01	0.03	0.05	0.0	NA	0.3	**0.06**	0.03	0.05	0	NA	0.6	0.01	0.02	0.05	0.0	NA	0.2	**0.13**	**0.10**	0.05	0.1	NA	0.5
Phenanthrene		ug/L	**0.41**	**0.25**	0.02	0.3	**47%**	NA	**1.21**	**0.66**	0.02	1	**59%**	NA	**0.14**	**0.22**	0.02	0.2	**42%**	NA	**2.49**	**2.44**	0.02	2.5	2%	NA
Pyrene		ug/L	**1.14**	**1.02**	0.01	1.1	11%	NA	**2.97**	**2.42**	0.01	3	**20%**	NA	**0.62**	**0.96**	0.01	0.8	**43%**	NA	**5.66**	**6.19**	0.01	6.0	5%	NA
Quinoline		ug/L	0.01	0.01	0.05	0.0	NA	0.0	0.01	0.01	0.05	0	NA	0.0	0.01	0.01	0.05	0.0	NA	0.0	0.01	0.02	0.05	0.0	NA	0.2
2-methylnaphthalene		ug/L	**0.01**	**0.03**	0.01	0.0	NA	1.6	**0.06**	**0.03**	0.01	0.045	**67%**	NA	0.01	0.02	0.01	0.0	NA	1.0	**0.14**	**0.10**	0.01	0.1	**35%**	NA
1-Methylnaphthalene		ug/L	0.01	0.01	0.01	0.0	NA	0.0	0.06	0.02	0.01	0	**99%**	NA	0.01	0.01	0.01	0.0	NA	0.0	0.15	0.14	0.01	0.1	8%	NA

Notes:
DF = difference factor; FDA = field duplicate available; FD = field duplicate; Mean = average of two values; mg/kg = miligrams per kilogram; NA = not applicable; NC = not calculated; QA/QC = Quality Assurance/Quality Control; RPD = releative percent difference; < = less than detection limit

When different detection limits are used for the sample and duplicate results, and one detectable result is reported at a value below the detection limit of a non-detectable result, the RPD is not calculated.

Relative percent difference (RPD) = the difference between two values divided by the mean of the two values. RPD is calculated when the concentration is greater than five times the detection limit.

Acceptable RPD for in sediment is less than or equal to 20%.

Difference factor (DF) = absolute difference between two values divided by the method detection limit. The DF is calculated when the concentration is less than five times the detection limit.

Golders' acceptable DF is less than or equal to 2.0.
Bold values indicate an exceedance of the acceptable RPD or DF.

APPENDIX G
Results of Water Quality QAQC Duplicate Sample Results
Milne Port, 2021

Sample Name		PCOM-SG-002	DUP-207					PCW-SG-006	DUP-007					PCW-SG-015	DUP-008					TC2A-SG-003	DUP-201				
Sample Date		2021-10-05	2021-10-05	Reported		Relative		2021-10-04	2021-10-04	Reported		Relative		2021-10-04	2021-10-04	Reported		Relative		2021-09-28	2021-09-28	Reported		Relative	
PARENT_SAMPLE_CODE	Units	L2650176	L2650176	Detection Limit	Mean	Percent Difference (RPD)	Difference Factor (DF)	L2647880	L2647880	Detection Limit	Mean	Percent Difference (RPD)	Difference Factor (DF)	L2647880	L2647880	Detection Limit	Mean	Percent Difference (RPD)	Difference Factor (DF)	L2646459	L2646459	Detection Limit	Mean	Percent Difference (RPD)	Difference Factor (DF)
Parameter																									
Field and Physical																									
pH	pH Units	-	-	0.1	NC	NC	NC	-	-	0.1	NC	NC	NC	-	-	0.1	NC	NC	NC	-	-	0.1	NC	NC	NC
Total Organic Carbon	ug/L	**6.09**	**6.24**	500	6	NA	0.0	**4.22**	**5.25**	500	5	NA	0.0	**7.54**	**7.21**	500	7	NA	0.0	**7.69**	**8.69**	500	8	NA	0.0
Metals, Dissolved																									
Aluminum (Al)	ug/L	7780.00	7350.00	5	7565	6%	NA	18000.00	15300.00	5	16650	16%	NA	12100.00	12100.00	5	12100	0%	NA	18000.00	18800.00	5	18400	4%	NA
Antimony (Sb)	ug/L	7.15	6.21	1	6.68	14%	NA	1.20	0.71	1	0.96	NA	0.5	2.68	1.98	1	2.33	NA	0.7	1.21	1.22	1	1.22	NA	0.0
Arsenic (As)	ug/L	4.27	3.96	0.4	4.12	8%	NA	5.64	5.11	0.4	5.38	10%	NA	5.53	5.64	0.4	5.59	2%	NA	**14.50**	**15.10**	0.4	14.80	4%	NA
Barium (Ba)	ug/L	222.00	189.00	1	205.5	16%	NA	261.00	223.00	1	242.0	16%	NA	258.00	235.00	1	246.5	9%	NA	280.00	285.00	1	282.5	2%	NA
Beryllium (Be)	ug/L	0.36	0.30	0.5	0.33	NA	0.1	0.73	0.61	0.5	0.67	NA	0.2	0.49	0.45	0.5	0.47	NA	0.1	0.69	0.70	0.5	0.70	NA	0.0
Bismuth (Bi)	ug/L	0.66	0.61	0.5	0.6	NA	0.1	0.24	0.10	0.5	0.2	NA	0.3	0.69	0.65	0.5	0.7	NA	0.1	0.71	0.74	0.5	0.7	NA	0.1
Boron (B)	ug/L	1.08|13	0.39|11	300	NC	NC	NC	10.90	9.40	300	10	NA	0.0	13.00	10.40	300	12	NA	0.0	11.50	11.60	300	12	NA	0.0
Cadmium (Cd)	ug/L	**1.22**	**1.03**	0.01	1.125	17%	NA	0.49	0.45	0.01	0.469	9%	NA	**1.04**	**1.03**	0.01	1.035	1%	NA	**0.89**	**0.90**	0.01	0.896	2%	NA
Calcium (Ca)	ug/L	132000.00	122000.00	1000	127000	8%	NA	43500.00	40400.00	1000	41950	7%	NA	158000.00	146000.00	1000	152000	8%	NA	76200.00	80300.00	1000	78250	5%	NA
Chromium (Cr)	ug/L	**4690.00**	**3640.00**	0.5	4165	**25%**	NA	**1220.00**	**1000.00**	0.5	1110	20%	NA	**2050.00**	**2460.00**	0.5	2255	18%	NA	**642.00**	**683.00**	0.5	663	6%	NA
Cobalt (Co)	ug/L	7.35	6.60	0.05	7	11%	NA	14.20	12.40	0.05	13	14%	NA	9.62	10.20	0.05	10	6%	NA	15.90	16.30	0.05	16	2%	NA
Copper (Cu)	ug/L	**98.60**	**69.40**	0.2	84.00	**35%**	NA	**39.40**	**35.70**	0.2	37.55	10%	NA	**63.20**	**64.80**	0.2	64.00	2%	NA	**53.40**	**54.80**	0.2	54.10	3%	NA
Iron (Fe)	ug/L	**20300.00**	18300.00	10	19300	10%	NA	**29100.00**	**25400.00**	10	27250	14%	NA	**21400.00**	**22000.00**	10	21700	3%	NA	**27000.00**	**28300.00**	10	27650	5%	NA
Lead (Pb)	ug/L	**378.00**	**352.00**	0.05	365	7%	NA	**110.00**	**85.70**	0.05	98	**25%**	NA	**223.00**	**213.00**	0.05	218	5%	NA	**131.00**	**143.00**	0.05	137	9%	NA
Lithium (Li)	ug/L	8.00	7.00	20	8	NA	0.1	13.40	14.70	20	14	NA	0.1	12.30	10.80	20	12	NA	0.1	16.60	16.40	20	17	NA	0.0
Magnesium (Mg)	ug/L	16300.00	16200.00	1000	16250	1%	NA	16800.00	15300.00	1000	16050	9%	NA	13700.00	14600.00	1000	14150	6%	NA	13500.00	14700.00	1000	14100	9%	NA
Manganese (Mn)	ug/L	300.00	286.00	0.1	293.00	5%	NA	**594.00**	**510.00**	0.1	552.00	15%	NA	**556.00**	**585.00**	0.1	570.50	5%	NA	**880.00**	**953.00**	0.1	916.50	8%	NA
Mercury (Hg)	ug/L	**0.29**	**0.26**	0.005	0	11%	NA	**0.18**	0.16	0.005	0	12%	NA	**0.24**	**0.26**	0.005	0	6%	NA	**0.73**	**0.75**	0.005	1	4%	NA
Molybdenum (Mo)	ug/L	2.27	1.71	0.1	1.99	**28%**	NA	1.07	0.78	0.1	0.93	**31%**	NA	1.52	1.44	0.1	1.48	5%	NA	1.26	1.24	0.1	1.25	2%	NA
Nickel (Ni)	ug/L	**18.10**	**16.10**	0.5	17	12%	NA	**26.00**	**22.90**	0.5	24	13%	NA	**20.80**	**20.70**	0.5	21	0%	NA	**28.90**	**29.10**	0.5	29	1%	NA
Phosphorus (P)	ug/L	**1720.00**	**1450.00**	50	1585	17%	NA	**1470.00**	**1280.00**	50	1375	14%	NA	**1300.00**	**1420.00**	50	1360	9%	NA	**1160.00**	**1280.00**	50	1220	10%	NA
Potassium (K)	ug/L	1760.00	1740.00	1000	1750	NA	0.0	4920.00	3920.00	1000	4420	NA	1.0	2940.00	2790.00	1000	2865	NA	0.2	4160.00	4350.00	1000	4255	NA	0.2
Selenium (Se)	ug/L	0.69	0.62	0.5	1	NA	0.1	0.66	0.53	0.5	1	NA	0.3	0.80	0.87	0.5	1	NA	0.1	1.24	1.37	0.5	1	NA	0.3
Silver (Ag)	ug/L	0.93	0.61	0.1	1	**42%**	NA	0.25	0.24	0.1	0	NA	0.1	0.51	0.51	0.1	1	0%	NA	1.04	1.06	0.1	1	2%	NA
Sodium (Na)	ug/L	530.00	450.00	2500	490	NA	0.0	689.00	559.00	2500	624	NA	0.1	515.00	574.00	2500	545	NA	0.0	637.00	672.00	2500	655	NA	0.0
Strontium (Sr)	ug/L	474.00	424.00	10	449	11%	NA	202.00	171.00	10	187	17%	NA	841.00	794.00	10	818	6%	NA	415.00	455.00	10	435	9%	NA
Sulfur (S)	ug/L	4700.00	3800.00	5000	4250	NA	0.2	3900.00	3800.00	5000	3850	NA	0.0	5800.00	6100.00	5000	5950	NA	0.1	8700.00	8700.00	5000	8700	NA	0.0
Thallium (Tl)	ug/L	0.27	0.24	0.05	0	12%	NA	0.34	0.25	0.05	0	**31%**	NA	0.27	0.24	0.05	0	12%	NA	0.31	0.33	0.05	0	7%	NA
Tin (Sn)	ug/L	9.60	8.60	1	9	11%	NA	6.10	5.90	1	6	3%	NA	7.80	7.60	1	8	3%	NA	9.40	7.80	1	9	19%	NA
Titanium (Ti)	ug/L	412.00	396.00	5	404	4%	NA	1410.00	1000.00	5	1205	**34%**	NA	553.00	586.00	5	570	6%	NA	1060.00	1110.00	5	1085	5%	NA
Tungsten (W)	ug/L	2.90	2.90	1	3	NA	0.0	0.25	0.25	1	0	NA	0.0	3.14	2.98	1	3	NA	0.2	0.53	0.53	1	1	NA	0.0
Uranium (U)	ug/L	0.49	0.46	0.05	0.48	6%	NA	0.75	0.56	0.05	0.66	**30%**	NA	0.56	0.52	0.05	0.54	7%	NA	0.89	0.98	0.05	0.94	9%	NA
Vanadium (V)	ug/L	26.90	25.00	0.5	25.95	7%	NA	49.70	41.60	0.5	45.65	18%	NA	35.00	35.60	0.5	35.30	2%	NA	48.20	50.10	0.5	49.15	4%	NA
Zinc (Zn)	ug/L	**337.00**	**291.00**	1	314	15%	NA	**166.00**	**150.00**	1	158	10%	NA	**290.00**	**294.00**	1	292	1%	NA	**208.00**	**210.00**	1	209	1%	NA
Zirconium (Zr)	ug/L	1.00	1.00	0.5	1	NA	0.0	5.40	4.80	0.5	5	12%	NA	2.40	1.80	0.5	2	NA	1.2	4.30	4.50	0.5	4	5%	NA
Hydrocarbons																									
Acenaphthene	ug/L	**1.12**	**1.14**	0.01	1.1	2%	NA	**0.12**	**0.11**	0.01	0.1	6%	NA	**0.13**	**0.20**	0.01	0.2	**40%**	NA	**0.04**	**0.06**	0.01	0.1	**31%**	NA
Acenaphthylene	ug/L	**1.54**	**1.85**	0.01	1.7	18%	NA	**0.67**	**0.80**	0.01	0.7	18%	NA	**0.42**	**0.68**	0.01	0.6	**47%**	NA	**0.15**	**0.18**	0.01	0.2	16%	NA
Acridine	ug/L	0.33	0.36	0.01	0.3	9%	NA	0.04	0.05	0.01	0.0	NA	0.9	0.05	0.14	0.01	0.1	**95%**	NA	0.04	0.04	0.01	0.0	NA	0.0
Anthracene	ug/L	**1.42**	**1.73**	0.01	1.6	20%	NA	**0.33**	**0.41**	0.01	0.4	**23%**	NA	**0.24**	**0.33**	0.01	0.3	**30%**	NA	**0.12**	**0.14**	0.01	0.1	18%	NA
Benz(a)anthracene	ug/L	**3.57**	**3.58**	0.01	3.6	0%	NA	**1.30**	**1.59**	0.01	1.4	**20%**	NA	**0.90**	**1.05**	0.01	1.0	16%	NA	**0.48**	**0.54**	0.01	0.5	12%	NA
Benzo(a)pyrene	ug/L	**4.26**	**4.45**	0.05	4.4	4%	NA	**1.67**	**2.09**	0.05	1.9	**22%**	NA	**1.24**	**1.52**	0.05	1.4	**20%**	NA	**0.62**	**0.65**	0.05	0.6	6%	NA
Benzo(g,h,i)perylene	ug/L	**2.33**	**2.23**	0.01	2.3	4%	NA	**0.94**	**1.09**	0.01	1.0	15%	NA	**0.93**	**0.97**	0.01	0.9	4%	NA	**0.52**	**0.53**	0.01	0.5	1%	NA
Benzo(k)fluoranthene	ug/L	**1.50**	**1.43**	0.01	1.5	5%	NA	**0.42**	**0.52**	0.01	0.5	**21%**	NA	**0.47**	**0.52**	0.01	0.5	9%	NA	**0.25**	**0.28**	0.01	0.3	11%	NA
Chrysene	ug/L	**3.84**	**3.88**	0.01	3.9	1%	NA	**1.38**	**1.74**	0.01	1.6	**23%**	NA	**1.20**	**1.35**	0.01	1.3	12%	NA	**0.59**	**0.61**	0.01	0.6	3%	NA
Dibenz(a,h)anthracene	ug/L	**0.57**	**0.56**	0.05	0.6	2%	NA	**0.25**	**0.30**	0.05	0.3	20%	NA	**0.21**	**0.23**	0.05	0.2	NA	0.3	**0.12**	**0.12**	0.05	0.1	NA	0.1
Fluoranthene	ug/L	**6.44**	**6.04**	0.01	6.2	6%	NA	**1.25**	**1.30**	0.01	1.3	4%	NA	**1.45**	**1.52**	0.01	1.5	5%	NA	**0.79**	**0.89**	0.01	0.8	12%	NA
Benzo(b,j) fluoranthene	ug/L	4.26	4.24	0.01	4.3	0%	NA	1.51	1.88	0.01	1.7	**22%**	NA	1.55	1.79	0.01	1.7	14%	NA	0.78	0.81	0.01	0.8	4%	NA
Fluorene	ug/L	**0.84**	**0.87**	0.01	0.9	3%	NA	**0.14**	**0.15**	0.01	0.1	8%	NA	**0.14**	**0.20**	0.01	0.2	**39%**	NA	**0.06**	**0.07**	0.01	0.1	**20%**	NA
Indeno(1,2,3-c,d)pyrene	ug/L	**2.21**	**2.26**	0.01	2.2	2%	NA	**0.73**	**0.88**	0.01	0.8	18%	NA	**0.81**	**0.71**	0.01	0.8	13%	NA	**0.44**	**0.46**	0.01	0.5	4%	NA
Naphthalene	ug/L	**0.17**	**0.22**	0.05	0.2	NA	1.1	0.02	0.03	0.05	0.0	NA	0.2	**0.04**	**0.07**	0.05	0.1	NA	0.5	**0.02**	**0.02**	0.05	0.0	NA	0.0
Phenanthrene	ug/L	**4.60**	**4.54**	0.02	4.6	1%	NA	**0.49**	**0.52**	0.02	0.5	6%	NA	**0.67**	**0.71**	0.02	0.7	5%	NA	**0.37**	**0.47**	0.02	0.4	**25%**	NA
Pyrene	ug/L	**8.75**	**8.91**	0.01	8.8	2%	NA	**1.70**	**1.82**	0.01	1.8	7%	NA	**1.85**	**2.11**	0.01	2.0	13%	NA	**0.82**	**0.90**	0.01	0.9	10%	NA
Quinoline	ug/L	0.03	0.03	0.05	0.0	NA	0.0	0.01	0.01	0.05	0.0	NA	0.0	0.01	0.01	0.05	0.0	NA	0.0	0.02	0.02	0.05	0.0	NA	0.0
2-methylnaphthalene	ug/L	**0.19**	**0.23**	0.01	0.2	20%	NA	**0.03**	**0.03**	0.01	0.0	NA	0.5	**0.05**	**0.07**	0.01	0.1	**37%**	NA	**0.02**	**0.02**	0.01	0.0	NA	0.0
1-Methylnaphthalene	ug/L	0.37	0.39	0.01	0.4	6%	NA	0.02	0.02	0.01	0.0	NA	0.1	0.06	0.06	0.01	0.1	9%	NA	0.02	0.02	0.01	0.0	NA	0.0

Notes:

DF = difference factor; FDA = field duplicate available; FD = field duplicate; Mean = average of two values; mg/kg = miligrams per kilogram; NA = not applicable; NC = not calculated; QA/QC = Quality Assurance/Quality Control; RPD = releative percent difference; < = less than detection limit

When different detection limits are used for the sample and duplicate results, and one detectable result is reported at a value below the detection limit of a non-detectable result, the RPD is not calculated.

Relative percent difference (RPD) = the difference between two values divided by the mean of the two values. RPD is calculated when the concentration is greater than five times the detection limit.

Acceptable RPD for in sediment is less than or equal to 20%.

Difference factor (DF) = absolute difference between two values divided by the method detection limit. The DF is calculated when the concentration is less than five times the detection limit.

Golders' acceptable DF is less than or equal to 2.0.

Bold values indicate an exceedance of the acceptable RPD or DF.

APPENDIX G
Results of Water Quality QAQC Duplicate Sample Results
Milne Port, 2021

Sample Name		TC2A-SG-007	DUP-001					TC4-SG-006	DUP-002					TC4-SG-007	DUP-202					TC4-SG-012	DUP-203				
Sample Date	Units	2021-09-28	2021-09-28	Reported Detection Limit	Mean	Relative Percent Difference (RPD)	Difference Factor (DF)	2021-09-29	2021-09-29	Reported Detection Limit	Mean	Relative Percent Difference (RPD)	Difference Factor (DF)	2021-09-29	2021-09-29	Reported Detection Limit	Mean	Relative Percent Difference (RPD)	Difference Factor (DF)	2021-09-30	2021-09-30	Reported Detection Limit	Mean	Relative Percent Difference (RPD)	Difference Factor (DF)
PARENT_SAMPLE_CODE		L2646459	L2646459					L2646722	L2646722					L2646722	L2646722					L2646743	L2646743				
Parameter																									
Field and Physical																									
pH	pH Units	-	-	0.1	NC	NC	NC	-	-	0.1	NC	NC	NC	-	-	0.1	NC	NC	NC	-	-	0.1	NC	NC	NC
Total Organic Carbon	ug/L	**8.75**	**8.74**	500	9	NA	0.0	**7.67**	**8.23**	500	8	NA	0.0	**8.05**	**8.64**	500	8	NA	0.0	**9.44**	**10.10**	500	10	NA	0.0
Metals, Dissolved																									
Aluminum (Al)	ug/L	14500.00	14200.00	5	14350	2%	NA	14000.00	14300.00	5	14150	2%	NA	19900.00	18400.00	5	19150	8%	NA	23200.00	21900.00	5	22550	6%	NA
Antimony (Sb)	ug/L	1.38	1.37	1	1.38	NA	0.0	0.77	0.81	1	0.79	NA	0.0	0.90	0.68	1	0.79	NA	0.2	0.78	0.68	1	0.73	NA	0.1
Arsenic (As)	ug/L	**12.30**	**12.00**	0.4	12.15	2%	NA	**8.10**	**8.09**	0.4	8.10	0%	NA	**8.17**	**7.41**	0.4	7.79	10%	NA	**6.62**	5.86	0.4	6.24	12%	NA
Barium (Ba)	ug/L	225.00	206.00	1	215.5	9%	NA	257.00	257.00	1	257.0	0%	NA	308.00	274.00	1	291.0	12%	NA	291.00	262.00	1	276.5	10%	NA
Beryllium (Be)	ug/L	0.56	0.58	0.5	0.57	NA	0.0	0.59	0.58	0.5	0.59	NA	0.0	0.75	0.64	0.5	0.70	NA	0.2	0.88	0.71	0.5	0.80	NA	0.3
Bismuth (Bi)	ug/L	0.78	0.74	0.5	0.8	NA	0.1	0.87	0.99	0.5	0.9	NA	0.2	0.90	0.68	0.5	0.8	NA	0.4	0.56	0.46	0.5	0.5	NA	0.2
Boron (B)	ug/L	13.00	14.00	300	14	NA	0.0	10.80	11.70	300	11	NA	0.0	13.30	8.60	300	11	NA	0.0	14.30	11.00	300	13	NA	0.0
Cadmium (Cd)	ug/L	**0.79**	**0.79**	0.01	0.789	1%	NA	**0.80**	**0.78**	0.01	0.787	2%	NA	**0.89**	**0.80**	0.01	0.849	11%	NA	**0.79**	**0.80**	0.01	0.793	2%	NA
Calcium (Ca)	ug/L	103000.00	99700.00	1000	101350	3%	NA	136000.00	129000.00	1000	132500	5%	NA	106000.00	72300.00	1000	89150	**38%**	NA	53200.00	36100.00	1000	44650	**38%**	NA
Chromium (Cr)	ug/L	**328.00**	**321.00**	0.5	325	2%	NA	**266.00**	**268.00**	0.5	267	1%	NA	**481.00**	**463.00**	0.5	472	4%	NA	**311.00**	**298.00**	0.5	305	4%	NA
Cobalt (Co)	ug/L	13.00	12.80	0.05	13	2%	NA	10.40	10.60	0.05	11	2%	NA	13.10	12.10	0.05	13	8%	NA	13.80	12.90	0.05	13	7%	NA
Copper (Cu)	ug/L	**65.10**	**64.60**	0.2	64.85	1%	NA	**53.40**	**54.20**	0.2	53.80	1%	NA	**53.00**	**47.80**	0.2	50.40	10%	NA	**62.70**	**58.90**	0.2	60.80	6%	NA
Iron (Fe)	ug/L	**23800.00**	**23200.00**	10	23500	3%	NA	**21700.00**	**22800.00**	10	22250	5%	NA	**29100.00**	**25700.00**	10	27400	12%	NA	**31900.00**	**29300.00**	10	30600	8%	NA
Lead (Pb)	ug/L	**108.00**	**115.00**	0.05	112	6%	NA	**115.00**	**116.00**	0.05	116	1%	NA	**114.00**	**93.10**	0.05	104	**20%**	NA	**94.30**	**86.70**	0.05	91	8%	NA
Lithium (Li)	ug/L	14.20	14.70	20	14	NA	0.0	13.40	13.30	20	13	NA	0.0	17.80	13.00	20	15	NA	0.2	21.20	15.60	20	18	NA	0.3
Magnesium (Mg)	ug/L	15200.00	14500.00	1000	14850	5%	NA	11200.00	11100.00	1000	11150	1%	NA	12900.00	11600.00	1000	12250	11%	NA	12900.00	11700.00	1000	12300	10%	NA
Manganese (Mn)	ug/L	**728.00**	**715.00**	0.1	721.50	2%	NA	**807.00**	**819.00**	0.1	813.00	1%	NA	**921.00**	**873.00**	0.1	897.00	5%	NA	**982.00**	**910.00**	0.1	946.00	8%	NA
Mercury (Hg)	ug/L	**0.70**	**0.62**	0.005	1	12%	NA	**0.47**	**0.56**	0.005	1	17%	NA	**0.42**	**0.40**	0.005	0	5%	NA	**0.35**	**0.31**	0.005	0	11%	NA
Molybdenum (Mo)	ug/L	1.66	1.68	0.1	1.67	1%	NA	1.03	1.03	0.1	1.03	0%	NA	1.23	0.96	0.1	1.10	**25%**	NA	1.14	0.94	0.1	1.04	19%	NA
Nickel (Ni)	ug/L	**24.90**	**24.80**	0.5	25	0%	NA	**21.60**	**22.10**	0.5	22	2%	NA	**28.60**	**26.10**	0.5	27	9%	NA	**31.60**	**29.50**	0.5	31	7%	NA
Phosphorus (P)	ug/L	**1170.00**	**1100.00**	50	1135	6%	NA	**1260.00**	**1270.00**	50	1265	1%	NA	**1320.00**	**1130.00**	50	1225	16%	NA	**1280.00**	**1020.00**	50	1150	**23%**	NA
Potassium (K)	ug/L	3260.00	3190.00	1000	3225	NA	0.1	3070.00	3220.00	1000	3145	NA	0.2	4310.00	3640.00	1000	3975	NA	0.7	4990.00	4390.00	1000	4690	NA	0.6
Selenium (Se)	ug/L	1.57	1.66	0.5	2	NA	0.2	1.44	1.32	0.5	1	NA	0.2	1.46	1.24	0.5	1	NA	0.4	1.85	1.43	0.5	2	NA	0.8
Silver (Ag)	ug/L	1.28	1.31	0.1	1	2%	NA	0.78	0.79	0.1	1	1%	NA	0.76	0.65	0.1	1	16%	NA	0.55	0.52	0.1	1	6%	NA
Sodium (Na)	ug/L	640.00	650.00	2500	645	NA	0.0	578.00	550.00	2500	564	NA	0.0	704.00	545.00	2500	625	NA	0.1	759.00	590.00	2500	675	NA	0.1
Strontium (Sr)	ug/L	436.00	401.00	10	419	8%	NA	650.00	611.00	10	631	6%	NA	496.00	370.00	10	433	**29%**	NA	256.00	194.00	10	225	**28%**	NA
Sulfur (S)	ug/L	9700.00	9700.00	5000	9700	NA	0.0	8000.00	8600.00	5000	8300	NA	0.1	10300.00	9300.00	5000	9800	NA	0.2	9600.00	7700.00	5000	8650	NA	0.4
Thallium (Tl)	ug/L	0.27	0.28	0.05	0	4%	NA	0.29	0.29	0.05	0	0%	NA	0.33	0.27	0.05	0	19%	NA	0.36	0.36	0.05	0	1%	NA
Tin (Sn)	ug/L	6.30	6.20	1	6	2%	NA	7.20	7.20	1	7	0%	NA	7.00	5.90	1	6	17%	NA	5.10	4.70	1	5	8%	NA
Titanium (Ti)	ug/L	826.00	796.00	5	811	4%	NA	813.00	866.00	5	840	6%	NA	1280.00	973.00	5	1127	**27%**	NA	1450.00	1280.00	5	1365	12%	NA
Tungsten (W)	ug/L	1.90	2.00	1	2	NA	0.1	0.63	0.66	1	1	NA	0.0	0.25	0.25	1	0	NA	0.0	0.54	0.50	1	1	NA	0.0
Uranium (U)	ug/L	0.96	0.99	0.05	0.98	3%	NA	0.83	0.86	0.05	0.84	4%	NA	0.97	0.87	0.05	0.92	11%	NA	1.01	0.96	0.05	0.99	5%	NA
Vanadium (V)	ug/L	43.20	42.30	0.5	42.75	2%	NA	35.70	36.70	0.5	36.20	3%	NA	48.10	40.60	0.5	44.35	17%	NA	52.50	47.90	0.5	50.20	9%	NA
Zinc (Zn)	ug/L	**247.00**	**250.00**	1	249	1%	NA	**192.00**	**196.00**	1	194	2%	NA	**180.00**	**172.00**	1	176	5%	NA	**180.00**	**173.00**	1	177	4%	NA
Zirconium (Zr)	ug/L	2.60	2.60	0.5	3	0%	NA	2.50	2.40	0.5	2	NA	0.2	3.80	3.10	0.5	3	**20%**	NA	4.60	4.30	0.5	4	7%	NA
Hydrocarbons																									
Acenaphthene	ug/L	**0.02**	**0.02**	0.01	0.0	NA	0.0	**0.05**	**0.054**	0.01	0.1	2%	NA	**0.05**	**0.06**	0.01	0.1	19%	NA	**0.05**	**0.07**	0.01	0.1	**24%**	NA
Acenaphthylene	ug/L	**0.08**	**0.08**	0.01	0.1	5%	NA	**0.24**	**0.179**	0.01	0.2	**27%**	NA	**0.32**	**0.42**	0.01	0.4	**26%**	NA	**0.27**	**0.31**	0.01	0.3	13%	NA
Acridine	ug/L	0.04	0.04	0.01	0.0	NA	0.0	0.04	0.03	0.01	0.0	NA	1.0	0.03	0.03	0.01	0.0	NA	0.0	0.04	0.04	0.01	0.0	NA	0.0
Anthracene	ug/L	**0.09**	**0.09**	0.01	0.1	1%	NA	**0.18**	**0.16**	0.01	0.2	12%	NA	**0.18**	**0.20**	0.01	0.2	14%	NA	**0.17**	**0.26**	0.01	0.2	**41%**	NA
Benz(a)anthracene	ug/L	**0.49**	**0.48**	0.01	0.5	2%	NA	**0.70**	**0.63**	0.01	0.7	10%	NA	**0.65**	**1.04**	0.01	0.8	**46%**	NA	**0.68**	**0.58**	0.01	0.6	16%	NA
Benzo(a)pyrene	ug/L	**0.60**	**0.59**	0.05	0.6	2%	NA	**0.89**	**0.75**	0.05	0.8	18%	NA	**0.98**	**1.43**	0.05	1.2	**38%**	NA	**0.92**	**0.84**	0.05	0.9	9%	NA
Benzo(g,h,i)perylene	ug/L	**0.47**	**0.49**	0.01	0.5	4%	NA	**0.63**	**0.54**	0.01	0.6	16%	NA	**0.65**	**0.92**	0.01	0.8	**35%**	NA	**0.61**	**0.61**	0.01	0.6	0%	NA
Benzo(k)fluoranthene	ug/L	**0.32**	**0.30**	0.01	0.3	5%	NA	**0.39**	**0.34**	0.01	0.4	12%	NA	**0.31**	**0.52**	0.01	0.4	**52%**	NA	**0.32**	**0.32**	0.01	0.3	0%	NA
Chrysene	ug/L	**0.74**	**0.72**	0.01	0.7	2%	NA	**0.79**	**0.74**	0.01	0.8	6%	NA	**0.73**	**1.11**	0.01	0.9	**42%**	NA	**0.75**	**0.68**	0.01	0.7	10%	NA
Dibenz(a,h)anthracene	ug/L	**0.11**	**0.12**	0.05	0.1	NA	0.1	**0.15**	**0.13**	0.05	0.1	NA	0.4	**0.16**	**0.23**	0.05	0.2	NA	1.4	**0.15**	**0.14**	0.05	0.1	NA	0.2
Fluoranthene	ug/L	**1.08**	**1.03**	0.01	1.1	5%	NA	**0.92**	**1.06**	0.01	1.0	14%	NA	**0.72**	**1.10**	0.01	0.9	**42%**	NA	**0.78**	**0.74**	0.01	0.8	5%	NA
Benzo(b,j) fluoranthene	ug/L	0.93	0.90	0.01	0.9	4%	NA	0.91	0.87	0.01	0.9	4%	NA	0.91	1.37	0.01	1.1	**41%**	NA	0.97	0.80	0.01	0.9	18%	NA
Fluorene	ug/L	**0.05**	**0.05**	0.01	0.0	NA	0.2	**0.08**	**0.07**	0.01	0.1	12%	NA	**0.07**	**0.08**	0.01	0.1	17%	NA	**0.07**	**0.09**	0.01	0.1	**26%**	NA
Indeno(1,2,3-c,d)pyrene	ug/L	**0.45**	**0.46**	0.01	0.5	2%	NA	**0.44**	**0.42**	0.01	0.4	5%	NA	**0.43**	**0.72**	0.01	0.6	**51%**	NA	**0.46**	**0.51**	0.01	0.5	10%	NA
Naphthalene	ug/L	**0.02**	**0.02**	0.05	0.0	NA	0.0	**0.02**	0.03	0.05	0.0	NA	0.2	0.03	0.01	0.05	0.0	NA	0.3	**0.02**	**0.04**	0.05	0.0	NA	0.4
Phenanthrene	ug/L	**0.42**	**0.40**	0.02	0.4	5%	NA	**0.44**	**0.51**	0.02	0.5	14%	NA	**0.29**	**0.35**	0.02	0.3	19%	NA	**0.27**	**0.29**	0.02	0.3	7%	NA
Pyrene	ug/L	**0.97**	**0.92**	0.01	0.9	5%	NA	**1.03**	**1.07**	0.01	1.1	4%	NA	**0.97**	**1.40**	0.01	1.2	**36%**	NA	**0.94**	**0.94**	0.01	0.9	0%	NA
Quinoline	ug/L	0.02	0.02	0.05	0.0	NA	0.0	0.02	0.01	0.05	0.0	NA	0.2	0.01	0.01	0.05	0.0	NA	0.0	0.02	0.02	0.05	0.0	NA	0.0
2-methylnaphthalene	ug/L	**0.02**	**0.02**	0.01	0.0	NA	0.0	**0.02**	**0.01**	0.01	0.0	NA	1.0	**0.01**	**0.01**	0.01	0.0	NA	0.0	**0.02**	**0.02**	0.01	0.0	NA	0.0
1-Methylnaphthalene	ug/L	0.02	0.02	0.01	0.0	NA	0.0	0.02	0.01	0.01	0.0	NA	1.0	0.01	0.01	0.01	0.0	NA	0.0	0.02	0.02	0.01	0.0	NA	0.0

Notes:
DF = difference factor; FDA = field duplicate available; FD = field duplicate; Mean = average of two values; mg/kg = miligrams per kilogram; NA = not applicable; NC = not calculated; QA/QC = Quality Assurance/Quality Control; RPD = releative percent difference; < = less than detection limit

When different detection limits are used for the sample and duplicate results, and one detectable result is reported at a value below the detection limit of a non-detectable result, the RPD is not calculated.

Relative percent difference (RPD) = the difference between two values divided by the mean of the two values. RPD is calculated when the concentration is greater than five times the detection limit.

Acceptable RPD for in sediment is less than or equal to 20%.

Difference factor (DF) = absolute difference between two values divided by the method detection limit. The DF is calculated when the concentration is less than five times the detection limit.

Golders' acceptable DF is less than or equal to 2.0.
Bold values indicate an exceedance of the acceptable RPD or DF.

APPENDIX G
Results of Water Quality QAQC Duplicate Sample Results
Milne Port, 2021

Sample Name			TC5-SG-007	DUP-209					PCE-SG-014	DUP-210					WM-SC-003A	DUP-206					PCW-SC-011A	DUP-204				
Sample Date			2021-10-06	2021-10-06					2021-10-06	2021-10-06					2021-10-05	2021-10-05					2021-10-05	2021-10-05				
PARENT_SAMPLE_CODE			L2650174	L2650174					L2650174	L2650174					L2650176	L2650176					L2650176	L2650176				
Parameter		Units			Reported Detection Limit	Mean	Relative Percent Difference (RPD)	Difference Factor (DF)			Reported Detection Limit	Mean	Relative Percent Difference (RPD)	Difference Factor (DF)			Reported Detection Limit	Mean	Relative Percent Difference (RPD)	Difference Factor (DF)			Reported Detection Limit	Mean	Relative Percent Difference (RPD)	Difference Factor (DF)
Field and Physical																										
pH		pH Units	-	-	0.1	NC	NC	NC	-	-	0.1	NC	NC	NC	-		0.1	NC	NC	NC	-	-	0.1	NC	NC	NC
Total Organic Carbon		ug/L	**9.84**	**10.50**	500	10	NA	0.0	**6.67**	**6.84**	500	7	NA	0.0	7.48	7.6	500	8	NA	0.0	8.49	**8.41**	500	8	NA	0.0
Metals, Dissolved																										
Aluminum (Al)		ug/L	24700.00	23300.00	5	24000	6%	NA	15300.00	15700.00	5	15500	3%	NA	20100	20400	5	20250	1%	NA	9840	9130.00	5	9485	7%	NA
Antimony (Sb)		ug/L	0.47	0.42	1	0.45	NA	0.1	1.00	1.00	1	1.00	NA	0.0	4.69	4.62	1	4.66	NA	0.1	5.63	0.79	1	3.21	**151%**	NA
Arsenic (As)		ug/L	5.32	4.95	0.4	5.14	7%	NA	5.60	5.40	0.4	5.50	4%	NA	61.7	64.2	0.4	62.95	4%	NA	10.1	5.03	0.4	7.57	**67%**	NA
Barium (Ba)		ug/L	288.00	272.00	1	280.0	6%	NA	206.00	203.00	1	204.5	1%	NA	298	314	1	306.0	5%	NA	320	302.00	1	311.0	6%	NA
Beryllium (Be)		ug/L	0.87	0.79	0.5	0.83	NA	0.2	1.00	1.00	0.5	1.00	NA	0.0	0.83	0.71	0.5	0.77	NA	0.2	0.42	0.39	0.5	0.41	NA	0.1
Bismuth (Bi)		ug/L	0.25	0.23	0.5	0.2	NA	0.0	2.00	2.00	0.5	2.0	NA	0.0	1.78	1.67	0.5	1.7	NA	0.2	1.06	0.65	0.5	0.9	NA	0.8
Boron (B)		ug/L	11.90	9.60	300	11	NA	0.0	50.00	50.00	300	50	NA	0.0	11.3	10	300	11	NA	0.0	9.4	8.20	300	9	NA	0.0
Cadmium (Cd)		ug/L	**0.70**	**0.67**	0.01	0.687	4%	NA	**0.62**	0.57	0.01	0.595	8%	NA	1.48	1.46	0.01	1.470	1%	NA	1.96	**1.94**	0.01	1.950	1%	NA
Calcium (Ca)		ug/L	18100.00	16500.00	1000	17300	9%	NA	44100.00	44000.00	1000	44050	0%	NA	52300	50800	1000	51550	3%	NA	111000	104000.00	1000	107500	7%	NA
Chromium (Cr)		ug/L	**123.00**	**115.00**	0.5	119	7%	NA	**1000.00**	**963.00**	0.5	982	4%	NA	1830	1840	0.5	1835	1%	NA	9790	**8940.00**	0.5	9365	9%	NA
Cobalt (Co)		ug/L	13.90	13.00	0.05	13	7%	NA	11.80	11.60	0.05	12	2%	NA	38.8	40.2	0.05	40	4%	NA	9.55	7.24	0.05	8	**28%**	NA
Copper (Cu)		ug/L	**44.60**	**42.00**	0.2	43.30	6%	NA	**34.00**	**33.00**	0.2	33.50	3%	NA	68.9	70.7	0.2	69.80	3%	NA	81.2	**69.20**	0.2	75.20	16%	NA
Iron (Fe)		ug/L	**32900.00**	**30800.00**	10	31850	7%	NA	**26100.00**	**25200.00**	10	25650	4%	NA	30100	29600	10	29850	2%	NA	20000	16700.00	10	18350	18%	NA
Lead (Pb)		ug/L	**53.00**	**50.20**	0.05	52	5%	NA	**85.00**	**90.00**	0.05	88	6%	NA	321	321	0.05	321	0%	NA	545	**504.00**	0.05	525	8%	NA
Lithium (Li)		ug/L	22.20	19.90	20	21	NA	0.1	20.00	20.00	20	20	NA	0.0	20.6	14.6	20	18	NA	0.3	8.4	8.20	20	8	NA	0.0
Magnesium (Mg)		ug/L	12200.00	11300.00	1000	11750	8%	NA	14300.00	14000.00	1000	14150	2%	NA	15000	15500	1000	15250	3%	NA	12000	10800.00	1000	11400	11%	NA
Manganese (Mn)		ug/L	**1560.00**	**1450.00**	0.1	1505.00	7%	NA	**627.00**	**600.00**	0.1	613.50	4%	NA	583	641	0.1	612.00	9%	NA	444	393.00	0.1	418.50	12%	NA
Mercury (Hg)		ug/L	0.13	0.14	0.005	0	1%	NA	**0.27**	**0.21**	0.005	0	**25%**	NA	2.3	2.52	0.005	2	9%	NA	0.554	0.08	0.005	0	**150%**	NA
Molybdenum (Mo)		ug/L	0.97	0.89	0.1	0.93	9%	NA	1.00	1.00	0.1	1.00	0%	NA	1.15	1.11	0.1	1.13	4%	NA	2.53	0.51	0.1	1.52	**133%**	NA
Nickel (Ni)		ug/L	**33.30**	**31.30**	0.5	32	6%	NA	**24.00**	**23.00**	0.5	24	4%	NA	45	46.1	0.5	46	2%	NA	20.2	**17.20**	0.5	19	16%	NA
Phosphorus (P)		ug/L	**1100.00**	**1060.00**	50	1080	4%	NA	**1000.00**	**1000.00**	50	1000	0%	NA	1260	1340	50	1300	6%	NA	2050	**1660.00**	50	1855	**21%**	NA
Potassium (K)		ug/L	4650.00	4160.00	1000	4405	NA	0.5	3200.00	3300.00	1000	3250	NA	0.1	4320	4910	1000	4615	NA	0.6	1970	1720.00	1000	1845	NA	0.3
Selenium (Se)		ug/L	1.39	1.34	0.5	1	NA	0.1	2.00	2.00	0.5	2	NA	0.0	1.21	1.25	0.5	1	NA	0.1	0.82	0.10	0.5	0	NA	1.4
Silver (Ag)		ug/L	0.31	0.27	0.1	0	NA	0.4	1.00	1.00	0.1	1	0%	NA	1.98	1.69	0.1	2	16%	NA	1.34	0.79	0.1	1	**52%**	NA
Sodium (Na)		ug/L	611.00	555.00	2500	583	NA	0.0	500.00	500.00	2500	500	NA	0.0	607	650	2500	629	NA	0.0	481	469.00	2500	475	NA	0.0
Strontium (Sr)		ug/L	108.00	99.50	10	104	8%	NA	237.00	245.00	10	241	3%	NA	275	297	10	286	8%	NA	618	562.00	10	590	9%	NA
Sulfur (S)		ug/L	7400.00	6900.00	5000	7150	NA	0.1	10000.00	10000.00	5000	10000	NA	0.0	7000	6300	5000	6650	NA	0.1	5800	500.00	5000	3150	NA	1.1
Thallium (Tl)		ug/L	0.32	0.28	0.05	0	12%	NA	0.50	0.50	0.05	1	0%	NA	0.399	0.38	0.05	0	5%	NA	0.279	0.24	0.05	0	15%	NA
Tin (Sn)		ug/L	2.90	2.70	1	3	NA	0.2	20.00	20.00	1	20	0%	NA	26.6	19.3	1	23	**32%**	NA	13.8	7.90	1	11	**54%**	NA
Titanium (Ti)		ug/L	1290.00	1170.00	5	1230	10%	NA	968.00	1000.00	5	984	3%	NA	1250	1360	5	1305	8%	NA	464	376.00	5	420	**21%**	NA
Tungsten (W)		ug/L	0.25	0.25	1	0	NA	0.0	5.00	5.00	1	5	NA	0.0	0.25	0.5	1	0	NA	0.3	1.26	0.25	1	1	NA	1.0
Uranium (U)		ug/L	0.99	0.91	0.05	0.95	8%	NA	0.50	0.50	0.05	0.50	0%	NA	0.853	0.87	0.05	0.86	2%	NA	0.548	0.45	0.05	0.50	20%	NA
Vanadium (V)		ug/L	49.00	45.70	0.5	47.35	7%	NA	41.10	42.00	0.5	41.55	2%	NA	51.3	53.7	0.5	52.50	5%	NA	29.4	25.00	0.5	27.20	16%	NA
Zinc (Zn)		ug/L	**156.00**	**147.00**	1	152	6%	NA	**152.00**	**140.00**	1	146	8%	NA	287	314	1	301	9%	NA	386	**349.00**	1	368	10%	NA
Zirconium (Zr)		ug/L	6.20	5.60	0.5	6	10%	NA	10.00	10.00	0.5	10	0%	NA	5.1	4.9	0.5	5	4%	NA	1.6	0.50	0.5	1	NA	**2.2**
Hydrocarbons																										
Acenaphthene		ug/L	**0.12**	**0.12**	0.01	0.1	1%	NA	**0.06**	**0.05**	0.01	0.1	**21%**	NA	0.143	0.17	0.01	0.2	17%	NA	0.55	**0.66**	0.01	0.6	18%	NA
Acenaphthylene		ug/L	**0.31**	**0.36**	0.01	0.3	14%	NA	**0.51**	**0.43**	0.01	0.5	17%	NA	0.557	0.65	0.01	0.6	15%	NA	1.5	**1.75**	0.01	1.6	15%	NA
Acridine		ug/L	0.04	0.04	0.01	0.0	NA	0.0	0.02	0.02	0.01	0.0	NA	0.0	0.521	0.63	0.01	0.6	19%	NA	0.218	0.28	0.01	0.2	**25%**	NA
Anthracene		ug/L	**0.65**	**0.84**	0.01	0.7	**26%**	NA	**0.22**	**0.20**	0.01	0.2	11%	NA	0.344	0.42	0.01	0.4	20%	NA	0.794	**0.93**	0.01	0.9	16%	NA
Benz(a)anthracene		ug/L	**0.83**	**0.98**	0.01	0.9	17%	NA	**0.88**	**0.87**	0.01	0.9	1%	NA	1.2	1.42	0.01	1.3	17%	NA	2.08	**2.55**	0.01	2.3	**20%**	NA
Benzo(a)pyrene		ug/L	**0.99**	**1.20**	0.05	1.1	19%	NA	**1.35**	**1.25**	0.05	1.3	8%	NA	1.46	1.76	0.05	1.6	19%	NA	3.05	**3.86**	0.05	3.5	**23%**	NA
Benzo(g,h,i)perylene		ug/L	**0.53**	**0.63**	0.01	0.6	18%	NA	**0.80**	**0.75**	0.01	0.8	6%	NA	0.788	1.02	0.01	0.9	**26%**	NA	1.55	**2.13**	0.01	1.8	**32%**	NA
Benzo(k)fluoranthene		ug/L	**0.38**	**0.46**	0.01	0.4	20%	NA	**0.51**	**0.49**	0.01	0.5	4%	NA	0.593	0.72	0.01	0.7	19%	NA	1	**1.29**	0.01	1.1	**25%**	NA
Chrysene		ug/L	**1.09**	**1.39**	0.01	1.2	**24%**	NA	**1.15**	**1.05**	0.01	1.1	9%	NA	1.47	1.69	0.01	1.6	14%	NA	2.5	**2.93**	0.01	2.7	16%	NA
Dibenz(a,h)anthracene		ug/L	**0.13**	**0.16**	0.05	0.1	NA	0.6	**0.20**	**0.18**	0.05	0.2	NA	0.4	0.227	0.27	0.05	0.2	17%	NA	0.378	**0.52**	0.05	0.4	**32%**	NA
Fluoranthene		ug/L	**1.07**	**1.23**	0.01	1.2	14%	NA	**0.89**	**0.84**	0.01	0.9	5%	NA	1.87	2.12	0.01	2.0	13%	NA	2.95	**3.42**	0.01	3.2	15%	NA
Benzo(b,j) fluoranthene		ug/L	0.78	1.02	0.01	0.9	**26%**	NA	1.12	1.06	0.01	1.1	6%	NA	1.61	1.97	0.01	1.8	**20%**	NA	3.04	3.69	0.01	3.4	19%	NA
Fluorene		ug/L	**0.09**	**0.11**	0.01	0.1	18%	NA	**0.09**	**0.07**	0.01	0.1	**21%**	NA	0.148	0.19	0.01	0.2	**25%**	NA	0.499	**0.57**	0.01	0.5	13%	NA
Indeno(1,2,3-c,d)pyrene		ug/L	**0.38**	**0.46**	0.01	0.4	20%	NA	**0.61**	**0.51**	0.01	0.6	18%	NA	0.819	1.03	0.01	0.9	**23%**	NA	1.47	**2.02**	0.01	1.7	**32%**	NA
Naphthalene		ug/L	**0.02**	**0.04**	0.05	0.0	NA	0.4	0.03	0.03	0.05	0.0	NA	0.0	0.065	0.12	0.05	0.1	NA	1.1	0.172	**0.21**	0.05	0.2	NA	0.8
Phenanthrene		ug/L	**0.44**	**0.50**	0.02	0.5	12%	NA	**0.35**	**0.32**	0.02	0.3	8%	NA	0.887	1.03	0.02	1.0	15%	NA	1.93	**2.35**	0.02	2.1	20%	NA
Pyrene		ug/L	**1.51**	**1.72**	0.01	1.6	13%	NA	**1.30**	**1.28**	0.01	1.3	2%	NA	2.62	2.94	0.01	2.8	12%	NA	4.67	**5.44**	0.01	5.1	15%	NA
Quinoline		ug/L	0.02	0.02	0.05	0.0	NA	0.0	0.01	0.01	0.05	0.0	NA	0.0	0.01	0.01	0.05	0.0	NA	0.1	0.02	0.02	0.05	0.0	NA	0.0
2-methylnaphthalene		ug/L	**0.02**	**0.02**	0.01	0.0	NA	0.0	**0.03**	**0.03**	0.01	0.0	NA	0.3	**0.063**	**0.11**	0.01	0.1	NA	**4.3**	0.153	**0.18**	0.01	0.2	16%	NA
1-Methylnaphthalene		ug/L	0.02	0.02	0.01	0.0	NA	0.0	0.03	0.02	0.01	0.0	NA	0.5	0.047	0.07	0.01	0.1	NA	**2.3**	0.122	0.15	0.01	0.1	**21%**	NA

Notes:

DF = difference factor; FDA = field duplicate available; FD = field duplicate; Mean = average of two values; mg/kg = miligrams per kilogram; NA = not applicable; NC = not calculated; QA/QC = Quality Assurance/Quality Control; RPD = releative percent difference; < = less than detection limit

When different detection limits are used for the sample and duplicate results, and one detectable result is reported at a value below the detection limit of a non-detectable result, the RPD is not calculated.

Relative percent difference (RPD) = the difference between two values divided by the mean of the two values. RPD is calculated when the concentration is greater than five times the detection limit.

Acceptable RPD for in sediment is less than or equal to 20%.

Difference factor (DF) = absolute difference between two values divided by the method detection limit. The DF is calculated when the concentration is less than five times the detection limit.

Golders' acceptable DF is less than or equal to 2.0.

Bold values indicate an exceedance of the acceptable RPD or DF.

APPENDIX G
Results of Water Quality QAQC Duplicate Sample Results
Milne Port, 2021

Sample Name	Units	PCW-SC-001A	DUP-205	Reported Detection Limit	Mean	Relative Percent Difference (RPD)	Difference Factor (DF)
Sample Date		2021-10-03	2021-10-03				
PARENT_SAMPLE_CODE		L2648161	L2648161				
Parameter							
Field and Physical							
pH	pH Units		-	0.1	NC	NC	NC
Total Organic Carbon	ug/L	6.63	5.98	500	6	NA	0.0
Metals, Dissolved							
Aluminum (Al)	ug/L	14200	17900.00	5	16050	**23%**	NA
Antimony (Sb)	ug/L	0.83	1.31	1	1.07	NA	0.5
Arsenic (As)	ug/L	5.41	**6.97**	0.4	6.19	**25%**	NA
Barium (Ba)	ug/L	231	264.00	1	247.5	13%	NA
Beryllium (Be)	ug/L	0.52	0.63	0.5	0.58	NA	0.2
Bismuth (Bi)	ug/L	0.28	0.32	0.5	0.3	NA	0.1
Boron (B)	ug/L	8.2	7.10	300	8	NA	0.0
Cadmium (Cd)	ug/L	0.53	0.54	0.01	0.534	1%	NA
Calcium (Ca)	ug/L	63800	37500.00	1000	50650	**52%**	NA
Chromium (Cr)	ug/L	1180	2080.00	0.5	1630	**55%**	NA
Cobalt (Co)	ug/L	10.7	12.80	0.05	12	18%	NA
Copper (Cu)	ug/L	33.8	35.50	0.2	34.65	5%	NA
Iron (Fe)	ug/L	22800	26800.00	10	24800	16%	NA
Lead (Pb)	ug/L	88.4	**128.00**	0.05	108	**37%**	NA
Lithium (Li)	ug/L	10.2	13.00	20	12	NA	0.1
Magnesium (Mg)	ug/L	14000	14400.00	1000	14200	3%	NA
Manganese (Mn)	ug/L	579	547.00	0.1	563.00	6%	NA
Mercury (Hg)	ug/L	0.192	**0.22**	0.005	0	15%	NA
Molybdenum (Mo)	ug/L	0.84	1.01	0.1	0.93	18%	NA
Nickel (Ni)	ug/L	21	25.20	0.5	23	18%	NA
Phosphorus (P)	ug/L	1210	1130.00	50	1170	7%	NA
Potassium (K)	ug/L	3330	4230.00	1000	3780	NA	0.9
Selenium (Se)	ug/L	0.74	0.53	0.5	1	NA	0.4
Silver (Ag)	ug/L	0.26	0.38	0.1	0	NA	1.2
Sodium (Na)	ug/L	527	572.00	2500	550	NA	0.0
Strontium (Sr)	ug/L	349	177.00	10	263	**65%**	NA
Sulfur (S)	ug/L	4900	3400.00	5000	4150	NA	0.3
Thallium (Tl)	ug/L	0.236	0.28	0.05	0	18%	NA
Tin (Sn)	ug/L	7.8	5.40	1	7	**36%**	NA
Titanium (Ti)	ug/L	964	1270.00	5	1117	**27%**	NA
Tungsten (W)	ug/L	0.25	0.25	1	0	NA	0.0
Uranium (U)	ug/L	0.624	0.76	0.05	0.69	20%	NA
Vanadium (V)	ug/L	39.8	47.50	0.5	43.65	18%	NA
Zinc (Zn)	ug/L	139	**140.00**	1	140	1%	NA
Zirconium (Zr)	ug/L	3.8	5.70	0.5	5	**40%**	NA
Hydrocarbons							
Acenaphthene	ug/L	0.058	**0.07**	0.01	0.1	**22%**	NA
Acenaphthylene	ug/L	0.509	**0.52**	0.01	0.5	3%	NA
Acridine	ug/L	0.03	0.05	0.01	0.0	NA	2.0
Anthracene	ug/L	0.221	**0.22**	0.01	0.2	2%	NA
Benz(a)anthracene	ug/L	1.03	**0.93**	0.01	1.0	10%	NA
Benzo(a)pyrene	ug/L	1.24	**1.15**	0.05	1.2	8%	NA
Benzo(g,h,i)perylene	ug/L	0.785	0.67	0.01	0.7	16%	NA
Benzo(k)fluoranthene	ug/L	0.367	0.30	0.01	0.3	**20%**	NA
Chrysene	ug/L	0.991	**0.88**	0.01	0.9	12%	NA
Dibenz(a,h)anthracene	ug/L	0.196	**0.17**	0.05	0.2	NA	0.5
Fluoranthene	ug/L	0.916	**0.94**	0.01	0.9	2%	NA
Benzo(b,j) fluoranthene	ug/L	1.12	0.97	0.01	1.0	14%	NA
Fluorene	ug/L	0.075	**0.08**	0.01	0.1	11%	NA
Indeno(1,2,3-c,d)pyrene	ug/L	0.63	0.56	0.01	0.6	12%	NA
Naphthalene	ug/L	0.01	0.02	0.05	0.0	NA	0.2
Phenanthrene	ug/L	0.336	**0.33**	0.02	0.3	2%	NA
Pyrene	ug/L	1.32	**1.52**	0.01	1.4	14%	NA
Quinoline	ug/L	0.01	0.01	0.05	0.0	NA	0.0
2-methylnaphthalene	ug/L	0.01	**0.03**	0.01	0.0	NA	2.0
1-Methylnaphthalene	ug/L	0.01	0.02	0.01	0.0	NA	1.2

Notes:
DF = difference factor; FDA = field duplicate available; FD = field duplicate; Mean = average of two values; mg/kg = miligrams per kilogram; NA = not applicable; NC = not calculated; QA/QC = Quality Assurance/Quality Control; RPD = releative percent difference; < = less than detection limit

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Golders' acceptable DF is less than or equal to 2.0.
Bold values indicate an exceedance of the acceptable RPD or DF.



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