



CONSULTANTS
Occupational Hygiene & Environment

Phase Two Environmental Site Assessment

Commercial Property

49 High Street
Barrie, Ontario
L4N 5J4

Presented to:

Wild Gray Capital Management Inc.

75 First Street, Suite 14
Orangeville, Ontario
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November 11, 2024

OHE Project No.: 30100

Submitted by:

OHE Consultants

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1 EXECUTIVE SUMMARY

Site

The Property is developed with a four (4)-storey office building, with a basement.

Purpose

OHE Consultants (OHE) was retained by Wild Gray Capital Management Inc. for this Phase Two Environmental Site Assessment (ESA).

The purpose of conducting the Phase Two ESA was to provide verification of soil and ground water conditions further to the application for a Record of Site Condition.

Methodology

The scope of the Phase Two ESA drilling program was determined based upon the Phase One ESA Update that was completed for the Property by OHE on September 18, 2024, as well as OHE's proposed Work Plan and Schedule.

Cambium Inc. was retained by the Client for geotechnical services at the Property. OHE attended the Property during this work to collect soil samples. In addition, the boreholes were completed as monitoring wells as per OHE's request.

Drilling was completed under the direction of Cambium Inc. on September 4 and 5, 2024. Five (5) boreholes (BH101-24 to BH105-24) were drilled to a maximum depth of 5.18 m below the elevation of the basement slab. Boreholes BH103-24 and BH104-24 were completed as ground water monitoring wells.

Soil samples were collected during drilling and submitted for laboratory analysis of petroleum hydrocarbons (PHCs), volatile organic compounds (VOCs), metals, hydride-forming metals, polycyclic aromatic hydrocarbons (PAHs) as well as polychlorinated biphenyls (PCBs).

The newly installed monitoring wells were noted as dry as of September 12, 2024 and September 26, 2024. An existing monitoring well, labelled MWX, was sampled by OHE on September 12, 2024 for PHCs, VOCs, metals, hydride-forming metals, PAHs and PCBs. It is noted that OHE does not have monitoring well construction information regarding this monitoring well.

Site Condition Standards

Soil and ground water quality were assessed based on the applicable Ontario Ministry of the Environment, Conservation and Parks (MECP) Table 2 Full Depth Generic Site Condition Standards in a Potable Ground Water for Residential / Parkland / Institutional Property Use with fine textured soils, as presented in Soil, Ground Water and Sediment

Standards for Use Under Part XV.1 of the Environmental Protection Act, dated April 15, 2011.

Stratigraphy

Boreholes penetrated sand, trace to some silt, trace to some gravel fill ranging in depth from 0.20 m to 2.69 m below the elevation of the floor slab. This fill overlay sand, trace to some silt, trace clay, trace gravel, to the maximum depth of drilling, at 5.18 m below the elevation of the basement floor slab.

Investigation Findings

Soil sampling was conducted from BH103-24, BH104-24 and BH105-24. No PHCs, VOCs, metals, hydride-forming metals, PAHs or PCBs soil contamination was identified.

No PHCs, VOCs, metals, hydride-forming metals, or PCBs ground water contamination was identified. The concentration of benzo(a)pyrene in ground water from MWX exceeded the Table 2 Standard.

MWX was resampled for VOCs on October 28, 2024. Two VOCs ground water samples were retrieved, one (1) unfiltered and one (1) filtered. Both samples had no reported concentrations over the Table 2 Standard.

The concentration of sodium in ground water exceeded the Table 2 Standard. However, no bulk salt storage or records of bulk salt storage was identified onsite. Therefore, as per Section 49.1 of Ontario Regulation 153/04 this concentrations was deemed to not represent contamination.

Conclusion

No soil contamination was identified as part of the Phase Two ESA.

No ground water contamination was identified as part of the Phase Two ESA with the exception of concentration of benzo(a)pyrene in ground water. As a filtered sample was uncontaminated this issue was concluded to be related to sediment.

It is noted that the ground water sample was retrieved from an existing monitoring well, from which no monitoring well construction details were ascertained.

2 INTRODUCTION

2(i) Site Description

The Property was developed with a four (4)-storey office building, with a basement. Property tenants comprised professional offices as well as Pizza Pizza, on the south side ground floor. The building comprised the entire Property.

Building heating was by way of natural gas-fired roof-top heating, ventilation, air-conditioning (HVAC) units, with supplemental heating provided by of electrical baseboard heaters. Building infrastructure was noted as follows:

- Basement: There are tenant lockers, water pumps, a fire alarm panel and a communications room in the basement. A monitoring well was found in this space.
- Pizza Pizza ground floor unit: A water heater and a grease trap for sanitary discharges were noted in this tenant space.
- Second Floor: The elevator room was identified on the second floor. An elevator oil storage tank was identified in this room.
- Third Floor: Tenant compressors, a water heater and a dentist tenant VacStar unit were identified in the mechanical room.
- Fourth Floor: A water heater was noted in the mechanical room.

The Property was adjoined as follows:

- north: parking lot, at a lower elevation than the Property;
- east: 110 Dunlop Street West, developed with a vacant two (2)-storey commercial building;
- west: High Street followed by 48 High Street, 52 High Street and 60 High Street, developed with residential dwellings;
- south: Dunlop Street West, followed by Stephen's Park;

A possible vent pipe was identified at the rear (north exterior) of 110 Dunlop Street West. In addition, an automotive garage (The Auto Shoppe) was identified at 66 Toronto Street, approximately 40 m to the east.

2(ii) Property Ownership

The Property is owned by Wild Gray Capital Management Group Inc.

2(iii) Current and Proposed Future Uses

The Property is currently occupied by a multiple-tenant commercial building. The upper floors of the building are intended for conversion to residential use.

2(iv) Applicable Site Condition Standard

The Phase Two ESA is subject to Ontario Regulation 153/04, as amended, provincial regulatory criteria, which outlines the allowable subsurface concentrations for a range of contaminants for all property uses, as stipulated in the Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the Environmental Protection Act.

Selection of the appropriate Ontario Regulation 153/04 Standards, as amended, was conducted by OHE taking into consideration the following information:

Definition of Primary Land Use

The Property is currently categorized as Industrial / Commercial / Community use as per Ontario Regulation 153/04 as amended. A partial conversion to residential land use is planned. Therefore, analytical results were compared to Table 2 Full Depth Generic Site Condition Standards in a Potable Ground Water for Residential / Parkland / Institutional Use with fine textured soils.

Potability of Ground Water

Potable water in Barrie is sourced from ground water wells as well as water from Kempenfelt Bay. As per publicmaps.barrie.ca the Property is situated in an area in which potable water is supplied by way of ground water. Therefore the Property is situated in a Potable Ground Water condition.

Site Sensitivity

The Ontario Ministry of Natural Resources and Forestry's "Make A Map: Natural Heritage Areas" interactive mapping tool from the Natural Heritage Information Centre internet resource was reviewed with respect to the presence of Areas of Natural and Scientific Interest (ANSIs), Environmentally Significant Areas, Species at Risk, Provincially Significant Wetlands or other environmental significant land status designations.

The MNR's online Make a Map, Natural Heritage Areas, showed no Areas of Natural and Scientific Interest (ANSIs), Environmentally Significant Areas, Species at Risk, Provincially Significant Wetlands or other environmental significant land status designations in the area of the Property.

The municipal Official Plan shows the Property situated in a "Commercial District". The Natural Heritage Protection Overlays page of the Official Plan shows:

- 1) Sophia Creek, approximately 45 m to the northeast; and
- 2) Kidds Creek, approximately 75 m to the southwest.

These are both listed as Environmental Protection Area – Level 1 with Existing Development Designation Subject to section 5.4.2.1.d of the Official Plan.

Official Plan section 5.4.2.1.d states *(n)otwithstanding the land use limitations applicable to properties identified as Level 1, where a land use designation, as found on Map 2, permits other forms of development, such development may proceed subject to the policies of Level 2 and the appropriate planning application processes.*

The Official Plan states that *Level 2 resources represent other significant components of the Natural Heritage System that also have a high level of protection. The features and function of these areas include: significant valleylands; provincially significant life science areas of natural and scientific interest; significant wildlife habitat; minimum vegetation protection zones and connectivity linkages; significant woodlands less than 4.0 hectares in size; woodlands greater than 4.0 hectares in size and less than 10.0 hectares; and woodlands within 30.0 metres of a Level 1 feature.* Level 2 development policies were stated, that are not applicable to this report.

Sophia Creek is not visible from grade. Kidds Creek is partially visible from grade.

Lands at the southwest corner of Dunlop Street West and High Street, approximately 35 m to the southwest, area designated as Greenspace.

Ontario Regulation 153/04, as amended, defines Areas of Natural Significance as:

An area reserved or set apart as a provincial park or conservation reserve under the *Provincial Parks and Conservation Reserves Act, 2006*.

The Property is not designated as a Provincial Park or a Conservation Reserve;

An ANSI (life science or earth science) identified by the MNRF as having provincial significance.

The MNRF's "Make A Map: Natural Heritage Areas" interactive mapping tool did not indicate any ANSIs within 30 m of the Property.

A wetland identified by the MNRF as having provincial significance.

The MNRF's "Make A Map: Natural Heritage Areas" interactive mapping tool did not show a wetland within 30 m of the Property.

An area designated by a municipality in its Official Plan as environmentally significant, however expressed, including designations of areas as environmentally sensitive, as being of environmental concern and as being ecologically significant.

The municipal Official Plan is discussed above.

An area designated as an escarpment natural area or an escarpment protection area by the Niagara Escarpment Plan under the *Niagara Escarpment Planning and Development Act*.

The Property is not located in the area of the Niagara Escarpment;

An area identified by the MNRF as significant habitat of a threatened or endangered species.

The MNRF's "Make a Map: Natural Heritage Areas" interactive mapping tool did not indicate any significant habitats of a threatened or endangered species within 30 m of the Property.

An area which is habitat of a species that is classified under Section 7 of the *Endangered Species Act, 2007* as a threatened or endangered species.

The MNRF's "Make a Map: Natural Heritage Areas" interactive mapping tool did not indicate any threatened or endangered species within 30 m of the Property.

Property within an area designated as a natural core area or natural linkage area within the area to which the Oak Ridges Moraine Conservation Plan under the *Oak Ridges Moraine Conservation Act, 2001* applies.

The Property is not located within the Oak Ridges Moraine.

An area set apart as a wilderness area under the *Wilderness Areas Act*.

The MNRF's "Make a Map: Natural Heritage Areas" interactive mapping tool did not indicate any wilderness areas within 30 m of the Property.

Shallow Soil Property

Boreholes BH103 to BH105 drilled at the Property encountered more than 2 m of soil or other overburden materials. BH101 and BH102 were terminated at shallower depths due to an unknown obstruction. These boreholes were drilled in close proximity of boreholes BH103 to BH105. The drilling program indicated that more than 1/3 of the

area of the Property consisted of soil greater than 2 m in depth below the soil surface, and the Property was not identified as a Shallow Soil Property.

Stratified Soil Property

Stratified soil Standards were not selected for use in this subsurface investigation.

Soil Texture

Grain size analysis was carried out on three (3) soil samples by Cambium Inc. The results were as follows:

- BH104-24, 0.8 m – 1.4 m below the slab: sand, trace silt, trace clay, trace gravel;
- BH104-24, 4.6 m – 5.2 m below the slab: sand, some silt, trace clay, trace gravel;
- BH105-24, 0.6 m – 1.2 m below the slab: sand, some silt, trace clay, some gravel;

The percent passing 75 µm grain size ranged from approximately 68% (BH BH105-24, 0.6 m – 1.2 m below the slab) to approximately 90% (BH104-24, 0.8 m – 1.4 m below the slab). Thus, as per Ontario Regulation 153/04 the Property soils were defined as fine textured.

Conclusion

Based on the above information, OHE determined that Table 2 Full Depth Generic Site Condition Standards in a Potable Ground Water Residential / Parkland / Institutional land use with fine textured soils is the applicable Standards for the Property, as per Ontario Regulation 153/04, as amended.

3 BACKGROUND INFORMATION

3(i) Physical Setting

Site Description

The Property location is shown in Drawing 1. The Property, as shown in Drawing 2, is described as follows:

The Property was developed with a four (4)-storey office building, with a basement. Property tenants comprised professional offices as well as Pizza Pizza, situated at the south side ground floor. The building comprised the entire Property.

Building heating was by way of natural gas-fired roof- HVAC units, with supplemental heating provided by of electrical baseboard heaters. Building infrastructure was noted as follows:

- Basement: Tenant lockers, water pumps, a fire alarm panel and a communications room were identified in the basement. A monitoring well was found in this space.
- Pizza Pizza ground floor unit: A water heater and a grease trap for sanitary discharges were noted in this tenant space.
- Second Floor: The elevator room was identified on the second floor. An elevator oil storage tank was identified in this room.
- Third Floor: Tenant compressors, a water heater and a dentist tenant VacStar unit were identified in the mechanical room.
- Fourth Floor: A water heater was noted in the mechanical room.

The Property was adjoined as follows:

- north: parking lot, at a lower elevation than the Property;
- east: 110 Dunlop Street West, developed with a vacant two (2)-storey commercial building;
- west: High Street followed by 48 High Street, 52 High Street and 60 High Street, developed with residential dwellings;
- south: Dunlop Street West, followed by Stephen's Park;

A possible vent pipe was identified at the rear (north exterior) of 110 Dunlop Street West. In addition, an automotive garage (The Auto Shoppe) was identified at 66 Toronto Street, approximately 40 m to the east.

Water Bodies within Proximity of the Phase Two ESA Property

Kidds Creek was identified approximately 75 m to the southwest.

Topography at the Phase Two ESA Property

Based on OHE's review of relevant sources of information, a summary of topographic, geologic, and hydrogeological conditions for the Property and surrounding areas is provided as follows:

A review of Google earth™ indicated the Property is situated at an approximate elevation of 238 m above mean sea level. The topography of the Property and local area identified during the Property reconnaissance indicated grades falling to the south.

The mapping entitled *Physiography of the South Central Portion of Southern Ontario*, Ontario Ministry of Mines and Northern Development, Ontario Research Foundation, shows the Property situated in an area of a till plain. Provincial

online mapping shows the Property and Phase One ESA Study Area situated in an area of littoral foreshore deposits, coarse-textured glaciolacustrine deposits.

Ontario Ministry of Northern Development and Mines, *Bedrock Geology of Ontario* mapping shows the Property and the Phase One ESA Study Area within an area of Middle Ordovician limestone, sandstone, shale, arkose and siltstone of the Ottawa Group, Simcoe Group and Shadow Lake Formation.

Cambium Inc. boreholes penetrated sand, trace to some silt, trace to some gravel fill ranging in depth from 0.20 m to 2.69 m below the elevation of the floor slab. This fill overlay sand, trace to some silt, trace clay, trace gravel, to the maximum depth of drilling, at 5.18 m below the elevation of the basement floor slab.

3(ii) Past Investigations

The following previous environmental investigation was conducted at the Property:

Phase I Environmental Site Assessment, 49 High Street, Barrie, Ontario, prepared by: Keller Engineering, prepared for: Wild Gray Capital Management Inc., October 19, 2023

Keller Engineering had conducted a Phase I ESA, under the name of Criterium-Jansen Engineers on June 18, 2018.

The Keller Engineering Phase I ESA was carried out as per CSA Z768-01 (R2022) *Phase I Environmental Site Assessment*, as well as ASTM E 1527-13 *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*. Neither of these guidelines address the Record of Site Condition process.

The Keller Engineering Phase I ESA comprised the following tasks and resources:

- Property and adjoining property inspection;
- parcel registry review, Land Registry Office #51;
- EcoLog ERIS environmental data search and review;
- Ontario Ministry of Environment, Conservation and Parks (MECP) Freedom of Information request;

Keller Engineering concluded:

This assessment has revealed no evidence of recognized environmental conditions; of hazardous substances or petroleum products on the subject

property which would indicate an existing release, a past release, or a threat of release of these substances in connection with the property.

Phase One Environmental Site Assessment Update 49 High Street, Barrie, Ontario,
prepared by: OHE Consultants, prepared for: Wild Gray Capital Management Inc.,
September 18, 2024

OHE carried out a Property reconnaissance, OHE also made the following information requests:

- fire insurance plans;
- city directories;
- online Land Registry Office documentation;
- aerial photographs;

As part of the Property reconnaissance OHE determined that there was a second floor elevator hydraulic oil storage tank. Correspondence with the MECP determined that this tank constituted a Potentially Contaminating Activity (PCA).

Through Property research OHE determined that the Property was formerly developed with a Canadian Tire retail store and gas bar. There was an underground storage tank (UST) associated with this gas bar.

The following PCAs were identified as part of the investigation:

Potentially Contaminating Activity (PCA)	Ontario Regulation 153/04 Item	Description
PCA #1	Item #30: Importation of Fill Material of Unknown Quality	fill was likely used during Property development and removal of tanks
PCA #2	Item #28: Gasoline and Associated Products Storage in Fixed Tanks	UST formerly present at the Property as part of a Canadian Tire retail facility presence of an elevator hydraulic oil storage tank in the building
PCA #3	Item #10: Commercial Autobody Shops	past use of the Property as a Canadian Tire automotive repair facility

PCA #4	Item #28: Gasoline and Associated Products Storage in Fixed Tanks	vent pipe at the rear of 110 Dunlop Street East
PCA #5	Item #10: Commercial Autobody Shops	automotive garage at 110 Dunlop Street East
PCA #6	Item #10: Commercial Autobody Shops	past use of 88 Dunlop Street as an automotive garage
PCA #7	Item #28: Gasoline and Associated Products Storage in Fixed Tanks	historic presence of UST at 101 Dunlop Street West
PCA #8	Item #10: Commercial Autobody Shops	past use of 101 Dunlop Street West as a gasoline service station
PCA #9	Item #28: Gasoline and Associated Products Storage in Fixed Tanks	historic presence of UST at 85 Dunlop Street West
PCA #10	Item #10: Commercial Autobody Shops	past use of 85 Dunlop Street West as a gasoline service station
PCA #11	Item #28: Gasoline and Associated Products Storage in Fixed Tanks	historic presence of UST at property northeast of 19 Bradford Street
PCA #12	Item #10: Commercial Autobody Shops	past use of property northeast of 19 Bradford Street as a gasoline service station
PCA #13	Item #28: Gasoline and Associated Products Storage in Fixed Tanks	historic presence of UST at 19 Bradford Street
PCA #14	Item #37: Operation of Dry Cleaning Equipment (where chemicals are used)	historic dry cleaner, west side of Bradford Street opposite Simcoe Street
PCA #15	Item #28: Gasoline and Associated Products Storage in Fixed Tanks	historic furnace fuel oil tanks, 34 Simcoe Street
PCA #16	Item #28: Gasoline and Associated Products Storage in Fixed Tanks	historic UST, 34 Simcoe Street
PCA #17	Item #28: Gasoline and Associated Products Storage in Fixed Tanks	historic UST, High Street

PCAs are shown in Drawing 3.

OHE reviewed the above PCAs with respect to relevance to the Property. Based upon this review the following APECs were derived. These APECs apply to the entire Property.

Area of Potential Environmental Concern (APEC)	Corresponding Potentially Contaminating Activities (PCAs)	Description
APEC #1	Item #30: Importation of Fill Material of Unknown Quality	fill was likely used during Property development and removal of tanks
APEC #2	Item #28: Gasoline and Associated Products Storage in Fixed Tanks	past presence of an underground storage tank at the Property presence of an elevator hydraulic oil storage tank in the building
APEC #3	Item #10: Commercial Autobody Shops	past use of the Property as an automotive garage

APECs are shown in Drawing 4.

4 SCOPE OF THE INVESTIGATION

4(i) Overview of the Site Investigation

The purpose of conducting the Phase Two ESA was to provide verification of soil and ground water conditions at the APEC identified through the Phase One ESA recently conducted by OHE at the Property.

Drilling was completed under the direction of Cambium Inc. on September 4 and 5, 2024. Five (5) boreholes (BH101-24 to BH105-24) were drilled to a maximum depth of 5.18 m below the elevation of the basement slab. Boreholes BH103-24 and BH104-24 were completed as ground water monitoring wells.

Please refer to Appendix A for the Sampling and Analysis Plan.

4(ii) Media Investigated

Rationale for Media Investigation

As per the agreed upon scope of this subsurface investigation, the media investigated were soil and ground water. The justification for the media investigated is as follows:

The media of potential environmental concern, as identified from the previous Phase One ESA Update by OHE, were soil and ground water.

Field Investigation Overview

As per the Phase Two ESA scope, soil samples were obtained from all of the borehole locations. One (1) sample per borehole was retrieved for laboratory analysis of PHCs, VOCs, metals, hydride-forming metals, PAHs and PCBs concentrations. Soil samples were retrieved as follows:

- BH103-24: 3.81 m – 4.42 m;
- BH104-24: 1.52 m – 2.13 m;
- BH105-24: 1.52 m – 2.13 m;

all below the basement floor slab.

The newly installed monitoring wells were noted as dry. OHE retrieved a ground water sample from existing monitoring well (labelled MWX). A ground water sample was retrieved from this location for laboratory analysis of PHCs, VOCs, metals, hydride-forming metals, sodium, PAHs and PCBs concentrations

4(iii) Deviations from Sampling and Analysis Plan

The soil sampling and analysis plan was carried out as detailed in the scope of work.

4(iv) Impediments

Only interior basement drilling was possible due to the configuration of the Property.

5 INVESTIGATION METHOD

5(i) General

Design and execution of the Phase Two ESA was generally completed using methods from the MECP document *Guidance on Sampling and Analytical Methods for Use at Contaminated Sites in Ontario*, dated May 1996 and Ontario Regulation 153/04 made under Part XV.1 of the Environmental Protection Act, dated May 12, 2004, as amended.

All investigation activities were conducted in accordance with OHE's Standard Operating Procedures (SOPs) and industry standard protocols.

5(ii) Drilling Activities

Borehole drilling was carried out under direction of Cambium Inc., as part of a geotechnical program. As per OHE's request these boreholes were completed as monitoring wells.

Please refer to Drawing 5 for borehole and monitoring well locations. Please refer to Drawing 6 for borehole and monitoring well locations with respect to APEC locations.

5(iii) Soil: Sampling

Sample collection and handling procedures were conducted in general accordance with the MECP *Guidance on Sampling and Analytical Methods for Use at Contaminated Sites in Ontario* document, dated 1996 and OHE's SOPs. Soil samples were obtained using split-spoon and sonic drill sampling method. Borehole soil samples were visually classified and screened in the field for organic headspace vapour concentrations utilizing an RKI Eagle portable gas detector, calibrated to isobutylene. Borehole soil samples were selected to represent the "worst case" for each borehole based on visual and olfactory observations, along with organic vapour readings, and submitted for laboratory analysis.

The stratigraphic profile at the Property generally consisted of sand, trace to some silt, trace to some gravel fill ranging in depth from 0.20 m to 2.69 m below the elevation of the floor slab. This fill overlay sand, trace to some silt, trace clay, trace gravel, to the maximum depth of drilling, at 5.18 m below the elevation of the basement floor slab.

Information on subsurface conditions such as stratigraphy, presence/absence of ground water and soil organic headspace vapour concentrations was logged at the time of drilling. Cambium Inc. Borehole Logs are presented in Appendix B.

A summary of soil samples submitted for laboratory analysis is presented in Table 1.

5(iv) Field Screening Measurements

Soil samples were recovered at continuous intervals from each borehole and were classified and screened in the field for soil headspace organic vapour concentrations utilizing an RKI Eagle portable gas detector.

Based on visual and olfactory observations, along with limited organic vapour readings, soil samples from the boreholes that exhibited the greatest apparent degree of impact were selected and submitted for laboratory analysis.

5(v) Ground Water: Monitoring Well Installation

Boreholes BH103-4 and BH104-24 were completed as ground water monitoring wells in accordance with Ontario Regulation 903/90, per amended requirements and standardized industry practices. The monitoring wells were constructed using 51 mm diameter, Schedule 40 PVC riser and screen.

All of the advanced boreholes were completed as ground water monitoring wells. The bottom of the screen was capped with a 51 mm diameter PVC cap while the riser was sealed with a lockable J-plug cap. Silica sand was placed around the screen to create a proper sand pack and brought to a minimum depth of 0.3 m above the screen. Bentonite was placed above the silica sand and extended to approximately 30 cm below the top of the riser pipe. The monitoring wells were completed with flushmount well casings set at basement slab elevation.

The borehole and monitoring well locations are shown on Drawings 5 and 6 and the details of the monitoring well installations are presented on the appended Cambium Inc. Borehole Logs (Appendix B).

The monitoring wells were installed by Profile Drilling and Monitoring Well Records were completed according to Ontario Regulation 903/90, as amended. All monitoring well installation protocols were followed, including the use of nitrile gloves to avoid cross-contamination.

5(vi) Ground Water: Field Measurement of Water Quality Parameters

Ground water purging at existing monitoring well MWX was conducted using a low-flow pump and bailers.

5(vii) Ground Water: Sampling

Prior to monitoring and sampling, the ground water monitoring wells were purged using a low-flow pump with parameter stabilization.

The monitoring wells were inspected and organic headspace vapour concentrations were measured using an RKI Eagle portable gas detector. The depth to ground water and/or non-aqueous phase liquid (NAPL) was measured using a Heron™ inter-phase probe. The inter-phase probe was cleaned with Alconox™ detergent and deionised water solution and rinsed in deionised water prior to use.

The newly installed monitoring wells were noted as dry as of September 12, 2024 and September 26, 2024. An existing monitoring well, labelled MWX, was sampled by OHE on September 12, 2024 for PHCs, VOCs, metals, hydride-forming metals, PAHs and

PCBs. It is noted that OHE does not have monitoring well construction information regarding this monitoring well.

Due to a benzo(a)pyrene concentration issue monitoring well MWX was resampled on October 28, 2024. Both an unfiltered and a filtered ground water was retrieved.

5(viii) Sediment: Sampling

Sediment samples were not included as part of the scope for the Phase Two ESA.

5(ix) Analytical Testing

ALS Canada Ltd. of Waterloo, Ontario, was retained to perform analytical testing. ALS Canada Ltd. is designated as an accredited laboratory by the Canadian Association for Laboratory Accreditation Inc. (CALA) and employs in-house quality assurance/quality control (QA/QC) programs to verify sample integrity that consist of surrogate analysis, matrix spike samples, spiked blank samples, method blank samples, laboratory duplicate samples, and QA samples.

5(x) Residue Management Procedures

Soil cuttings and purged ground water were containerized in a 205 L drum and located at the Property. This drum has been removed from the Property.

5(xi) Elevation Surveying

An elevation survey of the installed monitoring wells was not completed. It is assumed that the floor slab is at a constant elevation.

5(xii) Quality Assurance and Quality Control Measures

QA/QC protocols were followed during the field work to ensure that representative samples were obtained. The general QA/QC protocols include the following:

- Disposable nitrile gloves and clean tools were used to collect each soil and ground water sample for analysis.
- Field screening soil samples were placed in clean disposal bags and labeled accordingly.
- Samples were placed in clean, sealed, laboratory supplied glass jars or bottles, assigned individual labels, and preserved at below 10°C for transportation to the analytical laboratory under formal chain of custody procedures.
- Sample collection and handling procedures were conducted in general accordance with the MECP *Guidance on Sampling and Analytical Methods for Use at Contaminated Sites in Ontario* document, dated 1996 and OHE's SOPs.

OHE also evaluated QA/QC Reports, reported to OHE as part of the laboratory Certificate of Analysis. One (1) soil field duplicate sample was submitted for laboratory analysis. A trip blank water sample was submitted, both for analysis of VOCs.

6 REVIEW AND EVALUATION

6(i) Geology

Cambium Inc. boreholes penetrated sand, trace to some silt, trace to some gravel fill ranging in depth from 0.20 m to 2.69 m below the elevation of the floor slab. This fill overlay sand, trace to some silt, trace clay, trace gravel, to the maximum depth of drilling, at 5.18 m below the elevation of the basement floor slab.

6(ii) Ground Water: Elevations and Flow Direction

The monitoring well screen depth intervals were set from 1.5 m to 4.5 m below the elevation of the basement slab.

The monitoring wells were screened primarily within native soil to ensure that any light non-aqueous phase liquid (LNAPL), if present, would be detected. No LNAPL was detected in any of the monitoring wells. In addition, no deep non-aqueous phase liquid (DNAPL) was identified during Property ground water monitoring and sampling. The presence of DNAPL would be identified during monitoring well development.

The newly installed monitoring wells were dry as of September 12, 2024 and September 26, 2024. The depth to ground water at existing monitoring well MWX was measured at 1.52 m below the elevation of the basement concrete slab on September 12, 2024.

As only one (1) ground water depth was measured the estimated direction of ground water could not be measured.

6(iii) Ground Water: Hydraulic Gradient

As only one (1) ground water elevation was measured, horizontal hydraulic gradients could not be calculated.

6(iv) Soil Texture

Cambium Inc. carried out grain size analysis on three (3) soil samples. This analysis indicated that Property soils were defined as fine textured.

6(v) Soil: Field Screening

Soil samples were recovered at regular intervals from each core sample recovered and were visually classified and screened in the field for soil organic headspace vapour concentrations utilizing an RKI Eagle portable gas detector, calibrated to hexane.

Based on visual and olfactory observation, along with limited organic vapour readings, soil samples from boreholes that exhibited the greatest apparent degree of impact were selected and submitted for laboratory analysis. Soil organic vapour concentrations measured in the soil samples recovered during the investigation ranged from 0 ppm to 8 ppm and are presented in detail on the Cambium Inc. Borehole Logs in Appendix B.

6(vi) Soil Quality

A summary of soil laboratory analysis is included in Table 1.

No PHCs, VOCs, metals, hydride-forming metals, PAHs or PCBs soil contamination was identified. Soil sampling was conducted from BH103-24, BH104-24 and BH105-24.

Please refer to Tables 2 to 6. The laboratory Certificate of Analysis is included as Appendix C.

6(vli) Ground Water Quality

A summary of ground water laboratory analysis is included in Table 1.

No PHCs, VOCs, metals, hydride-forming metals, or PCBs ground water contamination was identified. The concentration of benzo(a)pyrene in ground water from MWX exceeded the Table 2 Standard. MWX was resampled on October 28, 2024 for PAHs. One sample was unfiltered and a second sample was filtered. Both samples had no reported concentrations over the Table 2 Standard.

The concentration of sodium in ground water exceeded the Table 2 Standard. However, no bulk salt storage or records of bulk salt storage was identified onsite. Therefore, as per Section 49.1 of Ontario Regulation 153/04 this concentrations was deemed to not represent contamination.

Please refer to Tables 7 to 11. The laboratory Certificate of Analysis is included as Appendix C.

6(viii) Sediment Quality

Sediment samples were not collected as part of the scope of work for the Phase Two ESA.

6(ix) Quality Assurance and Quality Control Results

The general OHE field QA/QC protocols include the following:

- Disposable nitrile gloves and clean hand tools were used to collect each soil sample for analysis;

- Field screening soil samples were placed in clean disposal bags and labeled accordingly;
- Samples were placed in clean, sealed, laboratory supplied glass jars or bottles, assigned individual labels, preserved at below 10 °C and transported to ALS Canada Ltd. under formal chain of custody procedures; and
- Sample collection and handling procedures were conducted in general accordance with the MECP Guidance on Sampling and Analytical Methods for Use at Contaminated Sites in Ontario document, dated 1996 and OHE's SOPs.

A field duplicate sample (DUP101) of soil sample BH103-6 was retrieved and laboratory analyzed for PHCs F2 to F4 fractions. As all reported concentrations were below the laboratory detection limit Relative Percent Differences (RPDs) could not be calculated for this duplicate sample. RPDs can only be calculated if all applicable concentrations are five (5) times or more than the laboratory Certificate of Analysis. Please refer to Table 12 and Appendix C for the laboratory Certificate of Analysis.

OHE submitted one (1) trip blank sample for ground water, for VOCs. A trip blank sample is a non-contaminated sample, provided by the laboratory. It is carried to the project site and is transported with the field samples, and provides an indication of sample integrity due to field or transport techniques. No issues were identified. Please refer to Table 13 and Appendix C for the laboratory Certificate of Analysis.

Review of ALS Canada Ltd.'s QA/QC for soil and ground water analysis revealed no issues with respect to laboratory duplicates, reference materials, method blank spikes, or matrix spikes. All values were reported within the acceptable limits.

The Certificates of Analysis received by OHE as part of the Phase Two ESA primarily comply with Section 47(3) of Ontario Regulation 153/04 as amended. The Certificates of Analysis have been included in full within Appendix C of this report. The Certificates of Analysis report all analysis carried out for all sampling locations within this Phase Two ESA.

6(x) Phase Two ESA Conceptual Site Model

Please refer to Appendix D.

7 CONCLUSIONS

Soil

No PHCs, VOCs, metals, hydride-forming metals, PAHs or PCBs soil contamination was identified. oil sampling was conducted from BH103-24, BH104-24 and BH105-24.

Ground Water

No PHCs, VOCs, metals, hydride-forming metals, or PCBs ground water contamination was identified. The concentration of benzo(a)pyrene in ground water from MWX exceeded the Table 2 Standard. MWX was resampled on October 28, 2024 for PAHs. One sample was unfiltered and a second sample was filtered. Both samples had no reported concentrations over the Table 2 Standard.

The concentration of sodium in ground water exceeded the Table 2 Standard. However, no bulk salt storage or records of bulk salt storage was identified onsite. Therefore, as per Section 49.1 of Ontario Regulation 153/04 this concentrations was deemed to not represent contamination.

Report Limitations

The information and conclusions contained in this report are based upon work undertaken by trained professional and technical staff in accordance with generally accepted engineering and scientific practices current at the time the work was performed. Conclusions presented in this report should not be construed as legal advice.

The comments and conclusions presented in this report represent the best technical judgment of OHE Consultants based on the data obtained from the work and site conditions encountered by OHE Consultants at the time the work was performed at the specific testing and/or sampling locations, and can only be extrapolated to an undefined area around these locations. The extent of the limited area depends on the soil and groundwater conditions, as well as the history of the site reflecting natural processes, construction and other activities. OHE Consultants considers this report to be representative of the conditions encountered at the Property. In addition, analysis has been carried out for a limited number of chemical parameters, and it should not be

inferred that other chemical species are not present. Due to the nature of the investigation and the limited data available, OHE Consultants cannot warrant against undiscovered environmental liabilities.

If conditions become apparent that differ significantly from our understanding of conditions as presented in this report, we request that we be notified immediately to reassess the conclusions provided herein.

Use of Report

This report has been prepared for exclusive use by Wild Gray Capital Management Inc. for specific application to this site. The report may not be used by any other person or entity without the express written consent of OHE Consultants and/or Wild Gray Capital Management Inc. Any use which a third party makes of this report, or any reliance on decisions based on it, is the responsibility of such third parties. OHE Consultants accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report. Any third party who may have an interest in the site must do their own testing and interpretation to determine if the site conditions affect them.

Closure

We trust that the information presented herein meets your current requirements. Should you have any questions or require additional information, please do not hesitate to contact the undersigned at 905-890-9000.

OHE Consultants

Occupational Hygiene & Environment

Prepared by:

Reviewed by:

Mike Grayhurst, P.Eng., Q.P.^{ESA}, EP, PMP
Senior Managing Consultant

Farid (Fred) Atrash, M.H.Sc., CIH, ROH
President

8 REFERENCES

- Atlas of Canada (<http://atlas.nrcan.gc.ca>);
- Canadian Standards Association Phase II ESA Standard; Z769-00 (R2013);
- MECP Guidance on Sampling and Analytical Methods for Use at Contaminated Sites in Ontario document, dated 1996;
- MECP Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, dated April 15, 2011 (Ontario Regulation 511/09 amendments);
- Ontario Geological Survey 2010; Surficial geology of Southern Ontario; Ontario Geological Survey, Miscellaneous Release--Data 128-REV-OGS Earth Mapping Service, Google earth™;
- Ontario Regulation 153/04 made under Part XV.1 of the Environmental Protection Act, dated May 12, 2004, as amended;
- *Phase I Environmental Site Assessment, 49 High Street, Barrie, Ontario*, prepared by: Keller Engineering, prepared for: Wild Gray Capital Management Inc., October 19, 2023;
- City of Barrie online resources;
- City of Barrie Official Plan;

Drawings



Legend:

← Property

Notes:

Locations of site features are approximate and may vary from that shown

Drawing Title:

Site Location

Client Address:

Wild Gray Capital Management Inc.
75 First Street, Suite 14
Orangeville, Ontario

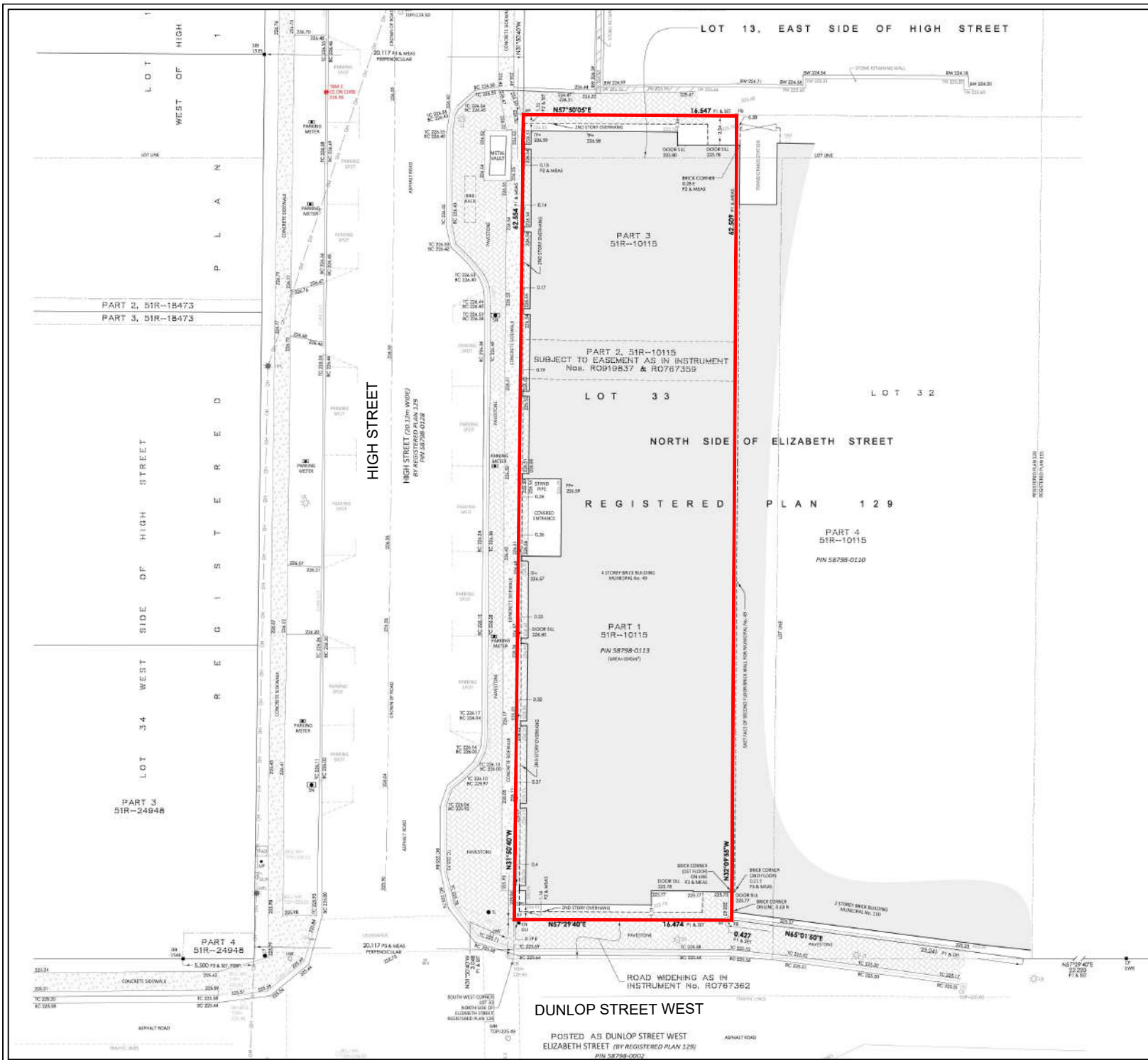
Project Location:

49 High Street
Barrie, Ontario

Project No: 30100

N

Date: Nov. 2024	Drawing No: 1
Scale: As Shown	
Drawn By: AF/OA	
Approved By: MG	



Legend:

Approximate Property Boundary

Notes:
Locations of site features are approximate and may vary from that shown
Drawing Title:

Site Plan

Client Address:
Wild Gray Capital Management Inc.
75 First Street, Suite 14
Orangeville, Ontario

Project Location:
49 High Street
Barrie, Ontario

Project No: 30100

Date: Nov. 2024

Scale: As Shown

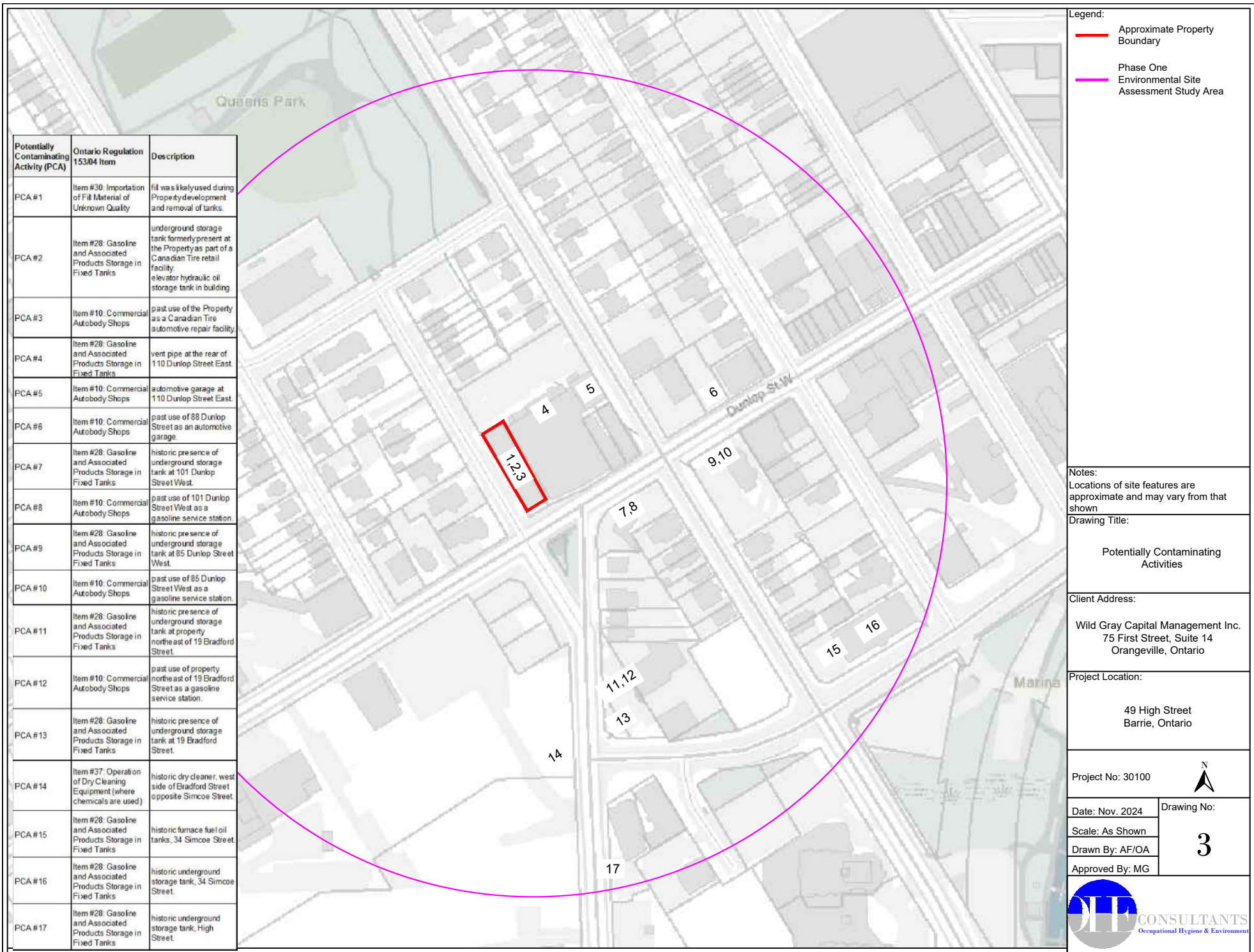
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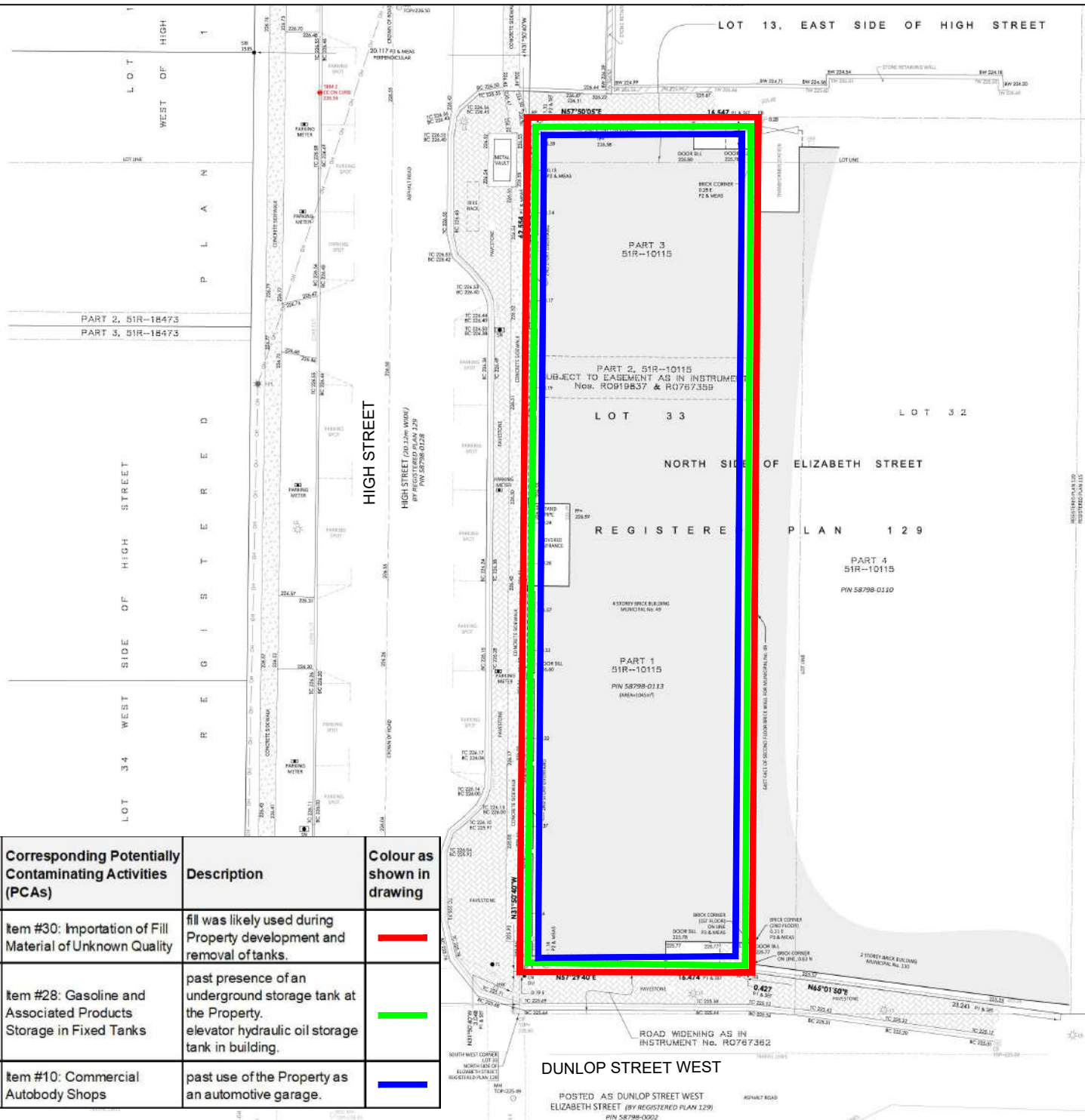
Approved By: MG



Drawing No:

2





Legend:

NOTE:
APEC - Area of Potential Environmental Concern

Notes:
Locations of site features are approximate and may vary from that shown

Drawing Title:

Areas of Potential Environmental Concern

Client Address:

Wild Gray Capital Management Inc.
75 First Street, Suite 14
Orangeville, Ontario

Project Location:

49 High Street
Barrie, Ontario

Project No: 30100

Date: Nov. 2024

Scale: As Shown

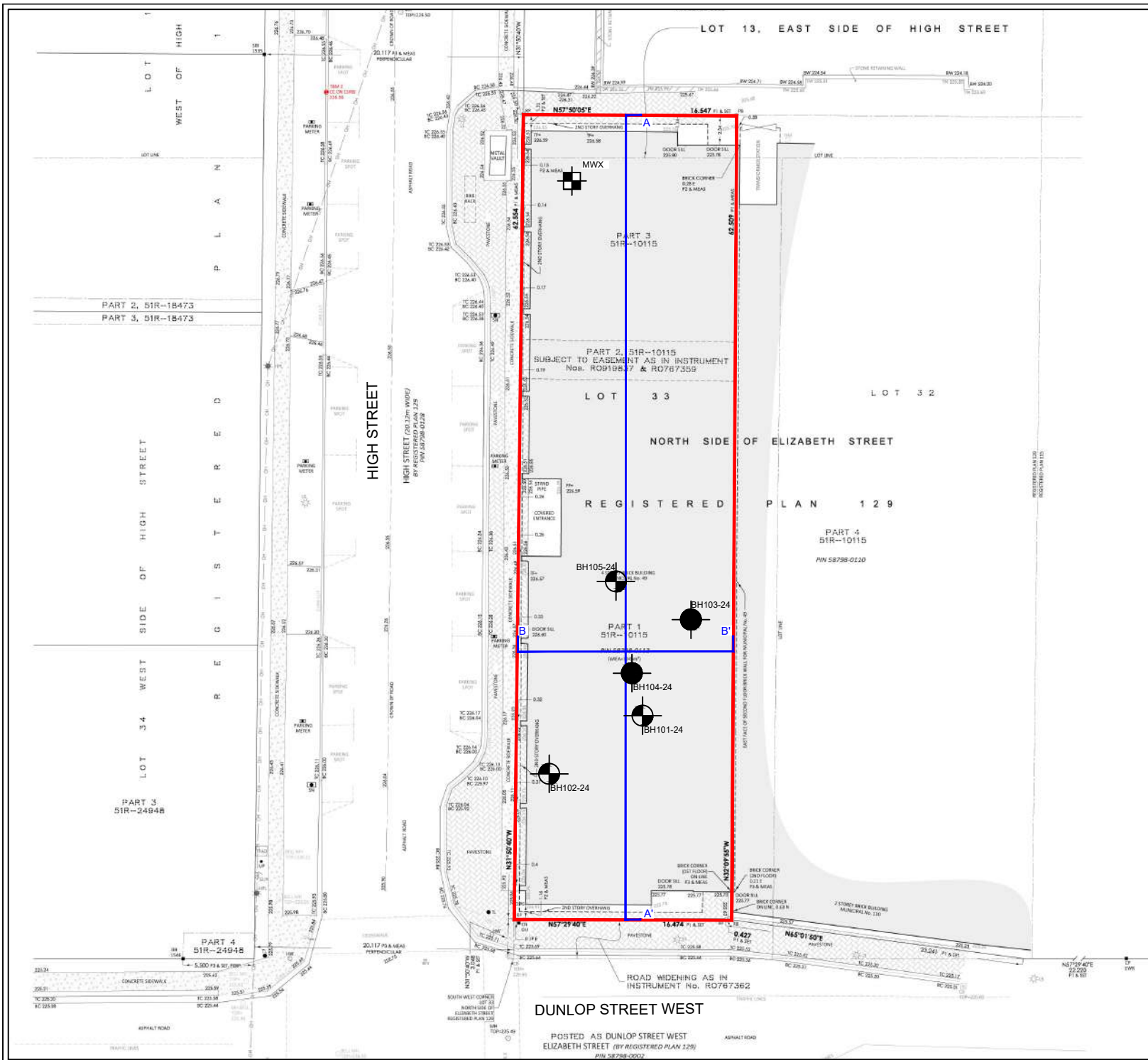
Drawn By: AF/OA

Approved By: MG

Drawing No: 4



Area of Potential Environmental Concern (APEC)	Corresponding Potentially Contaminating Activities (PCAs)	Description	Colour as shown in drawing
APEC #1	Item #30: Importation of Fill Material of Unknown Quality	fill was likely used during Property development and removal of tanks.	Red
APEC #2	Item #28: Gasoline and Associated Products Storage in Fixed Tanks	past presence of an underground storage tank at the Property. elevator hydraulic oil storage tank in building.	Green
APEC #3	Item #10: Commercial Autobody Shops	past use of the Property as an automotive garage.	Blue



- Legend:
- Approximate Property Boundary
 - BHxxx Cambium Inc. Borehole/ Monitoring Well Location
 - BHxxx Cambium Inc. Borehole/ Monitoring Well Location
 - MWX Pre-existing Monitoring Well Location

Notes:
Locations of site features are approximate and may vary from that shown

Drawing Title:
Location of Cross-Sections

Client Address:
Wild Gray Capital Management Inc.
75 First Street, Suite 14
Orangeville, Ontario

Project Location:
49 High Street
Barrie, Ontario

Project No: 30100

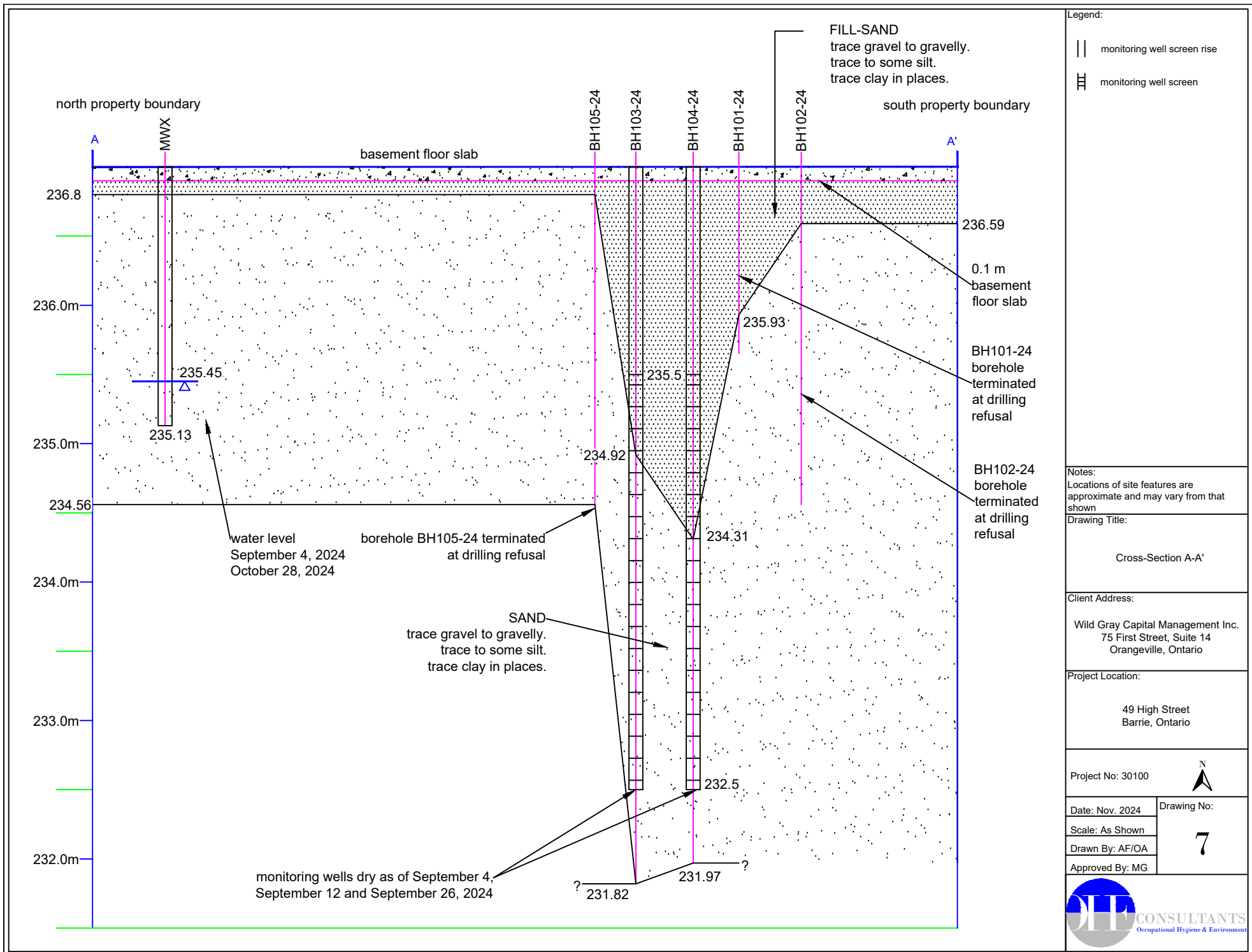
Date: Nov. 2024

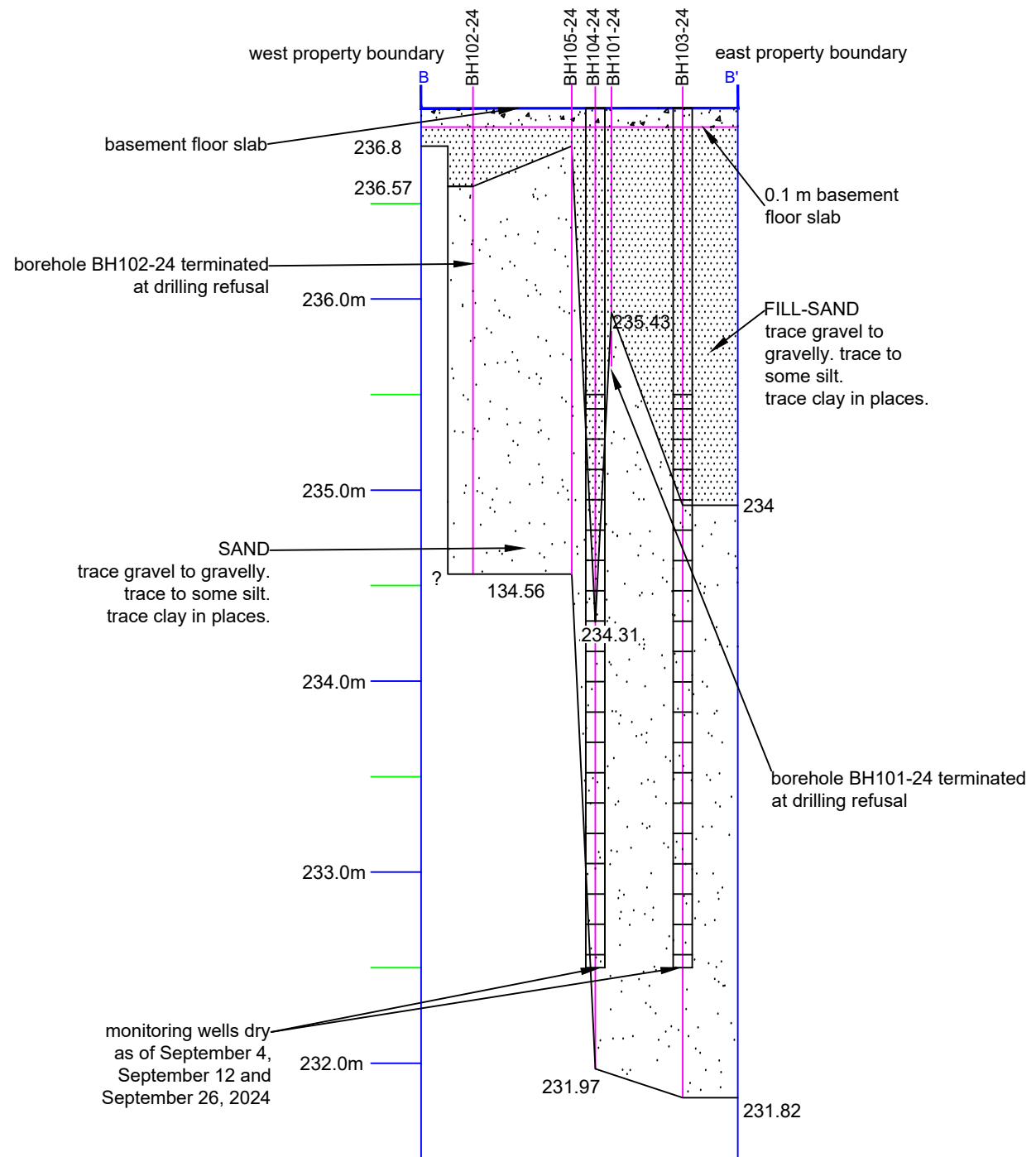
Scale: As Shown

Drawn By: AF/OA

Approved By: MG







Legend:

- monitoring well screen rise
- monitoring well screen

Notes:

Locations of site features are approximate and may vary from that shown

Drawing Title:

Cross-Section B-B'

Client Address:

Wild Gray Capital Management Inc.
75 First Street, Suite 14
Orangeville, Ontario

Project Location:

49 High Street
Barrie, Ontario

Project No: 30100

Date: Nov. 2024

Scale: As Shown

Drawn By: AF/OA

Approved By: MG

Drawing No:

8



Tables

Table 1 - Soil: Metals, Hydride-Forming Metals

parameter	Laboratory Detection Limit	Table 2 Standards	BH103-24-6 WT2426218-001 04-Sep-2024 3.81 - 4.42	BH104-24-3 WT2426218-002 05-Sep-2024 1.52 - 2.13	BH105-24-3 WT2426218-003 05-Sep-2024 1.52 - 2.13
metals					
barium	0.50	670	13.2	9.38	12.1
beryllium	0.10	10	<0.10	<0.10	0.10
boron	5.0	120	<5.0	<5.0	<5.0
cadmium	0.020	1.9	<0.020	0.025	0.020
chromium	0.50	160	6.85	5.54	10.7
cobalt	0.10	100	1.38	1.36	1.90
copper	0.50	300	3.96	2.34	3.68
lead	0.50	120	3.13	3.16	5.99
molybdenum	0.10	40	0.22	0.27	0.88
nickel	0.50	340	2.78	2.43	3.74
silver	0.10	50	<0.10	<0.10	<0.10
thallium	0.050	3.3	<0.050	<0.050	<0.050
uranium	0.050	33	0.247	0.201	0.224
vanadium	0.20	86	11.6	12.3	18.8
zinc	2.0	340	23.1	16.6	12.7
HFM s					
antimony	0.10	50	<0.10	<0.10	<0.10
arsenic	0.10	18	0.47	0.56	0.58
selenium	0.20	5.5	<0.20	<0.20	<0.20

value	value exceeds the Standard
<i>italics</i>	laboratory detection limit exceeds the Standard
NS	no Standard
	all parameters measured in µg/g

Table 2 Standards: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition
industrial / commercial / community land use
Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act

Table 2 - Soil: Petroleum Hydrocarbons

parameter	Laboratory Detection Limit	Table 2 Standards	BH103-24-6 WT2426218-001 04-Sep-2024 3.81 - 4.42	BH104-24-3 WT2426218-002 05-Sep-2024 1.52 - 2.13	BH105-24-3 WT2426218-003 05-Sep-2024 1.52 - 2.13
PHC F1	5.0	65	<5.0	<5.0	<5.0
PHC F2	10	250	<10	<10	<10
PHC F3	50	2,500	<50	<50	<50
PHC F4	50	6,600	<50	<50	<50

value value exceeds the Standard

italics laboratory detection limit exceeds the Standard

NS no Standard

PHC petroleum hydrocarbon
all parameters measured in µg/g

PHCs F1 values corrected for benzene, toluene, ethylbenzene, xylenes where available

PHCs F2 values corrected for naphthalene where available

PHCs F3 values corrected for polycyclic aromatic hydrocarbons excepting naphthalene

Table 2 Standards: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition

industrial / commercial / community land use

Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act

Table 3 - Soil: Volatile Organic Compounds

parameter	Laboratory Detection Limit	Table 2 Standards	BH103-24-6 WT2426218-001 04-Sep-2024 3.81 - 4.42	BH104-24-3 WT2426218-002 05-Sep-2024 1.52 - 2.13	BH105-24-3 WT2426218-003 05-Sep-2024 1.52 - 2.13
VOCs I					
acetone	0.50	28	<0.50	<0.50	<0.50
carbon tetrachloride	0.050	0.71	<0.050	<0.050	<0.050
chlorobenzene	0.050	2.7	<0.050	<0.050	<0.050
1,2-dibromoethane (ethylene dibromide)	0.050	0.05	<0.050	<0.050	<0.050
1,2-dichlorobenzene	0.050	1.7	<0.050	<0.050	<0.050
1,3-dichlorobenzene	0.050	23	<0.050	<0.050	<0.050
1,4-dichlorobenzene	0.050	0.57	<0.050	<0.050	<0.050
dichlorodifluoromethane	0.050	25	<0.050	<0.050	<0.050
1,1-dichloroethane	0.050	0.6	<0.050	<0.050	<0.050
1,2-dichloroethane	0.050	0.05	<0.050	<0.050	<0.050
1,1-dichloroethylene	0.050	0.48	<0.050	<0.050	<0.050
cis-1,2-dichloroethylene	0.050	2.5	<0.050	<0.050	<0.050
trans-1,2-dichloroethylene	0.050	2.5	<0.050	<0.050	<0.050
methylene chloride	0.050	2	<0.050	<0.045	<0.045
1,2-dichloropropane	0.050	0.68	<0.050	<0.050	<0.050
cis-1,3-dichloropropene	0.030	NS	<0.030	<0.050	<0.050
trans-1,3-dichloropropene	0.030	NS	<0.030	<0.030	<0.030
1,3-dichloropropene (cis & trans)	0.042	0.081	<0.042	<0.030	<0.030
n-hexane	0.050	88	<0.050	<0.050	<0.050
methyl ethyl ketone	0.50	88	<0.50	<0.50	<0.50
methyl isobutyl ketone	0.50	210	<0.50	<0.50	<0.50
MTBE	0.040	2.3	<0.040	<0.040	<0.040
styrene	0.050	43	<0.050	<0.050	<0.050
1,1,1,2-tetrachloroethane	0.050	0.11	<0.050	<0.050	<0.050
1,1,2,2-tetrachloroethane	0.050	0.094	<0.050	<0.050	<0.050
tetrachloroethylene	0.050	2.5	<0.050	<0.050	<0.050
1,1,1-trichloroethane	0.050	12	<0.050	<0.050	<0.050
1,1,2-trichloroethane	0.050	0.11	<0.050	<0.050	<0.050
trichloroethylene	0.010	0.61	<0.010	<0.010	<0.010
trichlorofluoromethane	0.050	5.8	<0.050	<0.050	<0.050
vinyl chloride	0.020	0.25	<0.020	<0.020	<0.020
VOCs II					
benzene	0.0050	0.4	<0.0050	<0.0050	<0.0050
toluene	0.080	9	<0.080	<0.050	<0.050
ethylbenzene	0.015	1.6	<0.015	<0.015	<0.015
o-xylene	0.020	NS	<0.020	<0.030	<0.030
m+p-xylenes	0.030	NS	<0.030	<0.030	<0.030
xylenes (total)	0.050	30	<0.050	<0.050	<0.050
VOCs III					
bromomethane	0.050	0.05	<0.050	<0.050	<0.050
trihalomethanes					
bromodichloromethane	0.050	1.9	<0.050	<0.050	<0.050
bromoform	0.050	1.7	<0.050	<0.050	<0.050
chloroform	0.050	0.18	<0.050	<0.050	<0.050
dibromochloromethane	0.050	2.9	<0.050	<0.050	<0.050

value	value exceeds the Standard
NS	no Standard
MTBE	methyl tert-butyl ether
	all parameters measured in µg/g

Table 2 Standards: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition
industrial / commercial / community land use
Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act

Table 4 - Soil: Polycyclic Aromatic Hydrocarbons

parameter	Laboratory Detection Limit	Table 2 Standards	BH103-24-6 WT2426218-001 04-Sep-2024 3.81 - 4.42	BH104-24-3 WT2426218-002 05-Sep-2024 1.52 - 2.13	BH105-24-3 WT2426218-003 05-Sep-2024 1.52 - 2.13
acenaphthene	0.050	29	<0.050	<0.050	<0.050
acenaphthylene	0.050	0.17	<0.050	<0.050	<0.050
anthracene	0.050	0.74	<0.050	<0.050	<0.050
benzo(a)anthracene	0.050	0.96	0.086	<0.050	<0.050
benzo(a)pyrene	0.050	0.3	0.097	<0.050	<0.050
benzo(b)fluoranthene	0.050	0.96	0.109	<0.050	<0.050
benzo(g,h,i)perylene	0.050	9.6	0.057	<0.050	<0.050
benzo(k)fluoranthene	0.050	0.96	<0.050	<0.050	<0.050
chrysene	0.050	9.6	0.096	<0.050	<0.050
dibenzo(ah)anthracene	0.050	0.1	<0.050	<0.050	<0.050
fluoranthene	0.050	9.6	0.191	0.061	<0.050
fluorene	0.050	69	<0.050	<0.050	<0.050
indeno(1,2,3-cd)pyrene	0.050	0.95	0.062	<0.050	<0.050
1+2-methylnaphthalenes	0.050	42	<0.050	<0.050	<0.050
naphthalene	0.010	28	0.020	<0.010	<0.010
phenanthrene	0.050	16	0.167	<0.050	<0.050
pyrene	0.050	96	0.169	0.052	<0.050

value

value exceeds the Standard
all parameters measured in µg/g

Table 2 Standards: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition
industrial / commercial / community land use
Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act

Table 5 - Soil: Polychlorinated Biphenyls

parameter	Laboratory Detection Limit	Table 2 Standards	BH103-24-6 WT2426218-001 04-Sep-2024 3.81 - 4.42	BH104-24-3 WT2426218-002 05-Sep-2024 1.52 - 2.13	BH105-24-3 WT2426218-003 05-Sep-2024 1.52 - 2.13
total PCBs	0.03	1.1	<0.030	<0.030	<0.030

value value exceeds the Standard
all parameters measured in µg/g

Table 2 Standards:Full Depth Generic Site Condition Standards in a Potable Ground Water Condition
industrial / commercial / community land use
Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act

Table 6 - Ground Water: Metals, Hydride-Forming Metals, Sodium

parameter	Laboratory Detection Limit	Table 2 Standards	MWX WT2426986-001 12-Sep-2024
metals			
barium	0.10	1,000	384
beryllium	0.020	4	<0.200
boron	10	5,000	<100
cadmium	0.0050	2.7	<0.0500
chromium	0.50	50	<5.00
cobalt	0.10	3.8	<1.00
copper	0.20	87	4.26
lead	0.050	10	<0.500
molybdenum	0.050	70	1.16
nickel	0.50	100	<5.00
silver	0.010	1.5	<0.100
thallium	0.050	0.010	<0.100
uranium	0.050	0.010	0.677
vanadium	0.20	0.50	<5.00
zinc	2.0	1.0	<10.0
HFMs			
antimony	0.10	6	<1.00
arsenic	0.10	25	<1.00
selenium	0.20	0.050	1.37
sodium			
sodium	50.0	490,000	1,030,000

value value exceeds the Standard
italics laboratory detection limit exceeds the Standard
NS no Standard
all parameters measured in µg/L

Table 2 Standards:Full Depth Generic Site Condition Standards in a Potable Ground Water Condition
all types of land use
Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act

Sodium concentration does not indicate contamination as per Ontario Regulation 153/04 Section 49.1.

Table 7 - Ground Water: Petroleum Hydrocarbons

parameter	Laboratory Detection Limit	Table 2 Standards	MWX WT2426986-001 12-Sep-2024
PHC F1	25	750	<25
PHC F2	100	150	<100
PHC F3	250	500	<250
PHC F4	250	500	<250

value value exceeds the Standard
italics laboratory detection limit exceeds the Standard
NS no Standard
PHC petroleum hydrocarbon
all parameters measured in µg/L
PHCs F1 values corrected for benzene, toluene, ethylbenzene, xylenes where available
PHCs F2 values corrected for naphthalene where available
PHCs F3 values corrected for polycyclic aromatic hydrocarbons excepting naphthalene

Table 2 Standards:Full Depth Generic Site Condition Standards in a Potable Ground Water Condition
all types of land use
Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act

Table 8 - Ground Water: Volatile Organic Compounds

parameter	Laboratory Detection Limit	Table 2 Standards	MWX WT2426986-001 12-Sep-2024
VOCs I			
acetone	20	2,700	<20
carbon tetrachloride	0.20	5	<0.20
chlorobenzene	0.50	30	<0.50
1,2-dibromoethane (ethylene dibromide)	0.20	0.2	<0.20
1,2-dichlorobenzene	0.50	3	<0.50
1,3-dichlorobenzene	0.50	59	<0.50
1,4-dichlorobenzene	0.50	1	<0.50
dichlorodifluoromethane	0.50	590	<0.50
1,1-dichloroethane	0.50	5	<0.50
1,2-dichloroethane	0.50	5	<0.50
1,1-dichloroethylene	0.50	14	<0.50
cis-1,2-dichloroethylene	0.50	17	<0.50
trans-1,2-dichloroethylene	0.50	17	<0.50
methylene chloride	1.0	50	<1.0
1,2-dichloropropane	0.50	5	<0.50
cis-1,3-dichloropropene	0.50	NS	<0.50
trans-1,3-dichloropropene	0.30	NS	<0.30
1,3-dichloropropene (cis & trans)	0.30	0.5	<0.30
n-hexane	0.50	520	<0.50
methyl ethyl ketone	20	1,800	<20
methyl isobutyl ketone	20	640	<20
MTBE	0.50	15	<0.50
styrene	0.50	5.4	<0.50
1,1,1,2-tetrachloroethane	0.50	1.1	<0.50
1,1,1,2,2-tetrachloroethane	0.50	1	<0.50
tetrachloroethylene	0.50	17	<0.50
1,1,1-trichloroethane	0.50	200	<0.50
1,1,2-trichloroethane	0.50	5	<0.50
trichloroethylene	0.50	5	<0.50
trichlorofluoromethane	0.50	150	<0.50
vinyl chloride	0.50	1.7	<0.50
VOCs II			
benzene	0.50	5	<0.50
toluene	0.50	24	<0.50
ethylbenzene	0.50	2.4	<0.50
o-xylene	0.40	NS	<0.40
m+p-xylenes	0.30	NS	<0.30
xylenes (total)	0.50	300	<0.50
VOCs III			
bromomethane	0.50	0.89	<0.50
trihalomethanes			
bromodichloromethane	0.50	16	<0.50
bromoform	0.50	25	<0.50
chloroform	0.50	22	<0.50
dibromochloromethane	0.50	25	<0.50

value	value exceeds the Standard
NS	no Standard
MTBE	methyl tert-butyl ether
	all parameters measured in µg/L

Table 2 Standards: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition
all types of land use
Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act

Table 9 - Ground Water: Polycyclic Aromatic Hydrocarbons

parameter	Laboratory Detection Limit	Table 2 Standards	MWX	MWX	MWX-F
			WT2426986-001 12-Sep-2024	WT2432289-001 28-Oct-2024	WT2432289-002 28-Oct-2024
acenaphthene	0.010	4.1	<0.010	<0.010	<0.010
acenaphthylene	0.010	1	<0.010	<0.010	<0.010
anthracene	0.010	2.4	0.014	<0.010	<0.010
benzo(a)anthracene	0.010	1	0.033	<0.010	<0.010
benzo(a)pyrene	0.0050	0.01	0.0305	<0.0050	<0.0050
benzo(b)fluoranthene	0.010	0.1	0.038	<0.010	<0.010
benzo(g,h,i)perylene	0.010	0.2	0.018	<0.010	<0.010
benzo(k)fluoranthene	0.010	0.1	0.018	<0.010	<0.010
chrysene	0.010	0.1	0.027	<0.010	<0.010
dibenzo(ah)anthracene	0.0050	0.2	<0.0050	<0.0050	<0.0050
fluoranthene	0.010	0.41	0.058	<0.010	<0.010
fluorene	0.010	120	0.010	<0.010	<0.010
indeno(1,2,3-cd)pyrene	0.010	0.2	0.020	<0.010	<0.010
1+2-methylnaphthalenes	0.015	3.2	0.083	<0.015	<0.015
naphthalene	0.050	11	<0.050	<0.050	<0.050
phenanthrene	0.020	1	0.050	<0.020	<0.020
pyrene	0.010	4.1	0.059	<0.010	<0.010

value value exceeds the Standard
all parameters measured in µg/L

Table 2 Standards:Full Depth Generic Site Condition Standards in a Potable Ground Water Condition
all types of land use
Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act

Table 10 - Ground Water: Polychlorinated Biphenyls

parameter	Laboratory Detection Limit	Table 2 Standards	BH103-6 WT2426218-001 04-Sep-2024
total PCBs	0.060	3	<0.060

value value exceeds the Standard
all parameters measured in µg/L

Table 2 Standards:Full Depth Generic Site Condition Standards in a Potable Ground Water Cor
all types of land use
Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Pro

Table 1 - Soil: Petroleum Hydrocarbons
Blind Field Duplicate Sample

parameter	Laboratory Detection Limit	BH103-6 WT2426218-001 04-Sep-2024	DUP101 WT2426218-004 04-Sep-2024	Relative Percent Difference (%)
PHC F1	5.0	<5.0	-	-
PHC F2	10	<10	<10	NC
PHC F3	50	<50	<50	NC
PHC F4	50	<50	<50	NC

value value exceeds the Standard

NS no Standard

PHC petroleum hydrocarbon
all parameters measured in µg/g

PHCs F1 values corrected for benzene, toluene, ethylbenzene, xylenes where available

PHCs F2 values corrected for naphthalene where available

PHCs F3 values corrected for polycyclic aromatic hydrocarbons excepting naphthalene

NC not calculable

not calculable due to the concentration of the sample and / or the duplicate sample falling within 5 x the Laboratory Detection Limit

Table 12 - Ground Water: Volatile Organic Compounds
Trip Blank

parameter	Laboratory Detection Limit	TRIP BLANK WT2426986-002 -
VOCs I		
acetone	20	<20
carbon tetrachloride	0.20	<0.20
chlorobenzene	0.50	<0.50
1,2-dibromoethane (ethylene dibromide)	0.20	<0.20
1,2-dichlorobenzene	0.50	<0.50
1,3-dichlorobenzene	0.50	<0.50
1,4-dichlorobenzene	0.50	<0.50
dichlorodifluoromethane	0.50	<0.50
1,1-dichloroethane	0.50	<0.50
1,2-dichloroethane	0.50	<0.50
1,1-dichloroethylene	0.50	<0.50
cis-1,2-dichloroethylene	0.50	<0.50
trans-1,2-dichloroethylene	0.50	<0.50
methylene chloride	1.0	<1.0
1,2-dichloropropane	0.50	<0.50
cis-1,3-dichloropropene	0.50	<0.50
trans-1,3-dichloropropene	0.30	<0.30
1,3-dichloropropene (cis & trans)	0.30	<0.30
n-hexane	0.50	<0.50
methyl ethyl ketone	20	<20
methyl isobutyl ketone	20	<20
MTBE	0.50	<0.50
styrene	0.50	<0.50
1,1,1,2-tetrachloroethane	0.50	<0.50
1,1,2,2-tetrachloroethane	0.50	<0.50
tetrachloroethylene	0.50	<0.50
1,1,1-trichloroethane	0.50	<0.50
1,1,2-trichloroethane	0.50	<0.50
trichloroethylene	0.50	<0.50
trichlorofluoromethane	0.50	<0.50
vinyl chloride	0.50	<0.50
VOCs II		
benzene	0.50	<0.50
toluene	0.50	<0.50
ethylbenzene	0.50	<0.50
o-xylene	0.40	<0.40
m+p-xylenes	0.30	<0.30
xylenes (total)	0.50	<0.50
VOCs III		
bromomethane	0.50	<0.50
trihalomethanes		
bromodichloromethane	0.50	<0.50
bromoform	0.50	<0.50
chloroform	0.50	<0.50
dibromochloromethane	0.50	<0.50

NS no Standard
MTBE methyl tert-butyl ether
all parameters measured in µg/L

Sampling and Analysis Plan

Sampling and Analysis Plan – Phase Two Environmental Site Assessment

Scope of Work:

The proposed scope of work will be conducted in accordance with Canadian Standards Association (CSA) Z769-00 standard (R2013), Ontario Regulation 153/04 as amended, and industry standards.

- Borehole drilling and monitoring well installation will be carried out by Cambium Inc. with input by OHE. .
- Soil samples will be field screened during borehole drilling, and representative and/or “worst-case” soil samples will be retrieved during the drilling of the boreholes. It is assumed that from each borehole, one (1) soil sample will be collected and submitted for laboratory chemical analysis of petroleum hydrocarbon (PHC) fractions F1-F4, selected volatile organic compounds (VOCs), selected polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), and/or selected metals and inorganic parameters. Soil sample analysis will be sent to the laboratory on normal sample turnaround time (TAT).
- Ground water monitoring, purging, and sampling will be carried out in compliance with applicable standards.
- It is assumed that one (1) ground water sample from each of the twelve (12) monitoring wells will be collected and submitted for laboratory chemical analysis of PHC fractions F1-F4, selected VOCs, selected PAHs, and PCBs. Ground water sample analysis will be sent to the laboratory on normal sample TAT.
- The soil and ground water analytical results will be compared with *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*, Ontario Ministry of the Environment, Conservation and Parks April 15, 2011. The analytical results will be compared to one (1) of the following (as applicable):
 - Table 2 Full Depth Generic Site Condition Standards in a Potable Ground Water Condition for Residential / Parkland / Institutional Property Use (soil), and All Types of Property Use (ground water); for industrial / commercial / community land use.

- All laboratory Certificates of Analysis will be evaluated for laboratory quality assurance/quality control (QA/QC) factors such as laboratory duplicates, matrix spike samples, matrix blank samples, spiked blank samples, and surrogate recoveries. Appropriate field duplicate soil and ground water samples will be submitted for laboratory analysis in accordance with regulatory requirements.

Soil and Ground Water Investigation Methodology

Design and execution of the intrusive subsurface investigation will be completed using methods from the MECP document *Guidance on Sampling and Analytical Methods for Use at Contaminated Sites in Ontario*, dated May 1996 and Ontario Regulation 153/04 made under Part XV.1 of the *Environmental Protection Act*, dated May 12, 2004, as amended.

OHE will retain a licensed and qualified environmental drilling subcontractor to advance boreholes at selected locations across the Property. All monitoring well installations will be in accordance with Ontario Regulation 903 as amended.

Information on subsurface conditions such as stratigraphy, presence/absence of ground water and soil organic vapour concentrations will be recorded during the drilling program. Soil samples will be recovered at regular intervals from each core sample and will be visually classified and screened in the field for organic headspace vapour concentrations utilizing an RKI Eagle, calibrated to hexane. Equipment calibration will be checked daily. Based on field screening results, soil samples from boreholes that exhibit the greatest apparent degree of impact will be collected and submitted for laboratory analysis.

Disposable nitrile gloves and clean tools will be used to collect each soil and sample for analysis. The samples will be placed in clean, sealed, laboratory supplied glass jars, assigned individual labels, kept on ice for transport to the analytical laboratory and delivered under chain of custody. Soil samples retrieved for selected VOC analysis will be collected with dedicated syringes and placed in laboratory-supplied vials precharged with methanol.

Analytical testing of soil and ground water samples will be conducted by an accredited environmental laboratory, designated by the Canadian Analytical Laboratory Association Inc. (CALA) that employs an in-house quality assurance/quality control (QA/QC) program to verify sample integrity and consists of laboratory replicates, matrix spikes and surrogate recoveries.

Cambium Inc. Borehole Logs



Client: Wild Gray Capital Management
Contractor: Kodiak Drilling
Project No.: 19390-001
Location: 49 High Street, Barrie, ON L4N 5J4

Project Name: 49 High Street
Method: Big Beaver
Elevation: 225.79 mASL
UTM: 17T **N:** 4915766.3 **E:** 603982.4

Log of Borehole: BH101-24
Page: 1 of 1
Date Completed: Sept 4 2024

SUBSURFACE PROFILE				SAMPLE																								
Elevation (m)	Depth	Lithology	Description	Elevation Depth	Number	Type	% Recovery	SPT (N)	Atterberg Limits (%)			Shear Strength Cu, kPa				Well Installation	Log Notes											
									LL	PL	PI	nat V _v	rem V _v	+														
									25 50 75			20 40 60 80																
									% Moisture			SPT (N)																
									25 50 75			20 40 60 80																
225.8	0		CONCRETE: 225.69	0.10																								
			FILL: Sand, trace gravel, trace silt, light brown, moist, compact		1	SS	75	19	2.7%					19														
225.3	0.5																											
224.8	1			224.72		2	SS	100	55	1.9%					55													
			Borehole terminated @ 1.1 mbgs due to SPT refusal encountered. 224.72	1.07																								
224.3	1.5																											
223.8	2																											
223.3	2.5																											
222.8	3																											
222.3	3.5																											
221.8	4																											
221.3	4.5																											
220.8	5																											
220.3	5.5																											
219.8	6																											
219.3	6.5																											
218.8	7																											
218.3																												
GRAINSIZE [SAMPLE] GRAVEL SAND SILT CLAY DISTRIBUTION																												

Borehole terminated in fill due to unknown obstruction encountered. Borehole caving was not observed. Groundwater was not encountered. Standing water was not observed upon completion of drilling.



Client: Wild Gray Capital Management
Contractor: Kodiak Drilling
Project No.: 19390-001
Location: 49 High Street, Barrie, ON L4N 5J4

Project Name: 49 High Street
Method: Big Beaver
Elevation: 225.79 mASL
UTM: 17T **N:** 4915760.6 **E:** 603976.2

Log of Borehole: BH102-24
Page: 1 of 1
Date Completed: Sept 4 2024

SUBSURFACE PROFILE				SAMPLE															
Elevation (m)	Depth	Lithology	Description	Elevation Depth	Number	Type	% Recovery	SPT (N)	Atterberg Limits (%)			Shear Strength Cu, kPa				Well Installation	Log Notes		
									LL	PL	PI	nat V _v	rem V _v	+	•				
									25 50 75			20 40 60 80							
									% Moisture			SPT (N)							
									25 50 75			20 40 60 80							
225.8	0		CONCRETE: 225.69													Borehole terminated in fill due to unknown obstruction encountered. Borehole caving was not observed. Groundwater was not encountered. Standing water was not observed upon completion of drilling.			
	FILL: Sand, trace gravel, some silt, light brown, moist, compact 225.38		0.10	1	SS	83	68	1%							68				
225.3	0.5		Borehole terminated @ 0.4 mbgs due to SPT refusal encountered. 0.41																
224.8	1																		
224.3	1.5																		
223.8	2																		
223.3	2.5																		
222.8	3																		
222.3	3.5																		
221.8	4																		
221.3	4.5																		
220.8	5																		
220.3	5.5																		
219.8	6																		
219.3	6.5																		
218.8	7																		
218.3																			
GRAINSIZE DISTRIBUTION [SAMPLE] GRAVEL SAND SILT CLAY																			



Wild Gray Capital
Client: Management
Contractor: Kodiak Drilling
Project No.: 19390-001
Location: 49 High Street, Barrie,
ON L4N 5J4

Project Name: 49 High Street
Method: Big Beaver
Elevation: 225.79 mASL
UTM: 17T N: 4915770.4 E: 603985.9

Log of Borehole: BH103-24
Page: 1 of 1
Date Completed: Sept 4 2024

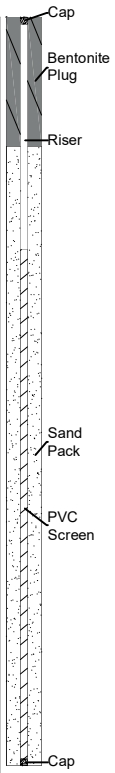
SUBSURFACE PROFILE					SAMPLE													
Elevation (m)	Depth	Lithology	Description	Elevation Depth	Number	Type	% Recovery	SPT (N)	Atterberg Limits (%)			Shear Strength Cu, kPa			Well Installation	Log Notes		
									LL	PL	PI	nat V. rem V.	20	40			60	80



Wild Gray Capital
Client: Management
Contractor: Kodiak Drilling
Project No.: 19390-001
Location: 49 High Street, Barrie,
ON L4N 5J4

Project Name: 49 High Street
Method: Big Beaver
Elevation: 225.79 mASL
UTM: 17T N: 4915766.6 E: 603980.8

Log of Borehole: BH104-24
Page: 1 of 1
Date Completed: Sept 5 2024

SUBSURFACE PROFILE					SAMPLE													
Elevation (m)	Depth	Lithology	Description	Elevation Depth	Number	Type	% Recovery	SPT (N)	Atterberg Limits (%)			Shear Strength Cu, kPa			Well Installation	Log Notes		
									LL	PL	PI	nat V. rem V.	20	40			60	80
									% Moisture			SPT (N)						
									25 50 75			20 40 60 80						
									25 50 75			20 40 60 80						
225.8	0		CONCRETE:	225.69													Monitoring well dry when measured on Sept. 25, 2024.	
			FILL: Sand, some gravel, trace silt, trace clay, brown, moist, compact	0.10	1A	SS	100	29	3.4%				29					
225.3	0.5			trace gravel		1B	SS											
224.8	1			loose		2	SS	42	5	1.5%			5					
224.3	1.5			compact		3	SS	100	15	2.3%			15					
223.8	2			very dense		4A	SS	100	50	2.7%			50					
223.3	2.5				223.10	4B	SS			1.8%								
222.8	3			(SW) gravelly SAND: trace silt, grey, moist, very dense	2.69													
					moist to wet		5	SS	100	75	2.1%			75				
222.3	3.5																	
221.8	4															Borehole terminated in gravelly sand. Borehole caving was not observed. Wet soils first encountered at 3.0 mbgs. Standing water was not observed upon completion of drilling.		
221.3	4.5			221.22														
			(SW) SAND: trace gravel, trace silt, trace clay, grey, wet, compact	4.57	6	SS	100	27	16.6%			27						
220.8	5		Borehole terminated @ 5 mbgs due to target depth achieved.	220.76														
				5.03														
220.3	5.5																	
219.8	6																	
219.3	6.5																	
218.8	7																	
218.3																		
GRAINSIZE DISTRIBUTION																		
SAMPLE GRAVEL SAND SILT CLAY																		
SS 2 6 88 5 1																		

Logged By: ND

Input By: ND

Peterborough, Barrie, Whitby, Kingston, Ottawa



Client: Wild Gray Capital Management
Contractor: Kodiak Drilling
Project No.: 19390-001
Location: 49 High Street, Barrie, ON L4N 5J4

Project Name: 49 High Street
Method: Geotool
Elevation: 222.13 mASL
UTM: 17T **N:** 4915772.1 **E:** 603974.4

Log of Borehole: BH105-24
Page: 1 of 1
Date Completed: Sept 5 2024

SUBSURFACE PROFILE					SAMPLE												
Elevation (m)	Depth	Lithology	Description	Elevation Depth	Number	Type	% Recovery	SPT (N)	Atterberg Limits (%)			Shear Strength Cu, kPa				Well Installation	Log Notes
									LL	PL	PI	nat V. rem V.					
									25	50	75	20	40	60	80		
									% Moisture			SPT (N)					
									25	50	75	20	40	60	80		
222.1	0		CONCRETE:	222.03	1A	SS			2.3%							Borehole terminated in gravelly sand. Borehole caving was observed at 1.2 mbgs. Wet soils first encountered at 2.3 mbgs. Standing water was not observed upon completion of drilling.	
			FILL: gravelly SAND, trace silt, brown, moist, compact	0.10													
221.6	0.5		(SW) SAND: some gravel, some silt, trace clay; grey, moist, compact to very dense	221.93	1B	SS	50	21	1.5%					21			
			grey/brown	0.20											53		
221.1	1				2	SS	100	53	1.4%								
220.6	1.5		decrease in gravel, grey		3	SS	100	70	1.1%						70		
220.1	2		wet		4	SS	100	78	5.4%						78		
219.6	2.5		Borehole terminated @ 2.4 mbgs due to SPT refusal encountered.	219.69													
219.1	3			2.44													
218.6	3.5																
218.1	4																
217.6	4.5																
217.1	5																
216.6	5.5																
216.1	6																
215.6	6.5																
215.1	7																
214.6																	
GRAINSIZE DISTRIBUTION																	
SAMPLE GRAVEL SAND SILT CLAY																	
SS 2 19 69 10 2																	

Borehole terminated in gravelly sand. Borehole caving was observed at 1.2 mbgs. Wet soils first encountered at 2.3 mbgs. Standing water was not observed upon completion of drilling.

Laboratory Certificates of Analysis

CERTIFICATE OF ANALYSIS (GUIDELINE EVALUATION)

Work Order	: WT2426218	Page	: 1 of 12
Client	: OH Environmental Inc.	Laboratory	: ALS Environmental - Waterloo
Contact	: Hasan Rahman	Account Manager	: Amanda Overholster
Address	: 311 Matheson Blvd. East Mississauga ON Canada L4Z 1X8	Address	: 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8
Telephone	: ----	Telephone	: 1 416 817 2944
Project	: 30100	Date Samples Received	: 06-Sep-2024 09:32
PO	: ----	Date Analysis Commenced	: 11-Sep-2024
C-O-C number	: 20-1046940	Issue Date	: 20-Sep-2024 15:24
Sampler	: HR		
Site	: ----		
Quote number	: 2024 SOA		
No. of samples received	: 4		
No. of samples analysed	: 4		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Guideline Comparison

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QC Interpretive report to assist with Quality Review and Sample Receipt Notification (SRN).

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

Signatories	Position	Laboratory Department
Amaninder Dhillon	Team Lead - Semi-Volatile Instrumentation	Organics, Waterloo, Ontario
Jeremy Gingras	Supervisor - Semi-Volatile Instrumentation	Organics, Waterloo, Ontario
Jocelyn Kennedy	Department Manager - Semi-Volatile Organics	Organics, Waterloo, Ontario
Josphin Masihi	Analyst	Centralized Prep, Waterloo, Ontario
Sarah Birch	VOC Section Supervisor	VOC, Waterloo, Ontario
Walt Kippenhuck	Supervisor - Inorganic	Metals, Waterloo, Ontario



No Breaches Found

General Comments

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Refer to the ALS Quality Control Interpretive report (QCI) for applicable references and methodology summaries. Reference methods may incorporate modifications to improve performance.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to fitness for a particular purpose, or non-infringement. ALS assumes no responsibility for errors or omissions in the information. Guidelines are not adjusted for the hardness, pH or temperature of the sample (the most conservative values are used). Measurement uncertainty is not applied to test results prior to comparison with specified criteria values.

Key : LOR: Limit of Reporting (detection limit).

Unit	Description
-	no units
%	percent
mg/kg	milligrams per kilogram

>: greater than.

<: less than.

Red shading is applied where the result or the LOR is greater than the Guideline Upper Limit (or lower than the Guideline Lower Limit, if applicable).

For drinking water samples, Red shading is applied where the result for E.coli, fecal or total coliforms is greater than or equal to the Guideline Upper Limit.

Workorder Comments

RRQC: Silver recovery outside of ALS DQOs due to issue with standard. Reported data was not affect by this issue



Qualifiers

Qualifier	Description
DUPH	Duplicate results outside ALS DQO, due to sample heterogeneity.



Analytical Results Evaluation

Matrix: Soil				Client sample ID	BH103-6	BH104-3	BH105-3	DUP101	----	----	----
				Sampling date/time	04-Sep-2024 15:10	05-Sep-2024 10:00	05-Sep-2024 13:45	05-Sep-2024 00:00	----	----	----
				Sub-Matrix	Soil	Soil	Soil	Soil	----	----	----
Analyte	CAS Number	Method/Lab	Unit		WT2426218-001	WT2426218-002	WT2426218-003	WT2426218-004	-----	-----	-----
Physical Tests											
Moisture	----	E144/WT	%		10.8	1.48	1.28	1.81	----	----	----
Metals											
Antimony	7440-36-0	E440C/WT	mg/kg		<0.10	<0.10	<0.10	----	----	----	----
Arsenic	7440-38-2	E440C/WT	mg/kg		0.47	0.56	0.58	----	----	----	----
Barium	7440-39-3	E440C/WT	mg/kg		13.2	9.38	12.1	----	----	----	----
Beryllium	7440-41-7	E440C/WT	mg/kg		<0.10	<0.10	0.10	----	----	----	----
Boron	7440-42-8	E440C/WT	mg/kg		<5.0	<5.0	<5.0	----	----	----	----
Cadmium	7440-43-9	E440C/WT	mg/kg		<0.020	0.025	0.020	----	----	----	----
Chromium	7440-47-3	E440C/WT	mg/kg		6.85	5.54	10.7	----	----	----	----
Cobalt	7440-48-4	E440C/WT	mg/kg		1.38	1.36	1.90	----	----	----	----
Copper	7440-50-8	E440C/WT	mg/kg		3.96	2.34	3.68	----	----	----	----
Lead	7439-92-1	E440C/WT	mg/kg		3.13	3.16	5.99	----	----	----	----
Molybdenum	7439-98-7	E440C/WT	mg/kg		0.22	0.27	0.88	----	----	----	----
Nickel	7440-02-0	E440C/WT	mg/kg		2.78	2.43	3.74	----	----	----	----
Selenium	7782-49-2	E440C/WT	mg/kg		<0.20	<0.20	<0.20	----	----	----	----
Silver	7440-22-4	E440C/WT	mg/kg		<0.10	<0.10	<0.10	----	----	----	----
Thallium	7440-28-0	E440C/WT	mg/kg		<0.050	<0.050	<0.050	----	----	----	----
Uranium	7440-61-1	E440C/WT	mg/kg		0.247	0.201	0.224	----	----	----	----
Vanadium	7440-62-2	E440C/WT	mg/kg		11.6	12.3	18.8	----	----	----	----
Zinc	7440-66-6	E440C/WT	mg/kg		23.1	16.6	12.7	----	----	----	----
Volatile Organic Compounds											
Acetone	67-64-1	E611D/WT	mg/kg		<0.50	<0.50	<0.50	----	----	----	----
Benzene	71-43-2	E611D/WT	mg/kg		<0.0050	<0.0050	<0.0050	----	----	----	----
Bromodichloromethane	75-27-4	E611D/WT	mg/kg		<0.050	<0.050	<0.050	----	----	----	----
Bromoform	75-25-2	E611D/WT	mg/kg		<0.050	<0.050	<0.050	----	----	----	----
Bromomethane	74-83-9	E611D/WT	mg/kg		<0.050	<0.050	<0.050	----	----	----	----
Carbon tetrachloride	56-23-5	E611D/WT	mg/kg		<0.050	<0.050	<0.050	----	----	----	----



Analytical Results Evaluation

				Client sample ID	BH103-6	BH104-3	BH105-3	DUP101	----	----	----
Matrix: Soil				Sampling date/time	04-Sep-2024 15:10	05-Sep-2024 10:00	05-Sep-2024 13:45	05-Sep-2024 00:00	----	----	----
				Sub-Matrix	Soil	Soil	Soil	Soil	----	----	----
Analyte	CAS Number	Method/Lab	Unit		WT2426218-001	WT2426218-002	WT2426218-003	WT2426218-004	-----	-----	-----
Volatile Organic Compounds											
Chlorobenzene	108-90-7	E611D/WT	mg/kg		<0.050	<0.050	<0.050	----	----	----	----
Chloroform	67-66-3	E611D/WT	mg/kg		<0.050	<0.050	<0.050	----	----	----	----
Dibromochloromethane	124-48-1	E611D/WT	mg/kg		<0.050	<0.050	<0.050	----	----	----	----
Dibromoethane, 1,2-	106-93-4	E611D/WT	mg/kg		<0.050	<0.050	<0.050	----	----	----	----
Dichlorobenzene, 1,2-	95-50-1	E611D/WT	mg/kg		<0.050	<0.050	<0.050	----	----	----	----
Dichlorobenzene, 1,3-	541-73-1	E611D/WT	mg/kg		<0.050	<0.050	<0.050	----	----	----	----
Dichlorobenzene, 1,4-	106-46-7	E611D/WT	mg/kg		<0.050	<0.050	<0.050	----	----	----	----
Dichlorodifluoromethane	75-71-8	E611D/WT	mg/kg		<0.050	<0.050	<0.050	----	----	----	----
Dichloroethane, 1,1-	75-34-3	E611D/WT	mg/kg		<0.050	<0.050	<0.050	----	----	----	----
Dichloroethane, 1,2-	107-06-2	E611D/WT	mg/kg		<0.050	<0.050	<0.050	----	----	----	----
Dichloroethylene, 1,1-	75-35-4	E611D/WT	mg/kg		<0.050	<0.050	<0.050	----	----	----	----
Dichloroethylene, cis-1,2-	156-59-2	E611D/WT	mg/kg		<0.050	<0.050	<0.050	----	----	----	----
Dichloroethylene, trans-1,2-	156-60-5	E611D/WT	mg/kg		<0.050	<0.050	<0.050	----	----	----	----
Dichloromethane	75-09-2	E611D/WT	mg/kg		<0.045	<0.045	<0.045	----	----	----	----
Dichloropropane, 1,2-	78-87-5	E611D/WT	mg/kg		<0.050	<0.050	<0.050	----	----	----	----
Dichloropropylene, cis+trans-1,3-	542-75-6	E611D/WT	mg/kg		<0.050	<0.050	<0.050	----	----	----	----
Dichloropropylene, cis-1,3-	10061-01-5	E611D/WT	mg/kg		<0.030	<0.030	<0.030	----	----	----	----
Dichloropropylene, trans-1,3-	10061-02-6	E611D/WT	mg/kg		<0.030	<0.030	<0.030	----	----	----	----
Ethylbenzene	100-41-4	E611D/WT	mg/kg		<0.015	<0.015	<0.015	----	----	----	----
Hexane, n-	110-54-3	E611D/WT	mg/kg		<0.050	<0.050	<0.050	----	----	----	----
Methyl ethyl ketone [MEK]	78-93-3	E611D/WT	mg/kg		<0.50	<0.50	<0.50	----	----	----	----
Methyl isobutyl ketone [MIBK]	108-10-1	E611D/WT	mg/kg		<0.50	<0.50	<0.50	----	----	----	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D/WT	mg/kg		<0.040	<0.040	<0.040	----	----	----	----
Styrene	100-42-5	E611D/WT	mg/kg		<0.050	<0.050	<0.050	----	----	----	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611D/WT	mg/kg		<0.050	<0.050	<0.050	----	----	----	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611D/WT	mg/kg		<0.050	<0.050	<0.050	----	----	----	----
Tetrachloroethylene	127-18-4	E611D/WT	mg/kg		<0.050	<0.050	<0.050	----	----	----	----
Toluene	108-88-3	E611D/WT	mg/kg		<0.050	<0.050	<0.050	----	----	----	----
Trichloroethane, 1,1,1-	71-55-6	E611D/WT	mg/kg		<0.050	<0.050	<0.050	----	----	----	----



Analytical Results Evaluation

				Client sample ID	BH103-6	BH104-3	BH105-3	DUP101	----	----	----
Matrix: Soil				Sampling date/time	04-Sep-2024 15:10	05-Sep-2024 10:00	05-Sep-2024 13:45	05-Sep-2024 00:00	----	----	----
				Sub-Matrix	Soil	Soil	Soil	Soil	----	----	----
Analyte	CAS Number	Method/Lab	Unit		WT2426218-001	WT2426218-002	WT2426218-003	WT2426218-004	-----	-----	-----
Volatile Organic Compounds											
Trichloroethane, 1,1,2-	79-00-5	E611D/WT	mg/kg		<0.050	<0.050	<0.050	----	----	----	----
Trichloroethylene	79-01-6	E611D/WT	mg/kg		<0.010	<0.010	<0.010	----	----	----	----
Trichlorofluoromethane	75-69-4	E611D/WT	mg/kg		<0.050	<0.050	<0.050	----	----	----	----
Vinyl chloride	75-01-4	E611D/WT	mg/kg		<0.020	<0.020	<0.020	----	----	----	----
Xylene, m+p-	179601-23-1	E611D/WT	mg/kg		<0.030	<0.030	<0.030	----	----	----	----
Xylene, o-	95-47-6	E611D/WT	mg/kg		<0.030	<0.030	<0.030	----	----	----	----
Xylenes, total	1330-20-7	E611D/WT	mg/kg		<0.050	<0.050	<0.050	----	----	----	----
BTEX, total	----	E611D/WT	mg/kg		<0.10	<0.10	<0.10	----	----	----	----
Hydrocarbons											
F1 (C6-C10)	----	E581.F1/WT	mg/kg		<5.0	<5.0	<5.0	----	----	----	----
F2 (C10-C16)	----	E601.SG-L/WT	mg/kg		<10	<10	<10	<10	----	----	----
F2-Naphthalene	----	EC600/WT	mg/kg		<25	<25	<25	----	----	----	----
F3 (C16-C34)	----	E601.SG-L/WT	mg/kg		<50	<50	<50	<50	----	----	----
F3-PAH	n/a	EC600/WT	mg/kg		<50	<50	<50	----	----	----	----
F4 (C34-C50)	----	E601.SG-L/WT	mg/kg		<50	<50	<50	<50	----	----	----
F1-BTEX	----	EC580/WT	mg/kg		<5.0	<5.0	<5.0	----	----	----	----
Hydrocarbons, total (C6-C50)	n/a	EC581/WT	mg/kg		<80	<80	<80	----	----	----	----
Chromatogram to baseline at nC50	n/a	E601.SG-L/WT	-		YES	YES	YES	YES	----	----	----
Hydrocarbons Surrogates											
Bromobenzotrifluoride, 2- (F2-F4 surrogate)	392-83-6	E601.SG-L/WT	%		96.4	95.3	96.1	92.8	----	----	----
Dichlorotoluene, 3,4-	95-75-0	E581.F1/WT	%		72.8	88.1	104	----	----	----	----
Volatile Organic Compounds Surrogates											
Bromofluorobenzene, 4-	460-00-4	E611D/WT	%		107	128	107	----	----	----	----
Diffuorobenzene, 1,4-	540-36-3	E611D/WT	%		108	130	108	----	----	----	----
Polycyclic Aromatic Hydrocarbons											
Acenaphthene	83-32-9	E641A/WT	mg/kg		<0.050	<0.050	<0.050	----	----	----	----
Acenaphthylene	208-96-8	E641A/WT	mg/kg		<0.050	<0.050	<0.050	----	----	----	----
Anthracene	120-12-7	E641A/WT	mg/kg		<0.050	<0.050	<0.050	----	----	----	----



Analytical Results Evaluation

Matrix: Soil

				Client sample ID	BH103-6	BH104-3	BH105-3	DUP101	----	----	----
				Sampling date/time	04-Sep-2024 15:10	05-Sep-2024 10:00	05-Sep-2024 13:45	05-Sep-2024 00:00	----	----	----
				Sub-Matrix	Soil	Soil	Soil	Soil	----	----	----
Analyte	CAS Number	Method/Lab	Unit		WT2426218-001	WT2426218-002	WT2426218-003	WT2426218-004	-----	-----	-----
Polycyclic Aromatic Hydrocarbons											
Benz(a)anthracene	56-55-3	E641A/WT	mg/kg		0.086	<0.050	<0.050	----	----	----	----
Benzo(a)pyrene	50-32-8	E641A/WT	mg/kg		0.097	<0.050	<0.050	----	----	----	----
Benzo(b+j)fluoranthene	n/a	E641A/WT	mg/kg		0.109	<0.050	<0.050	----	----	----	----
Benzo(g,h,i)perylene	191-24-2	E641A/WT	mg/kg		0.057	<0.050	<0.050	----	----	----	----
Benzo(k)fluoranthene	207-08-9	E641A/WT	mg/kg		<0.050	<0.050	<0.050	----	----	----	----
Chrysene	218-01-9	E641A/WT	mg/kg		0.096	<0.050	<0.050	----	----	----	----
Dibenz(a,h)anthracene	53-70-3	E641A/WT	mg/kg		<0.050	<0.050	<0.050	----	----	----	----
Fluoranthene	206-44-0	E641A/WT	mg/kg		0.191 ^{DUPH}	0.061	<0.050	----	----	----	----
Fluorene	86-73-7	E641A/WT	mg/kg		<0.050	<0.050	<0.050	----	----	----	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A/WT	mg/kg		0.062	<0.050	<0.050	----	----	----	----
Methylnaphthalene, 1-	90-12-0	E641A/WT	mg/kg		<0.030	<0.030	<0.030	----	----	----	----
Methylnaphthalene, 1+2-	----	E641A/WT	mg/kg		<0.050	<0.050	<0.050	----	----	----	----
Methylnaphthalene, 2-	91-57-6	E641A/WT	mg/kg		<0.030	<0.030	<0.030	----	----	----	----
Naphthalene	91-20-3	E641A/WT	mg/kg		0.020	<0.010	<0.010	----	----	----	----
Phenanthrene	85-01-8	E641A/WT	mg/kg		0.167 ^{DUPH}	<0.050	<0.050	----	----	----	----
Pyrene	129-00-0	E641A/WT	mg/kg		0.169 ^{DUPH}	0.052	<0.050	----	----	----	----
Polycyclic Aromatic Hydrocarbons Surrogates											
Acridine-d9	34749-75-2	E641A/WT	%		104	103	104	----	----	----	----
Chrysene-d12	1719-03-5	E641A/WT	%		91.2	89.4	87.8	----	----	----	----
Naphthalene-d8	1146-65-2	E641A/WT	%		93.4	92.8	91.1	----	----	----	----
Phenanthrene-d10	1517-22-2	E641A/WT	%		94.4	91.9	93.9	----	----	----	----
Polychlorinated Biphenyls											
Aroclor 1016	12674-11-2	E687/WT	mg/kg		<0.010	<0.010	<0.010	----	----	----	----
Aroclor 1221	11104-28-2	E687/WT	mg/kg		<0.010	<0.010	<0.010	----	----	----	----
Aroclor 1232	11141-16-5	E687/WT	mg/kg		<0.010	<0.010	<0.010	----	----	----	----
Aroclor 1242	53469-21-9	E687/WT	mg/kg		<0.010	<0.010	<0.010	----	----	----	----
Aroclor 1248	12672-29-6	E687/WT	mg/kg		<0.010	<0.010	<0.010	----	----	----	----
Aroclor 1254	11097-69-1	E687/WT	mg/kg		<0.010	<0.010	<0.010	----	----	----	----



Analytical Results Evaluation

Matrix: Soil				Client sample ID	BH103-6	BH104-3	BH105-3	DUP101	----	----	----
				Sampling date/time	04-Sep-2024 15:10	05-Sep-2024 10:00	05-Sep-2024 13:45	05-Sep-2024 00:00	----	----	----
				Sub-Matrix	Soil	Soil	Soil	Soil	----	----	----
Analyte	CAS Number	Method/Lab	Unit	WT2426218-001	WT2426218-002	WT2426218-003	WT2426218-004	-----	-----	-----	-----
Polychlorinated Biphenyls											
Aroclor 1260	11096-82-5	E687/WT	mg/kg	<0.010	<0.010	<0.010	----	----	----	----	----
Aroclor 1262	37324-23-5	E687/WT	mg/kg	<0.010	<0.010	<0.010	----	----	----	----	----
Aroclor 1268	11100-14-4	E687/WT	mg/kg	<0.010	<0.010	<0.010	----	----	----	----	----
Polychlorinated biphenyls [PCBs], total	----	E687/WT	mg/kg	<0.030	<0.030	<0.030	----	----	----	----	----
Polychlorinated Biphenyls Surrogates											
Decachlorobiphenyl	2051-24-3	E687/WT	%	92.2	94.4	76.2	----	----	----	----	----
Tetrachloro-m-xylene	877-09-8	E687/WT	%	80.2	82.0	78.4	----	----	----	----	----

Please refer to the General Comments section for an explanation of any result qualifiers detected.

Please refer to the Accreditation section for an explanation of analyte accreditations.



Summary of Guideline Limits

Analyte	CAS Number	Unit	ON153/04 T1-RPIICC						
Physical Tests									
Moisture	----	%	--						
Metals									
Antimony	7440-36-0	mg/kg	1.3 mg/kg						
Arsenic	7440-38-2	mg/kg	18 mg/kg						
Barium	7440-39-3	mg/kg	220 mg/kg						
Beryllium	7440-41-7	mg/kg	2.5 mg/kg						
Boron	7440-42-8	mg/kg	36 mg/kg						
Cadmium	7440-43-9	mg/kg	1.2 mg/kg						
Chromium	7440-47-3	mg/kg	70 mg/kg						
Cobalt	7440-48-4	mg/kg	21 mg/kg						
Copper	7440-50-8	mg/kg	92 mg/kg						
Lead	7439-92-1	mg/kg	120 mg/kg						
Molybdenum	7439-98-7	mg/kg	2 mg/kg						
Nickel	7440-02-0	mg/kg	82 mg/kg						
Selenium	7782-49-2	mg/kg	1.5 mg/kg						
Silver	7440-22-4	mg/kg	0.5 mg/kg						
Thallium	7440-28-0	mg/kg	1 mg/kg						
Uranium	7440-61-1	mg/kg	2.5 mg/kg						
Vanadium	7440-62-2	mg/kg	86 mg/kg						
Zinc	7440-66-6	mg/kg	290 mg/kg						
Volatile Organic Compounds									
Acetone	67-64-1	mg/kg	0.5 mg/kg						
Benzene	71-43-2	mg/kg	0.02 mg/kg						
Bromodichloromethane	75-27-4	mg/kg	0.05 mg/kg						
Bromoform	75-25-2	mg/kg	0.05 mg/kg						
Bromomethane	74-83-9	mg/kg	0.05 mg/kg						
BTEX, total	----	mg/kg	--						
Carbon tetrachloride	56-23-5	mg/kg	0.05 mg/kg						
Chlorobenzene	108-90-7	mg/kg	0.05 mg/kg						
Chloroform	67-66-3	mg/kg	0.05 mg/kg						
Dibromochloromethane	124-48-1	mg/kg	0.05 mg/kg						
Dibromoethane, 1,2-	106-93-4	mg/kg	0.05 mg/kg						
Dichlorobenzene, 1,2-	95-50-1	mg/kg	0.05 mg/kg						
Dichlorobenzene, 1,3-	541-73-1	mg/kg	0.05 mg/kg						
Dichlorobenzene, 1,4-	106-46-7	mg/kg	0.05 mg/kg						
Dichlorodifluoromethane	75-71-8	mg/kg	0.05 mg/kg						
Dichloroethane, 1,1-	75-34-3	mg/kg	0.05 mg/kg						



Analyte	CAS Number	Unit	ON153/04 T1-RPIICC						
Volatile Organic Compounds - Continued									
Dichloroethane, 1,2-	107-06-2	mg/kg	0.05 mg/kg						
Dichloroethylene, 1,1-	75-35-4	mg/kg	0.05 mg/kg						
Dichloroethylene, cis-1,2-	156-59-2	mg/kg	0.05 mg/kg						
Dichloroethylene, trans-1,2-	156-60-5	mg/kg	0.05 mg/kg						
Dichloromethane	75-09-2	mg/kg	0.05 mg/kg						
Dichloropropane, 1,2-	78-87-5	mg/kg	0.05 mg/kg						
Dichloropropylene, cis+trans-1,3-	542-75-6	mg/kg	0.05 mg/kg						
Dichloropropylene, cis-1,3-	10061-01-5	mg/kg	--						
Dichloropropylene, trans-1,3-	10061-02-6	mg/kg	--						
Ethylbenzene	100-41-4	mg/kg	0.05 mg/kg						
Hexane, n-	110-54-3	mg/kg	0.05 mg/kg						
Methyl ethyl ketone [MEK]	78-93-3	mg/kg	0.5 mg/kg						
Methyl isobutyl ketone [MIBK]	108-10-1	mg/kg	0.5 mg/kg						
Methyl-tert-butyl ether [MTBE]	1634-04-4	mg/kg	0.05 mg/kg						
Styrene	100-42-5	mg/kg	0.05 mg/kg						
Tetrachloroethane, 1,1,1,2-	630-20-6	mg/kg	0.05 mg/kg						
Tetrachloroethane, 1,1,1,2,2-	79-34-5	mg/kg	0.05 mg/kg						
Tetrachloroethylene	127-18-4	mg/kg	0.05 mg/kg						
Toluene	108-88-3	mg/kg	0.2 mg/kg						
Trichloroethane, 1,1,1-	71-55-6	mg/kg	0.05 mg/kg						
Trichloroethane, 1,1,2-	79-00-5	mg/kg	0.05 mg/kg						
Trichloroethylene	79-01-6	mg/kg	0.05 mg/kg						
Trichlorofluoromethane	75-69-4	mg/kg	0.25 mg/kg						
Vinyl chloride	75-01-4	mg/kg	0.02 mg/kg						
Xylene, m+p-	179601-23-1	mg/kg	--						
Xylene, o-	95-47-6	mg/kg	--						
Xylenes, total	1330-20-7	mg/kg	0.05 mg/kg						
Hydrocarbons									
Chromatogram to baseline at nC50	n/a	-	--						
F1 (C6-C10)	----	mg/kg	25 mg/kg						
F1-BTEX	----	mg/kg	25 mg/kg						
F2 (C10-C16)	----	mg/kg	10 mg/kg						
F2-Naphthalene	----	mg/kg	--						
F3 (C16-C34)	----	mg/kg	240 mg/kg						
F3-PAH	n/a	mg/kg	--						
F4 (C34-C50)	----	mg/kg	120 mg/kg						
Hydrocarbons, total (C6-C50)	n/a	mg/kg	--						
Bromobenzotrifluoride, 2- (F2-F4 surrogate)	392-83-6	%	--						
Dichlorotoluene, 3,4-	95-75-0	%	--						



Analyte	CAS Number	Unit	ON153/04 T1-RPIICC						
Volatile Organic Compounds Surrogates - Continued									
Bromofluorobenzene, 4-	460-00-4	%	--						
Difluorobenzene, 1,4-	540-36-3	%	--						
Polycyclic Aromatic Hydrocarbons									
Acenaphthene	83-32-9	mg/kg	0.072 mg/kg						
Acenaphthylene	208-96-8	mg/kg	0.093 mg/kg						
Anthracene	120-12-7	mg/kg	0.16 mg/kg						
Benz(a)anthracene	56-55-3	mg/kg	0.36 mg/kg						
Benzo(a)pyrene	50-32-8	mg/kg	0.3 mg/kg						
Benzo(b+j)fluoranthene	n/a	mg/kg	0.47 mg/kg						
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.68 mg/kg						
Benzo(k)fluoranthene	207-08-9	mg/kg	0.48 mg/kg						
Chrysene	218-01-9	mg/kg	2.8 mg/kg						
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.1 mg/kg						
Fluoranthene	206-44-0	mg/kg	0.56 mg/kg						
Fluorene	86-73-7	mg/kg	0.12 mg/kg						
Indeno(1,2,3-c,d)pyrene	193-39-5	mg/kg	0.23 mg/kg						
Methylnaphthalene, 1+2-	----	mg/kg	0.59 mg/kg						
Methylnaphthalene, 1-	90-12-0	mg/kg	0.59 mg/kg						
Methylnaphthalene, 2-	91-57-6	mg/kg	0.59 mg/kg						
Naphthalene	91-20-3	mg/kg	0.09 mg/kg						
Phenanthrene	85-01-8	mg/kg	0.69 mg/kg						
Pyrene	129-00-0	mg/kg	1 mg/kg						
Acridine-d9	34749-75-2	%	--						
Chrysene-d12	1719-03-5	%	--						
Naphthalene-d8	1146-65-2	%	--						
Phenanthrene-d10	1517-22-2	%	--						
Polychlorinated Biphenyls									
Aroclor 1016	12674-11-2	mg/kg	--						
Aroclor 1221	11104-28-2	mg/kg	--						
Aroclor 1232	11141-16-5	mg/kg	--						
Aroclor 1242	53469-21-9	mg/kg	--						
Aroclor 1248	12672-29-6	mg/kg	--						
Aroclor 1254	11097-69-1	mg/kg	--						
Aroclor 1260	11096-82-5	mg/kg	--						
Aroclor 1262	37324-23-5	mg/kg	--						
Aroclor 1268	11100-14-4	mg/kg	--						
Polychlorinated biphenyls [PCBs], total	----	mg/kg	0.3 mg/kg						
Decachlorobiphenyl	2051-24-3	%	--						
Tetrachloro-m-xylene	877-09-8	%	--						



Please refer to the General Comments section for an explanation of any qualifiers detected.

Key:

ON153/04	Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
T1-RPIICC	153 T1-Soil-Res/Park/Inst/Ind/Com/Commu Property Use

QUALITY CONTROL INTERPRETIVE REPORT

Work Order	: WT2426218	Page	: 1 of 9
Client	: OH Environmental Inc.	Laboratory	: ALS Environmental - Waterloo
Contact	: Hasan Rahman	Account Manager	: Amanda Overholster
Address	: 311 Matheson Blvd. East Mississauga ON Canada L4Z 1X8	Address	: 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8
Telephone	: ----	Telephone	: 1 416 817 2944
Project	: 30100	Date Samples Received	: 06-Sep-2024 09:32
PO	: ----	Issue Date	: 20-Sep-2024 15:24
C-O-C number	: 20-1046940		
Sampler	: HR		
Site	: ----		
Quote number	: 2024 SOA		
No. of samples received	: 4		
No. of samples analysed	: 4		

This report is automatically generated by the ALS LIMS (Laboratory Information Management System) through evaluation of Quality Control (QC) results and other QA parameters associated with this submission, and is intended to facilitate rapid data validation by auditors or reviewers. The report highlights any exceptions and outliers to ALS Data Quality Objectives, provides holding time details and exceptions, summarizes QC sample frequencies, and lists applicable methodology references and summaries.

Key

Anonymous: Refers to samples which are not part of this work order, but which formed part of the QC process lot.

CAS Number: Chemical Abstracts Service number is a unique identifier assigned to discrete substances.

DQO: Data Quality Objective.

LOR: Limit of Reporting (detection limit).

RPD: Relative Percent Difference.

Workorder Comments

Holding times are displayed as "----" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

Summary of Outliers

Outliers : Quality Control Samples

- No Method Blank value outliers occur.
- No Matrix Spike outliers occur.
- Duplicate outliers occur - please see following pages for full details.
- Laboratory Control Sample (LCS) outliers occur - please see following pages for full details.
- No Test sample Surrogate recovery outliers exist.

Outliers: Reference Material (RM) Samples

- No Reference Material (RM) Sample outliers occur.

Outliers : Analysis Holding Time Compliance (Breaches)

- Analysis Holding Time Outliers exist - please see following pages for full details.

Outliers : Frequency of Quality Control Samples

- No Quality Control Sample Frequency Outliers occur.



Outliers : Quality Control Samples

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: Soil/Solid

Analyte Group	Laboratory sample ID	Client/Ref Sample ID	Analyte	CAS Number	Method	Result	Limits	Comment
Duplicate (DUP) RPDs								
Polycyclic Aromatic Hydrocarbons	WT2426218-001	BH103-6	Fluoranthene	206-44-0	E641A	0.141 % ^{DUP-H, J}	Diff <2x LOR	Low Level DUP DQO exceeded (difference > 2 LOR).
Polycyclic Aromatic Hydrocarbons	WT2426218-001	BH103-6	Phenanthrene	85-01-8	E641A	0.117 % ^{DUP-H, J}	Diff <2x LOR	Low Level DUP DQO exceeded (difference > 2 LOR).
Polycyclic Aromatic Hydrocarbons	WT2426218-001	BH103-6	Pyrene	129-00-0	E641A	0.119 % ^{DUP-H, J}	Diff <2x LOR	Low Level DUP DQO exceeded (difference > 2 LOR).

Result Qualifiers

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.

Laboratory Control Sample (LCS) Recoveries

Metals	QC-MRG2-1644324 002	----	Silver	7440-22-4	E440C	65.1 % ^{RRQC}	80.0-120%	Recovery less than lower control limit
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Result Qualifiers

Qualifier Description

RRQC Refer to report comments for information regarding this QC result.



Analysis Holding Time Compliance

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times, which are selected to meet known provincial and /or federal requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by organizations such as CCME, US EPA, APHA Standard Methods, ASTM, or Environment Canada (where available). Dates and holding times reported below represent the first dates of extraction or analysis. If subsequent tests or dilutions exceeded holding times, qualifiers are added (refer to COA).

If samples are identified below as having been analyzed or extracted outside of recommended holding times, measurement uncertainties may be increased, and this should be taken into consideration when interpreting results.

Where actual sampling date is not provided on the chain of custody, the date of receipt with time at 00:00 is used for calculation purposes.

Where only the sample date without time is provided on the chain of custody, the sampling date at 00:00 is used for calculation purposes.

Matrix: Soil/Solid

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Hydrocarbons : CCME PHC - F1 by Headspace GC-FID										
Glass soil methanol vial [ON MECP] BH103-6	E581.F1	04-Sep-2024	11-Sep-2024	14 days	6 days	✓	11-Sep-2024	40 days	0 days	✓
Hydrocarbons : CCME PHC - F1 by Headspace GC-FID										
Glass soil methanol vial [ON MECP] BH104-3	E581.F1	05-Sep-2024	11-Sep-2024	14 days	6 days	✓	11-Sep-2024	40 days	0 days	✓
Hydrocarbons : CCME PHC - F1 by Headspace GC-FID										
Glass soil methanol vial [ON MECP] BH105-3	E581.F1	05-Sep-2024	11-Sep-2024	14 days	6 days	✓	11-Sep-2024	40 days	1 days	✓
Hydrocarbons : CCME PHCs - F2-F4 by GC-FID (Low Level)										
Glass soil jar/Teflon lined cap [ON MECP] DUP101	E601.SG-L	05-Sep-2024	19-Sep-2024	14 days	15 days	✖ EHT	20-Sep-2024	40 days	1 days	✓
Hydrocarbons : CCME PHCs - F2-F4 by GC-FID (Low Level)										
Glass soil jar/Teflon lined cap [ON MECP] BH104-3	E601.SG-L	05-Sep-2024	12-Sep-2024	14 days	7 days	✓	13-Sep-2024	40 days	0 days	✓
Hydrocarbons : CCME PHCs - F2-F4 by GC-FID (Low Level)										
Glass soil jar/Teflon lined cap [ON MECP] BH105-3	E601.SG-L	05-Sep-2024	12-Sep-2024	14 days	7 days	✓	13-Sep-2024	40 days	0 days	✓
Hydrocarbons : CCME PHCs - F2-F4 by GC-FID (Low Level)										
Glass soil jar/Teflon lined cap [ON MECP] BH103-6	E601.SG-L	04-Sep-2024	12-Sep-2024	14 days	8 days	✓	13-Sep-2024	40 days	0 days	✓

Page : 5 of 9
 Work Order : WT2426218
 Client : OH Environmental Inc.
 Project : 30100



Matrix: Soil/Solid

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Metals : Metals in Soil/Solid by CRC ICPMS (<355 µm)										
Glass soil jar/Teflon lined cap [ON MECP] BH104-3	E440C	05-Sep-2024	15-Sep-2024	180 days	10 days	✓	16-Sep-2024	180 days	11 days	✓
Metals : Metals in Soil/Solid by CRC ICPMS (<355 µm)										
Glass soil jar/Teflon lined cap [ON MECP] BH105-3	E440C	05-Sep-2024	15-Sep-2024	180 days	10 days	✓	16-Sep-2024	180 days	11 days	✓
Metals : Metals in Soil/Solid by CRC ICPMS (<355 µm)										
Glass soil jar/Teflon lined cap [ON MECP] BH103-6	E440C	04-Sep-2024	15-Sep-2024	180 days	11 days	✓	16-Sep-2024	180 days	12 days	✓
Physical Tests : Moisture Content by Gravimetry										
Glass soil jar/Teflon lined cap [ON MECP] DUP101	E144	05-Sep-2024	----	----	----		19-Sep-2024	----	15 days	
Physical Tests : Moisture Content by Gravimetry										
Glass soil jar/Teflon lined cap [ON MECP] BH104-3	E144	05-Sep-2024	----	----	----		11-Sep-2024	----	6 days	
Physical Tests : Moisture Content by Gravimetry										
Glass soil jar/Teflon lined cap [ON MECP] BH105-3	E144	05-Sep-2024	----	----	----		11-Sep-2024	----	6 days	
Physical Tests : Moisture Content by Gravimetry										
Glass soil jar/Teflon lined cap [ON MECP] BH103-6	E144	04-Sep-2024	----	----	----		11-Sep-2024	----	7 days	
Polychlorinated Biphenyls : PCB Aroclors by GC-MS										
Glass soil jar/Teflon lined cap [ON MECP] BH103-6	E687	04-Sep-2024	11-Sep-2024	365 days	6 days	✓	12-Sep-2024	40 days	1 days	✓
Polychlorinated Biphenyls : PCB Aroclors by GC-MS										
Glass soil jar/Teflon lined cap [ON MECP] BH104-3	E687	05-Sep-2024	11-Sep-2024	365 days	6 days	✓	12-Sep-2024	40 days	1 days	✓

Page : 6 of 9
 Work Order : WT2426218
 Client : OH Environmental Inc.
 Project : 30100



Matrix: Soil/Solid

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group : Analytical Method	Method	Sampling Date	Extraction / Preparation				Analysis			
Container / Client Sample ID(s)			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Polychlorinated Biphenyls : PCB Aroclors by GC-MS										
Glass soil jar/Teflon lined cap [ON MECP] BH105-3	E687	05-Sep-2024	11-Sep-2024	365 days	6 days	✓	12-Sep-2024	40 days	1 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Soil/solid by Hex:Ace GC-MS										
Glass soil jar/Teflon lined cap [ON MECP] BH104-3	E641A	05-Sep-2024	12-Sep-2024	60 days	7 days	✓	13-Sep-2024	40 days	1 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Soil/solid by Hex:Ace GC-MS										
Glass soil jar/Teflon lined cap [ON MECP] BH105-3	E641A	05-Sep-2024	12-Sep-2024	60 days	7 days	✓	13-Sep-2024	40 days	1 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Soil/solid by Hex:Ace GC-MS										
Glass soil jar/Teflon lined cap [ON MECP] BH103-6	E641A	04-Sep-2024	12-Sep-2024	60 days	8 days	✓	13-Sep-2024	40 days	1 days	✓
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass soil methanol vial [ON MECP] BH103-6	E611D	04-Sep-2024	11-Sep-2024	14 days	6 days	✓	11-Sep-2024	40 days	0 days	✓
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass soil methanol vial [ON MECP] BH104-3	E611D	05-Sep-2024	11-Sep-2024	14 days	6 days	✓	11-Sep-2024	40 days	0 days	✓
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass soil methanol vial [ON MECP] BH105-3	E611D	05-Sep-2024	11-Sep-2024	14 days	6 days	✓	11-Sep-2024	40 days	1 days	✓

Legend & Qualifier Definitions

Rec. HT: ALS recommended hold time (see units).



Quality Control Parameter Frequency Compliance

The following report summarizes the frequency of laboratory QC samples analyzed within the analytical batches (QC lots) in which the submitted samples were processed. The actual frequency should be greater than or equal to the expected frequency.

Matrix: **Soil/Solid**

Evaluation: ✖ = QC frequency outside specification; ✔ = QC frequency within specification.

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	Method	QC Lot #	QC	Regular	Actual	Expected	Evaluation
Laboratory Duplicates (DUP)							
CCME PHC - F1 by Headspace GC-FID	E581.F1	1643881	2	40	5.0	5.0	✔
CCME PHCs - F2-F4 by GC-FID (Low Level)	E601.SG-L	1661322	2	35	5.7	5.0	✔
Metals in Soil/Solid by CRC ICPMS (<355 µm)	E440C	1644324	1	9	11.1	5.0	✔
Moisture Content by Gravimetry	E144	1661329	2	40	5.0	5.0	✔
PAHs in Soil/solid by Hex:Ace GC-MS	E641A	1644043	1	15	6.6	5.0	✔
PCB Aroclors by GC-MS	E687	1643772	2	14	14.2	5.0	✔
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	1643880	2	40	5.0	5.0	✔
Laboratory Control Samples (LCS)							
CCME PHC - F1 by Headspace GC-FID	E581.F1	1643881	2	40	5.0	5.0	✔
CCME PHCs - F2-F4 by GC-FID (Low Level)	E601.SG-L	1661322	2	35	5.7	5.0	✔
Metals in Soil/Solid by CRC ICPMS (<355 µm)	E440C	1644324	2	9	22.2	10.0	✔
Moisture Content by Gravimetry	E144	1661329	2	40	5.0	5.0	✔
PAHs in Soil/solid by Hex:Ace GC-MS	E641A	1644043	1	15	6.6	5.0	✔
PCB Aroclors by GC-MS	E687	1643772	2	14	14.2	5.0	✔
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	1643880	2	40	5.0	5.0	✔
Method Blanks (MB)							
CCME PHC - F1 by Headspace GC-FID	E581.F1	1643881	2	40	5.0	5.0	✔
CCME PHCs - F2-F4 by GC-FID (Low Level)	E601.SG-L	1661322	2	35	5.7	5.0	✔
Metals in Soil/Solid by CRC ICPMS (<355 µm)	E440C	1644324	1	9	11.1	5.0	✔
Moisture Content by Gravimetry	E144	1661329	2	40	5.0	5.0	✔
PAHs in Soil/solid by Hex:Ace GC-MS	E641A	1644043	1	15	6.6	5.0	✔
PCB Aroclors by GC-MS	E687	1643772	2	14	14.2	5.0	✔
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	1643880	2	40	5.0	5.0	✔
Matrix Spikes (MS)							
CCME PHC - F1 by Headspace GC-FID	E581.F1	1643881	2	40	5.0	5.0	✔
CCME PHCs - F2-F4 by GC-FID (Low Level)	E601.SG-L	1661322	2	35	5.7	5.0	✔
PAHs in Soil/solid by Hex:Ace GC-MS	E641A	1644043	1	15	6.6	5.0	✔
PCB Aroclors by GC-MS	E687	1643772	2	14	14.2	5.0	✔
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	1643880	2	40	5.0	5.0	✔



Methodology References and Summaries

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Reference methods may incorporate modifications to improve performance (indicated by "mod").

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Moisture Content by Gravimetry	E144 ALS Environmental - Waterloo	Soil/Solid	CCME PHC in Soil - Tier 1	Moisture is measured gravimetrically by drying the sample at 105°C. Moisture content is calculated as the weight loss (due to water) divided by the wet weight of the sample, expressed as a percentage.
Metals in Soil/Solid by CRC ICPMS (<355 µm)	E440C ALS Environmental - Waterloo	Soil/Solid	EPA 6020B (mod)	This method is intended to liberate metals that may be environmentally available. Samples are dried, then sieved through a 355 µm sieve, and digested with HNO₃ and HCl. Dependent on sample matrix, some metals may be only partially recovered, including Al, Ba, Be, Cr, Sr, Ti, Tl, V, W, and Zr. Silicate minerals are not solubilized. Volatile forms of sulfur (including sulfide) may not be captured, as they may be lost during sampling, storage, or digestion. This method does not adequately recover elemental sulfur, and is unsuitable for assessment of elemental sulfur standards or guidelines. Analysis is by Collision/Reaction Cell ICPMS.
CCME PHC - F1 by Headspace GC-FID	E581.F1 ALS Environmental - Waterloo	Soil/Solid	CCME PHC in Soil - Tier 1	CCME Fraction 1 (F1) is analyzed by static headspace GC-FID. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law. Analytical methods for CCME Petroleum Hydrocarbons (PHCs) are validated to comply fully with the Reference Method for the Canada-Wide Standard for PHC. Test results are expressed on a dry weight basis. Unless qualified, all required quality control criteria of the CCME PHC method have been met, including response factor and linearity requirements.
CCME PHCs - F2-F4 by GC-FID (Low Level)	E601.SG-L ALS Environmental - Waterloo	Soil/Solid	CCME PHC in Soil - Tier 1	Sample extracts are subjected to in-situ silica gel treatment prior to analysis by GC-FID for CCME hydrocarbon fractions (F2-F4). Analytical methods for CCME Petroleum Hydrocarbons (PHCs) are validated to comply fully with the Reference Method for the Canada-Wide Standard for PHC. Test results are expressed on a dry weight basis. Unless qualified, all required quality control criteria of the CCME PHC method have been met, including response factor and linearity requirements.
VOCs (Eastern Canada List) by Headspace GC-MS	E611D ALS Environmental - Waterloo	Soil/Solid	EPA 8260D (mod)	Volatile Organic Compounds (VOCs) are analyzed by static headspace GC-MS. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law.



Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
PAHs in Soil/solid by Hex:Ace GC-MS	E641A ALS Environmental - Waterloo	Soil/Solid	EPA 8270E (mod)	Polycyclic Aromatic Hydrocarbons (PAHs) are extracted with hexane/acetone and analyzed by GC-MS. If reported, IACR (index of additive cancer risk, unitless) and B(a)P toxic potency equivalent (in soil concentration units) are calculated as per CCME PAH Soil Quality Guidelines fact sheet (2010) or ABT1.
PCB Aroclors by GC-MS	E687 ALS Environmental - Waterloo	Soil/Solid	EPA 8270E (mod)	PCB Aroclors are analyzed by GC-MS
F1-BTEX	EC580 ALS Environmental - Waterloo	Soil/Solid	CCME PHC in Soil - Tier 1	F1-BTEX is calculated as follows: F1-BTEX = F1 (C6-C10) minus benzene, toluene, ethylbenzene and xylenes (BTEX).
Sum F1 to F4 (C6-C50)	EC581 ALS Environmental - Waterloo	Soil/Solid	CCME PHC in Soil - Tier 1	Hydrocarbons, total (C6-C50) is the sum of CCME Fractions F1(C6-C10), F2(C10-C16), F3(C16-C34), and F4(C34-C50). F4G-sg is not used within this calculation due to overlap with other fractions.
F2 to F3 minus PAH	EC600 ALS Environmental - Waterloo	Soil/Solid	CCME PHC in Soil - Tier 1	F2-Naphthalene = CCME Fraction 2 (C10-C16) minus Naphthalene F3-PAH = CCME Fraction 3 (C16-C34) minus sPhenanthrene, Fluoranthene, Pyrene, Benz(a)anthracene, benzo(b+)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-c,d)pyrene, and Dibenz(a,h)anthracene.
Preparation Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Digestion for Metals and Mercury (355 µm Sieve)	EP440C ALS Environmental - Waterloo	Soil/Solid	EPA 200.2 (mod)	Samples are sieved through a 355 µm sieve, and digested with HNO ₃ and HCl. This method is intended to liberate metals that may be environmentally available.
VOCs Methanol Extraction for Headspace Analysis	EP581 ALS Environmental - Waterloo	Soil/Solid	EPA 5035A (mod)	VOCs in samples are extracted with methanol. Extracts are then prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law.
PHCs and PAHs Hexane-Acetone Tumbler Extraction	EP601 ALS Environmental - Waterloo	Soil/Solid	CCME PHC in Soil - Tier 1 (mod)	Samples are subsampled and Petroleum Hydrocarbons (PHC) and PAHs are extracted with 1:1 hexane:acetone using a rotary extractor.
Pesticides, PCB, PAH, and Neutral Extractable Chlorinated Hydrocarbons Extraction	EP660 ALS Environmental - Waterloo	Soil/Solid	EPA 3570 (mod)	A homogenized subsample is extracted with organic solvents using a mechanical shaker.

QUALITY CONTROL REPORT

Work Order	: WT2426218	Page	: 1 of 21
Client	: OH Environmental Inc.	Laboratory	: ALS Environmental - Waterloo
Contact	: Hasan Rahman	Account Manager	: Amanda Overholster
Address	: 311 Matheson Blvd. East Mississauga ON Canada L4Z 1X8	Address	: 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8
Telephone	: ----	Telephone	: 1 416 817 2944
Project	: 30100	Date Samples Received	: 06-Sep-2024 09:32
PO	: ----	Date Analysis Commenced	: 11-Sep-2024
C-O-C number	: 20-1046940	Issue Date	: 20-Sep-2024 15:24
Sampler	: HR		
Site	: ----		
Quote number	: 2024 SOA		
No. of samples received	: 4		
No. of samples analysed	: 4		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percent Difference (RPD) and Data Quality Objectives
- Matrix Spike (MS) Report; Recovery and Data Quality Objectives
- Reference Material (RM) Report; Recovery and Data Quality Objectives
- Method Blank (MB) Report; Recovery and Data Quality Objectives
- Laboratory Control Sample (LCS) Report; Recovery and Data Quality Objectives

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

Signatories	Position	Laboratory Department
Amaninder Dhillon	Team Lead - Semi-Volatile Instrumentation	Waterloo Organics, Waterloo, Ontario
Jeremy Gingras	Supervisor - Semi-Volatile Instrumentation	Waterloo Organics, Waterloo, Ontario
Jocelyn Kennedy	Department Manager - Semi-Volatile Organics	Waterloo Organics, Waterloo, Ontario
Josphin Masihi	Analyst	Waterloo Centralized Prep, Waterloo, Ontario
Sarah Birch	VOC Section Supervisor	Waterloo VOC, Waterloo, Ontario
Walt Kippenhuck	Supervisor - Inorganic	Waterloo Metals, Waterloo, Ontario



General Comments

The ALS Quality Control (QC) report is optionally provided to ALS clients upon request. ALS test methods include 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 predetermined Data Quality Objectives (DQOs) to provide confidence in the accuracy of associated test results. This report contains detailed results for all QC results applicable to this sample submission. Please refer to the ALS Quality Control Interpretation report (QCI) for applicable method references and methodology summaries.

Key :

Anonymous = Refers to samples which are not part of this work order, but which formed part of the QC process lot.

CAS Number = Chemical Abstracts Service number is a unique identifier assigned to discrete substances.

DQO = Data Quality Objective.

LOR = Limit of Reporting (detection limit).

RPD = Relative Percent Difference

= Indicates a QC result that did not meet the ALS DQO.

Workorder Comments

Holding times are displayed as "---" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.



Laboratory Duplicate (DUP) Report

A Laboratory Duplicate (DUP) is a randomly selected intralaboratory replicate sample. Laboratory Duplicates provide information regarding method precision and sample heterogeneity. ALS DQOs for Laboratory Duplicates are expressed as test-specific limits for Relative Percent Difference (RPD), or as an absolute difference limit of 2 times the LOR for low concentration duplicates within ~ 4-10 times the LOR (cut-off is test-specific).

Sub-Matrix: Soil/Solid					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Physical Tests (QC Lot: 1644824)											
WT2426218-001	BH103-6	Moisture	----	E144	0.25	%	10.8	10.8	0.00105%	20%	----
Physical Tests (QC Lot: 1661329)											
WT2426218-004	DUP101	Moisture	----	E144	0.25	%	1.81	1.74	0.07	Diff <2x LOR	----
Metals (QC Lot: 1644324)											
WT2426343-001	Anonymous	Antimony	7440-36-0	E440C	0.10	mg/kg	<0.10	<0.10	0	Diff <2x LOR	----
		Arsenic	7440-38-2	E440C	0.10	mg/kg	1.55	1.44	7.30%	30%	----
		Barium	7440-39-3	E440C	0.50	mg/kg	31.5	30.7	2.55%	40%	----
		Beryllium	7440-41-7	E440C	0.10	mg/kg	0.21	0.23	0.02	Diff <2x LOR	----
		Boron	7440-42-8	E440C	5.0	mg/kg	5.0	<5.0	0.010	Diff <2x LOR	----
		Cadmium	7440-43-9	E440C	0.020	mg/kg	0.047	0.051	0.004	Diff <2x LOR	----
		Chromium	7440-47-3	E440C	0.50	mg/kg	10.4	10.3	1.45%	30%	----
		Cobalt	7440-48-4	E440C	0.10	mg/kg	3.73	3.60	3.57%	30%	----
		Copper	7440-50-8	E440C	0.50	mg/kg	7.40	7.03	5.06%	30%	----
		Lead	7439-92-1	E440C	0.50	mg/kg	3.70	3.58	3.26%	40%	----
		Molybdenum	7439-98-7	E440C	0.10	mg/kg	0.22	0.22	0.005	Diff <2x LOR	----
		Nickel	7440-02-0	E440C	0.50	mg/kg	7.82	7.59	2.98%	30%	----
		Selenium	7782-49-2	E440C	0.20	mg/kg	<0.20	<0.20	0	Diff <2x LOR	----
		Silver	7440-22-4	E440C	0.10	mg/kg	<0.10	<0.10	0	Diff <2x LOR	----
		Thallium	7440-28-0	E440C	0.050	mg/kg	0.079	0.074	0.005	Diff <2x LOR	----
		Uranium	7440-61-1	E440C	0.050	mg/kg	0.377	0.360	4.81%	30%	----
		Vanadium	7440-62-2	E440C	0.20	mg/kg	20.7	20.2	2.53%	30%	----
		Zinc	7440-66-6	E440C	2.0	mg/kg	20.2	19.5	3.32%	30%	----
Volatile Organic Compounds (QC Lot: 1643854)											
WT2426037-002	Anonymous	Acetone	67-64-1	E611D	0.50	mg/kg	<0.50 µg/g	<0.50	0	Diff <2x LOR	----
		Benzene	71-43-2	E611D	0.0050	mg/kg	<0.0050 µg/g	<0.0050	0	Diff <2x LOR	----
		Bromodichloromethane	75-27-4	E611D	0.050	mg/kg	<0.050 µg/g	<0.050	0	Diff <2x LOR	----
		Bromoform	75-25-2	E611D	0.050	mg/kg	<0.050 µg/g	<0.050	0	Diff <2x LOR	----
		Bromomethane	74-83-9	E611D	0.050	mg/kg	<0.050 µg/g	<0.050	0	Diff <2x LOR	----
		Carbon tetrachloride	56-23-5	E611D	0.050	mg/kg	<0.050 µg/g	<0.050	0	Diff <2x LOR	----
		Chlorobenzene	108-90-7	E611D	0.050	mg/kg	<0.050 µg/g	<0.050	0	Diff <2x LOR	----



Sub-Matrix: Soil/Solid

Laboratory Duplicate (DUP) Report

Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Volatile Organic Compounds (QC Lot: 1643854) - continued											
WT2426037-002	Anonymous	Chloroform	67-66-3	E611D	0.050	mg/kg	<0.050 µg/g	<0.050	0	Diff <2x LOR	----
		Dibromochloromethane	124-48-1	E611D	0.050	mg/kg	<0.050 µg/g	<0.050	0	Diff <2x LOR	----
		Dibromoethane, 1,2-	106-93-4	E611D	0.050	mg/kg	<0.050 µg/g	<0.050	0	Diff <2x LOR	----
		Dichlorobenzene, 1,2-	95-50-1	E611D	0.050	mg/kg	<0.050 µg/g	<0.050	0	Diff <2x LOR	----
		Dichlorobenzene, 1,3-	541-73-1	E611D	0.050	mg/kg	<0.050 µg/g	<0.050	0	Diff <2x LOR	----
		Dichlorobenzene, 1,4-	106-46-7	E611D	0.050	mg/kg	<0.050 µg/g	<0.050	0	Diff <2x LOR	----
		Dichlorodifluoromethane	75-71-8	E611D	0.050	mg/kg	<0.050 µg/g	<0.050	0	Diff <2x LOR	----
		Dichloroethane, 1,1-	75-34-3	E611D	0.050	mg/kg	<0.050 µg/g	<0.050	0	Diff <2x LOR	----
		Dichloroethane, 1,2-	107-06-2	E611D	0.050	mg/kg	<0.050 µg/g	<0.050	0	Diff <2x LOR	----
		Dichloroethylene, 1,1-	75-35-4	E611D	0.050	mg/kg	<0.050 µg/g	<0.050	0	Diff <2x LOR	----
		Dichloroethylene, cis-1,2-	156-59-2	E611D	0.050	mg/kg	<0.050 µg/g	<0.050	0	Diff <2x LOR	----
		Dichloroethylene, trans-1,2-	156-60-5	E611D	0.050	mg/kg	<0.050 µg/g	<0.050	0	Diff <2x LOR	----
		Dichloromethane	75-09-2	E611D	0.045	mg/kg	<0.045 µg/g	<0.045	0	Diff <2x LOR	----
		Dichloropropane, 1,2-	78-87-5	E611D	0.050	mg/kg	<0.050 µg/g	<0.050	0	Diff <2x LOR	----
		Dichloropropylene, cis-1,3-	10061-01-5	E611D	0.030	mg/kg	<0.030 µg/g	<0.030	0	Diff <2x LOR	----
		Dichloropropylene, trans-1,3-	10061-02-6	E611D	0.030	mg/kg	<0.030 µg/g	<0.030	0	Diff <2x LOR	----
		Ethylbenzene	100-41-4	E611D	0.015	mg/kg	<0.015 µg/g	<0.015	0	Diff <2x LOR	----
		Hexane, n-	110-54-3	E611D	0.050	mg/kg	<0.050 µg/g	<0.050	0	Diff <2x LOR	----
		Methyl ethyl ketone [MEK]	78-93-3	E611D	0.50	mg/kg	<0.50 µg/g	<0.50	0	Diff <2x LOR	----
		Methyl isobutyl ketone [MIBK]	108-10-1	E611D	0.50	mg/kg	<0.50 µg/g	<0.50	0	Diff <2x LOR	----
		Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.040	mg/kg	<0.040 µg/g	<0.040	0	Diff <2x LOR	----
		Styrene	100-42-5	E611D	0.050	mg/kg	<0.050 µg/g	<0.050	0	Diff <2x LOR	----
		Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.050	mg/kg	<0.050 µg/g	<0.050	0	Diff <2x LOR	----
		Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.050	mg/kg	<0.050 µg/g	<0.050	0	Diff <2x LOR	----
		Tetrachloroethylene	127-18-4	E611D	0.050	mg/kg	<0.050 µg/g	<0.050	0	Diff <2x LOR	----
		Toluene	108-88-3	E611D	0.050	mg/kg	<0.050 µg/g	<0.050	0	Diff <2x LOR	----
		Trichloroethane, 1,1,1-	71-55-6	E611D	0.050	mg/kg	<0.050 µg/g	<0.050	0	Diff <2x LOR	----
		Trichloroethane, 1,1,2-	79-00-5	E611D	0.050	mg/kg	<0.050 µg/g	<0.050	0	Diff <2x LOR	----
		Trichloroethylene	79-01-6	E611D	0.010	mg/kg	<0.010 µg/g	<0.010	0	Diff <2x LOR	----
		Trichlorofluoromethane	75-69-4	E611D	0.050	mg/kg	<0.050 µg/g	<0.050	0	Diff <2x LOR	----
		Vinyl chloride	75-01-4	E611D	0.020	mg/kg	<0.020 µg/g	<0.020	0	Diff <2x LOR	----
		Xylene, m+p-	179601-23-1	E611D	0.030	mg/kg	<0.030 µg/g	<0.030	0	Diff <2x LOR	----
		Xylene, o-	95-47-6	E611D	0.030	mg/kg	<0.030 µg/g	<0.030	0	Diff <2x LOR	----

Volatile Organic Compounds (QC Lot: 1643880)



Sub-Matrix: Soil/Solid

Laboratory Duplicate (DUP) Report

Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Volatile Organic Compounds (QC Lot: 1643880) - continued											
WT2426343-002	Anonymous	Acetone	67-64-1	E611D	0.50	mg/kg	<0.50	<0.50	0	Diff <2x LOR	----
		Benzene	71-43-2	E611D	0.0050	mg/kg	<0.0050	<0.0050	0	Diff <2x LOR	----
		Bromodichloromethane	75-27-4	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Bromoform	75-25-2	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Bromomethane	74-83-9	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Carbon tetrachloride	56-23-5	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Chlorobenzene	108-90-7	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Chloroform	67-66-3	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Dibromochloromethane	124-48-1	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Dibromoethane, 1,2-	106-93-4	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Dichlorobenzene, 1,2-	95-50-1	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Dichlorobenzene, 1,3-	541-73-1	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Dichlorobenzene, 1,4-	106-46-7	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Dichlorodifluoromethane	75-71-8	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Dichloroethane, 1,1-	75-34-3	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Dichloroethane, 1,2-	107-06-2	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Dichloroethylene, 1,1-	75-35-4	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Dichloroethylene, cis-1,2-	156-59-2	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Dichloroethylene, trans-1,2-	156-60-5	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Dichloromethane	75-09-2	E611D	0.045	mg/kg	<0.045	<0.045	0	Diff <2x LOR	----
		Dichloropropane, 1,2-	78-87-5	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Dichloropropylene, cis-1,3-	10061-01-5	E611D	0.030	mg/kg	<0.030	<0.030	0	Diff <2x LOR	----
		Dichloropropylene, trans-1,3-	10061-02-6	E611D	0.030	mg/kg	<0.030	<0.030	0	Diff <2x LOR	----
		Ethylbenzene	100-41-4	E611D	0.015	mg/kg	<0.015	<0.015	0	Diff <2x LOR	----
		Hexane, n-	110-54-3	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Methyl ethyl ketone [MEK]	78-93-3	E611D	0.50	mg/kg	<0.50	<0.50	0	Diff <2x LOR	----
		Methyl isobutyl ketone [MIBK]	108-10-1	E611D	0.50	mg/kg	<0.50	<0.50	0	Diff <2x LOR	----
		Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.040	mg/kg	<0.040	<0.040	0	Diff <2x LOR	----
		Styrene	100-42-5	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Tetrachloroethylene	127-18-4	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Toluene	108-88-3	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Trichloroethane, 1,1,1-	71-55-6	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----



Sub-Matrix: Soil/Solid					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Volatile Organic Compounds (QC Lot: 1643880) - continued											
WT2426343-002	Anonymous	Trichloroethane, 1,1,2-	79-00-5	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Trichloroethylene	79-01-6	E611D	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----
		Trichlorofluoromethane	75-69-4	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Vinyl chloride	75-01-4	E611D	0.020	mg/kg	<0.020	<0.020	0	Diff <2x LOR	----
		Xylene, m+p-	179601-23-1	E611D	0.030	mg/kg	<0.030	<0.030	0	Diff <2x LOR	----
		Xylene, o-	95-47-6	E611D	0.030	mg/kg	<0.030	<0.030	0	Diff <2x LOR	----
Hydrocarbons (QC Lot: 1643855)											
WT2426037-002	Anonymous	F1 (C6-C10)	----	E581.F1	5.0	mg/kg	<5.0 µg/g	<5.0	0	Diff <2x LOR	----
Hydrocarbons (QC Lot: 1643881)											
WT2426343-002	Anonymous	F1 (C6-C10)	----	E581.F1	5.0	mg/kg	<5.0	<5.0	0	Diff <2x LOR	----
Hydrocarbons (QC Lot: 1644044)											
WT2426218-001	BH103-6	F2 (C10-C16)	----	E601.SG-L	10	mg/kg	<10	<10	0	Diff <2x LOR	----
		F3 (C16-C34)	----	E601.SG-L	50	mg/kg	<50	<50	0	Diff <2x LOR	----
		F4 (C34-C50)	----	E601.SG-L	50	mg/kg	<50	<50	0	Diff <2x LOR	----
Hydrocarbons (QC Lot: 1661322)											
WT2427634-004	Anonymous	F2 (C10-C16)	----	E601.SG-L	10	mg/kg	<10	<10	0	Diff <2x LOR	----
		F3 (C16-C34)	----	E601.SG-L	50	mg/kg	<50	<50	0	Diff <2x LOR	----
		F4 (C34-C50)	----	E601.SG-L	50	mg/kg	<50	<50	0	Diff <2x LOR	----
Polycyclic Aromatic Hydrocarbons (QC Lot: 1644043)											
WT2426218-001	BH103-6	Acenaphthene	83-32-9	E641A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Acenaphthylene	208-96-8	E641A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Anthracene	120-12-7	E641A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Benz(a)anthracene	56-55-3	E641A	0.050	mg/kg	0.086	<0.050	0.036	Diff <2x LOR	J
		Benzo(a)pyrene	50-32-8	E641A	0.050	mg/kg	0.097	<0.050	0.047	Diff <2x LOR	J
		Benzo(b+j)fluoranthene	n/a	E641A	0.050	mg/kg	0.109	<0.050	0.059	Diff <2x LOR	J
		Benzo(g,h,i)perylene	191-24-2	E641A	0.050	mg/kg	0.057	<0.050	0.007	Diff <2x LOR	J
		Benzo(k)fluoranthene	207-08-9	E641A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Chrysene	218-01-9	E641A	0.050	mg/kg	0.096	<0.050	0.046	Diff <2x LOR	J
		Dibenz(a,h)anthracene	53-70-3	E641A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Fluoranthene	206-44-0	E641A	0.050	mg/kg	0.191	# <0.050	0.141	Diff <2x LOR	DUP-H,J
		Fluorene	86-73-7	E641A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Indeno(1,2,3-c,d)pyrene	193-39-5	E641A	0.050	mg/kg	0.062	<0.050	0.012	Diff <2x LOR	J
		Methylnaphthalene, 1-	90-12-0	E641A	0.030	mg/kg	<0.030	<0.030	0	Diff <2x LOR	----
		Methylnaphthalene, 2-	91-57-6	E641A	0.030	mg/kg	<0.030	<0.030	0	Diff <2x LOR	----



Sub-Matrix: Soil/Solid					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Polycyclic Aromatic Hydrocarbons (QC Lot: 1644043) - continued											
WT2426218-001	BH103-6	Naphthalene	91-20-3	E641A	0.010	mg/kg	0.020	<0.010	0.010	Diff <2x LOR	J
		Phenanthrene	85-01-8	E641A	0.050	mg/kg	0.167	# <0.050	0.117	Diff <2x LOR	DUP-H,J
		Pyrene	129-00-0	E641A	0.050	mg/kg	0.169	# <0.050	0.119	Diff <2x LOR	DUP-H,J
Polychlorinated Biphenyls (QC Lot: 1643772)											
WT2426009-010	Anonymous	Aroclor 1016	12674-11-2	E687	0.010	mg/kg	<0.010 µg/g	<0.010	0	Diff <2x LOR	----
		Aroclor 1221	11104-28-2	E687	0.010	mg/kg	<0.010 µg/g	<0.010	0	Diff <2x LOR	----
		Aroclor 1232	11141-16-5	E687	0.010	mg/kg	<0.010 µg/g	<0.010	0	Diff <2x LOR	----
		Aroclor 1242	53469-21-9	E687	0.010	mg/kg	<0.010 µg/g	<0.010	0	Diff <2x LOR	----
		Aroclor 1248	12672-29-6	E687	0.010	mg/kg	<0.010 µg/g	<0.010	0	Diff <2x LOR	----
		Aroclor 1254	11097-69-1	E687	0.010	mg/kg	<0.010 µg/g	<0.010	0	Diff <2x LOR	----
		Aroclor 1260	11096-82-5	E687	0.010	mg/kg	<0.010 µg/g	<0.010	0	Diff <2x LOR	----
		Aroclor 1262	37324-23-5	E687	0.010	mg/kg	<0.010 µg/g	<0.010	0	Diff <2x LOR	----
		Aroclor 1268	11100-14-4	E687	0.010	mg/kg	<0.010 µg/g	<0.010	0	Diff <2x LOR	----
Polychlorinated Biphenyls (QC Lot: 1644917)											
WT2426043-003	Anonymous	Aroclor 1016	12674-11-2	E687	0.010	mg/kg	<0.010 µg/g	<0.010	0.0004	Diff <2x LOR	----
		Aroclor 1221	11104-28-2	E687	0.010	mg/kg	<0.010 µg/g	<0.010	0.0004	Diff <2x LOR	----
		Aroclor 1232	11141-16-5	E687	0.010	mg/kg	<0.010 µg/g	<0.010	0.0004	Diff <2x LOR	----
		Aroclor 1242	53469-21-9	E687	0.010	mg/kg	<0.010 µg/g	<0.010	0.0004	Diff <2x LOR	----
		Aroclor 1248	12672-29-6	E687	0.010	mg/kg	<0.010 µg/g	<0.010	0.0004	Diff <2x LOR	----
		Aroclor 1254	11097-69-1	E687	0.010	mg/kg	<0.010 µg/g	<0.010	0.0004	Diff <2x LOR	----
		Aroclor 1260	11096-82-5	E687	0.010	mg/kg	<0.010 µg/g	<0.010	0.0004	Diff <2x LOR	----
		Aroclor 1262	37324-23-5	E687	0.010	mg/kg	<0.010 µg/g	<0.010	0.0004	Diff <2x LOR	----
Aroclor 1268	11100-14-4	E687	0.010	mg/kg	<0.010 µg/g	<0.010	0.0004	Diff <2x LOR	----		

Qualifiers

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.



Method Blank (MB) Report

A Method Blank is an analyte-free matrix that undergoes sample processing identical to that carried out for test samples. Method Blank results are used to monitor and control for potential contamination from the laboratory environment and reagents. For most tests, the DQO for Method Blanks is for the result to be < LOR.

Sub-Matrix: Soil/Solid

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Physical Tests (QCLot: 1644824)						
Moisture	---	E144	0.25	%	<0.25	---
Physical Tests (QCLot: 1661329)						
Moisture	---	E144	0.25	%	<0.25	---
Metals (QCLot: 1644324)						
Antimony	7440-36-0	E440C	0.1	mg/kg	<0.10	---
Arsenic	7440-38-2	E440C	0.1	mg/kg	<0.10	---
Barium	7440-39-3	E440C	0.5	mg/kg	<0.50	---
Beryllium	7440-41-7	E440C	0.1	mg/kg	<0.10	---
Boron	7440-42-8	E440C	5	mg/kg	<5.0	---
Cadmium	7440-43-9	E440C	0.02	mg/kg	<0.020	---
Chromium	7440-47-3	E440C	0.5	mg/kg	<0.50	---
Cobalt	7440-48-4	E440C	0.1	mg/kg	<0.10	---
Copper	7440-50-8	E440C	0.5	mg/kg	<0.50	---
Lead	7439-92-1	E440C	0.5	mg/kg	<0.50	---
Molybdenum	7439-98-7	E440C	0.1	mg/kg	<0.10	---
Nickel	7440-02-0	E440C	0.5	mg/kg	<0.50	---
Selenium	7782-49-2	E440C	0.2	mg/kg	<0.20	---
Silver	7440-22-4	E440C	0.1	mg/kg	<0.10	---
Thallium	7440-28-0	E440C	0.05	mg/kg	<0.050	---
Uranium	7440-61-1	E440C	0.05	mg/kg	<0.050	---
Vanadium	7440-62-2	E440C	0.2	mg/kg	<0.20	---
Zinc	7440-66-6	E440C	2	mg/kg	<2.0	---
Volatile Organic Compounds (QCLot: 1643854)						
Acetone	67-64-1	E611D	0.5	mg/kg	<0.50	---
Benzene	71-43-2	E611D	0.005	mg/kg	<0.0050	---
Bromodichloromethane	75-27-4	E611D	0.05	mg/kg	<0.050	---
Bromoform	75-25-2	E611D	0.05	mg/kg	<0.050	---
Bromomethane	74-83-9	E611D	0.05	mg/kg	<0.050	---
Carbon tetrachloride	56-23-5	E611D	0.05	mg/kg	<0.050	---
Chlorobenzene	108-90-7	E611D	0.05	mg/kg	<0.050	---
Chloroform	67-66-3	E611D	0.05	mg/kg	<0.050	---
Dibromochloromethane	124-48-1	E611D	0.05	mg/kg	<0.050	---



Sub-Matrix: Soil/Solid

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Volatile Organic Compounds (QCLot: 1643854) - continued						
Dibromoethane, 1,2-	106-93-4	E611D	0.05	mg/kg	<0.050	----
Dichlorobenzene, 1,2-	95-50-1	E611D	0.05	mg/kg	<0.050	----
Dichlorobenzene, 1,3-	541-73-1	E611D	0.05	mg/kg	<0.050	----
Dichlorobenzene, 1,4-	106-46-7	E611D	0.05	mg/kg	<0.050	----
Dichlorodifluoromethane	75-71-8	E611D	0.05	mg/kg	<0.050	----
Dichloroethane, 1,1-	75-34-3	E611D	0.05	mg/kg	<0.050	----
Dichloroethane, 1,2-	107-06-2	E611D	0.05	mg/kg	<0.050	----
Dichloroethylene, 1,1-	75-35-4	E611D	0.05	mg/kg	<0.050	----
Dichloroethylene, cis-1,2-	156-59-2	E611D	0.05	mg/kg	<0.050	----
Dichloroethylene, trans-1,2-	156-60-5	E611D	0.05	mg/kg	<0.050	----
Dichloromethane	75-09-2	E611D	0.045	mg/kg	<0.045	----
Dichloropropane, 1,2-	78-87-5	E611D	0.05	mg/kg	<0.050	----
Dichloropropylene, cis-1,3-	10061-01-5	E611D	0.03	mg/kg	<0.030	----
Dichloropropylene, trans-1,3-	10061-02-6	E611D	0.03	mg/kg	<0.030	----
Ethylbenzene	100-41-4	E611D	0.015	mg/kg	<0.015	----
Hexane, n-	110-54-3	E611D	0.05	mg/kg	<0.050	----
Methyl ethyl ketone [MEK]	78-93-3	E611D	0.5	mg/kg	<0.50	----
Methyl isobutyl ketone [MIBK]	108-10-1	E611D	0.5	mg/kg	<0.50	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.04	mg/kg	<0.040	----
Styrene	100-42-5	E611D	0.05	mg/kg	<0.050	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.05	mg/kg	<0.050	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.05	mg/kg	<0.050	----
Tetrachloroethylene	127-18-4	E611D	0.05	mg/kg	<0.050	----
Toluene	108-88-3	E611D	0.05	mg/kg	<0.050	----
Trichloroethane, 1,1,1-	71-55-6	E611D	0.05	mg/kg	<0.050	----
Trichloroethane, 1,1,2-	79-00-5	E611D	0.05	mg/kg	<0.050	----
Trichloroethylene	79-01-6	E611D	0.01	mg/kg	<0.010	----
Trichlorofluoromethane	75-69-4	E611D	0.05	mg/kg	<0.050	----
Vinyl chloride	75-01-4	E611D	0.02	mg/kg	<0.020	----
Xylene, m+p-	179601-23-1	E611D	0.03	mg/kg	<0.030	----
Xylene, o-	95-47-6	E611D	0.03	mg/kg	<0.030	----
Volatile Organic Compounds (QCLot: 1643880)						
Acetone	67-64-1	E611D	0.5	mg/kg	<0.50	----
Benzene	71-43-2	E611D	0.005	mg/kg	<0.0050	----
Bromodichloromethane	75-27-4	E611D	0.05	mg/kg	<0.050	----



Sub-Matrix: Soil/Solid

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Volatile Organic Compounds (QCLot: 1643880) - continued						
Bromoform	75-25-2	E611D	0.05	mg/kg	<0.050	----
Bromomethane	74-83-9	E611D	0.05	mg/kg	<0.050	----
Carbon tetrachloride	56-23-5	E611D	0.05	mg/kg	<0.050	----
Chlorobenzene	108-90-7	E611D	0.05	mg/kg	<0.050	----
Chloroform	67-66-3	E611D	0.05	mg/kg	<0.050	----
Dibromochloromethane	124-48-1	E611D	0.05	mg/kg	<0.050	----
Dibromoethane, 1,2-	106-93-4	E611D	0.05	mg/kg	<0.050	----
Dichlorobenzene, 1,2-	95-50-1	E611D	0.05	mg/kg	<0.050	----
Dichlorobenzene, 1,3-	541-73-1	E611D	0.05	mg/kg	<0.050	----
Dichlorobenzene, 1,4-	106-46-7	E611D	0.05	mg/kg	<0.050	----
Dichlorodifluoromethane	75-71-8	E611D	0.05	mg/kg	<0.050	----
Dichloroethane, 1,1-	75-34-3	E611D	0.05	mg/kg	<0.050	----
Dichloroethane, 1,2-	107-06-2	E611D	0.05	mg/kg	<0.050	----
Dichloroethylene, 1,1-	75-35-4	E611D	0.05	mg/kg	<0.050	----
Dichloroethylene, cis-1,2-	156-59-2	E611D	0.05	mg/kg	<0.050	----
Dichloroethylene, trans-1,2-	156-60-5	E611D	0.05	mg/kg	<0.050	----
Dichloromethane	75-09-2	E611D	0.045	mg/kg	<0.045	----
Dichloropropane, 1,2-	78-87-5	E611D	0.05	mg/kg	<0.050	----
Dichloropropylene, cis-1,3-	10061-01-5	E611D	0.03	mg/kg	<0.030	----
Dichloropropylene, trans-1,3-	10061-02-6	E611D	0.03	mg/kg	<0.030	----
Ethylbenzene	100-41-4	E611D	0.015	mg/kg	<0.015	----
Hexane, n-	110-54-3	E611D	0.05	mg/kg	<0.050	----
Methyl ethyl ketone [MEK]	78-93-3	E611D	0.5	mg/kg	<0.50	----
Methyl isobutyl ketone [MIBK]	108-10-1	E611D	0.5	mg/kg	<0.50	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.04	mg/kg	<0.040	----
Styrene	100-42-5	E611D	0.05	mg/kg	<0.050	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.05	mg/kg	<0.050	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.05	mg/kg	<0.050	----
Tetrachloroethylene	127-18-4	E611D	0.05	mg/kg	<0.050	----
Toluene	108-88-3	E611D	0.05	mg/kg	<0.050	----
Trichloroethane, 1,1,1-	71-55-6	E611D	0.05	mg/kg	<0.050	----
Trichloroethane, 1,1,2-	79-00-5	E611D	0.05	mg/kg	<0.050	----
Trichloroethylene	79-01-6	E611D	0.01	mg/kg	<0.010	----
Trichlorofluoromethane	75-69-4	E611D	0.05	mg/kg	<0.050	----
Vinyl chloride	75-01-4	E611D	0.02	mg/kg	<0.020	----



Sub-Matrix: Soil/Solid

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Volatile Organic Compounds (QCLot: 1643880) - continued						
Xylene, m+p-	179601-23-1	E611D	0.03	mg/kg	<0.030	----
Xylene, o-	95-47-6	E611D	0.03	mg/kg	<0.030	----
Hydrocarbons (QCLot: 1643855)						
F1 (C6-C10)	----	E581.F1	5	mg/kg	<5.0	----
Hydrocarbons (QCLot: 1643881)						
F1 (C6-C10)	----	E581.F1	5	mg/kg	<5.0	----
Hydrocarbons (QCLot: 1644044)						
F2 (C10-C16)	----	E601.SG-L	10	mg/kg	<10	----
F3 (C16-C34)	----	E601.SG-L	50	mg/kg	<50	----
F4 (C34-C50)	----	E601.SG-L	50	mg/kg	<50	----
Hydrocarbons (QCLot: 1661322)						
F2 (C10-C16)	----	E601.SG-L	10	mg/kg	<10	----
F3 (C16-C34)	----	E601.SG-L	50	mg/kg	<50	----
F4 (C34-C50)	----	E601.SG-L	50	mg/kg	<50	----
Polycyclic Aromatic Hydrocarbons (QCLot: 1644043)						
Acenaphthene	83-32-9	E641A	0.05	mg/kg	<0.050	----
Acenaphthylene	208-96-8	E641A	0.05	mg/kg	<0.050	----
Anthracene	120-12-7	E641A	0.05	mg/kg	<0.050	----
Benz(a)anthracene	56-55-3	E641A	0.05	mg/kg	<0.050	----
Benzo(a)pyrene	50-32-8	E641A	0.05	mg/kg	<0.050	----
Benzo(b+j)fluoranthene	n/a	E641A	0.05	mg/kg	<0.050	----
Benzo(g,h,i)perylene	191-24-2	E641A	0.05	mg/kg	<0.050	----
Benzo(k)fluoranthene	207-08-9	E641A	0.05	mg/kg	<0.050	----
Chrysene	218-01-9	E641A	0.05	mg/kg	<0.050	----
Dibenz(a,h)anthracene	53-70-3	E641A	0.05	mg/kg	<0.050	----
Fluoranthene	206-44-0	E641A	0.05	mg/kg	<0.050	----
Fluorene	86-73-7	E641A	0.05	mg/kg	<0.050	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A	0.05	mg/kg	<0.050	----
Methylnaphthalene, 1-	90-12-0	E641A	0.03	mg/kg	<0.030	----
Methylnaphthalene, 2-	91-57-6	E641A	0.03	mg/kg	<0.030	----
Naphthalene	91-20-3	E641A	0.01	mg/kg	<0.010	----
Phenanthrene	85-01-8	E641A	0.05	mg/kg	<0.050	----
Pyrene	129-00-0	E641A	0.05	mg/kg	<0.050	----
Polychlorinated Biphenyls (QCLot: 1643772)						
Aroclor 1016	12674-11-2	E687	0.01	mg/kg	<0.010	----

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 Project : 30100



Sub-Matrix: Soil/Solid

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Polychlorinated Biphenyls (QCLot: 1643772) - continued						
Aroclor 1221	11104-28-2	E687	0.01	mg/kg	<0.010	----
Aroclor 1232	11141-16-5	E687	0.01	mg/kg	<0.010	----
Aroclor 1242	53469-21-9	E687	0.01	mg/kg	<0.010	----
Aroclor 1248	12672-29-6	E687	0.01	mg/kg	<0.010	----
Aroclor 1254	11097-69-1	E687	0.01	mg/kg	<0.010	----
Aroclor 1260	11096-82-5	E687	0.01	mg/kg	<0.010	----
Aroclor 1262	37324-23-5	E687	0.01	mg/kg	<0.010	----
Aroclor 1268	11100-14-4	E687	0.01	mg/kg	<0.010	----
Polychlorinated Biphenyls (QCLot: 1644917)						
Aroclor 1016	12674-11-2	E687	0.01	mg/kg	<0.010	----
Aroclor 1221	11104-28-2	E687	0.01	mg/kg	<0.010	----
Aroclor 1232	11141-16-5	E687	0.01	mg/kg	<0.010	----
Aroclor 1242	53469-21-9	E687	0.01	mg/kg	<0.010	----
Aroclor 1248	12672-29-6	E687	0.01	mg/kg	<0.010	----
Aroclor 1254	11097-69-1	E687	0.01	mg/kg	<0.010	----
Aroclor 1260	11096-82-5	E687	0.01	mg/kg	<0.010	----
Aroclor 1262	37324-23-5	E687	0.01	mg/kg	<0.010	----
Aroclor 1268	11100-14-4	E687	0.01	mg/kg	<0.010	----



Laboratory Control Sample (LCS) Report

A Laboratory Control Sample (LCS) is an analyte-free matrix that has been fortified (spiked) with test analytes at known concentration and processed in an identical manner to test samples. LCS results are expressed as percent recovery, and are used to monitor and control test method accuracy and precision, independent of test sample matrix.

Sub-Matrix: Soil/Solid

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Physical Tests (QCLot: 1644824)									
Moisture	----	E144	0.25	%	50 %	99.4	90.0	110	----
Physical Tests (QCLot: 1661329)									
Moisture	----	E144	0.25	%	50 %	101	90.0	110	----
Metals (QCLot: 1644324)									
Antimony	7440-36-0	E440C	0.1	mg/kg	100 mg/kg	102	80.0	120	----
Arsenic	7440-38-2	E440C	0.1	mg/kg	100 mg/kg	104	80.0	120	----
Barium	7440-39-3	E440C	0.5	mg/kg	25 mg/kg	98.0	80.0	120	----
Beryllium	7440-41-7	E440C	0.1	mg/kg	10 mg/kg	95.3	80.0	120	----
Boron	7440-42-8	E440C	5	mg/kg	100 mg/kg	95.3	80.0	120	----
Cadmium	7440-43-9	E440C	0.02	mg/kg	10 mg/kg	97.2	80.0	120	----
Chromium	7440-47-3	E440C	0.5	mg/kg	25 mg/kg	98.4	80.0	120	----
Cobalt	7440-48-4	E440C	0.1	mg/kg	25 mg/kg	96.9	80.0	120	----
Copper	7440-50-8	E440C	0.5	mg/kg	25 mg/kg	97.0	80.0	120	----
Lead	7439-92-1	E440C	0.5	mg/kg	50 mg/kg	98.2	80.0	120	----
Molybdenum	7439-98-7	E440C	0.1	mg/kg	25 mg/kg	101	80.0	120	----
Nickel	7440-02-0	E440C	0.5	mg/kg	50 mg/kg	96.4	80.0	120	----
Selenium	7782-49-2	E440C	0.2	mg/kg	100 mg/kg	102	80.0	120	----
Silver	7440-22-4	E440C	0.1	mg/kg	10 mg/kg	# 65.1	80.0	120	RRQC
Thallium	7440-28-0	E440C	0.05	mg/kg	100 mg/kg	97.0	80.0	120	----
Uranium	7440-61-1	E440C	0.05	mg/kg	0.5 mg/kg	96.4	80.0	120	----
Vanadium	7440-62-2	E440C	0.2	mg/kg	50 mg/kg	99.3	80.0	120	----
Zinc	7440-66-6	E440C	2	mg/kg	50 mg/kg	96.6	80.0	120	----
Volatile Organic Compounds (QCLot: 1643854)									
Acetone	67-64-1	E611D	0.5	mg/kg	3.48 mg/kg	85.9	60.0	140	----
Benzene	71-43-2	E611D	0.005	mg/kg	3.48 mg/kg	84.6	70.0	130	----
Bromodichloromethane	75-27-4	E611D	0.05	mg/kg	3.48 mg/kg	88.6	50.0	140	----
Bromoform	75-25-2	E611D	0.05	mg/kg	3.48 mg/kg	93.3	70.0	130	----
Bromomethane	74-83-9	E611D	0.05	mg/kg	3.48 mg/kg	75.2	50.0	140	----
Carbon tetrachloride	56-23-5	E611D	0.05	mg/kg	3.48 mg/kg	95.4	70.0	130	----
Chlorobenzene	108-90-7	E611D	0.05	mg/kg	3.48 mg/kg	88.4	70.0	130	----
Chloroform	67-66-3	E611D	0.05	mg/kg	3.48 mg/kg	92.3	70.0	130	----



Sub-Matrix: Soil/Solid					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		Qualifier
					Target Concentration	LCS	Low	High	
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Volatile Organic Compounds (QCLot: 1643854) - continued									
Dibromochloromethane	124-48-1	E611D	0.05	mg/kg	3.48 mg/kg	93.5	60.0	130	----
Dibromoethane, 1,2-	106-93-4	E611D	0.05	mg/kg	3.48 mg/kg	92.4	70.0	130	----
Dichlorobenzene, 1,2-	95-50-1	E611D	0.05	mg/kg	3.48 mg/kg	90.7	70.0	130	----
Dichlorobenzene, 1,3-	541-73-1	E611D	0.05	mg/kg	3.48 mg/kg	94.4	70.0	130	----
Dichlorobenzene, 1,4-	106-46-7	E611D	0.05	mg/kg	3.48 mg/kg	93.5	70.0	130	----
Dichlorodifluoromethane	75-71-8	E611D	0.05	mg/kg	3.48 mg/kg	58.5	50.0	140	----
Dichloroethane, 1,1-	75-34-3	E611D	0.05	mg/kg	3.48 mg/kg	84.9	60.0	130	----
Dichloroethane, 1,2-	107-06-2	E611D	0.05	mg/kg	3.48 mg/kg	88.9	60.0	130	----
Dichloroethylene, 1,1-	75-35-4	E611D	0.05	mg/kg	3.48 mg/kg	82.4	60.0	130	----
Dichloroethylene, cis-1,2-	156-59-2	E611D	0.05	mg/kg	3.48 mg/kg	86.2	70.0	130	----
Dichloroethylene, trans-1,2-	156-60-5	E611D	0.05	mg/kg	3.48 mg/kg	84.7	60.0	130	----
Dichloromethane	75-09-2	E611D	0.045	mg/kg	3.48 mg/kg	89.6	70.0	130	----
Dichloropropane, 1,2-	78-87-5	E611D	0.05	mg/kg	3.48 mg/kg	83.6	70.0	130	----
Dichloropropylene, cis-1,3-	10061-01-5	E611D	0.03	mg/kg	3.48 mg/kg	83.2	70.0	130	----
Dichloropropylene, trans-1,3-	10061-02-6	E611D	0.03	mg/kg	3.48 mg/kg	85.1	70.0	130	----
Ethylbenzene	100-41-4	E611D	0.015	mg/kg	3.48 mg/kg	86.5	70.0	130	----
Hexane, n-	110-54-3	E611D	0.05	mg/kg	3.48 mg/kg	82.6	70.0	130	----
Methyl ethyl ketone [MEK]	78-93-3	E611D	0.5	mg/kg	3.48 mg/kg	80.1	60.0	140	----
Methyl isobutyl ketone [MIBK]	108-10-1	E611D	0.5	mg/kg	3.48 mg/kg	75.0	60.0	140	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.04	mg/kg	3.48 mg/kg	87.8	70.0	130	----
Styrene	100-42-5	E611D	0.05	mg/kg	3.48 mg/kg	86.4	70.0	130	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.05	mg/kg	3.48 mg/kg	92.0	60.0	130	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.05	mg/kg	3.48 mg/kg	97.8	60.0	130	----
Tetrachloroethylene	127-18-4	E611D	0.05	mg/kg	3.48 mg/kg	100	60.0	130	----
Toluene	108-88-3	E611D	0.05	mg/kg	3.48 mg/kg	88.2	70.0	130	----
Trichloroethane, 1,1,1-	71-55-6	E611D	0.05	mg/kg	3.48 mg/kg	92.4	60.0	130	----
Trichloroethane, 1,1,2-	79-00-5	E611D	0.05	mg/kg	3.48 mg/kg	92.6	60.0	130	----
Trichloroethylene	79-01-6	E611D	0.01	mg/kg	3.48 mg/kg	96.1	60.0	130	----
Trichlorofluoromethane	75-69-4	E611D	0.05	mg/kg	3.48 mg/kg	88.2	50.0	140	----
Vinyl chloride	75-01-4	E611D	0.02	mg/kg	3.48 mg/kg	82.4	60.0	140	----
Xylene, m+p-	179601-23-1	E611D	0.03	mg/kg	6.95 mg/kg	86.7	70.0	130	----
Xylene, o-	95-47-6	E611D	0.03	mg/kg	3.48 mg/kg	85.7	70.0	130	----
Volatile Organic Compounds (QCLot: 1643880)									
Acetone	67-64-1	E611D	0.5	mg/kg	3.48 mg/kg	104	60.0	140	----
Benzene	71-43-2	E611D	0.005	mg/kg	3.48 mg/kg	96.7	70.0	130	----
Bromodichloromethane	75-27-4	E611D	0.05	mg/kg	3.48 mg/kg	99.9	50.0	140	----



Sub-Matrix: Soil/Solid

Sub-Matrix: Soil/Solid					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Volatile Organic Compounds (QCLot: 1643880) - continued									
Bromoform	75-25-2	E611D	0.05	mg/kg	3.48 mg/kg	94.7	70.0	130	----
Bromomethane	74-83-9	E611D	0.05	mg/kg	3.48 mg/kg	79.4	50.0	140	----
Carbon tetrachloride	56-23-5	E611D	0.05	mg/kg	3.48 mg/kg	102	70.0	130	----
Chlorobenzene	108-90-7	E611D	0.05	mg/kg	3.48 mg/kg	98.1	70.0	130	----
Chloroform	67-66-3	E611D	0.05	mg/kg	3.48 mg/kg	102	70.0	130	----
Dibromochloromethane	124-48-1	E611D	0.05	mg/kg	3.48 mg/kg	101	60.0	130	----
Dibromoethane, 1,2-	106-93-4	E611D	0.05	mg/kg	3.48 mg/kg	98.1	70.0	130	----
Dichlorobenzene, 1,2-	95-50-1	E611D	0.05	mg/kg	3.48 mg/kg	98.2	70.0	130	----
Dichlorobenzene, 1,3-	541-73-1	E611D	0.05	mg/kg	3.48 mg/kg	98.2	70.0	130	----
Dichlorobenzene, 1,4-	106-46-7	E611D	0.05	mg/kg	3.48 mg/kg	97.9	70.0	130	----
Dichlorodifluoromethane	75-71-8	E611D	0.05	mg/kg	3.48 mg/kg	61.7	50.0	140	----
Dichloroethane, 1,1-	75-34-3	E611D	0.05	mg/kg	3.48 mg/kg	100	60.0	130	----
Dichloroethane, 1,2-	107-06-2	E611D	0.05	mg/kg	3.48 mg/kg	98.0	60.0	130	----
Dichloroethylene, 1,1-	75-35-4	E611D	0.05	mg/kg	3.48 mg/kg	97.3	60.0	130	----
Dichloroethylene, cis-1,2-	156-59-2	E611D	0.05	mg/kg	3.48 mg/kg	100	70.0	130	----
Dichloroethylene, trans-1,2-	156-60-5	E611D	0.05	mg/kg	3.48 mg/kg	102	60.0	130	----
Dichloromethane	75-09-2	E611D	0.045	mg/kg	3.48 mg/kg	100	70.0	130	----
Dichloropropane, 1,2-	78-87-5	E611D	0.05	mg/kg	3.48 mg/kg	100.0	70.0	130	----
Dichloropropylene, cis-1,3-	10061-01-5	E611D	0.03	mg/kg	3.48 mg/kg	95.6	70.0	130	----
Dichloropropylene, trans-1,3-	10061-02-6	E611D	0.03	mg/kg	3.48 mg/kg	97.2	70.0	130	----
Ethylbenzene	100-41-4	E611D	0.015	mg/kg	3.48 mg/kg	96.0	70.0	130	----
Hexane, n-	110-54-3	E611D	0.05	mg/kg	3.48 mg/kg	98.4	70.0	130	----
Methyl ethyl ketone [MEK]	78-93-3	E611D	0.5	mg/kg	3.48 mg/kg	86.7	60.0	140	----
Methyl isobutyl ketone [MIBK]	108-10-1	E611D	0.5	mg/kg	3.48 mg/kg	92.8	60.0	140	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.04	mg/kg	3.48 mg/kg	96.1	70.0	130	----
Styrene	100-42-5	E611D	0.05	mg/kg	3.48 mg/kg	96.9	70.0	130	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.05	mg/kg	3.48 mg/kg	103	60.0	130	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.05	mg/kg	3.48 mg/kg	106	60.0	130	----
Tetrachloroethylene	127-18-4	E611D	0.05	mg/kg	3.48 mg/kg	101	60.0	130	----
Toluene	108-88-3	E611D	0.05	mg/kg	3.48 mg/kg	96.1	70.0	130	----
Trichloroethane, 1,1,1-	71-55-6	E611D	0.05	mg/kg	3.48 mg/kg	101	60.0	130	----
Trichloroethane, 1,1,2-	79-00-5	E611D	0.05	mg/kg	3.48 mg/kg	101	60.0	130	----
Trichloroethylene	79-01-6	E611D	0.01	mg/kg	3.48 mg/kg	102	60.0	130	----
Trichlorofluoromethane	75-69-4	E611D	0.05	mg/kg	3.48 mg/kg	95.9	50.0	140	----
Vinyl chloride	75-01-4	E611D	0.02	mg/kg	3.48 mg/kg	98.8	60.0	140	----
Xylene, m+p-	179601-23-1	E611D	0.03	mg/kg	6.95 mg/kg	98.4	70.0	130	----



Sub-Matrix: Soil/Solid					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Volatile Organic Compounds (QCLot: 1643880) - continued									
Xylene, o-	95-47-6	E611D	0.03	mg/kg	3.48 mg/kg	97.0	70.0	130	----
Hydrocarbons (QCLot: 1643855)									
F1 (C6-C10)	----	E581.F1	5	mg/kg	69.2 mg/kg	95.8	80.0	120	----
Hydrocarbons (QCLot: 1643881)									
F1 (C6-C10)	----	E581.F1	5	mg/kg	69.2 mg/kg	98.8	80.0	120	----
Hydrocarbons (QCLot: 1644044)									
F2 (C10-C16)	----	E601.SG-L	10	mg/kg	712 mg/kg	96.1	70.0	130	----
F3 (C16-C34)	----	E601.SG-L	50	mg/kg	1470 mg/kg	97.1	70.0	130	----
F4 (C34-C50)	----	E601.SG-L	50	mg/kg	796 mg/kg	107	70.0	130	----
Hydrocarbons (QCLot: 1661322)									
F2 (C10-C16)	----	E601.SG-L	10	mg/kg	712 mg/kg	98.4	70.0	130	----
F3 (C16-C34)	----	E601.SG-L	50	mg/kg	1470 mg/kg	99.4	70.0	130	----
F4 (C34-C50)	----	E601.SG-L	50	mg/kg	796 mg/kg	104	70.0	130	----
Polycyclic Aromatic Hydrocarbons (QCLot: 1644043)									
Acenaphthene	83-32-9	E641A	0.05	mg/kg	0.5 mg/kg	87.7	60.0	130	----
Acenaphthylene	208-96-8	E641A	0.05	mg/kg	0.5 mg/kg	89.2	60.0	130	----
Anthracene	120-12-7	E641A	0.05	mg/kg	0.5 mg/kg	93.6	60.0	130	----
Benz(a)anthracene	56-55-3	E641A	0.05	mg/kg	0.5 mg/kg	79.5	60.0	130	----
Benzo(a)pyrene	50-32-8	E641A	0.05	mg/kg	0.5 mg/kg	88.1	60.0	130	----
Benzo(b+j)fluoranthene	n/a	E641A	0.05	mg/kg	0.5 mg/kg	79.8	60.0	130	----
Benzo(g,h,i)perylene	191-24-2	E641A	0.05	mg/kg	0.5 mg/kg	90.9	60.0	130	----
Benzo(k)fluoranthene	207-08-9	E641A	0.05	mg/kg	0.5 mg/kg	91.6	60.0	130	----
Chrysene	218-01-9	E641A	0.05	mg/kg	0.5 mg/kg	89.7	60.0	130	----
Dibenz(a,h)anthracene	53-70-3	E641A	0.05	mg/kg	0.5 mg/kg	89.1	60.0	130	----
Fluoranthene	206-44-0	E641A	0.05	mg/kg	0.5 mg/kg	90.0	60.0	130	----
Fluorene	86-73-7	E641A	0.05	mg/kg	0.5 mg/kg	91.0	60.0	130	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A	0.05	mg/kg	0.5 mg/kg	89.1	60.0	130	----
Methylnaphthalene, 1-	90-12-0	E641A	0.03	mg/kg	0.5 mg/kg	86.9	60.0	130	----
Methylnaphthalene, 2-	91-57-6	E641A	0.03	mg/kg	0.5 mg/kg	87.5	60.0	130	----
Naphthalene	91-20-3	E641A	0.01	mg/kg	0.5 mg/kg	84.8	60.0	130	----
Phenanthrene	85-01-8	E641A	0.05	mg/kg	0.5 mg/kg	83.7	60.0	130	----
Pyrene	129-00-0	E641A	0.05	mg/kg	0.5 mg/kg	88.4	60.0	130	----
Polychlorinated Biphenyls (QCLot: 1643772)									



Sub-Matrix: Soil/Solid					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		Qualifier
					Target Concentration	LCS	Low	High	
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Polychlorinated Biphenyls (QCLot: 1643772) - continued									
Aroclor 1016	12674-11-2	E687	0.01	mg/kg	0.012 mg/kg	84.6	60.0	140	----
Aroclor 1221	11104-28-2	E687	0.01	mg/kg	0.012 mg/kg	84.6	60.0	140	----
Aroclor 1232	11141-16-5	E687	0.01	mg/kg	0.012 mg/kg	84.6	60.0	140	----
Aroclor 1242	53469-21-9	E687	0.01	mg/kg	0.012 mg/kg	84.6	60.0	140	----
Aroclor 1248	12672-29-6	E687	0.01	mg/kg	0.012 mg/kg	65.7	60.0	140	----
Aroclor 1254	11097-69-1	E687	0.01	mg/kg	0.012 mg/kg	68.8	60.0	140	----
Aroclor 1260	11096-82-5	E687	0.01	mg/kg	0.012 mg/kg	78.2	60.0	140	----
Aroclor 1262	37324-23-5	E687	0.01	mg/kg	0.012 mg/kg	78.2	60.0	140	----
Aroclor 1268	11100-14-4	E687	0.01	mg/kg	0.012 mg/kg	78.2	60.0	140	----
Polychlorinated Biphenyls (QCLot: 1644917)									
Aroclor 1016	12674-11-2	E687	0.01	mg/kg	0.012 mg/kg	74.6	60.0	140	----
Aroclor 1221	11104-28-2	E687	0.01	mg/kg	0.012 mg/kg	74.6	60.0	140	----
Aroclor 1232	11141-16-5	E687	0.01	mg/kg	0.012 mg/kg	74.6	60.0	140	----
Aroclor 1242	53469-21-9	E687	0.01	mg/kg	0.012 mg/kg	74.6	60.0	140	----
Aroclor 1248	12672-29-6	E687	0.01	mg/kg	0.012 mg/kg	74.0	60.0	140	----
Aroclor 1254	11097-69-1	E687	0.01	mg/kg	0.012 mg/kg	65.0	60.0	140	----
Aroclor 1260	11096-82-5	E687	0.01	mg/kg	0.012 mg/kg	72.8	60.0	140	----
Aroclor 1262	37324-23-5	E687	0.01	mg/kg	0.012 mg/kg	72.8	60.0	140	----
Aroclor 1268	11100-14-4	E687	0.01	mg/kg	0.012 mg/kg	72.8	60.0	140	----

Qualifiers

Qualifier	Description
RRQC	Refer to report comments for information regarding this QC result.



Matrix Spike (MS) Report

A Matrix Spike (MS) is a randomly selected intra-laboratory replicate sample that has been fortified (spiked) with test analytes at known concentration, and processed in an identical manner to test samples. Matrix Spikes provide information regarding analyte recovery and potential matrix effects. MS DQO exceedances due to sample matrix may sometimes be unavoidable; in such cases, test results for the associated sample (or similar samples) may be subject to bias. ND – Recovery not determined, background level >= 1x spike level.

Sub-Matrix: Soil/Solid

Sub-Matrix: Soil/Solid					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Volatile Organic Compounds (QCLot: 1643854)										
WT2426037-002	Anonymous	Acetone	67-64-1	E611D	2.16 mg/kg	2.12 mg/kg	102	50.0	140	----
		Benzene	71-43-2	E611D	2.14 mg/kg	2.12 mg/kg	101	50.0	140	----
		Bromodichloromethane	75-27-4	E611D	2.22 mg/kg	2.12 mg/kg	105	50.0	140	----
		Bromoform	75-25-2	E611D	2.23 mg/kg	2.12 mg/kg	105	50.0	140	----
		Bromomethane	74-83-9	E611D	2.06 mg/kg	2.12 mg/kg	97.4	50.0	140	----
		Carbon tetrachloride	56-23-5	E611D	2.42 mg/kg	2.12 mg/kg	114	50.0	140	----
		Chlorobenzene	108-90-7	E611D	2.14 mg/kg	2.12 mg/kg	101	50.0	140	----
		Chloroform	67-66-3	E611D	2.34 mg/kg	2.12 mg/kg	110	50.0	140	----
		Dibromochloromethane	124-48-1	E611D	2.25 mg/kg	2.12 mg/kg	106	50.0	140	----
		Dibromoethane, 1,2-	106-93-4	E611D	2.22 mg/kg	2.12 mg/kg	105	50.0	140	----
		Dichlorobenzene, 1,2-	95-50-1	E611D	2.13 mg/kg	2.12 mg/kg	101	50.0	140	----
		Dichlorobenzene, 1,3-	541-73-1	E611D	2.20 mg/kg	2.12 mg/kg	104	50.0	140	----
		Dichlorobenzene, 1,4-	106-46-7	E611D	2.19 mg/kg	2.12 mg/kg	103	50.0	140	----
		Dichlorodifluoromethane	75-71-8	E611D	2.56 mg/kg	2.12 mg/kg	121	50.0	140	----
		Dichloroethane, 1,1-	75-34-3	E611D	1.76 mg/kg	2.12 mg/kg	83.2	50.0	140	----
		Dichloroethane, 1,2-	107-06-2	E611D	2.25 mg/kg	2.12 mg/kg	106	50.0	140	----
		Dichloroethylene, 1,1-	75-35-4	E611D	2.16 mg/kg	2.12 mg/kg	102	50.0	140	----
		Dichloroethylene, cis-1,2-	156-59-2	E611D	2.18 mg/kg	2.12 mg/kg	103	50.0	140	----
		Dichloroethylene, trans-1,2-	156-60-5	E611D	2.16 mg/kg	2.12 mg/kg	102	50.0	140	----
		Dichloromethane	75-09-2	E611D	2.30 mg/kg	2.12 mg/kg	109	50.0	140	----
		Dichloropropane, 1,2-	78-87-5	E611D	2.10 mg/kg	2.12 mg/kg	99.3	50.0	140	----
		Dichloropropylene, cis-1,3-	10061-01-5	E611D	2.05 mg/kg	2.12 mg/kg	97.0	50.0	140	----
		Dichloropropylene, trans-1,3-	10061-02-6	E611D	2.03 mg/kg	2.12 mg/kg	96.0	50.0	140	----
		Ethylbenzene	100-41-4	E611D	2.09 mg/kg	2.12 mg/kg	99.0	50.0	140	----
		Hexane, n-	110-54-3	E611D	1.83 mg/kg	2.12 mg/kg	86.5	50.0	140	----
		Methyl ethyl ketone [MEK]	78-93-3	E611D	2.08 mg/kg	2.12 mg/kg	98.6	50.0	140	----
		Methyl isobutyl ketone [MIBK]	108-10-1	E611D	1.84 mg/kg	2.12 mg/kg	86.9	50.0	140	----
		Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	2.08 mg/kg	2.12 mg/kg	98.2	50.0	140	----
		Styrene	100-42-5	E611D	2.07 mg/kg	2.12 mg/kg	97.9	50.0	140	----
		Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	2.21 mg/kg	2.12 mg/kg	104	50.0	140	----
		Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	2.34 mg/kg	2.12 mg/kg	111	50.0	140	----
		Tetrachloroethylene	127-18-4	E611D	2.42 mg/kg	2.12 mg/kg	114	50.0	140	----
		Toluene	108-88-3	E611D	2.14 mg/kg	2.12 mg/kg	101	50.0	140	----
		Trichloroethane, 1,1,1-	71-55-6	E611D	2.34 mg/kg	2.12 mg/kg	111	50.0	140	----
		Trichloroethane, 1,1,2-	79-00-5	E611D	2.24 mg/kg	2.12 mg/kg	106	50.0	140	----
		Trichloroethylene	79-01-6	E611D	2.41 mg/kg	2.12 mg/kg	114	50.0	140	----
		Trichlorofluoromethane	75-69-4	E611D	2.36 mg/kg	2.12 mg/kg	111	50.0	140	----
		Vinyl chloride	75-01-4	E611D	2.40 mg/kg	2.12 mg/kg	113	50.0	140	----
		Xylene, m+p-	179601-23-1	E611D	4.18 mg/kg	4.23 mg/kg	98.7	50.0	140	----
		Xylene, o-	95-47-6	E611D	2.06 mg/kg	2.12 mg/kg	97.3	50.0	140	----



Sub-Matrix: Soil/Solid					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Volatile Organic Compounds (QCLot: 1643880)										
WT2426343-002	Anonymous	Acetone	67-64-1	E611D	2.42 mg/kg	2.2 mg/kg	110	50.0	140	----
		Benzene	71-43-2	E611D	2.27 mg/kg	2.2 mg/kg	103	50.0	140	----
		Bromodichloromethane	75-27-4	E611D	2.36 mg/kg	2.2 mg/kg	107	50.0	140	----
		Bromoform	75-25-2	E611D	2.25 mg/kg	2.2 mg/kg	102	50.0	140	----
		Bromomethane	74-83-9	E611D	2.02 mg/kg	2.2 mg/kg	91.9	50.0	140	----
		Carbon tetrachloride	56-23-5	E611D	2.45 mg/kg	2.2 mg/kg	111	50.0	140	----
		Chlorobenzene	108-90-7	E611D	2.29 mg/kg	2.2 mg/kg	104	50.0	140	----
		Chloroform	67-66-3	E611D	2.40 mg/kg	2.2 mg/kg	109	50.0	140	----
		Dibromochloromethane	124-48-1	E611D	2.39 mg/kg	2.2 mg/kg	109	50.0	140	----
		Dibromoethane, 1,2-	106-93-4	E611D	2.31 mg/kg	2.2 mg/kg	105	50.0	140	----
		Dichlorobenzene, 1,2-	95-50-1	E611D	2.29 mg/kg	2.2 mg/kg	104	50.0	140	----
		Dichlorobenzene, 1,3-	541-73-1	E611D	2.29 mg/kg	2.2 mg/kg	104	50.0	140	----
		Dichlorobenzene, 1,4-	106-46-7	E611D	2.28 mg/kg	2.2 mg/kg	104	50.0	140	----
		Dichlorodifluoromethane	75-71-8	E611D	2.61 mg/kg	2.2 mg/kg	119	50.0	140	----
		Dichloroethane, 1,1-	75-34-3	E611D	2.38 mg/kg	2.2 mg/kg	108	50.0	140	----
		Dichloroethane, 1,2-	107-06-2	E611D	2.32 mg/kg	2.2 mg/kg	106	50.0	140	----
		Dichloroethylene, 1,1-	75-35-4	E611D	2.39 mg/kg	2.2 mg/kg	108	50.0	140	----
		Dichloroethylene, cis-1,2-	156-59-2	E611D	2.36 mg/kg	2.2 mg/kg	107	50.0	140	----
		Dichloroethylene, trans-1,2-	156-60-5	E611D	2.43 mg/kg	2.2 mg/kg	110	50.0	140	----
		Dichloromethane	75-09-2	E611D	2.40 mg/kg	2.2 mg/kg	109	50.0	140	----
		Dichloropropane, 1,2-	78-87-5	E611D	2.35 mg/kg	2.2 mg/kg	107	50.0	140	----
		Dichloropropylene, cis-1,3-	10061-01-5	E611D	2.22 mg/kg	2.2 mg/kg	101	50.0	140	----
		Dichloropropylene, trans-1,3-	10061-02-6	E611D	2.25 mg/kg	2.2 mg/kg	102	50.0	140	----
		Ethylbenzene	100-41-4	E611D	2.24 mg/kg	2.2 mg/kg	102	50.0	140	----
		Hexane, n-	110-54-3	E611D	2.43 mg/kg	2.2 mg/kg	110	50.0	140	----
		Methyl ethyl ketone [MEK]	78-93-3	E611D	2.15 mg/kg	2.2 mg/kg	97.9	50.0	140	----
		Methyl isobutyl ketone [MIBK]	108-10-1	E611D	2.18 mg/kg	2.2 mg/kg	99.0	50.0	140	----
		Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	2.30 mg/kg	2.2 mg/kg	105	50.0	140	----
		Styrene	100-42-5	E611D	2.26 mg/kg	2.2 mg/kg	103	50.0	140	----
		Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	2.43 mg/kg	2.2 mg/kg	110	50.0	140	----
		Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	2.50 mg/kg	2.2 mg/kg	114	50.0	140	----
		Tetrachloroethylene	127-18-4	E611D	2.36 mg/kg	2.2 mg/kg	107	50.0	140	----
		Toluene	108-88-3	E611D	2.23 mg/kg	2.2 mg/kg	102	50.0	140	----
		Trichloroethane, 1,1,1-	71-55-6	E611D	2.43 mg/kg	2.2 mg/kg	111	50.0	140	----
		Trichloroethane, 1,1,2-	79-00-5	E611D	2.36 mg/kg	2.2 mg/kg	108	50.0	140	----
		Trichloroethylene	79-01-6	E611D	2.40 mg/kg	2.2 mg/kg	109	50.0	140	----
		Trichlorofluoromethane	75-69-4	E611D	2.48 mg/kg	2.2 mg/kg	113	50.0	140	----
		Vinyl chloride	75-01-4	E611D	2.69 mg/kg	2.2 mg/kg	122	50.0	140	----
		Xylene, m+p-	179601-23-1	E611D	4.58 mg/kg	4.4 mg/kg	104	50.0	140	----
		Xylene, o-	95-47-6	E611D	2.26 mg/kg	2.2 mg/kg	103	50.0	140	----
Hydrocarbons (QCLot: 1643855)										
WT2426037-002	Anonymous	F1 (C6-C10)	----	E581.F1	42.4 mg/kg	42.3 mg/kg	100	60.0	140	----
Hydrocarbons (QCLot: 1643881)										

Page : 20 of 21
 Work Order : WT2426218
 Client : OH Environmental Inc.
 Project : 30100



Sub-Matrix: Soil/Solid

Sub-Matrix: Soil/Solid					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Hydrocarbons (QCLot: 1643881) - continued										
WT2426343-002	Anonymous	F1 (C6-C10)	----	E581.F1	45.5 mg/kg	44 mg/kg	104	60.0	140	----
Hydrocarbons (QCLot: 1644044)										
WT2426218-001	BH103-6	F2 (C10-C16)	----	E601.SG-L	546 mg/kg	559 mg/kg	97.6	60.0	140	----
		F3 (C16-C34)	----	E601.SG-L	1140 mg/kg	1160 mg/kg	98.5	60.0	140	----
		F4 (C34-C50)	----	E601.SG-L	622 mg/kg	625 mg/kg	99.4	60.0	140	----
Hydrocarbons (QCLot: 1661322)										
WT2426218-004	DUP101	F2 (C10-C16)	----	E601.SG-L	484 mg/kg	530 mg/kg	91.5	60.0	140	----
		F3 (C16-C34)	----	E601.SG-L	1000 mg/kg	1100 mg/kg	91.8	60.0	140	----
		F4 (C34-C50)	----	E601.SG-L	566 mg/kg	592 mg/kg	95.6	60.0	140	----
Polycyclic Aromatic Hydrocarbons (QCLot: 1644043)										
WT2426218-001	BH103-6	Acenaphthene	83-32-9	E641A	0.359 mg/kg	0.395 mg/kg	91.0	50.0	140	----
		Acenaphthylene	208-96-8	E641A	0.380 mg/kg	0.395 mg/kg	96.3	50.0	140	----
		Anthracene	120-12-7	E641A	0.364 mg/kg	0.395 mg/kg	92.2	50.0	140	----
		Benz(a)anthracene	56-55-3	E641A	0.271 mg/kg	0.395 mg/kg	68.6	50.0	140	----
		Benzo(a)pyrene	50-32-8	E641A	0.288 mg/kg	0.395 mg/kg	72.9	50.0	140	----
		Benzo(b+j)fluoranthene	n/a	E641A	0.259 mg/kg	0.395 mg/kg	65.5	50.0	140	----
		Benzo(g,h,i)perylene	191-24-2	E641A	0.332 mg/kg	0.395 mg/kg	84.0	50.0	140	----
		Benzo(k)fluoranthene	207-08-9	E641A	0.351 mg/kg	0.395 mg/kg	88.8	50.0	140	----
		Chrysene	218-01-9	E641A	0.300 mg/kg	0.395 mg/kg	75.8	50.0	140	----
		Dibenz(a,h)anthracene	53-70-3	E641A	0.361 mg/kg	0.395 mg/kg	91.3	50.0	140	----
		Fluoranthene	206-44-0	E641A	0.222 mg/kg	0.395 mg/kg	56.1	50.0	140	----
		Fluorene	86-73-7	E641A	0.376 mg/kg	0.395 mg/kg	95.2	50.0	140	----
		Indeno(1,2,3-c,d)pyrene	193-39-5	E641A	0.317 mg/kg	0.395 mg/kg	80.2	50.0	140	----
		Methylnaphthalene, 1-	90-12-0	E641A	0.363 mg/kg	0.395 mg/kg	91.8	50.0	140	----
		Methylnaphthalene, 2-	91-57-6	E641A	0.363 mg/kg	0.395 mg/kg	91.9	50.0	140	----
		Naphthalene	91-20-3	E641A	0.350 mg/kg	0.395 mg/kg	88.5	50.0	140	----
		Phenanthrene	85-01-8	E641A	0.217 mg/kg	0.395 mg/kg	55.0	50.0	140	----
		Pyrene	129-00-0	E641A	0.237 mg/kg	0.395 mg/kg	59.9	50.0	140	----
Polychlorinated Biphenyls (QCLot: 1643772)										
WT2426009-010	Anonymous	Aroclor 1016	12674-11-2	E687	0.008 mg/kg	0.01 mg/kg	81.0	50.0	150	----
		Aroclor 1221	11104-28-2	E687	0.008 mg/kg	0.01 mg/kg	81.0	50.0	150	----
		Aroclor 1232	11141-16-5	E687	0.008 mg/kg	0.01 mg/kg	81.0	50.0	150	----
		Aroclor 1242	53469-21-9	E687	0.008 mg/kg	0.01 mg/kg	79.3	50.0	150	----
		Aroclor 1248	12672-29-6	E687	0.008 mg/kg	0.01 mg/kg	81.0	50.0	150	----
		Aroclor 1254	11097-69-1	E687	0.006 mg/kg	0.01 mg/kg	63.6	50.0	150	----
		Aroclor 1260	11096-82-5	E687	0.008 mg/kg	0.01 mg/kg	76.2	50.0	150	----
		Aroclor 1262	37324-23-5	E687	0.008 mg/kg	0.01 mg/kg	76.7	50.0	150	----
		Aroclor 1268	11100-14-4	E687	0.008 mg/kg	0.01 mg/kg	76.7	50.0	150	----
Polychlorinated Biphenyls (QCLot: 1644917)										
WT2426043-003	Anonymous	Aroclor 1016	12674-11-2	E687	0.008 mg/kg	0.01 mg/kg	82.4	50.0	150	----
		Aroclor 1221	11104-28-2	E687	0.008 mg/kg	0.01 mg/kg	82.4	50.0	150	----



Sub-Matrix: Soil/Solid					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		Qualifier
					Concentration	Target	MS	Low	High	
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method						
Polychlorinated Biphenyls (QCLot: 1644917) - continued										
WT2426043-003	Anonymous	Aroclor 1232	11141-16-5	E687	0.008 mg/kg	0.01 mg/kg	82.4	50.0	150	----
		Aroclor 1242	53469-21-9	E687	0.006 mg/kg	0.01 mg/kg	63.8	50.0	150	----
		Aroclor 1248	12672-29-6	E687	0.008 mg/kg	0.01 mg/kg	82.4	50.0	150	----
		Aroclor 1254	11097-69-1	E687	0.006 mg/kg	0.01 mg/kg	59.1	50.0	150	----
		Aroclor 1260	11096-82-5	E687	0.007 mg/kg	0.01 mg/kg	74.3	50.0	150	----
		Aroclor 1262	37324-23-5	E687	0.009 mg/kg	0.01 mg/kg	88.4	50.0	150	----
		Aroclor 1268	11100-14-4	E687	0.009 mg/kg	0.01 mg/kg	88.4	50.0	150	----

Reference Material (RM) Report

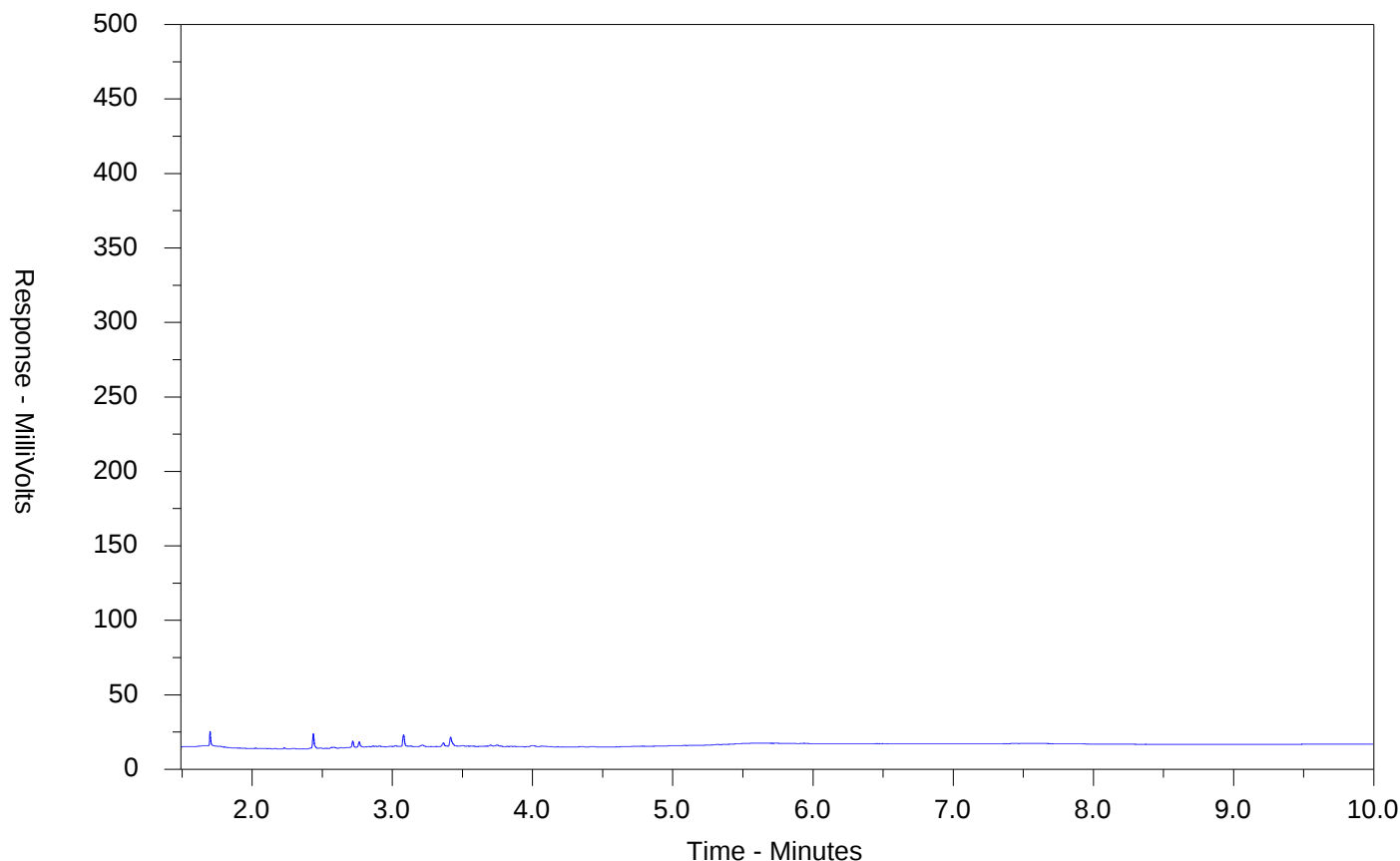
A Reference Material (RM) is a homogenous material with known and well-established analyte concentrations. RMs are processed in an identical manner to test samples, and are used to monitor and control the accuracy and precision of a test method for a typical sample matrix. RM results are expressed as percent recovery of the target analyte concentration. RM targets may be certified target concentrations provided by the RM supplier, or may be ALS long-term mean values (for empirical test methods).

Sub-Matrix:					Reference Material (RM) Report				
					RM Target Concentration	Recovery (%) RM	Recovery Limits (%)		Qualifier
							Low	High	
Laboratory sample ID	Reference Material ID	Analyte	CAS Number	Method					
Metals (QCLot: 1644324)									
QC-1644324-003	RM	Antimony	7440-36-0	E440C	24.8 mg/kg	91.7	70.0	130	----
QC-1644324-003	RM	Arsenic	7440-38-2	E440C	21.2 mg/kg	96.9	70.0	130	----
QC-1644324-003	RM	Barium	7440-39-3	E440C	788 mg/kg	99.4	70.0	130	----
QC-1644324-003	RM	Beryllium	7440-41-7	E440C	1.82 mg/kg	101	70.0	130	----
QC-1644324-003	RM	Cadmium	7440-43-9	E440C	2.15 mg/kg	98.3	70.0	130	----
QC-1644324-003	RM	Chromium	7440-47-3	E440C	56.9 mg/kg	97.0	70.0	130	----
QC-1644324-003	RM	Cobalt	7440-48-4	E440C	32 mg/kg	96.1	70.0	130	----
QC-1644324-003	RM	Copper	7440-50-8	E440C	969 mg/kg	107	70.0	130	----
QC-1644324-003	RM	Lead	7439-92-1	E440C	919 mg/kg	94.3	70.0	130	----
QC-1644324-003	RM	Molybdenum	7439-98-7	E440C	25.1 mg/kg	98.3	70.0	130	----
QC-1644324-003	RM	Nickel	7440-02-0	E440C	1000 mg/kg	94.3	70.0	130	----
QC-1644324-003	RM	Selenium	7782-49-2	E440C	1.04 mg/kg	114	60.0	140	----
QC-1644324-003	RM	Silver	7440-22-4	E440C	8.98 mg/kg	92.1	70.0	130	----
QC-1644324-003	RM	Thallium	7440-28-0	E440C	0.907 mg/kg	92.9	70.0	130	----
QC-1644324-003	RM	Uranium	7440-61-1	E440C	3.97 mg/kg	81.7	70.0	130	----
QC-1644324-003	RM	Vanadium	7440-62-2	E440C	66.2 mg/kg	96.2	70.0	130	----
QC-1644324-003	RM	Zinc	7440-66-6	E440C	828 mg/kg	97.3	70.0	130	----

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: WT2426218-001-E601.SG-L
Client Sample ID: BH103-6



← F2 →		← F3 →		← F4 →	
nC10	nC16		nC34		nC50
174°C	287°C		481°C		575°C
346°F	549°F		898°F		1067°F
Gasoline →			← Motor Oils/Lube Oils/Grease		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

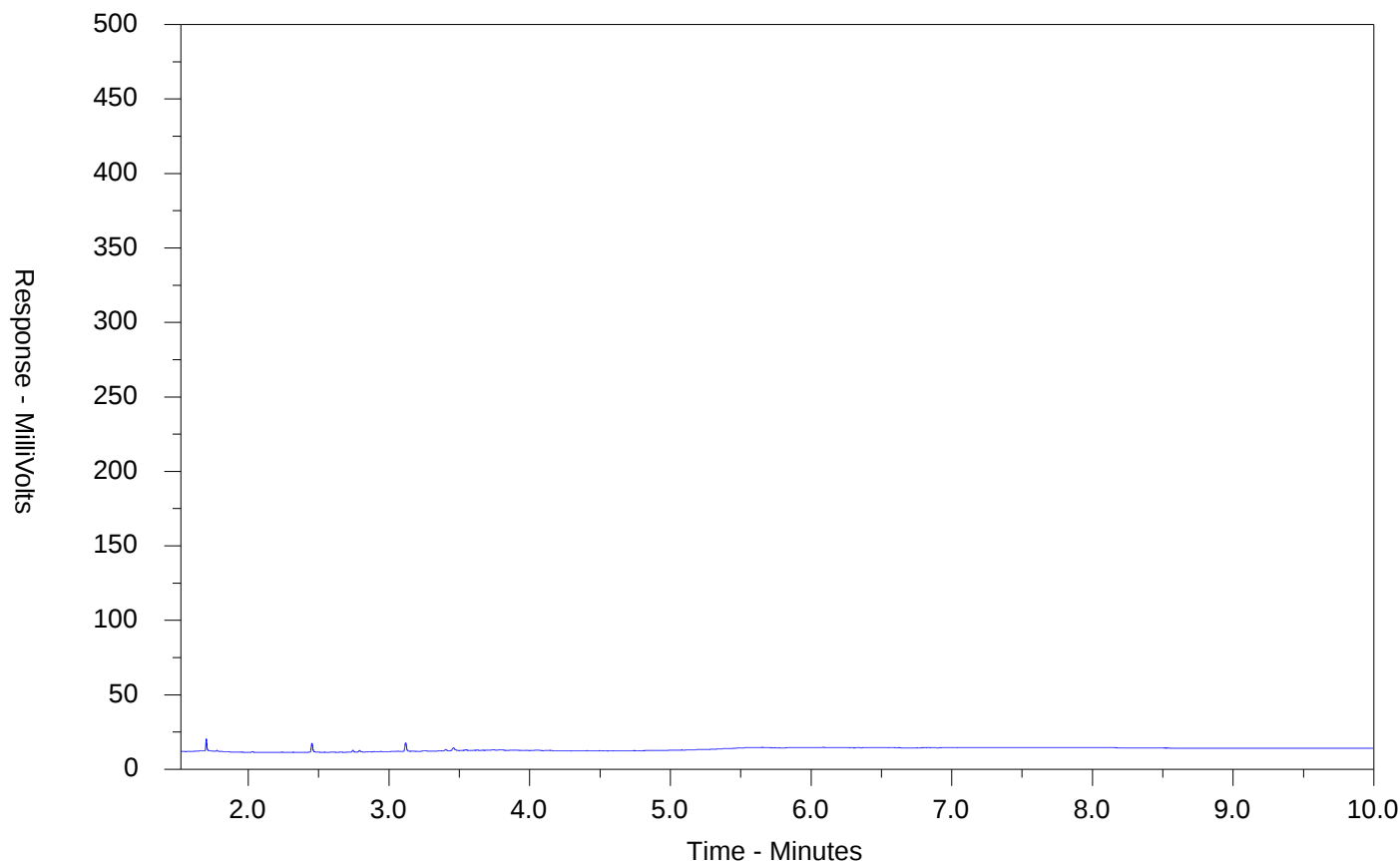
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at www.alsglobal.com.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: WT2426218-002-E601.SG-L
 Client Sample ID: BH104-3



← F2 →		← F3 →		← F4 →	
nC10	nC16		nC34		nC50
174°C	287°C		481°C		575°C
346°F	549°F		898°F		1067°F
Gasoline →			← Motor Oils/Lube Oils/Grease		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

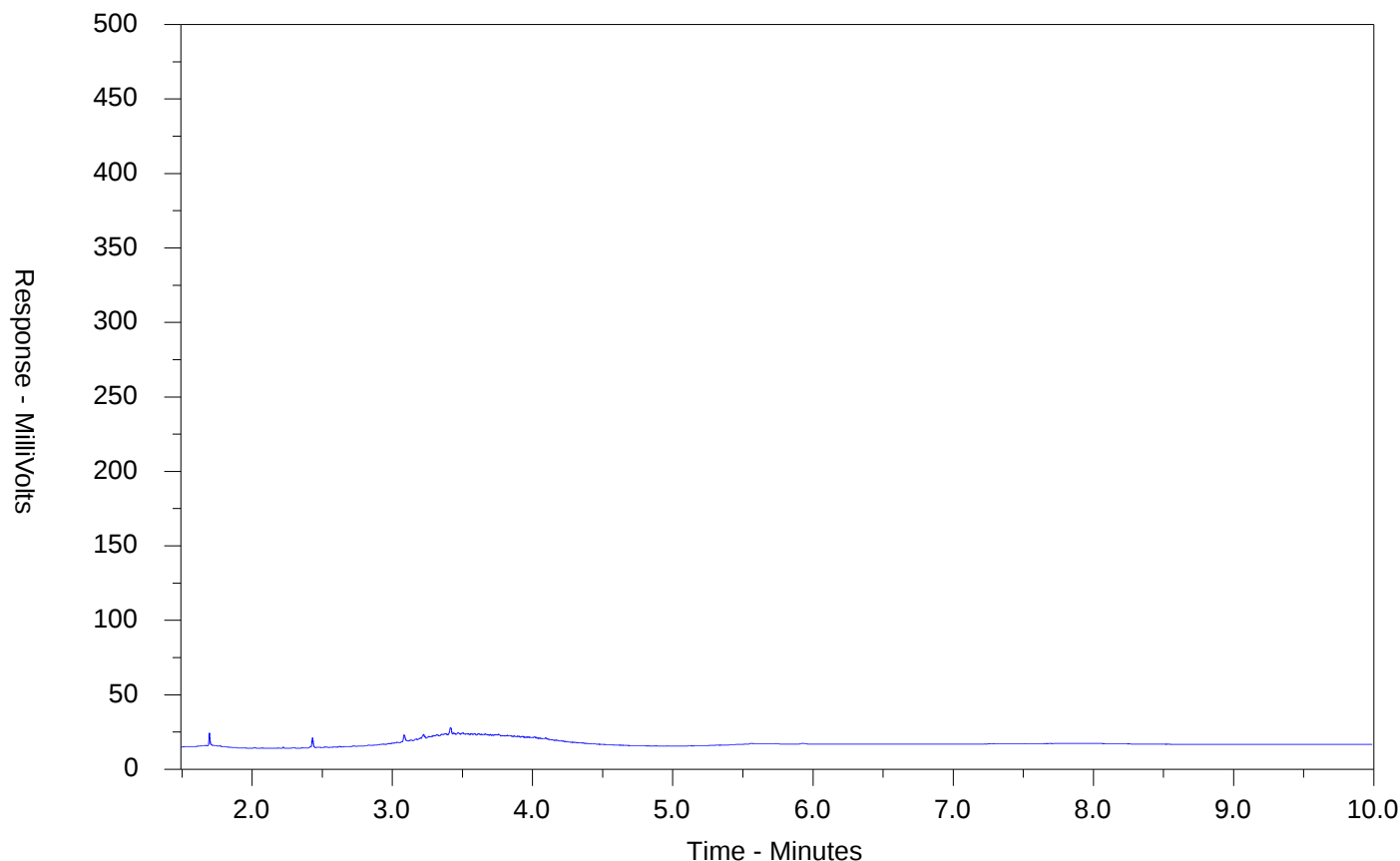
The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at www.alsglobal.com.

CCME F2-F4 **HYDROCARBON DISTRIBUTION REPORT**

ALS Sample ID: WT2426218-003-E601.SG-L
 Client Sample ID: BH105-3



← F2 →		← F3 →		← F4 →	
nC10	nC16		nC34		nC50
174°C	287°C		481°C		575°C
346°F	549°F		898°F		1067°F
Gasoline →			← Motor Oils/Lube Oils/Grease		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

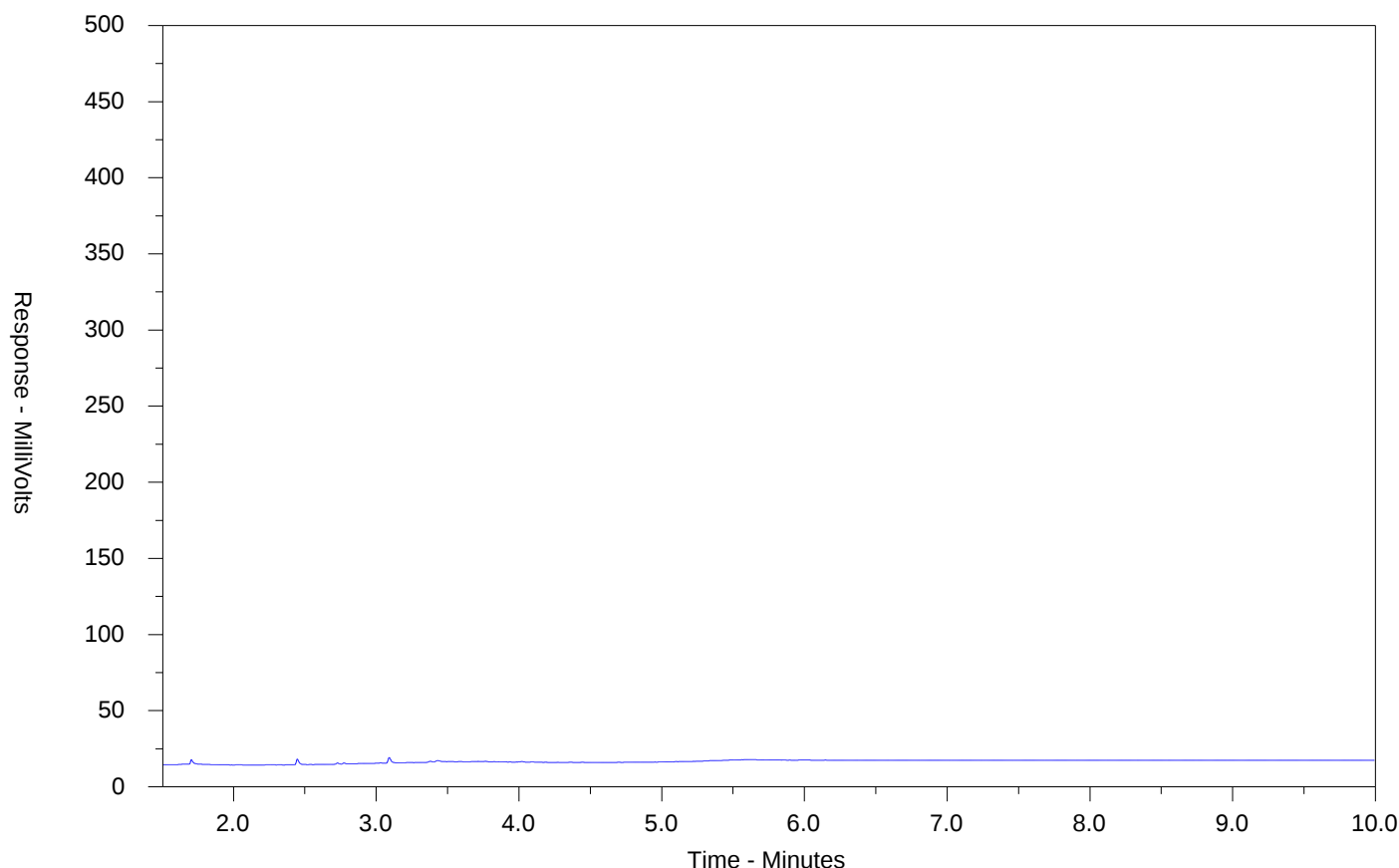
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at www.alsglobal.com.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: WT2426218-004-E601.SG-L
Client Sample ID: DUP101



← F2 →		← F3 →		← F4 →	
nC10	nC16		nC34		nC50
174°C	287°C		481°C		575°C
346°F	549°F		898°F		1067°F
Gasoline →			← Motor Oils/Lube Oils/Grease		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at www.alsglobal.com.

Chain of Custody (COC) / Analytical Request Form

COC Number: 20 - 1046940

Canada Toll Free: 1 800 668 9878

Page 1 of 1



www.alsglobal.com

Environmental Division
Waterloo

Work Order Reference

WT2426218



Telephone : +1 519 886 6910

Report To		Reports / Recipients		Turnaround Time (TAT) Requested	
Contact and company name below will appear on the final report		Select Report Format: ☒ PDF ☒ EXCEL ☐ EDD (DIGITAL)		☒ Routine [R] if received by 3pm M-F - no surcharges apply	
Company: OHE Consultants		Merge QC/QCI Reports with COA ☐ YES ☐ NO ☐ N/A		☐ 4 day [P4] if received by 3pm M-F - 20% rush surcharge minimum	
Contact: Hasan Rahman		☐ 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	
Phone: 905-890-9000		Select Distribution: ☐ EMAIL ☐ MAIL ☐ FAX		☐ 2 day [P2] if received by 3pm M-F - 50% rush surcharge minimum	
Company address below will appear on the final report		Email 1 or Fax: results@ohcconsultants.com		☐ 1 day [E] if received by 3pm M-F - 100% rush surcharge minimum	
Street: 311 Matheson Blvd E		Email 2:		☐ Same day [E2] if received by 10am M-S - 200% rush surcharge. Add may apply to rush requests on weekends, statutory holidays and non-r	
City/Province: Mississauga, ON		Email 3:		Date and Time Required for all E&P TATs:	
Postal Code: L4Z 1X8				For all tests with rush TATs requested, please	
Invoice To: Same as Report To ☒ YES ☐ NO		Select Invoice Distribution: ☒ EMAIL ☐ MAIL ☐ FAX		Analysis R	
Copy of Invoice with Report ☐ YES ☒ NO		Email 1 or Fax: prf@ohcconsultants.com		Indicate Filtered (F), Preserved (P) or Filtered a	
Company:		Email 2:		NUMBER OF CONTAINERS	
Contact:				PHCS	
Project Information		Oil and Gas Required Fields (client use)		VOCs	
ALS Account # / Quote #:		AFE/Cost Center:		metals	
Job #: 30100		Major/Minor Code:		hydrocarbon-forming methods	
PO / AFE:		Routing Code:		PAHs	
LSD:		Requisitioner:		PCBs	
ALS Lab Work Order # (ALS use only):		Location:		PHCS (F2-F4)	
		ALS Contact:			
		Sampler: HR			
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	
	BH103-6	04-Sep-24	15:10	soil	3
	BH104-3	05-Sep-24	10:00	↓	3
	BH105-3	05-Sep-24	13:45	↓	3
	DUP101	05-Sep-24	-	↓	2
Drinking Water (DW) Samples ¹ (client use)		Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only)		SAMPLE RECEIPT DETAILS (ALS use only)	
Are samples taken from a Regulated DW System? ☐ YES ☒ NO		Table 1, O. Reg. 153/04		Cooling Method: ☐ NONE ☒ ICE ☒ ICE PACKS ☐ FROZEN ☐ COOLING INITIATED	
Are samples for human consumption/ use? ☐ YES ☒ NO				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: 9.0 FINAL COOLER TEMPERATURES °C: -0.2°C	
SHIPMENT RELEASE (client use)		INITIAL SHIPMENT RECEPTION (ALS use only)		FINAL SHIPMENT RECEPTION (ALS use only)	
Released by: [Signature] Date: 06-Sep-24 Time: 10:00		Received by: Karan Date: 9/6/2024 Time: 9:32		Received by: JZ Date: 6/9/24 Time: 1:00	

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.

m1 - G1 115-066 AL

CERTIFICATE OF ANALYSIS (GUIDELINE EVALUATION)

Work Order	: WT2426986	Page	: 1 of 11
Client	: OH Environmental Inc.	Laboratory	: ALS Environmental - Waterloo
Contact	: Hasan Rahman	Account Manager	: Amanda Overholster
Address	: 311 Matheson Blvd. East Mississauga ON Canada L4Z 1X8	Address	: 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8
Telephone	: ----	Telephone	: 1 416 817 2944
Project	: 30100	Date Samples Received	: 13-Sep-2024 09:15
PO	: ----	Date Analysis Commenced	: 13-Sep-2024
C-O-C number	: 23-1100375	Issue Date	: 20-Sep-2024 15:48
Sampler	: HR		
Site	: ----		
Quote number	: 2024 SOA		
No. of samples received	: 2		
No. of samples analysed	: 2		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Guideline Comparison

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QC Interpretive report to assist with Quality Review and Sample Receipt Notification (SRN).

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

Signatories	Position	Laboratory Department
Jeremy Gingras	Supervisor - Semi-Volatile Instrumentation	Organics, Waterloo, Ontario
Sarah Birch	VOC Section Supervisor	VOC, Waterloo, Ontario
Walt Kippenhuck	Supervisor - Inorganic	Metals, Waterloo, Ontario

CERTIFICATE OF ANALYSIS (GUIDELINE EVALUATION)

Work Order	: WT2426218	Page	: 1 of 12
Amendment	: 1		
Client	: OH Environmental Inc.	Laboratory	: ALS Environmental - Waterloo
Contact	: Hasan Rahman	Account Manager	: Amanda Overholster
Address	: 311 Matheson Blvd. East Mississauga ON Canada L4Z 1X8	Address	: 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8
Telephone	: ----	Telephone	: 1 416 817 2944
Project	: 30100	Date Samples Received	: 06-Sep-2024 09:32
PO	: ----	Date Analysis Commenced	: 11-Sep-2024
C-O-C number	: 20-1046940	Issue Date	: 17-Oct-2024 14:10
Sampler	: HR		
Site	: ----		
Quote number	: 2024 SOA		
No. of samples received	: 4		
No. of samples analysed	: 4		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Guideline Comparison

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QC Interpretive report to assist with Quality Review and Sample Receipt Notification (SRN).

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

Signatories	Position	Laboratory Department
Amaninder Dhillon	Team Lead - Semi-Volatile Instrumentation	Organics, Waterloo, Ontario
Jeremy Gingras	Supervisor - Semi-Volatile Instrumentation	Organics, Waterloo, Ontario
Jocelyn Kennedy	Department Manager - Semi-Volatile Organics	Organics, Waterloo, Ontario
Josphin Masihi	Analyst	Centralized Prep, Waterloo, Ontario
Sarah Birch	VOC Section Supervisor	VOC, Waterloo, Ontario
Walt Kippenhuck	Supervisor - Inorganic	Inorganics, Waterloo, Ontario
Walt Kippenhuck	Supervisor - Inorganic	Metals, Waterloo, Ontario



No Breaches Found

General Comments

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Refer to the ALS Quality Control Interpretive report (QCI) for applicable references and methodology summaries. Reference methods may incorporate modifications to improve performance.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to fitness for a particular purpose, or non-infringement. ALS assumes no responsibility for errors or omissions in the information. Guidelines are not adjusted for the hardness, pH or temperature of the sample (the most conservative values are used). Measurement uncertainty is not applied to test results prior to comparison with specified criteria values.

Key : LOR: Limit of Reporting (detection limit).

Unit	Description
-	no units
%	percent
mg/kg	milligrams per kilogram
pH units	pH units

>: greater than.

<: less than.

Red shading is applied where the result or the LOR is greater than the Guideline Upper Limit (or lower than the Guideline Lower Limit, if applicable).

For drinking water samples, Red shading is applied where the result for E.coli, fecal or total coliforms is greater than or equal to the Guideline Upper Limit.

Workorder Comments

Amendment (07/10/2024): This report has been amended and re-released to allow the reporting of additional analytical data.

RRQC: Silver recovery outside of ALS DQOs due to issue with standard. Reported data was not affect by this issue



Qualifiers

Qualifier	Description
DUPH	Duplicate results outside ALS DQO, due to sample heterogeneity.



Analytical Results Evaluation

Matrix: Soil				Client sample ID	BH103-6	BH104-3	BH105-3	DUP101	----	----	----
				Sampling date/time	04-Sep-2024 15:10	05-Sep-2024 10:00	05-Sep-2024 13:45	05-Sep-2024 00:00	----	----	----
				Sub-Matrix	Soil	Soil	Soil	Soil	----	----	----
Analyte	CAS Number	Method/Lab	Unit		WT2426218-001	WT2426218-002	WT2426218-003	WT2426218-004	-----	-----	-----
Physical Tests											
Moisture	----	E144/WT	%		10.8	1.48	1.28	1.81	----	----	----
pH (1:2 soil:CaCl2-aq)	----	E108A/WT	pH units		8.05	8.07	8.13	7.93	----	----	----
Metals											
Antimony	7440-36-0	E440C/WT	mg/kg		<0.10	<0.10	<0.10	----	----	----	----
Arsenic	7440-38-2	E440C/WT	mg/kg		0.47	0.56	0.58	----	----	----	----
Barium	7440-39-3	E440C/WT	mg/kg		13.2	9.38	12.1	----	----	----	----
Beryllium	7440-41-7	E440C/WT	mg/kg		<0.10	<0.10	0.10	----	----	----	----
Boron	7440-42-8	E440C/WT	mg/kg		<5.0	<5.0	<5.0	----	----	----	----
Cadmium	7440-43-9	E440C/WT	mg/kg		<0.020	0.025	0.020	----	----	----	----
Chromium	7440-47-3	E440C/WT	mg/kg		6.85	5.54	10.7	----	----	----	----
Cobalt	7440-48-4	E440C/WT	mg/kg		1.38	1.36	1.90	----	----	----	----
Copper	7440-50-8	E440C/WT	mg/kg		3.96	2.34	3.68	----	----	----	----
Lead	7439-92-1	E440C/WT	mg/kg		3.13	3.16	5.99	----	----	----	----
Molybdenum	7439-98-7	E440C/WT	mg/kg		0.22	0.27	0.88	----	----	----	----
Nickel	7440-02-0	E440C/WT	mg/kg		2.78	2.43	3.74	----	----	----	----
Selenium	7782-49-2	E440C/WT	mg/kg		<0.20	<0.20	<0.20	----	----	----	----
Silver	7440-22-4	E440C/WT	mg/kg		<0.10	<0.10	<0.10	----	----	----	----
Thallium	7440-28-0	E440C/WT	mg/kg		<0.050	<0.050	<0.050	----	----	----	----
Uranium	7440-61-1	E440C/WT	mg/kg		0.247	0.201	0.224	----	----	----	----
Vanadium	7440-62-2	E440C/WT	mg/kg		11.6	12.3	18.8	----	----	----	----
Zinc	7440-66-6	E440C/WT	mg/kg		23.1	16.6	12.7	----	----	----	----
Volatile Organic Compounds											
Acetone	67-64-1	E611D/WT	mg/kg		<0.50	<0.50	<0.50	----	----	----	----
Benzene	71-43-2	E611D/WT	mg/kg		<0.0050	<0.0050	<0.0050	----	----	----	----
Bromodichloromethane	75-27-4	E611D/WT	mg/kg		<0.050	<0.050	<0.050	----	----	----	----
Bromoform	75-25-2	E611D/WT	mg/kg		<0.050	<0.050	<0.050	----	----	----	----
Bromomethane	74-83-9	E611D/WT	mg/kg		<0.050	<0.050	<0.050	----	----	----	----



Analytical Results Evaluation

				Client sample ID	BH103-6	BH104-3	BH105-3	DUP101	----	----	----
Matrix: Soil				Sampling date/time	04-Sep-2024 15:10	05-Sep-2024 10:00	05-Sep-2024 13:45	05-Sep-2024 00:00	----	----	----
				Sub-Matrix	Soil	Soil	Soil	Soil	----	----	----
Analyte	CAS Number	Method/Lab	Unit		WT2426218-001	WT2426218-002	WT2426218-003	WT2426218-004	-----	-----	-----
Volatile Organic Compounds											
Carbon tetrachloride	56-23-5	E611D/WT	mg/kg		<0.050	<0.050	<0.050	----	----	----	----
Chlorobenzene	108-90-7	E611D/WT	mg/kg		<0.050	<0.050	<0.050	----	----	----	----
Chloroform	67-66-3	E611D/WT	mg/kg		<0.050	<0.050	<0.050	----	----	----	----
Dibromochloromethane	124-48-1	E611D/WT	mg/kg		<0.050	<0.050	<0.050	----	----	----	----
Dibromoethane, 1,2-	106-93-4	E611D/WT	mg/kg		<0.050	<0.050	<0.050	----	----	----	----
Dichlorobenzene, 1,2-	95-50-1	E611D/WT	mg/kg		<0.050	<0.050	<0.050	----	----	----	----
Dichlorobenzene, 1,3-	541-73-1	E611D/WT	mg/kg		<0.050	<0.050	<0.050	----	----	----	----
Dichlorobenzene, 1,4-	106-46-7	E611D/WT	mg/kg		<0.050	<0.050	<0.050	----	----	----	----
Dichlorodifluoromethane	75-71-8	E611D/WT	mg/kg		<0.050	<0.050	<0.050	----	----	----	----
Dichloroethane, 1,1-	75-34-3	E611D/WT	mg/kg		<0.050	<0.050	<0.050	----	----	----	----
Dichloroethane, 1,2-	107-06-2	E611D/WT	mg/kg		<0.050	<0.050	<0.050	----	----	----	----
Dichloroethylene, 1,1-	75-35-4	E611D/WT	mg/kg		<0.050	<0.050	<0.050	----	----	----	----
Dichloroethylene, cis-1,2-	156-59-2	E611D/WT	mg/kg		<0.050	<0.050	<0.050	----	----	----	----
Dichloroethylene, trans-1,2-	156-60-5	E611D/WT	mg/kg		<0.050	<0.050	<0.050	----	----	----	----
Dichloromethane	75-09-2	E611D/WT	mg/kg		<0.045	<0.045	<0.045	----	----	----	----
Dichloropropane, 1,2-	78-87-5	E611D/WT	mg/kg		<0.050	<0.050	<0.050	----	----	----	----
Dichloropropylene, cis+trans-1,3-	542-75-6	E611D/WT	mg/kg		<0.050	<0.050	<0.050	----	----	----	----
Dichloropropylene, cis-1,3-	10061-01-5	E611D/WT	mg/kg		<0.030	<0.030	<0.030	----	----	----	----
Dichloropropylene, trans-1,3-	10061-02-6	E611D/WT	mg/kg		<0.030	<0.030	<0.030	----	----	----	----
Ethylbenzene	100-41-4	E611D/WT	mg/kg		<0.015	<0.015	<0.015	----	----	----	----
Hexane, n-	110-54-3	E611D/WT	mg/kg		<0.050	<0.050	<0.050	----	----	----	----
Methyl ethyl ketone [MEK]	78-93-3	E611D/WT	mg/kg		<0.50	<0.50	<0.50	----	----	----	----
Methyl isobutyl ketone [MIBK]	108-10-1	E611D/WT	mg/kg		<0.50	<0.50	<0.50	----	----	----	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D/WT	mg/kg		<0.040	<0.040	<0.040	----	----	----	----
Styrene	100-42-5	E611D/WT	mg/kg		<0.050	<0.050	<0.050	----	----	----	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611D/WT	mg/kg		<0.050	<0.050	<0.050	----	----	----	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611D/WT	mg/kg		<0.050	<0.050	<0.050	----	----	----	----
Tetrachloroethylene	127-18-4	E611D/WT	mg/kg		<0.050	<0.050	<0.050	----	----	----	----
Toluene	108-88-3	E611D/WT	mg/kg		<0.050	<0.050	<0.050	----	----	----	----



Analytical Results Evaluation

Matrix: Soil				Client sample ID	BH103-6	BH104-3	BH105-3	DUP101	----	----	----
				Sampling date/time	04-Sep-2024 15:10	05-Sep-2024 10:00	05-Sep-2024 13:45	05-Sep-2024 00:00	----	----	----
				Sub-Matrix	Soil	Soil	Soil	Soil	----	----	----
Analyte	CAS Number	Method/Lab	Unit	WT2426218-001	WT2426218-002	WT2426218-003	WT2426218-004	-----	-----	-----	
Volatile Organic Compounds											
Trichloroethane, 1,1,1-	71-55-6	E611D/WT	mg/kg	<0.050	<0.050	<0.050	----	----	----	----	
Trichloroethane, 1,1,2-	79-00-5	E611D/WT	mg/kg	<0.050	<0.050	<0.050	----	----	----	----	
Trichloroethylene	79-01-6	E611D/WT	mg/kg	<0.010	<0.010	<0.010	----	----	----	----	
Trichlorofluoromethane	75-69-4	E611D/WT	mg/kg	<0.050	<0.050	<0.050	----	----	----	----	
Vinyl chloride	75-01-4	E611D/WT	mg/kg	<0.020	<0.020	<0.020	----	----	----	----	
Xylene, m+p-	179601-23-1	E611D/WT	mg/kg	<0.030	<0.030	<0.030	----	----	----	----	
Xylene, o-	95-47-6	E611D/WT	mg/kg	<0.030	<0.030	<0.030	----	----	----	----	
Xylenes, total	1330-20-7	E611D/WT	mg/kg	<0.050	<0.050	<0.050	----	----	----	----	
BTEX, total	----	E611D/WT	mg/kg	<0.10	<0.10	<0.10	----	----	----	----	
Hydrocarbons											
Chromatogram to baseline at nC50	n/a	E601.SG-L/WT	-	YES	YES	YES	YES	----	----	----	
F1 (C6-C10)	----	E581.F1/WT	mg/kg	<5.0	<5.0	<5.0	----	----	----	----	
F2 (C10-C16)	----	E601.SG-L/WT	mg/kg	<10	<10	<10	<10	----	----	----	
F2-Naphthalene	----	EC600/WT	mg/kg	<25	<25	<25	----	----	----	----	
F3 (C16-C34)	----	E601.SG-L/WT	mg/kg	<50	<50	<50	<50	----	----	----	
F3-PAH	n/a	EC600/WT	mg/kg	<50	<50	<50	----	----	----	----	
F4 (C34-C50)	----	E601.SG-L/WT	mg/kg	<50	<50	<50	<50	----	----	----	
F1-BTEX	----	EC580/WT	mg/kg	<5.0	<5.0	<5.0	----	----	----	----	
Hydrocarbons, total (C6-C50)	n/a	EC581/WT	mg/kg	<80	<80	<80	----	----	----	----	
Hydrocarbons Surrogates											
Bromobenzotrifluoride, 2- (F2-F4 surrogate)	392-83-6	E601.SG-L/WT	%	96.4	95.3	96.1	92.8	----	----	----	
Dichlorotoluene, 3,4-	95-75-0	E581.F1/WT	%	72.8	88.1	104	----	----	----	----	
Volatile Organic Compounds Surrogates											
Bromofluorobenzene, 4-	460-00-4	E611D/WT	%	107	128	107	----	----	----	----	
Difluorobenzene, 1,4-	540-36-3	E611D/WT	%	108	130	108	----	----	----	----	
Polycyclic Aromatic Hydrocarbons											
Acenaphthene	83-32-9	E641A/WT	mg/kg	<0.050	<0.050	<0.050	----	----	----	----	
Acenaphthylene	208-96-8	E641A/WT	mg/kg	<0.050	<0.050	<0.050	----	----	----	----	



Analytical Results Evaluation

				Client sample ID	BH103-6	BH104-3	BH105-3	DUP101	----	----	----
Matrix: Soil				Sampling date/time	04-Sep-2024 15:10	05-Sep-2024 10:00	05-Sep-2024 13:45	05-Sep-2024 00:00	----	----	----
				Sub-Matrix	Soil	Soil	Soil	Soil	----	----	----
Analyte	CAS Number	Method/Lab	Unit		WT2426218-001	WT2426218-002	WT2426218-003	WT2426218-004	-----	-----	-----
Polycyclic Aromatic Hydrocarbons											
Anthracene	120-12-7	E641A/WT	mg/kg		<0.050	<0.050	<0.050	----	----	----	----
Benz(a)anthracene	56-55-3	E641A/WT	mg/kg		0.086	<0.050	<0.050	----	----	----	----
Benzo(a)pyrene	50-32-8	E641A/WT	mg/kg		0.097	<0.050	<0.050	----	----	----	----
Benzo(b+j)fluoranthene	n/a	E641A/WT	mg/kg		0.109	<0.050	<0.050	----	----	----	----
Benzo(g,h,i)perylene	191-24-2	E641A/WT	mg/kg		0.057	<0.050	<0.050	----	----	----	----
Benzo(k)fluoranthene	207-08-9	E641A/WT	mg/kg		<0.050	<0.050	<0.050	----	----	----	----
Chrysene	218-01-9	E641A/WT	mg/kg		0.096	<0.050	<0.050	----	----	----	----
Dibenz(a,h)anthracene	53-70-3	E641A/WT	mg/kg		<0.050	<0.050	<0.050	----	----	----	----
Fluoranthene	206-44-0	E641A/WT	mg/kg		0.191 ^{DUPH}	0.061	<0.050	----	----	----	----
Fluorene	86-73-7	E641A/WT	mg/kg		<0.050	<0.050	<0.050	----	----	----	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A/WT	mg/kg		0.062	<0.050	<0.050	----	----	----	----
Methylnaphthalene, 1-	90-12-0	E641A/WT	mg/kg		<0.030	<0.030	<0.030	----	----	----	----
Methylnaphthalene, 1+2-	----	E641A/WT	mg/kg		<0.050	<0.050	<0.050	----	----	----	----
Methylnaphthalene, 2-	91-57-6	E641A/WT	mg/kg		<0.030	<0.030	<0.030	----	----	----	----
Naphthalene	91-20-3	E641A/WT	mg/kg		0.020	<0.010	<0.010	----	----	----	----
Phenanthrene	85-01-8	E641A/WT	mg/kg		0.167 ^{DUPH}	<0.050	<0.050	----	----	----	----
Pyrene	129-00-0	E641A/WT	mg/kg		0.169 ^{DUPH}	0.052	<0.050	----	----	----	----
Polycyclic Aromatic Hydrocarbons Surrogates											
Acridine-d9	34749-75-2	E641A/WT	%		104	103	104	----	----	----	----
Chrysene-d12	1719-03-5	E641A/WT	%		91.2	89.4	87.8	----	----	----	----
Naphthalene-d8	1146-65-2	E641A/WT	%		93.4	92.8	91.1	----	----	----	----
Phenanthrene-d10	1517-22-2	E641A/WT	%		94.4	91.9	93.9	----	----	----	----
Polychlorinated Biphenyls											
Aroclor 1016	12674-11-2	E687/WT	mg/kg		<0.010	<0.010	<0.010	----	----	----	----
Aroclor 1221	11104-28-2	E687/WT	mg/kg		<0.010	<0.010	<0.010	----	----	----	----
Aroclor 1232	11141-16-5	E687/WT	mg/kg		<0.010	<0.010	<0.010	----	----	----	----
Aroclor 1242	53469-21-9	E687/WT	mg/kg		<0.010	<0.010	<0.010	----	----	----	----
Aroclor 1248	12672-29-6	E687/WT	mg/kg		<0.010	<0.010	<0.010	----	----	----	----



Analytical Results Evaluation

Matrix: Soil				Client sample ID	BH103-6	BH104-3	BH105-3	DUP101	----	----	----
				Sampling date/time	04-Sep-2024 15:10	05-Sep-2024 10:00	05-Sep-2024 13:45	05-Sep-2024 00:00	----	----	----
				Sub-Matrix	Soil	Soil	Soil	Soil	----	----	----
Analyte	CAS Number	Method/Lab	Unit		WT2426218-001	WT2426218-002	WT2426218-003	WT2426218-004	-----	-----	-----
Polychlorinated Biphenyls											
Aroclor 1254	11097-69-1	E687/WT	mg/kg		<0.010	<0.010	<0.010	----	----	----	----
Aroclor 1260	11096-82-5	E687/WT	mg/kg		<0.010	<0.010	<0.010	----	----	----	----
Aroclor 1262	37324-23-5	E687/WT	mg/kg		<0.010	<0.010	<0.010	----	----	----	----
Aroclor 1268	11100-14-4	E687/WT	mg/kg		<0.010	<0.010	<0.010	----	----	----	----
Polychlorinated biphenyls [PCBs], total	----	E687/WT	mg/kg		<0.030	<0.030	<0.030	----	----	----	----
Polychlorinated Biphenyls Surrogates											
Decachlorobiphenyl	2051-24-3	E687/WT	%		92.2	94.4	76.2	----	----	----	----
Tetrachloro-m-xylene	877-09-8	E687/WT	%		80.2	82.0	78.4	----	----	----	----

Please refer to the General Comments section for an explanation of any result qualifiers detected.

Please refer to the Accreditation section for an explanation of analyte accreditations.



Summary of Guideline Limits

Analyte	CAS Number	Unit	ON153/04 T1-RPIICC						
Physical Tests									
Moisture	----	%	--						
pH (1:2 soil:CaCl2-aq)	----	pH units	--						
Metals									
Antimony	7440-36-0	mg/kg	1.3 mg/kg						
Arsenic	7440-38-2	mg/kg	18 mg/kg						
Barium	7440-39-3	mg/kg	220 mg/kg						
Beryllium	7440-41-7	mg/kg	2.5 mg/kg						
Boron	7440-42-8	mg/kg	36 mg/kg						
Cadmium	7440-43-9	mg/kg	1.2 mg/kg						
Chromium	7440-47-3	mg/kg	70 mg/kg						
Cobalt	7440-48-4	mg/kg	21 mg/kg						
Copper	7440-50-8	mg/kg	92 mg/kg						
Lead	7439-92-1	mg/kg	120 mg/kg						
Molybdenum	7439-98-7	mg/kg	2 mg/kg						
Nickel	7440-02-0	mg/kg	82 mg/kg						
Selenium	7782-49-2	mg/kg	1.5 mg/kg						
Silver	7440-22-4	mg/kg	0.5 mg/kg						
Thallium	7440-28-0	mg/kg	1 mg/kg						
Uranium	7440-61-1	mg/kg	2.5 mg/kg						
Vanadium	7440-62-2	mg/kg	86 mg/kg						
Zinc	7440-66-6	mg/kg	290 mg/kg						
Volatile Organic Compounds									
Acetone	67-64-1	mg/kg	0.5 mg/kg						
Benzene	71-43-2	mg/kg	0.02 mg/kg						
Bromodichloromethane	75-27-4	mg/kg	0.05 mg/kg						
Bromoform	75-25-2	mg/kg	0.05 mg/kg						
Bromomethane	74-83-9	mg/kg	0.05 mg/kg						
BTEX, total	----	mg/kg	--						
Carbon tetrachloride	56-23-5	mg/kg	0.05 mg/kg						
Chlorobenzene	108-90-7	mg/kg	0.05 mg/kg						
Chloroform	67-66-3	mg/kg	0.05 mg/kg						
Dibromochloromethane	124-48-1	mg/kg	0.05 mg/kg						
Dibromoethane, 1,2-	106-93-4	mg/kg	0.05 mg/kg						
Dichlorobenzene, 1,2-	95-50-1	mg/kg	0.05 mg/kg						
Dichlorobenzene, 1,3-	541-73-1	mg/kg	0.05 mg/kg						
Dichlorobenzene, 1,4-	106-46-7	mg/kg	0.05 mg/kg						
Dichlorodifluoromethane	75-71-8	mg/kg	0.05 mg/kg						



Analyte	CAS Number	Unit	ON153/04 T1-RPIICC						
Volatile Organic Compounds - Continued									
Dichloroethane, 1,1-	75-34-3	mg/kg	0.05 mg/kg						
Dichloroethane, 1,2-	107-06-2	mg/kg	0.05 mg/kg						
Dichloroethylene, 1,1-	75-35-4	mg/kg	0.05 mg/kg						
Dichloroethylene, cis-1,2-	156-59-2	mg/kg	0.05 mg/kg						
Dichloroethylene, trans-1,2-	156-60-5	mg/kg	0.05 mg/kg						
Dichloromethane	75-09-2	mg/kg	0.05 mg/kg						
Dichloropropane, 1,2-	78-87-5	mg/kg	0.05 mg/kg						
Dichloropropylene, cis+trans-1,3-	542-75-6	mg/kg	0.05 mg/kg						
Dichloropropylene, cis-1,3-	10061-01-5	mg/kg	--						
Dichloropropylene, trans-1,3-	10061-02-6	mg/kg	--						
Ethylbenzene	100-41-4	mg/kg	0.05 mg/kg						
Hexane, n-	110-54-3	mg/kg	0.05 mg/kg						
Methyl ethyl ketone [MEK]	78-93-3	mg/kg	0.5 mg/kg						
Methyl isobutyl ketone [MIBK]	108-10-1	mg/kg	0.5 mg/kg						
Methyl-tert-butyl ether [MTBE]	1634-04-4	mg/kg	0.05 mg/kg						
Styrene	100-42-5	mg/kg	0.05 mg/kg						
Tetrachloroethane, 1,1,1,2-	630-20-6	mg/kg	0.05 mg/kg						
Tetrachloroethane, 1,1,2,2-	79-34-5	mg/kg	0.05 mg/kg						
Tetrachloroethylene	127-18-4	mg/kg	0.05 mg/kg						
Toluene	108-88-3	mg/kg	0.2 mg/kg						
Trichloroethane, 1,1,1-	71-55-6	mg/kg	0.05 mg/kg						
Trichloroethane, 1,1,2-	79-00-5	mg/kg	0.05 mg/kg						
Trichloroethylene	79-01-6	mg/kg	0.05 mg/kg						
Trichlorofluoromethane	75-69-4	mg/kg	0.25 mg/kg						
Vinyl chloride	75-01-4	mg/kg	0.02 mg/kg						
Xylene, m+p-	179601-23-1	mg/kg	--						
Xylene, o-	95-47-6	mg/kg	--						
Xylenes, total	1330-20-7	mg/kg	0.05 mg/kg						
Hydrocarbons									
Chromatogram to baseline at nC50	n/a	-	--						
F1 (C6-C10)	----	mg/kg	25 mg/kg						
F1-BTEX	----	mg/kg	25 mg/kg						
F2 (C10-C16)	----	mg/kg	10 mg/kg						
F2-Naphthalene	----	mg/kg	--						
F3 (C16-C34)	----	mg/kg	240 mg/kg						
F3-PAH	n/a	mg/kg	--						
F4 (C34-C50)	----	mg/kg	120 mg/kg						
Hydrocarbons, total (C6-C50)	n/a	mg/kg	--						
Bromobenzotrifluoride, 2- (F2-F4 surrogate)	392-83-6	%	--						



Analyte	CAS Number	Unit	ON153/04 T1-RPIICC						
Hydrocarbons Surrogates - Continued									
Dichlorotoluene, 3,4-	95-75-0	%	--						
Bromofluorobenzene, 4-	460-00-4	%	--						
Difluorobenzene, 1,4-	540-36-3	%	--						
Polycyclic Aromatic Hydrocarbons									
Acenaphthene	83-32-9	mg/kg	0.072 mg/kg						
Acenaphthylene	208-96-8	mg/kg	0.093 mg/kg						
Anthracene	120-12-7	mg/kg	0.16 mg/kg						
Benz(a)anthracene	56-55-3	mg/kg	0.36 mg/kg						
Benzo(a)pyrene	50-32-8	mg/kg	0.3 mg/kg						
Benzo(b+j)fluoranthene	n/a	mg/kg	0.47 mg/kg						
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.68 mg/kg						
Benzo(k)fluoranthene	207-08-9	mg/kg	0.48 mg/kg						
Chrysene	218-01-9	mg/kg	2.8 mg/kg						
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.1 mg/kg						
Fluoranthene	206-44-0	mg/kg	0.56 mg/kg						
Fluorene	86-73-7	mg/kg	0.12 mg/kg						
Indeno(1,2,3-c,d)pyrene	193-39-5	mg/kg	0.23 mg/kg						
Methylnaphthalene, 1+2-	----	mg/kg	0.59 mg/kg						
Methylnaphthalene, 1-	90-12-0	mg/kg	0.59 mg/kg						
Methylnaphthalene, 2-	91-57-6	mg/kg	0.59 mg/kg						
Naphthalene	91-20-3	mg/kg	0.09 mg/kg						
Phenanthrene	85-01-8	mg/kg	0.69 mg/kg						
Pyrene	129-00-0	mg/kg	1 mg/kg						
Acridine-d9	34749-75-2	%	--						
Chrysene-d12	1719-03-5	%	--						
Naphthalene-d8	1146-65-2	%	--						
Phenanthrene-d10	1517-22-2	%	--						
Polychlorinated Biphenyls									
Aroclor 1016	12674-11-2	mg/kg	--						
Aroclor 1221	11104-28-2	mg/kg	--						
Aroclor 1232	11141-16-5	mg/kg	--						
Aroclor 1242	53469-21-9	mg/kg	--						
Aroclor 1248	12672-29-6	mg/kg	--						
Aroclor 1254	11097-69-1	mg/kg	--						
Aroclor 1260	11096-82-5	mg/kg	--						
Aroclor 1262	37324-23-5	mg/kg	--						
Aroclor 1268	11100-14-4	mg/kg	--						
Polychlorinated biphenyls [PCBs], total	----	mg/kg	0.3 mg/kg						
Decachlorobiphenyl	2051-24-3	%	--						

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Analyte	CAS Number	Unit	ON153/04 T1-RPIICC						
Polychlorinated Biphenyls Surrogates - Continued									
Tetrachloro-m-xylene	877-09-8	%	--						

Please refer to the General Comments section for an explanation of any qualifiers detected.

Key:

ON153/04	Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
T1-RPIICC	153 T1-Soil-Res/Park/Inst/Ind/Com/Commu Property Use

QUALITY CONTROL INTERPRETIVE REPORT

Work Order	: WT2426218	Page	: 1 of 11
Amendment	: 1		
Client	: OH Environmental Inc.	Laboratory	: ALS Environmental - Waterloo
Contact	: Hasan Rahman	Account Manager	: Amanda Overholster
Address	: 311 Matheson Blvd. East Mississauga ON Canada L4Z 1X8	Address	: 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8
Telephone	: ----	Telephone	: 1 416 817 2944
Project	: 30100	Date Samples Received	: 06-Sep-2024 09:32
PO	: ----	Issue Date	: 17-Oct-2024 14:09
C-O-C number	: 20-1046940		
Sampler	: HR		
Site	: ----		
Quote number	: 2024 SOA		
No. of samples received	: 4		
No. of samples analysed	: 4		

This report is automatically generated by the ALS LIMS (Laboratory Information Management System) through evaluation of Quality Control (QC) results and other QA parameters associated with this submission, and is intended to facilitate rapid data validation by auditors or reviewers. The report highlights any exceptions and outliers to ALS Data Quality Objectives, provides holding time details and exceptions, summarizes QC sample frequencies, and lists applicable methodology references and summaries.

Key

Anonymous: Refers to samples which are not part of this work order, but which formed part of the QC process lot.

CAS Number: Chemical Abstracts Service number is a unique identifier assigned to discrete substances.

DQO: Data Quality Objective.

LOR: Limit of Reporting (detection limit).

RPD: Relative Percent Difference.

Workorder Comments

Holding times are displayed as "----" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

Summary of Outliers

Outliers : Quality Control Samples

- No Method Blank value outliers occur.
- No Matrix Spike outliers occur.
- Duplicate outliers occur - please see following pages for full details.
- Laboratory Control Sample (LCS) outliers occur - please see following pages for full details.
- No Test sample Surrogate recovery outliers exist.

Outliers: Reference Material (RM) Samples

- No Reference Material (RM) Sample outliers occur.

Outliers : Analysis Holding Time Compliance (Breaches)

- Analysis Holding Time Outliers exist - please see following pages for full details.

Outliers : Frequency of Quality Control Samples

- No Quality Control Sample Frequency Outliers occur.



Outliers : Quality Control Samples

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: Soil/Solid

Analyte Group	Laboratory sample ID	Client/Ref Sample ID	Analyte	CAS Number	Method	Result	Limits	Comment
Duplicate (DUP) RPDs								
Polycyclic Aromatic Hydrocarbons	WT2426218-001	BH103-6	Fluoranthene	206-44-0	E641A	0.141 % DUP-H, J	Diff <2x LOR	Low Level DUP DQO exceeded (difference > 2 LOR).
Polycyclic Aromatic Hydrocarbons	WT2426218-001	BH103-6	Phenanthrene	85-01-8	E641A	0.117 % DUP-H, J	Diff <2x LOR	Low Level DUP DQO exceeded (difference > 2 LOR).
Polycyclic Aromatic Hydrocarbons	WT2426218-001	BH103-6	Pyrene	129-00-0	E641A	0.119 % DUP-H, J	Diff <2x LOR	Low Level DUP DQO exceeded (difference > 2 LOR).

Result Qualifiers

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.

Laboratory Control Sample (LCS) Recoveries

Metals	QC-MRG2-1644324 002	----	Silver	7440-22-4	E440C	65.1 % RRQC	80.0-120%	Recovery less than lower control limit
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Result Qualifiers

Qualifier Description

RRQC Refer to report comments for information regarding this QC result.



Analysis Holding Time Compliance

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times, which are selected to meet known provincial and /or federal requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by organizations such as CCME, US EPA, APHA Standard Methods, ASTM, or Environment Canada (where available). Dates and holding times reported below represent the first dates of extraction or analysis. If subsequent tests or dilutions exceeded holding times, qualifiers are added (refer to COA).

If samples are identified below as having been analyzed or extracted outside of recommended holding times, measurement uncertainties may be increased, and this should be taken into consideration when interpreting results.

Where actual sampling date is not provided on the chain of custody, the date of receipt with time at 00:00 is used for calculation purposes.

Where only the sample date without time is provided on the chain of custody, the sampling date at 00:00 is used for calculation purposes.

Matrix: Soil/Solid

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Hydrocarbons : CCME PHC - F1 by Headspace GC-FID										
Glass soil methanol vial [ON MECP] BH103-6	E581.F1	04-Sep-2024	11-Sep-2024	14 days	6 days	✓	11-Sep-2024	40 days	0 days	✓
Hydrocarbons : CCME PHC - F1 by Headspace GC-FID										
Glass soil methanol vial [ON MECP] BH104-3	E581.F1	05-Sep-2024	11-Sep-2024	14 days	6 days	✓	11-Sep-2024	40 days	0 days	✓
Hydrocarbons : CCME PHC - F1 by Headspace GC-FID										
Glass soil methanol vial [ON MECP] BH105-3	E581.F1	05-Sep-2024	11-Sep-2024	14 days	6 days	✓	11-Sep-2024	40 days	1 days	✓
Hydrocarbons : CCME PHCs - F2-F4 by GC-FID (Low Level)										
Glass soil jar/Teflon lined cap [ON MECP] DUP101	E601.SG-L	05-Sep-2024	19-Sep-2024	14 days	15 days	✖ EHT	20-Sep-2024	40 days	1 days	✓
Hydrocarbons : CCME PHCs - F2-F4 by GC-FID (Low Level)										
Glass soil jar/Teflon lined cap [ON MECP] BH104-3	E601.SG-L	05-Sep-2024	12-Sep-2024	14 days	7 days	✓	13-Sep-2024	40 days	0 days	✓
Hydrocarbons : CCME PHCs - F2-F4 by GC-FID (Low Level)										
Glass soil jar/Teflon lined cap [ON MECP] BH105-3	E601.SG-L	05-Sep-2024	12-Sep-2024	14 days	7 days	✓	13-Sep-2024	40 days	0 days	✓
Hydrocarbons : CCME PHCs - F2-F4 by GC-FID (Low Level)										
Glass soil jar/Teflon lined cap [ON MECP] BH103-6	E601.SG-L	04-Sep-2024	12-Sep-2024	14 days	8 days	✓	13-Sep-2024	40 days	0 days	✓



Matrix: Soil/Solid

Evaluation: * = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Metals : Metals in Soil/Solid by CRC ICPMS (<355 µm)										
Glass soil jar/Teflon lined cap [ON MECP] BH104-3	E440C	05-Sep-2024	15-Sep-2024	180 days	10 days	✓	16-Sep-2024	180 days	11 days	✓
Metals : Metals in Soil/Solid by CRC ICPMS (<355 µm)										
Glass soil jar/Teflon lined cap [ON MECP] BH105-3	E440C	05-Sep-2024	15-Sep-2024	180 days	10 days	✓	16-Sep-2024	180 days	11 days	✓
Metals : Metals in Soil/Solid by CRC ICPMS (<355 µm)										
Glass soil jar/Teflon lined cap [ON MECP] BH103-6	E440C	04-Sep-2024	15-Sep-2024	180 days	11 days	✓	16-Sep-2024	180 days	12 days	✓
Physical Tests : Moisture Content by Gravimetry										
Glass soil jar/Teflon lined cap [ON MECP] DUP101	E144	05-Sep-2024	----	----	----		19-Sep-2024	----	15 days	
Physical Tests : Moisture Content by Gravimetry										
Glass soil jar/Teflon lined cap [ON MECP] BH104-3	E144	05-Sep-2024	----	----	----		11-Sep-2024	----	6 days	
Physical Tests : Moisture Content by Gravimetry										
Glass soil jar/Teflon lined cap [ON MECP] BH105-3	E144	05-Sep-2024	----	----	----		11-Sep-2024	----	6 days	
Physical Tests : Moisture Content by Gravimetry										
Glass soil jar/Teflon lined cap [ON MECP] BH103-6	E144	04-Sep-2024	----	----	----		11-Sep-2024	----	7 days	
Physical Tests : pH by Meter (1:2 Soil:0.01M CaCl2 Extraction) - As Received										
Glass soil jar/Teflon lined cap [ON MECP] BH104-3	E108A	05-Sep-2024	08-Oct-2024	30 days	33 days	✖ EHT	08-Oct-2024	30 days	33 days	✖ EHT
Physical Tests : pH by Meter (1:2 Soil:0.01M CaCl2 Extraction) - As Received										
Glass soil jar/Teflon lined cap [ON MECP] BH105-3	E108A	05-Sep-2024	08-Oct-2024	30 days	33 days	✖ EHT	08-Oct-2024	30 days	33 days	✖ EHT

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Matrix: Soil/Solid

Evaluation: * = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Physical Tests : pH by Meter (1:2 Soil:0.01M CaCl2 Extraction) - As Received										
Glass soil jar/Teflon lined cap [ON MECP] BH103-6	E108A	04-Sep-2024	08-Oct-2024	30 days	34 days	✖ EHT	08-Oct-2024	30 days	34 days	✖ EHT
Physical Tests : pH by Meter (1:2 Soil:0.01M CaCl2 Extraction) - As Received										
Glass soil jar/Teflon lined cap [ON MECP] DUP101	E108A	05-Sep-2024	10-Oct-2024	30 days	35 days	✖ EHT	10-Oct-2024	30 days	36 days	✖ EHT
Polychlorinated Biphenyls : PCB Aroclors by GC-MS										
Glass soil jar/Teflon lined cap [ON MECP] BH103-6	E687	04-Sep-2024	11-Sep-2024	365 days	6 days	✔	12-Sep-2024	40 days	1 days	✔
Polychlorinated Biphenyls : PCB Aroclors by GC-MS										
Glass soil jar/Teflon lined cap [ON MECP] BH104-3	E687	05-Sep-2024	11-Sep-2024	365 days	6 days	✔	12-Sep-2024	40 days	1 days	✔
Polychlorinated Biphenyls : PCB Aroclors by GC-MS										
Glass soil jar/Teflon lined cap [ON MECP] BH105-3	E687	05-Sep-2024	11-Sep-2024	365 days	6 days	✔	12-Sep-2024	40 days	1 days	✔
Polycyclic Aromatic Hydrocarbons : PAHs in Soil/solid by Hex:Ace GC-MS										
Glass soil jar/Teflon lined cap [ON MECP] BH104-3	E641A	05-Sep-2024	12-Sep-2024	60 days	7 days	✔	13-Sep-2024	40 days	1 days	✔
Polycyclic Aromatic Hydrocarbons : PAHs in Soil/solid by Hex:Ace GC-MS										
Glass soil jar/Teflon lined cap [ON MECP] BH105-3	E641A	05-Sep-2024	12-Sep-2024	60 days	7 days	✔	13-Sep-2024	40 days	1 days	✔
Polycyclic Aromatic Hydrocarbons : PAHs in Soil/solid by Hex:Ace GC-MS										
Glass soil jar/Teflon lined cap [ON MECP] BH103-6	E641A	04-Sep-2024	12-Sep-2024	60 days	8 days	✔	13-Sep-2024	40 days	1 days	✔
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass soil methanol vial [ON MECP] BH103-6	E611D	04-Sep-2024	11-Sep-2024	14 days	6 days	✔	11-Sep-2024	40 days	0 days	✔



Matrix: **Soil/Solid**

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS											
Glass soil methanol vial [ON MECP] BH104-3	E611D	05-Sep-2024	11-Sep-2024	14 days	6 days	✓	11-Sep-2024	40 days	0 days	✓	
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS											
Glass soil methanol vial [ON MECP] BH105-3	E611D	05-Sep-2024	11-Sep-2024	14 days	6 days	✓	11-Sep-2024	40 days	1 days	✓	

Legend & Qualifier Definitions

EHT: Exceeded ALS recommended hold time prior to analysis.

Rec. HT: ALS recommended hold time (see units).



Quality Control Parameter Frequency Compliance

The following report summarizes the frequency of laboratory QC samples analyzed within the analytical batches (QC lots) in which the submitted samples were processed. The actual frequency should be greater than or equal to the expected frequency.

Matrix: **Soil/Solid**

Evaluation: ✖ = QC frequency outside specification; ✔ = QC frequency within specification.

Quality Control Sample Type	Method	QC Lot #	Count		Frequency (%)		
			QC	Regular	Actual	Expected	Evaluation
Analytical Methods							
Laboratory Duplicates (DUP)							
CCME PHC - F1 by Headspace GC-FID	E581.F1	1643881	2	40	5.0	5.0	✔
CCME PHCs - F2-F4 by GC-FID (Low Level)	E601.SG-L	1661322	2	35	5.7	5.0	✔
Metals in Soil/Solid by CRC ICPMS (<355 µm)	E440C	1644324	1	9	11.1	5.0	✔
Moisture Content by Gravimetry	E144	1661329	2	40	5.0	5.0	✔
PAHs in Soil/solid by Hex:Ace GC-MS	E641A	1644043	1	15	6.6	5.0	✔
PCB Aroclors by GC-MS	E687	1643772	2	14	14.2	5.0	✔
pH by Meter (1:2 Soil:0.01M CaCl2 Extraction) - As Received	E108A	1700744	2	15	13.3	5.0	✔
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	1643880	2	40	5.0	5.0	✔
Laboratory Control Samples (LCS)							
CCME PHC - F1 by Headspace GC-FID	E581.F1	1643881	2	40	5.0	5.0	✔
CCME PHCs - F2-F4 by GC-FID (Low Level)	E601.SG-L	1661322	2	35	5.7	5.0	✔
Metals in Soil/Solid by CRC ICPMS (<355 µm)	E440C	1644324	2	9	22.2	10.0	✔
Moisture Content by Gravimetry	E144	1661329	2	40	5.0	5.0	✔
PAHs in Soil/solid by Hex:Ace GC-MS	E641A	1644043	1	15	6.6	5.0	✔
PCB Aroclors by GC-MS	E687	1643772	2	14	14.2	5.0	✔
pH by Meter (1:2 Soil:0.01M CaCl2 Extraction) - As Received	E108A	1700744	2	15	13.3	5.0	✔
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	1643880	2	40	5.0	5.0	✔
Method Blanks (MB)							
CCME PHC - F1 by Headspace GC-FID	E581.F1	1643881	2	40	5.0	5.0	✔
CCME PHCs - F2-F4 by GC-FID (Low Level)	E601.SG-L	1661322	2	35	5.7	5.0	✔
Metals in Soil/Solid by CRC ICPMS (<355 µm)	E440C	1644324	1	9	11.1	5.0	✔
Moisture Content by Gravimetry	E144	1661329	2	40	5.0	5.0	✔
PAHs in Soil/solid by Hex:Ace GC-MS	E641A	1644043	1	15	6.6	5.0	✔
PCB Aroclors by GC-MS	E687	1643772	2	14	14.2	5.0	✔
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	1643880	2	40	5.0	5.0	✔
Matrix Spikes (MS)							
CCME PHC - F1 by Headspace GC-FID	E581.F1	1643881	2	40	5.0	5.0	✔
CCME PHCs - F2-F4 by GC-FID (Low Level)	E601.SG-L	1661322	2	35	5.7	5.0	✔
PAHs in Soil/solid by Hex:Ace GC-MS	E641A	1644043	1	15	6.6	5.0	✔
PCB Aroclors by GC-MS	E687	1643772	2	14	14.2	5.0	✔
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	1643880	2	40	5.0	5.0	✔



Methodology References and Summaries

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Reference methods may incorporate modifications to improve performance (indicated by "mod").

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
pH by Meter (1:2 Soil:0.01M CaCl ₂ Extraction) - As Received	E108A ALS Environmental - Waterloo	Soil/Solid	MECP E3530	pH is determined by potentiometric measurement with a pH electrode, and is conducted at ambient laboratory temperature (normally 20 ± 5°C) and is carried out in accordance with procedures described in the Analytical Protocol (prescriptive method). A minimum 10g portion of the sample, as received, is extracted with 20mL of 0.01M calcium chloride solution by shaking for at least 30 minutes. The aqueous layer is separated from the soil by centrifuging, settling, or decanting and then analyzed using a pH meter and electrode. This method is equivalent to ASTM D4972 and is acceptable for topsoil analysis.
Moisture Content by Gravimetry	E144 ALS Environmental - Waterloo	Soil/Solid	CCME PHC in Soil - Tier 1	Moisture is measured gravimetrically by drying the sample at 105°C. Moisture content is calculated as the weight loss (due to water) divided by the wet weight of the sample, expressed as a percentage.
Metals in Soil/Solid by CRC ICPMS (<355 µm)	E440C ALS Environmental - Waterloo	Soil/Solid	EPA 6020B (mod)	This method is intended to liberate metals that may be environmentally available. Samples are dried, then sieved through a 355 µm sieve, and digested with HNO ₃ and HCl. Dependent on sample matrix, some metals may be only partially recovered, including Al, Ba, Be, Cr, Sr, Ti, Tl, V, W, and Zr. Silicate minerals are not solubilized. Volatile forms of sulfur (including sulfide) may not be captured, as they may be lost during sampling, storage, or digestion. This method does not adequately recover elemental sulfur, and is unsuitable for assessment of elemental sulfur standards or guidelines. Analysis is by Collision/Reaction Cell ICPMS.
CCME PHC - F1 by Headspace GC-FID	E581.F1 ALS Environmental - Waterloo	Soil/Solid	CCME PHC in Soil - Tier 1	CCME Fraction 1 (F1) is analyzed by static headspace GC-FID. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law. Analytical methods for CCME Petroleum Hydrocarbons (PHCs) are validated to comply fully with the Reference Method for the Canada-Wide Standard for PHC. Test results are expressed on a dry weight basis. Unless qualified, all required quality control criteria of the CCME PHC method have been met, including response factor and linearity requirements.



Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
CCME PHCs - F2-F4 by GC-FID (Low Level)	E601.SG-L ALS Environmental - Waterloo	Soil/Solid	CCME PHC in Soil - Tier 1	Sample extracts are subjected to in-situ silica gel treatment prior to analysis by GC-FID for CCME hydrocarbon fractions (F2-F4). Analytical methods for CCME Petroleum Hydrocarbons (PHCs) are validated to comply fully with the Reference Method for the Canada-Wide Standard for PHC. Test results are expressed on a dry weight basis. Unless qualified, all required quality control criteria of the CCME PHC method have been met, including response factor and linearity requirements.
VOCs (Eastern Canada List) by Headspace GC-MS	E611D ALS Environmental - Waterloo	Soil/Solid	EPA 8260D (mod)	Volatile Organic Compounds (VOCs) are analyzed by static headspace GC-MS. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law.
PAHs in Soil/solid by Hex:Ace GC-MS	E641A ALS Environmental - Waterloo	Soil/Solid	EPA 8270E (mod)	Polycyclic Aromatic Hydrocarbons (PAHs) are extracted with hexane/acetone and analyzed by GC-MS. If reported, IACR (index of additive cancer risk, unitless) and B(a)P toxic potency equivalent (in soil concentration units) are calculated as per CCME PAH Soil Quality Guidelines fact sheet (2010) or ABT1.
PCB Aroclors by GC-MS	E687 ALS Environmental - Waterloo	Soil/Solid	EPA 8270E (mod)	PCB Aroclors are analyzed by GC-MS
F1-BTEX	EC580 ALS Environmental - Waterloo	Soil/Solid	CCME PHC in Soil - Tier 1	F1-BTEX is calculated as follows: F1-BTEX = F1 (C6-C10) minus benzene, toluene, ethylbenzene and xylenes (BTEX).
Sum F1 to F4 (C6-C50)	EC581 ALS Environmental - Waterloo	Soil/Solid	CCME PHC in Soil - Tier 1	Hydrocarbons, total (C6-C50) is the sum of CCME Fractions F1(C6-C10), F2(C10-C16), F3(C16-C34), and F4(C34-C50). F4G-sg is not used within this calculation due to overlap with other fractions.
F2 to F3 minus PAH	EC600 ALS Environmental - Waterloo	Soil/Solid	CCME PHC in Soil - Tier 1	F2-Naphthalene = CCME Fraction 2 (C10-C16) minus Naphthalene F3-PAH = CCME Fraction 3 (C16-C34) minus sPhenanthrene, Fluoranthene, Pyrene, Benz(a)anthracene, benzo(b+)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-c,d)pyrene, and Dibenz(a,h)anthracene.
Preparation Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Leach 1:2 Soil : 0.01CaCl2 - As Received for pH	EP108A ALS Environmental - Waterloo	Soil/Solid	MOEE E3137A	A minimum 10g portion of the sample, as received, is extracted with 20mL of 0.01M calcium chloride solution by shaking for at least 30 minutes. The aqueous layer is separated from the soil by centrifuging, settling or decanting and then analyzed using a pH meter and electrode.
Digestion for Metals and Mercury (355 µm Sieve)	EP440C ALS Environmental - Waterloo	Soil/Solid	EPA 200.2 (mod)	Samples are sieved through a 355 µm sieve, and digested with HNO3 and HCl. This method is intended to liberate metals that may be environmentally available.

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 Project : 30100



<i>Preparation Methods</i>	<i>Method / Lab</i>	<i>Matrix</i>	<i>Method Reference</i>	<i>Method Descriptions</i>
VOCs Methanol Extraction for Headspace Analysis	EP581 ALS Environmental - Waterloo	Soil/Solid	EPA 5035A (mod)	VOCs in samples are extracted with methanol. Extracts are then prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law.
PHCs and PAHs Hexane-Acetone Tumbler Extraction	EP601 ALS Environmental - Waterloo	Soil/Solid	CCME PHC in Soil - Tier 1 (mod)	Samples are subsampled and Petroleum Hydrocarbons (PHC) and PAHs are extracted with 1:1 hexane:acetone using a rotary extractor.
Pesticides, PCB, PAH, and Neutral Extractable Chlorinated Hydrocarbons Extraction	EP660 ALS Environmental - Waterloo	Soil/Solid	EPA 3570 (mod)	A homogenized subsample is extracted with organic solvents using a mechanical shaker.

QUALITY CONTROL REPORT

Work Order	: WT2426218	Page	: 1 of 21
Amendment	: 1		
Client	: OH Environmental Inc.	Laboratory	: ALS Environmental - Waterloo
Contact	: Hasan Rahman	Account Manager	: Amanda Overholster
Address	: 311 Matheson Blvd. East Mississauga ON Canada L4Z 1X8	Address	: 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8
Telephone	: ----	Telephone	: 1 416 817 2944
Project	: 30100	Date Samples Received	: 06-Sep-2024 09:32
PO	: ----	Date Analysis Commenced	: 11-Sep-2024
C-O-C number	: 20-1046940	Issue Date	: 17-Oct-2024 14:09
Sampler	: HR		
Site	: ----		
Quote number	: 2024 SOA		
No. of samples received	: 4		
No. of samples analysed	: 4		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percent Difference (RPD) and Data Quality Objectives
- Matrix Spike (MS) Report; Recovery and Data Quality Objectives
- Reference Material (RM) Report; Recovery and Data Quality Objectives
- Method Blank (MB) Report; Recovery and Data Quality Objectives
- Laboratory Control Sample (LCS) Report; Recovery and Data Quality Objectives

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

Signatories	Position	Laboratory Department
Amaninder Dhillon	Team Lead - Semi-Volatile Instrumentation	Waterloo Organics, Waterloo, Ontario
Jeremy Gingras	Supervisor - Semi-Volatile Instrumentation	Waterloo Organics, Waterloo, Ontario
Jocelyn Kennedy	Department Manager - Semi-Volatile Organics	Waterloo Organics, Waterloo, Ontario
Josphin Masihi	Analyst	Waterloo Centralized Prep, Waterloo, Ontario
Sarah Birch	VOC Section Supervisor	Waterloo VOC, Waterloo, Ontario
Walt Kippenhuck	Supervisor - Inorganic	Waterloo Inorganics, Waterloo, Ontario
Walt Kippenhuck	Supervisor - Inorganic	Waterloo Metals, Waterloo, Ontario



General Comments

The ALS Quality Control (QC) report is optionally provided to ALS clients upon request. ALS test methods include 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 predetermined Data Quality Objectives (DQOs) to provide confidence in the accuracy of associated test results. This report contains detailed results for all QC results applicable to this sample submission. Please refer to the ALS Quality Control Interpretation report (QCI) for applicable method references and methodology summaries.

Key :

Anonymous = Refers to samples which are not part of this work order, but which formed part of the QC process lot.

CAS Number = Chemical Abstracts Service number is a unique identifier assigned to discrete substances.

DQO = Data Quality Objective.

LOR = Limit of Reporting (detection limit).

RPD = Relative Percent Difference

= Indicates a QC result that did not meet the ALS DQO.

Workorder Comments

Holding times are displayed as "---" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.



Laboratory Duplicate (DUP) Report

A Laboratory Duplicate (DUP) is a randomly selected intralaboratory replicate sample. Laboratory Duplicates provide information regarding method precision and sample heterogeneity. ALS DQOs for Laboratory Duplicates are expressed as test-specific limits for Relative Percent Difference (RPD), or as an absolute difference limit of 2 times the LOR for low concentration duplicates within ~ 4-10 times the LOR (cut-off is test-specific).

Sub-Matrix: Soil/Solid					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Physical Tests (QC Lot: 1644824)											
WT2426218-001	BH103-6	Moisture	----	E144	0.25	%	10.8	10.8	0.00105%	20%	----
Physical Tests (QC Lot: 1661329)											
WT2426218-004	DUP101	Moisture	----	E144	0.25	%	1.81	1.74	0.07	Diff <2x LOR	----
Physical Tests (QC Lot: 1695809)											
TY2410862-001	Anonymous	pH (1:2 soil:CaCl2-aq)	----	E108A	0.10	pH units	7.14	7.26	1.67%	5%	----
Physical Tests (QC Lot: 1700744)											
WT2426218-004	DUP101	pH (1:2 soil:CaCl2-aq)	----	E108A	0.10	pH units	7.93	8.01	1.00%	5%	----
Metals (QC Lot: 1644324)											
WT2426343-001	Anonymous	Antimony	7440-36-0	E440C	0.10	mg/kg	<0.10	<0.10	0	Diff <2x LOR	----
		Arsenic	7440-38-2	E440C	0.10	mg/kg	1.55	1.44	7.30%	30%	----
		Barium	7440-39-3	E440C	0.50	mg/kg	31.5	30.7	2.55%	40%	----
		Beryllium	7440-41-7	E440C	0.10	mg/kg	0.21	0.23	0.02	Diff <2x LOR	----
		Boron	7440-42-8	E440C	5.0	mg/kg	5.0	<5.0	0.010	Diff <2x LOR	----
		Cadmium	7440-43-9	E440C	0.020	mg/kg	0.047	0.051	0.004	Diff <2x LOR	----
		Chromium	7440-47-3	E440C	0.50	mg/kg	10.4	10.3	1.45%	30%	----
		Cobalt	7440-48-4	E440C	0.10	mg/kg	3.73	3.60	3.57%	30%	----
		Copper	7440-50-8	E440C	0.50	mg/kg	7.40	7.03	5.06%	30%	----
		Lead	7439-92-1	E440C	0.50	mg/kg	3.70	3.58	3.26%	40%	----
		Molybdenum	7439-98-7	E440C	0.10	mg/kg	0.22	0.22	0.005	Diff <2x LOR	----
		Nickel	7440-02-0	E440C	0.50	mg/kg	7.82	7.59	2.98%	30%	----
		Selenium	7782-49-2	E440C	0.20	mg/kg	<0.20	<0.20	0	Diff <2x LOR	----
		Silver	7440-22-4	E440C	0.10	mg/kg	<0.10	<0.10	0	Diff <2x LOR	----
		Thallium	7440-28-0	E440C	0.050	mg/kg	0.079	0.074	0.005	Diff <2x LOR	----
		Uranium	7440-61-1	E440C	0.050	mg/kg	0.377	0.360	4.81%	30%	----
		Vanadium	7440-62-2	E440C	0.20	mg/kg	20.7	20.2	2.53%	30%	----
		Zinc	7440-66-6	E440C	2.0	mg/kg	20.2	19.5	3.32%	30%	----
Volatile Organic Compounds (QC Lot: 1643854)											
WT2426037-002	Anonymous	Acetone	67-64-1	E611D	0.50	mg/kg	<0.50 µg/g	<0.50	0	Diff <2x LOR	----
		Benzene	71-43-2	E611D	0.0050	mg/kg	<0.0050 µg/g	<0.0050	0	Diff <2x LOR	----
		Bromodichloromethane	75-27-4	E611D	0.050	mg/kg	<0.050 µg/g	<0.050	0	Diff <2x LOR	----



Sub-Matrix: Soil/Solid

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Volatile Organic Compounds (QC Lot: 1643854) - continued											
WT2426037-002	Anonymous	Bromoform	75-25-2	E611D	0.050	mg/kg	<0.050 µg/g	<0.050	0	Diff <2x LOR	----
		Bromomethane	74-83-9	E611D	0.050	mg/kg	<0.050 µg/g	<0.050	0	Diff <2x LOR	----
		Carbon tetrachloride	56-23-5	E611D	0.050	mg/kg	<0.050 µg/g	<0.050	0	Diff <2x LOR	----
		Chlorobenzene	108-90-7	E611D	0.050	mg/kg	<0.050 µg/g	<0.050	0	Diff <2x LOR	----
		Chloroform	67-66-3	E611D	0.050	mg/kg	<0.050 µg/g	<0.050	0	Diff <2x LOR	----
		Dibromochloromethane	124-48-1	E611D	0.050	mg/kg	<0.050 µg/g	<0.050	0	Diff <2x LOR	----
		Dibromoethane, 1,2-	106-93-4	E611D	0.050	mg/kg	<0.050 µg/g	<0.050	0	Diff <2x LOR	----
		Dichlorobenzene, 1,2-	95-50-1	E611D	0.050	mg/kg	<0.050 µg/g	<0.050	0	Diff <2x LOR	----
		Dichlorobenzene, 1,3-	541-73-1	E611D	0.050	mg/kg	<0.050 µg/g	<0.050	0	Diff <2x LOR	----
		Dichlorobenzene, 1,4-	106-46-7	E611D	0.050	mg/kg	<0.050 µg/g	<0.050	0	Diff <2x LOR	----
		Dichlorodifluoromethane	75-71-8	E611D	0.050	mg/kg	<0.050 µg/g	<0.050	0	Diff <2x LOR	----
		Dichloroethane, 1,1-	75-34-3	E611D	0.050	mg/kg	<0.050 µg/g	<0.050	0	Diff <2x LOR	----
		Dichloroethane, 1,2-	107-06-2	E611D	0.050	mg/kg	<0.050 µg/g	<0.050	0	Diff <2x LOR	----
		Dichloroethylene, 1,1-	75-35-4	E611D	0.050	mg/kg	<0.050 µg/g	<0.050	0	Diff <2x LOR	----
		Dichloroethylene, cis-1,2-	156-59-2	E611D	0.050	mg/kg	<0.050 µg/g	<0.050	0	Diff <2x LOR	----
		Dichloroethylene, trans-1,2-	156-60-5	E611D	0.050	mg/kg	<0.050 µg/g	<0.050	0	Diff <2x LOR	----
		Dichloromethane	75-09-2	E611D	0.045	mg/kg	<0.045 µg/g	<0.045	0	Diff <2x LOR	----
		Dichloropropane, 1,2-	78-87-5	E611D	0.050	mg/kg	<0.050 µg/g	<0.050	0	Diff <2x LOR	----
		Dichloropropylene, cis-1,3-	10061-01-5	E611D	0.030	mg/kg	<0.030 µg/g	<0.030	0	Diff <2x LOR	----
		Dichloropropylene, trans-1,3-	10061-02-6	E611D	0.030	mg/kg	<0.030 µg/g	<0.030	0	Diff <2x LOR	----
		Ethylbenzene	100-41-4	E611D	0.015	mg/kg	<0.015 µg/g	<0.015	0	Diff <2x LOR	----
		Hexane, n-	110-54-3	E611D	0.050	mg/kg	<0.050 µg/g	<0.050	0	Diff <2x LOR	----
		Methyl ethyl ketone [MEK]	78-93-3	E611D	0.50	mg/kg	<0.50 µg/g	<0.50	0	Diff <2x LOR	----
		Methyl isobutyl ketone [MIBK]	108-10-1	E611D	0.50	mg/kg	<0.50 µg/g	<0.50	0	Diff <2x LOR	----
		Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.040	mg/kg	<0.040 µg/g	<0.040	0	Diff <2x LOR	----
		Styrene	100-42-5	E611D	0.050	mg/kg	<0.050 µg/g	<0.050	0	Diff <2x LOR	----
		Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.050	mg/kg	<0.050 µg/g	<0.050	0	Diff <2x LOR	----
		Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.050	mg/kg	<0.050 µg/g	<0.050	0	Diff <2x LOR	----
		Tetrachloroethylene	127-18-4	E611D	0.050	mg/kg	<0.050 µg/g	<0.050	0	Diff <2x LOR	----
		Toluene	108-88-3	E611D	0.050	mg/kg	<0.050 µg/g	<0.050	0	Diff <2x LOR	----
		Trichloroethane, 1,1,1-	71-55-6	E611D	0.050	mg/kg	<0.050 µg/g	<0.050	0	Diff <2x LOR	----
		Trichloroethane, 1,1,2-	79-00-5	E611D	0.050	mg/kg	<0.050 µg/g	<0.050	0	Diff <2x LOR	----
		Trichloroethylene	79-01-6	E611D	0.010	mg/kg	<0.010 µg/g	<0.010	0	Diff <2x LOR	----
		Trichlorofluoromethane	75-69-4	E611D	0.050	mg/kg	<0.050 µg/g	<0.050	0	Diff <2x LOR	----



Sub-Matrix: Soil/Solid

Sub-Matrix: Soil/Solid					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Volatile Organic Compounds (QC Lot: 1643854) - continued											
WT2426037-002	Anonymous	Vinyl chloride	75-01-4	E611D	0.020	mg/kg	<0.020 µg/g	<0.020	0	Diff <2x LOR	----
		Xylene, m+p-	179601-23-1	E611D	0.030	mg/kg	<0.030 µg/g	<0.030	0	Diff <2x LOR	----
		Xylene, o-	95-47-6	E611D	0.030	mg/kg	<0.030 µg/g	<0.030	0	Diff <2x LOR	----
Volatile Organic Compounds (QC Lot: 1643880)											
WT2426343-002	Anonymous	Acetone	67-64-1	E611D	0.50	mg/kg	<0.50	<0.50	0	Diff <2x LOR	----
		Benzene	71-43-2	E611D	0.0050	mg/kg	<0.0050	<0.0050	0	Diff <2x LOR	----
		Bromodichloromethane	75-27-4	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Bromoform	75-25-2	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Bromomethane	74-83-9	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Carbon tetrachloride	56-23-5	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Chlorobenzene	108-90-7	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Chloroform	67-66-3	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Dibromochloromethane	124-48-1	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Dibromoethane, 1,2-	106-93-4	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Dichlorobenzene, 1,2-	95-50-1	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Dichlorobenzene, 1,3-	541-73-1	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Dichlorobenzene, 1,4-	106-46-7	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Dichlorodifluoromethane	75-71-8	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Dichloroethane, 1,1-	75-34-3	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Dichloroethane, 1,2-	107-06-2	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Dichloroethylene, 1,1-	75-35-4	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Dichloroethylene, cis-1,2-	156-59-2	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Dichloroethylene, trans-1,2-	156-60-5	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Dichloromethane	75-09-2	E611D	0.045	mg/kg	<0.045	<0.045	0	Diff <2x LOR	----
		Dichloropropane, 1,2-	78-87-5	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Dichloropropylene, cis-1,3-	10061-01-5	E611D	0.030	mg/kg	<0.030	<0.030	0	Diff <2x LOR	----
		Dichloropropylene, trans-1,3-	10061-02-6	E611D	0.030	mg/kg	<0.030	<0.030	0	Diff <2x LOR	----
		Ethylbenzene	100-41-4	E611D	0.015	mg/kg	<0.015	<0.015	0	Diff <2x LOR	----
		Hexane, n-	110-54-3	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Methyl ethyl ketone [MEK]	78-93-3	E611D	0.50	mg/kg	<0.50	<0.50	0	Diff <2x LOR	----
		Methyl isobutyl ketone [MIBK]	108-10-1	E611D	0.50	mg/kg	<0.50	<0.50	0	Diff <2x LOR	----
		Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.040	mg/kg	<0.040	<0.040	0	Diff <2x LOR	----
		Styrene	100-42-5	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----

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 Work Order : WT2426218 Amendment 1
 Client : OH Environmental Inc.
 Project : 30100



Sub-Matrix: Soil/Solid

Sub-Matrix: Soil/Solid					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Volatile Organic Compounds (QC Lot: 1643880) - continued											
WT2426343-002	Anonymous	Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Tetrachloroethylene	127-18-4	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Toluene	108-88-3	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Trichloroethane, 1,1,1-	71-55-6	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Trichloroethane, 1,1,2-	79-00-5	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Trichloroethylene	79-01-6	E611D	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----
		Trichlorofluoromethane	75-69-4	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Vinyl chloride	75-01-4	E611D	0.020	mg/kg	<0.020	<0.020	0	Diff <2x LOR	----
		Xylene, m+p-	179601-23-1	E611D	0.030	mg/kg	<0.030	<0.030	0	Diff <2x LOR	----
		Xylene, o-	95-47-6	E611D	0.030	mg/kg	<0.030	<0.030	0	Diff <2x LOR	----
Hydrocarbons (QC Lot: 1643855)											
WT2426037-002	Anonymous	F1 (C6-C10)	----	E581.F1	5.0	mg/kg	<5.0 µg/g	<5.0	0	Diff <2x LOR	----
Hydrocarbons (QC Lot: 1643881)											
WT2426343-002	Anonymous	F1 (C6-C10)	----	E581.F1	5.0	mg/kg	<5.0	<5.0	0	Diff <2x LOR	----
Hydrocarbons (QC Lot: 1644044)											
WT2426218-001	BH103-6	F2 (C10-C16)	----	E601.SG-L	10	mg/kg	<10	<10	0	Diff <2x LOR	----
		F3 (C16-C34)	----	E601.SG-L	50	mg/kg	<50	<50	0	Diff <2x LOR	----
		F4 (C34-C50)	----	E601.SG-L	50	mg/kg	<50	<50	0	Diff <2x LOR	----
Hydrocarbons (QC Lot: 1661322)											
WT2427634-004	Anonymous	F2 (C10-C16)	----	E601.SG-L	10	mg/kg	<10	<10	0	Diff <2x LOR	----
		F3 (C16-C34)	----	E601.SG-L	50	mg/kg	<50	<50	0	Diff <2x LOR	----
		F4 (C34-C50)	----	E601.SG-L	50	mg/kg	<50	<50	0	Diff <2x LOR	----
Polycyclic Aromatic Hydrocarbons (QC Lot: 1644043)											
WT2426218-001	BH103-6	Acenaphthene	83-32-9	E641A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Acenaphthylene	208-96-8	E641A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Anthracene	120-12-7	E641A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Benz(a)anthracene	56-55-3	E641A	0.050	mg/kg	0.086	<0.050	0.036	Diff <2x LOR	J
		Benzo(a)pyrene	50-32-8	E641A	0.050	mg/kg	0.097	<0.050	0.047	Diff <2x LOR	J
		Benzo(b+j)fluoranthene	n/a	E641A	0.050	mg/kg	0.109	<0.050	0.059	Diff <2x LOR	J
		Benzo(g,h,i)perylene	191-24-2	E641A	0.050	mg/kg	0.057	<0.050	0.007	Diff <2x LOR	J
		Benzo(k)fluoranthene	207-08-9	E641A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Chrysene	218-01-9	E641A	0.050	mg/kg	0.096	<0.050	0.046	Diff <2x LOR	J
		Dibenz(a,h)anthracene	53-70-3	E641A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Fluoranthene	206-44-0	E641A	0.050	mg/kg	0.191	# <0.050	0.141	Diff <2x LOR	DUP-H,J



Sub-Matrix: Soil/Solid					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Polycyclic Aromatic Hydrocarbons (QC Lot: 1644043) - continued											
WT2426218-001	BH103-6	Fluorene	86-73-7	E641A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Indeno(1,2,3-c,d)pyrene	193-39-5	E641A	0.050	mg/kg	0.062	<0.050	0.012	Diff <2x LOR	J
		Methylnaphthalene, 1-	90-12-0	E641A	0.030	mg/kg	<0.030	<0.030	0	Diff <2x LOR	----
		Methylnaphthalene, 2-	91-57-6	E641A	0.030	mg/kg	<0.030	<0.030	0	Diff <2x LOR	----
		Naphthalene	91-20-3	E641A	0.010	mg/kg	0.020	<0.010	0.010	Diff <2x LOR	J
		Phenanthrene	85-01-8	E641A	0.050	mg/kg	0.167	# <0.050	0.117	Diff <2x LOR	DUP-H,J
		Pyrene	129-00-0	E641A	0.050	mg/kg	0.169	# <0.050	0.119	Diff <2x LOR	DUP-H,J
Polychlorinated Biphenyls (QC Lot: 1643772)											
WT2426009-010	Anonymous	Aroclor 1016	12674-11-2	E687	0.010	mg/kg	<0.010 µg/g	<0.010	0	Diff <2x LOR	----
		Aroclor 1221	11104-28-2	E687	0.010	mg/kg	<0.010 µg/g	<0.010	0	Diff <2x LOR	----
		Aroclor 1232	11141-16-5	E687	0.010	mg/kg	<0.010 µg/g	<0.010	0	Diff <2x LOR	----
		Aroclor 1242	53469-21-9	E687	0.010	mg/kg	<0.010 µg/g	<0.010	0	Diff <2x LOR	----
		Aroclor 1248	12672-29-6	E687	0.010	mg/kg	<0.010 µg/g	<0.010	0	Diff <2x LOR	----
		Aroclor 1254	11097-69-1	E687	0.010	mg/kg	<0.010 µg/g	<0.010	0	Diff <2x LOR	----
		Aroclor 1260	11096-82-5	E687	0.010	mg/kg	<0.010 µg/g	<0.010	0	Diff <2x LOR	----
		Aroclor 1262	37324-23-5	E687	0.010	mg/kg	<0.010 µg/g	<0.010	0	Diff <2x LOR	----
		Aroclor 1268	11100-14-4	E687	0.010	mg/kg	<0.010 µg/g	<0.010	0	Diff <2x LOR	----
Polychlorinated Biphenyls (QC Lot: 1644917)											
WT2426043-003	Anonymous	Aroclor 1016	12674-11-2	E687	0.010	mg/kg	<0.010 µg/g	<0.010	0.0004	Diff <2x LOR	----
		Aroclor 1221	11104-28-2	E687	0.010	mg/kg	<0.010 µg/g	<0.010	0.0004	Diff <2x LOR	----
		Aroclor 1232	11141-16-5	E687	0.010	mg/kg	<0.010 µg/g	<0.010	0.0004	Diff <2x LOR	----
		Aroclor 1242	53469-21-9	E687	0.010	mg/kg	<0.010 µg/g	<0.010	0.0004	Diff <2x LOR	----
		Aroclor 1248	12672-29-6	E687	0.010	mg/kg	<0.010 µg/g	<0.010	0.0004	Diff <2x LOR	----
		Aroclor 1254	11097-69-1	E687	0.010	mg/kg	<0.010 µg/g	<0.010	0.0004	Diff <2x LOR	----
		Aroclor 1260	11096-82-5	E687	0.010	mg/kg	<0.010 µg/g	<0.010	0.0004	Diff <2x LOR	----
		Aroclor 1262	37324-23-5	E687	0.010	mg/kg	<0.010 µg/g	<0.010	0.0004	Diff <2x LOR	----
		Aroclor 1268	11100-14-4	E687	0.010	mg/kg	<0.010 µg/g	<0.010	0.0004	Diff <2x LOR	----

Qualifiers

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.



Method Blank (MB) Report

A Method Blank is an analyte-free matrix that undergoes sample processing identical to that carried out for test samples. Method Blank results are used to monitor and control for potential contamination from the laboratory environment and reagents. For most tests, the DQO for Method Blanks is for the result to be < LOR.

Sub-Matrix: Soil/Solid

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Physical Tests (QCLot: 1644824)						
Moisture	---	E144	0.25	%	<0.25	---
Physical Tests (QCLot: 1661329)						
Moisture	---	E144	0.25	%	<0.25	---
Metals (QCLot: 1644324)						
Antimony	7440-36-0	E440C	0.1	mg/kg	<0.10	---
Arsenic	7440-38-2	E440C	0.1	mg/kg	<0.10	---
Barium	7440-39-3	E440C	0.5	mg/kg	<0.50	---
Beryllium	7440-41-7	E440C	0.1	mg/kg	<0.10	---
Boron	7440-42-8	E440C	5	mg/kg	<5.0	---
Cadmium	7440-43-9	E440C	0.02	mg/kg	<0.020	---
Chromium	7440-47-3	E440C	0.5	mg/kg	<0.50	---
Cobalt	7440-48-4	E440C	0.1	mg/kg	<0.10	---
Copper	7440-50-8	E440C	0.5	mg/kg	<0.50	---
Lead	7439-92-1	E440C	0.5	mg/kg	<0.50	---
Molybdenum	7439-98-7	E440C	0.1	mg/kg	<0.10	---
Nickel	7440-02-0	E440C	0.5	mg/kg	<0.50	---
Selenium	7782-49-2	E440C	0.2	mg/kg	<0.20	---
Silver	7440-22-4	E440C	0.1	mg/kg	<0.10	---
Thallium	7440-28-0	E440C	0.05	mg/kg	<0.050	---
Uranium	7440-61-1	E440C	0.05	mg/kg	<0.050	---
Vanadium	7440-62-2	E440C	0.2	mg/kg	<0.20	---
Zinc	7440-66-6	E440C	2	mg/kg	<2.0	---
Volatile Organic Compounds (QCLot: 1643854)						
Acetone	67-64-1	E611D	0.5	mg/kg	<0.50	---
Benzene	71-43-2	E611D	0.005	mg/kg	<0.0050	---
Bromodichloromethane	75-27-4	E611D	0.05	mg/kg	<0.050	---
Bromoform	75-25-2	E611D	0.05	mg/kg	<0.050	---
Bromomethane	74-83-9	E611D	0.05	mg/kg	<0.050	---
Carbon tetrachloride	56-23-5	E611D	0.05	mg/kg	<0.050	---
Chlorobenzene	108-90-7	E611D	0.05	mg/kg	<0.050	---
Chloroform	67-66-3	E611D	0.05	mg/kg	<0.050	---
Dibromochloromethane	124-48-1	E611D	0.05	mg/kg	<0.050	---



Sub-Matrix: Soil/Solid

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Volatile Organic Compounds (QCLot: 1643854) - continued						
Dibromoethane, 1,2-	106-93-4	E611D	0.05	mg/kg	<0.050	----
Dichlorobenzene, 1,2-	95-50-1	E611D	0.05	mg/kg	<0.050	----
Dichlorobenzene, 1,3-	541-73-1	E611D	0.05	mg/kg	<0.050	----
Dichlorobenzene, 1,4-	106-46-7	E611D	0.05	mg/kg	<0.050	----
Dichlorodifluoromethane	75-71-8	E611D	0.05	mg/kg	<0.050	----
Dichloroethane, 1,1-	75-34-3	E611D	0.05	mg/kg	<0.050	----
Dichloroethane, 1,2-	107-06-2	E611D	0.05	mg/kg	<0.050	----
Dichloroethylene, 1,1-	75-35-4	E611D	0.05	mg/kg	<0.050	----
Dichloroethylene, cis-1,2-	156-59-2	E611D	0.05	mg/kg	<0.050	----
Dichloroethylene, trans-1,2-	156-60-5	E611D	0.05	mg/kg	<0.050	----
Dichloromethane	75-09-2	E611D	0.045	mg/kg	<0.045	----
Dichloropropane, 1,2-	78-87-5	E611D	0.05	mg/kg	<0.050	----
Dichloropropylene, cis-1,3-	10061-01-5	E611D	0.03	mg/kg	<0.030	----
Dichloropropylene, trans-1,3-	10061-02-6	E611D	0.03	mg/kg	<0.030	----
Ethylbenzene	100-41-4	E611D	0.015	mg/kg	<0.015	----
Hexane, n-	110-54-3	E611D	0.05	mg/kg	<0.050	----
Methyl ethyl ketone [MEK]	78-93-3	E611D	0.5	mg/kg	<0.50	----
Methyl isobutyl ketone [MIBK]	108-10-1	E611D	0.5	mg/kg	<0.50	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.04	mg/kg	<0.040	----
Styrene	100-42-5	E611D	0.05	mg/kg	<0.050	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.05	mg/kg	<0.050	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.05	mg/kg	<0.050	----
Tetrachloroethylene	127-18-4	E611D	0.05	mg/kg	<0.050	----
Toluene	108-88-3	E611D	0.05	mg/kg	<0.050	----
Trichloroethane, 1,1,1-	71-55-6	E611D	0.05	mg/kg	<0.050	----
Trichloroethane, 1,1,2-	79-00-5	E611D	0.05	mg/kg	<0.050	----
Trichloroethylene	79-01-6	E611D	0.01	mg/kg	<0.010	----
Trichlorofluoromethane	75-69-4	E611D	0.05	mg/kg	<0.050	----
Vinyl chloride	75-01-4	E611D	0.02	mg/kg	<0.020	----
Xylene, m+p-	179601-23-1	E611D	0.03	mg/kg	<0.030	----
Xylene, o-	95-47-6	E611D	0.03	mg/kg	<0.030	----
Volatile Organic Compounds (QCLot: 1643880)						
Acetone	67-64-1	E611D	0.5	mg/kg	<0.50	----
Benzene	71-43-2	E611D	0.005	mg/kg	<0.0050	----
Bromodichloromethane	75-27-4	E611D	0.05	mg/kg	<0.050	----



Sub-Matrix: Soil/Solid

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Volatile Organic Compounds (QCLot: 1643880) - continued						
Bromoform	75-25-2	E611D	0.05	mg/kg	<0.050	----
Bromomethane	74-83-9	E611D	0.05	mg/kg	<0.050	----
Carbon tetrachloride	56-23-5	E611D	0.05	mg/kg	<0.050	----
Chlorobenzene	108-90-7	E611D	0.05	mg/kg	<0.050	----
Chloroform	67-66-3	E611D	0.05	mg/kg	<0.050	----
Dibromochloromethane	124-48-1	E611D	0.05	mg/kg	<0.050	----
Dibromoethane, 1,2-	106-93-4	E611D	0.05	mg/kg	<0.050	----
Dichlorobenzene, 1,2-	95-50-1	E611D	0.05	mg/kg	<0.050	----
Dichlorobenzene, 1,3-	541-73-1	E611D	0.05	mg/kg	<0.050	----
Dichlorobenzene, 1,4-	106-46-7	E611D	0.05	mg/kg	<0.050	----
Dichlorodifluoromethane	75-71-8	E611D	0.05	mg/kg	<0.050	----
Dichloroethane, 1,1-	75-34-3	E611D	0.05	mg/kg	<0.050	----
Dichloroethane, 1,2-	107-06-2	E611D	0.05	mg/kg	<0.050	----
Dichloroethylene, 1,1-	75-35-4	E611D	0.05	mg/kg	<0.050	----
Dichloroethylene, cis-1,2-	156-59-2	E611D	0.05	mg/kg	<0.050	----
Dichloroethylene, trans-1,2-	156-60-5	E611D	0.05	mg/kg	<0.050	----
Dichloromethane	75-09-2	E611D	0.045	mg/kg	<0.045	----
Dichloropropane, 1,2-	78-87-5	E611D	0.05	mg/kg	<0.050	----
Dichloropropylene, cis-1,3-	10061-01-5	E611D	0.03	mg/kg	<0.030	----
Dichloropropylene, trans-1,3-	10061-02-6	E611D	0.03	mg/kg	<0.030	----
Ethylbenzene	100-41-4	E611D	0.015	mg/kg	<0.015	----
Hexane, n-	110-54-3	E611D	0.05	mg/kg	<0.050	----
Methyl ethyl ketone [MEK]	78-93-3	E611D	0.5	mg/kg	<0.50	----
Methyl isobutyl ketone [MIBK]	108-10-1	E611D	0.5	mg/kg	<0.50	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.04	mg/kg	<0.040	----
Styrene	100-42-5	E611D	0.05	mg/kg	<0.050	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.05	mg/kg	<0.050	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.05	mg/kg	<0.050	----
Tetrachloroethylene	127-18-4	E611D	0.05	mg/kg	<0.050	----
Toluene	108-88-3	E611D	0.05	mg/kg	<0.050	----
Trichloroethane, 1,1,1-	71-55-6	E611D	0.05	mg/kg	<0.050	----
Trichloroethane, 1,1,2-	79-00-5	E611D	0.05	mg/kg	<0.050	----
Trichloroethylene	79-01-6	E611D	0.01	mg/kg	<0.010	----
Trichlorofluoromethane	75-69-4	E611D	0.05	mg/kg	<0.050	----
Vinyl chloride	75-01-4	E611D	0.02	mg/kg	<0.020	----



Sub-Matrix: Soil/Solid

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Volatile Organic Compounds (QCLot: 1643880) - continued						
Xylene, m+p-	179601-23-1	E611D	0.03	mg/kg	<0.030	----
Xylene, o-	95-47-6	E611D	0.03	mg/kg	<0.030	----
Hydrocarbons (QCLot: 1643855)						
F1 (C6-C10)	----	E581.F1	5	mg/kg	<5.0	----
Hydrocarbons (QCLot: 1643881)						
F1 (C6-C10)	----	E581.F1	5	mg/kg	<5.0	----
Hydrocarbons (QCLot: 1644044)						
F2 (C10-C16)	----	E601.SG-L	10	mg/kg	<10	----
F3 (C16-C34)	----	E601.SG-L	50	mg/kg	<50	----
F4 (C34-C50)	----	E601.SG-L	50	mg/kg	<50	----
Hydrocarbons (QCLot: 1661322)						
F2 (C10-C16)	----	E601.SG-L	10	mg/kg	<10	----
F3 (C16-C34)	----	E601.SG-L	50	mg/kg	<50	----
F4 (C34-C50)	----	E601.SG-L	50	mg/kg	<50	----
Polycyclic Aromatic Hydrocarbons (QCLot: 1644043)						
Acenaphthene	83-32-9	E641A	0.05	mg/kg	<0.050	----
Acenaphthylene	208-96-8	E641A	0.05	mg/kg	<0.050	----
Anthracene	120-12-7	E641A	0.05	mg/kg	<0.050	----
Benzo(a)anthracene	56-55-3	E641A	0.05	mg/kg	<0.050	----
Benzo(a)pyrene	50-32-8	E641A	0.05	mg/kg	<0.050	----
Benzo(b+j)fluoranthene	n/a	E641A	0.05	mg/kg	<0.050	----
Benzo(g,h,i)perylene	191-24-2	E641A	0.05	mg/kg	<0.050	----
Benzo(k)fluoranthene	207-08-9	E641A	0.05	mg/kg	<0.050	----
Chrysene	218-01-9	E641A	0.05	mg/kg	<0.050	----
Dibenz(a,h)anthracene	53-70-3	E641A	0.05	mg/kg	<0.050	----
Fluoranthene	206-44-0	E641A	0.05	mg/kg	<0.050	----
Fluorene	86-73-7	E641A	0.05	mg/kg	<0.050	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A	0.05	mg/kg	<0.050	----
Methylnaphthalene, 1-	90-12-0	E641A	0.03	mg/kg	<0.030	----
Methylnaphthalene, 2-	91-57-6	E641A	0.03	mg/kg	<0.030	----
Naphthalene	91-20-3	E641A	0.01	mg/kg	<0.010	----
Phenanthrene	85-01-8	E641A	0.05	mg/kg	<0.050	----
Pyrene	129-00-0	E641A	0.05	mg/kg	<0.050	----
Polychlorinated Biphenyls (QCLot: 1643772)						
Aroclor 1016	12674-11-2	E687	0.01	mg/kg	<0.010	----

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 Work Order : WT2426218 Amendment 1
 Client : OH Environmental Inc.
 Project : 30100



Sub-Matrix: Soil/Solid

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Polychlorinated Biphenyls (QCLot: 1643772) - continued						
Aroclor 1221	11104-28-2	E687	0.01	mg/kg	<0.010	----
Aroclor 1232	11141-16-5	E687	0.01	mg/kg	<0.010	----
Aroclor 1242	53469-21-9	E687	0.01	mg/kg	<0.010	----
Aroclor 1248	12672-29-6	E687	0.01	mg/kg	<0.010	----
Aroclor 1254	11097-69-1	E687	0.01	mg/kg	<0.010	----
Aroclor 1260	11096-82-5	E687	0.01	mg/kg	<0.010	----
Aroclor 1262	37324-23-5	E687	0.01	mg/kg	<0.010	----
Aroclor 1268	11100-14-4	E687	0.01	mg/kg	<0.010	----
Polychlorinated Biphenyls (QCLot: 1644917)						
Aroclor 1016	12674-11-2	E687	0.01	mg/kg	<0.010	----
Aroclor 1221	11104-28-2	E687	0.01	mg/kg	<0.010	----
Aroclor 1232	11141-16-5	E687	0.01	mg/kg	<0.010	----
Aroclor 1242	53469-21-9	E687	0.01	mg/kg	<0.010	----
Aroclor 1248	12672-29-6	E687	0.01	mg/kg	<0.010	----
Aroclor 1254	11097-69-1	E687	0.01	mg/kg	<0.010	----
Aroclor 1260	11096-82-5	E687	0.01	mg/kg	<0.010	----
Aroclor 1262	37324-23-5	E687	0.01	mg/kg	<0.010	----
Aroclor 1268	11100-14-4	E687	0.01	mg/kg	<0.010	----



Laboratory Control Sample (LCS) Report

A Laboratory Control Sample (LCS) is an analyte-free matrix that has been fortified (spiked) with test analytes at known concentration and processed in an identical manner to test samples. LCS results are expressed as percent recovery, and are used to monitor and control test method accuracy and precision, independent of test sample matrix.

Sub-Matrix: Soil/Solid

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Physical Tests (QCLot: 1644824)									
Moisture	----	E144	0.25	%	50 %	99.4	90.0	110	----
Physical Tests (QCLot: 1661329)									
Moisture	----	E144	0.25	%	50 %	101	90.0	110	----
Physical Tests (QCLot: 1695809)									
pH (1:2 soil:CaCl2-aq)	----	E108A	----	pH units	7 pH units	101	98.0	102	----
Physical Tests (QCLot: 1700744)									
pH (1:2 soil:CaCl2-aq)	----	E108A	----	pH units	7 pH units	101	98.0	102	----
Metals (QCLot: 1644324)									
Antimony	7440-36-0	E440C	0.1	mg/kg	100 mg/kg	102	80.0	120	----
Arsenic	7440-38-2	E440C	0.1	mg/kg	100 mg/kg	104	80.0	120	----
Barium	7440-39-3	E440C	0.5	mg/kg	25 mg/kg	98.0	80.0	120	----
Beryllium	7440-41-7	E440C	0.1	mg/kg	10 mg/kg	95.3	80.0	120	----
Boron	7440-42-8	E440C	5	mg/kg	100 mg/kg	95.3	80.0	120	----
Cadmium	7440-43-9	E440C	0.02	mg/kg	10 mg/kg	97.2	80.0	120	----
Chromium	7440-47-3	E440C	0.5	mg/kg	25 mg/kg	98.4	80.0	120	----
Cobalt	7440-48-4	E440C	0.1	mg/kg	25 mg/kg	96.9	80.0	120	----
Copper	7440-50-8	E440C	0.5	mg/kg	25 mg/kg	97.0	80.0	120	----
Lead	7439-92-1	E440C	0.5	mg/kg	50 mg/kg	98.2	80.0	120	----
Molybdenum	7439-98-7	E440C	0.1	mg/kg	25 mg/kg	101	80.0	120	----
Nickel	7440-02-0	E440C	0.5	mg/kg	50 mg/kg	96.4	80.0	120	----
Selenium	7782-49-2	E440C	0.2	mg/kg	100 mg/kg	102	80.0	120	----
Silver	7440-22-4	E440C	0.1	mg/kg	10 mg/kg	# 65.1	80.0	120	RRQC
Thallium	7440-28-0	E440C	0.05	mg/kg	100 mg/kg	97.0	80.0	120	----
Uranium	7440-61-1	E440C	0.05	mg/kg	0.5 mg/kg	96.4	80.0	120	----
Vanadium	7440-62-2	E440C	0.2	mg/kg	50 mg/kg	99.3	80.0	120	----
Zinc	7440-66-6	E440C	2	mg/kg	50 mg/kg	96.6	80.0	120	----
Volatile Organic Compounds (QCLot: 1643854)									
Acetone	67-64-1	E611D	0.5	mg/kg	3.48 mg/kg	85.9	60.0	140	----
Benzene	71-43-2	E611D	0.005	mg/kg	3.48 mg/kg	84.6	70.0	130	----
Bromodichloromethane	75-27-4	E611D	0.05	mg/kg	3.48 mg/kg	88.6	50.0	140	----
Bromoform	75-25-2	E611D	0.05	mg/kg	3.48 mg/kg	93.3	70.0	130	----



Sub-Matrix: Soil/Solid

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Volatile Organic Compounds (QCLot: 1643854) - continued									
Bromomethane	74-83-9	E611D	0.05	mg/kg	3.48 mg/kg	75.2	50.0	140	----
Carbon tetrachloride	56-23-5	E611D	0.05	mg/kg	3.48 mg/kg	95.4	70.0	130	----
Chlorobenzene	108-90-7	E611D	0.05	mg/kg	3.48 mg/kg	88.4	70.0	130	----
Chloroform	67-66-3	E611D	0.05	mg/kg	3.48 mg/kg	92.3	70.0	130	----
Dibromochloromethane	124-48-1	E611D	0.05	mg/kg	3.48 mg/kg	93.5	60.0	130	----
Dibromoethane, 1,2-	106-93-4	E611D	0.05	mg/kg	3.48 mg/kg	92.4	70.0	130	----
Dichlorobenzene, 1,2-	95-50-1	E611D	0.05	mg/kg	3.48 mg/kg	90.7	70.0	130	----
Dichlorobenzene, 1,3-	541-73-1	E611D	0.05	mg/kg	3.48 mg/kg	94.4	70.0	130	----
Dichlorobenzene, 1,4-	106-46-7	E611D	0.05	mg/kg	3.48 mg/kg	93.5	70.0	130	----
Dichlorodifluoromethane	75-71-8	E611D	0.05	mg/kg	3.48 mg/kg	58.5	50.0	140	----
Dichloroethane, 1,1-	75-34-3	E611D	0.05	mg/kg	3.48 mg/kg	84.9	60.0	130	----
Dichloroethane, 1,2-	107-06-2	E611D	0.05	mg/kg	3.48 mg/kg	88.9	60.0	130	----
Dichloroethylene, 1,1-	75-35-4	E611D	0.05	mg/kg	3.48 mg/kg	82.4	60.0	130	----
Dichloroethylene, cis-1,2-	156-59-2	E611D	0.05	mg/kg	3.48 mg/kg	86.2	70.0	130	----
Dichloroethylene, trans-1,2-	156-60-5	E611D	0.05	mg/kg	3.48 mg/kg	84.7	60.0	130	----
Dichloromethane	75-09-2	E611D	0.045	mg/kg	3.48 mg/kg	89.6	70.0	130	----
Dichloropropane, 1,2-	78-87-5	E611D	0.05	mg/kg	3.48 mg/kg	83.6	70.0	130	----
Dichloropropylene, cis-1,3-	10061-01-5	E611D	0.03	mg/kg	3.48 mg/kg	83.2	70.0	130	----
Dichloropropylene, trans-1,3-	10061-02-6	E611D	0.03	mg/kg	3.48 mg/kg	85.1	70.0	130	----
Ethylbenzene	100-41-4	E611D	0.015	mg/kg	3.48 mg/kg	86.5	70.0	130	----
Hexane, n-	110-54-3	E611D	0.05	mg/kg	3.48 mg/kg	82.6	70.0	130	----
Methyl ethyl ketone [MEK]	78-93-3	E611D	0.5	mg/kg	3.48 mg/kg	80.1	60.0	140	----
Methyl isobutyl ketone [MIBK]	108-10-1	E611D	0.5	mg/kg	3.48 mg/kg	75.0	60.0	140	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.04	mg/kg	3.48 mg/kg	87.8	70.0	130	----
Styrene	100-42-5	E611D	0.05	mg/kg	3.48 mg/kg	86.4	70.0	130	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.05	mg/kg	3.48 mg/kg	92.0	60.0	130	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.05	mg/kg	3.48 mg/kg	97.8	60.0	130	----
Tetrachloroethylene	127-18-4	E611D	0.05	mg/kg	3.48 mg/kg	100	60.0	130	----
Toluene	108-88-3	E611D	0.05	mg/kg	3.48 mg/kg	88.2	70.0	130	----
Trichloroethane, 1,1,1-	71-55-6	E611D	0.05	mg/kg	3.48 mg/kg	92.4	60.0	130	----
Trichloroethane, 1,1,2-	79-00-5	E611D	0.05	mg/kg	3.48 mg/kg	92.6	60.0	130	----
Trichloroethylene	79-01-6	E611D	0.01	mg/kg	3.48 mg/kg	96.1	60.0	130	----
Trichlorofluoromethane	75-69-4	E611D	0.05	mg/kg	3.48 mg/kg	88.2	50.0	140	----
Vinyl chloride	75-01-4	E611D	0.02	mg/kg	3.48 mg/kg	82.4	60.0	140	----
Xylene, m+p-	179601-23-1	E611D	0.03	mg/kg	6.95 mg/kg	86.7	70.0	130	----
Xylene, o-	95-47-6	E611D	0.03	mg/kg	3.48 mg/kg	85.7	70.0	130	----



Sub-Matrix: Soil/Solid					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		Qualifier
					Target Concentration	LCS	Low	High	
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Volatile Organic Compounds (QCLot: 1643880)									
Acetone	67-64-1	E611D	0.5	mg/kg	3.48 mg/kg	104	60.0	140	----
Benzene	71-43-2	E611D	0.005	mg/kg	3.48 mg/kg	96.7	70.0	130	----
Bromodichloromethane	75-27-4	E611D	0.05	mg/kg	3.48 mg/kg	99.9	50.0	140	----
Bromoform	75-25-2	E611D	0.05	mg/kg	3.48 mg/kg	94.7	70.0	130	----
Bromomethane	74-83-9	E611D	0.05	mg/kg	3.48 mg/kg	79.4	50.0	140	----
Carbon tetrachloride	56-23-5	E611D	0.05	mg/kg	3.48 mg/kg	102	70.0	130	----
Chlorobenzene	108-90-7	E611D	0.05	mg/kg	3.48 mg/kg	98.1	70.0	130	----
Chloroform	67-66-3	E611D	0.05	mg/kg	3.48 mg/kg	102	70.0	130	----
Dibromochloromethane	124-48-1	E611D	0.05	mg/kg	3.48 mg/kg	101	60.0	130	----
Dibromoethane, 1,2-	106-93-4	E611D	0.05	mg/kg	3.48 mg/kg	98.1	70.0	130	----
Dichlorobenzene, 1,2-	95-50-1	E611D	0.05	mg/kg	3.48 mg/kg	98.2	70.0	130	----
Dichlorobenzene, 1,3-	541-73-1	E611D	0.05	mg/kg	3.48 mg/kg	98.2	70.0	130	----
Dichlorobenzene, 1,4-	106-46-7	E611D	0.05	mg/kg	3.48 mg/kg	97.9	70.0	130	----
Dichlorodifluoromethane	75-71-8	E611D	0.05	mg/kg	3.48 mg/kg	61.7	50.0	140	----
Dichloroethane, 1,1-	75-34-3	E611D	0.05	mg/kg	3.48 mg/kg	100	60.0	130	----
Dichloroethane, 1,2-	107-06-2	E611D	0.05	mg/kg	3.48 mg/kg	98.0	60.0	130	----
Dichloroethylene, 1,1-	75-35-4	E611D	0.05	mg/kg	3.48 mg/kg	97.3	60.0	130	----
Dichloroethylene, cis-1,2-	156-59-2	E611D	0.05	mg/kg	3.48 mg/kg	100	70.0	130	----
Dichloroethylene, trans-1,2-	156-60-5	E611D	0.05	mg/kg	3.48 mg/kg	102	60.0	130	----
Dichloromethane	75-09-2	E611D	0.045	mg/kg	3.48 mg/kg	100	70.0	130	----
Dichloropropane, 1,2-	78-87-5	E611D	0.05	mg/kg	3.48 mg/kg	100.0	70.0	130	----
Dichloropropylene, cis-1,3-	10061-01-5	E611D	0.03	mg/kg	3.48 mg/kg	95.6	70.0	130	----
Dichloropropylene, trans-1,3-	10061-02-6	E611D	0.03	mg/kg	3.48 mg/kg	97.2	70.0	130	----
Ethylbenzene	100-41-4	E611D	0.015	mg/kg	3.48 mg/kg	96.0	70.0	130	----
Hexane, n-	110-54-3	E611D	0.05	mg/kg	3.48 mg/kg	98.4	70.0	130	----
Methyl ethyl ketone [MEK]	78-93-3	E611D	0.5	mg/kg	3.48 mg/kg	86.7	60.0	140	----
Methyl isobutyl ketone [MIBK]	108-10-1	E611D	0.5	mg/kg	3.48 mg/kg	92.8	60.0	140	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.04	mg/kg	3.48 mg/kg	96.1	70.0	130	----
Styrene	100-42-5	E611D	0.05	mg/kg	3.48 mg/kg	96.9	70.0	130	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.05	mg/kg	3.48 mg/kg	103	60.0	130	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.05	mg/kg	3.48 mg/kg	106	60.0	130	----
Tetrachloroethylene	127-18-4	E611D	0.05	mg/kg	3.48 mg/kg	101	60.0	130	----
Toluene	108-88-3	E611D	0.05	mg/kg	3.48 mg/kg	96.1	70.0	130	----
Trichloroethane, 1,1,1-	71-55-6	E611D	0.05	mg/kg	3.48 mg/kg	101	60.0	130	----
Trichloroethane, 1,1,2-	79-00-5	E611D	0.05	mg/kg	3.48 mg/kg	101	60.0	130	----
Trichloroethylene	79-01-6	E611D	0.01	mg/kg	3.48 mg/kg	102	60.0	130	----



Sub-Matrix: Soil/Solid					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Volatile Organic Compounds (QCLot: 1643880) - continued									
Trichlorofluoromethane	75-69-4	E611D	0.05	mg/kg	3.48 mg/kg	95.9	50.0	140	----
Vinyl chloride	75-01-4	E611D	0.02	mg/kg	3.48 mg/kg	98.8	60.0	140	----
Xylene, m+p-	179601-23-1	E611D	0.03	mg/kg	6.95 mg/kg	98.4	70.0	130	----
Xylene, o-	95-47-6	E611D	0.03	mg/kg	3.48 mg/kg	97.0	70.0	130	----
Hydrocarbons (QCLot: 1643855)									
F1 (C6-C10)	----	E581.F1	5	mg/kg	69.2 mg/kg	95.8	80.0	120	----
Hydrocarbons (QCLot: 1643881)									
F1 (C6-C10)	----	E581.F1	5	mg/kg	69.2 mg/kg	98.8	80.0	120	----
Hydrocarbons (QCLot: 1644044)									
F2 (C10-C16)	----	E601.SG-L	10	mg/kg	712 mg/kg	96.1	70.0	130	----
F3 (C16-C34)	----	E601.SG-L	50	mg/kg	1470 mg/kg	97.1	70.0	130	----
F4 (C34-C50)	----	E601.SG-L	50	mg/kg	796 mg/kg	107	70.0	130	----
Hydrocarbons (QCLot: 1661322)									
F2 (C10-C16)	----	E601.SG-L	10	mg/kg	712 mg/kg	98.4	70.0	130	----
F3 (C16-C34)	----	E601.SG-L	50	mg/kg	1470 mg/kg	99.4	70.0	130	----
F4 (C34-C50)	----	E601.SG-L	50	mg/kg	796 mg/kg	104	70.0	130	----
Polycyclic Aromatic Hydrocarbons (QCLot: 1644043)									
Acenaphthene	83-32-9	E641A	0.05	mg/kg	0.5 mg/kg	87.7	60.0	130	----
Acenaphthylene	208-96-8	E641A	0.05	mg/kg	0.5 mg/kg	89.2	60.0	130	----
Anthracene	120-12-7	E641A	0.05	mg/kg	0.5 mg/kg	93.6	60.0	130	----
Benz(a)anthracene	56-55-3	E641A	0.05	mg/kg	0.5 mg/kg	79.5	60.0	130	----
Benzo(a)pyrene	50-32-8	E641A	0.05	mg/kg	0.5 mg/kg	88.1	60.0	130	----
Benzo(b+j)fluoranthene	n/a	E641A	0.05	mg/kg	0.5 mg/kg	79.8	60.0	130	----
Benzo(g,h,i)perylene	191-24-2	E641A	0.05	mg/kg	0.5 mg/kg	90.9	60.0	130	----
Benzo(k)fluoranthene	207-08-9	E641A	0.05	mg/kg	0.5 mg/kg	91.6	60.0	130	----
Chrysene	218-01-9	E641A	0.05	mg/kg	0.5 mg/kg	89.7	60.0	130	----
Dibenz(a,h)anthracene	53-70-3	E641A	0.05	mg/kg	0.5 mg/kg	89.1	60.0	130	----
Fluoranthene	206-44-0	E641A	0.05	mg/kg	0.5 mg/kg	90.0	60.0	130	----
Fluorene	86-73-7	E641A	0.05	mg/kg	0.5 mg/kg	91.0	60.0	130	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A	0.05	mg/kg	0.5 mg/kg	89.1	60.0	130	----
Methylnaphthalene, 1-	90-12-0	E641A	0.03	mg/kg	0.5 mg/kg	86.9	60.0	130	----
Methylnaphthalene, 2-	91-57-6	E641A	0.03	mg/kg	0.5 mg/kg	87.5	60.0	130	----
Naphthalene	91-20-3	E641A	0.01	mg/kg	0.5 mg/kg	84.8	60.0	130	----
Phenanthrene	85-01-8	E641A	0.05	mg/kg	0.5 mg/kg	83.7	60.0	130	----



Sub-Matrix: Soil/Solid					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		Qualifier
					Target Concentration	LCS	Low	High	
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Polycyclic Aromatic Hydrocarbons (QCLot: 1644043) - continued									
Pyrene	129-00-0	E641A	0.05	mg/kg	0.5 mg/kg	88.4	60.0	130	----
Polychlorinated Biphenyls (QCLot: 1643772)									
Aroclor 1016	12674-11-2	E687	0.01	mg/kg	0.012 mg/kg	84.6	60.0	140	----
Aroclor 1221	11104-28-2	E687	0.01	mg/kg	0.012 mg/kg	84.6	60.0	140	----
Aroclor 1232	11141-16-5	E687	0.01	mg/kg	0.012 mg/kg	84.6	60.0	140	----
Aroclor 1242	53469-21-9	E687	0.01	mg/kg	0.012 mg/kg	84.6	60.0	140	----
Aroclor 1248	12672-29-6	E687	0.01	mg/kg	0.012 mg/kg	65.7	60.0	140	----
Aroclor 1254	11097-69-1	E687	0.01	mg/kg	0.012 mg/kg	68.8	60.0	140	----
Aroclor 1260	11096-82-5	E687	0.01	mg/kg	0.012 mg/kg	78.2	60.0	140	----
Aroclor 1262	37324-23-5	E687	0.01	mg/kg	0.012 mg/kg	78.2	60.0	140	----
Aroclor 1268	11100-14-4	E687	0.01	mg/kg	0.012 mg/kg	78.2	60.0	140	----
Polychlorinated Biphenyls (QCLot: 1644917)									
Aroclor 1016	12674-11-2	E687	0.01	mg/kg	0.012 mg/kg	74.6	60.0	140	----
Aroclor 1221	11104-28-2	E687	0.01	mg/kg	0.012 mg/kg	74.6	60.0	140	----
Aroclor 1232	11141-16-5	E687	0.01	mg/kg	0.012 mg/kg	74.6	60.0	140	----
Aroclor 1242	53469-21-9	E687	0.01	mg/kg	0.012 mg/kg	74.6	60.0	140	----
Aroclor 1248	12672-29-6	E687	0.01	mg/kg	0.012 mg/kg	74.0	60.0	140	----
Aroclor 1254	11097-69-1	E687	0.01	mg/kg	0.012 mg/kg	65.0	60.0	140	----
Aroclor 1260	11096-82-5	E687	0.01	mg/kg	0.012 mg/kg	72.8	60.0	140	----
Aroclor 1262	37324-23-5	E687	0.01	mg/kg	0.012 mg/kg	72.8	60.0	140	----
Aroclor 1268	11100-14-4	E687	0.01	mg/kg	0.012 mg/kg	72.8	60.0	140	----

Qualifiers

Qualifier	Description
RRQC	Refer to report comments for information regarding this QC result.



Matrix Spike (MS) Report

A Matrix Spike (MS) is a randomly selected intra-laboratory replicate sample that has been fortified (spiked) with test analytes at known concentration, and processed in an identical manner to test samples. Matrix Spikes provide information regarding analyte recovery and potential matrix effects. MS DQO exceedances due to sample matrix may sometimes be unavoidable; in such cases, test results for the associated sample (or similar samples) may be subject to bias. ND – Recovery not determined, background level >= 1x spike level.

Sub-Matrix: Soil/Solid

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Volatile Organic Compounds (QCLot: 1643854)										
WT2426037-002	Anonymous	Acetone	67-64-1	E611D	2.16 mg/kg	2.12 mg/kg	102	50.0	140	----
		Benzene	71-43-2	E611D	2.14 mg/kg	2.12 mg/kg	101	50.0	140	----
		Bromodichloromethane	75-27-4	E611D	2.22 mg/kg	2.12 mg/kg	105	50.0	140	----
		Bromoform	75-25-2	E611D	2.23 mg/kg	2.12 mg/kg	105	50.0	140	----
		Bromomethane	74-83-9	E611D	2.06 mg/kg	2.12 mg/kg	97.4	50.0	140	----
		Carbon tetrachloride	56-23-5	E611D	2.42 mg/kg	2.12 mg/kg	114	50.0	140	----
		Chlorobenzene	108-90-7	E611D	2.14 mg/kg	2.12 mg/kg	101	50.0	140	----
		Chloroform	67-66-3	E611D	2.34 mg/kg	2.12 mg/kg	110	50.0	140	----
		Dibromochloromethane	124-48-1	E611D	2.25 mg/kg	2.12 mg/kg	106	50.0	140	----
		Dibromoethane, 1,2-	106-93-4	E611D	2.22 mg/kg	2.12 mg/kg	105	50.0	140	----
		Dichlorobenzene, 1,2-	95-50-1	E611D	2.13 mg/kg	2.12 mg/kg	101	50.0	140	----
		Dichlorobenzene, 1,3-	541-73-1	E611D	2.20 mg/kg	2.12 mg/kg	104	50.0	140	----
		Dichlorobenzene, 1,4-	106-46-7	E611D	2.19 mg/kg	2.12 mg/kg	103	50.0	140	----
		Dichlorodifluoromethane	75-71-8	E611D	2.56 mg/kg	2.12 mg/kg	121	50.0	140	----
		Dichloroethane, 1,1-	75-34-3	E611D	1.76 mg/kg	2.12 mg/kg	83.2	50.0	140	----
		Dichloroethane, 1,2-	107-06-2	E611D	2.25 mg/kg	2.12 mg/kg	106	50.0	140	----
		Dichloroethylene, 1,1-	75-35-4	E611D	2.16 mg/kg	2.12 mg/kg	102	50.0	140	----
		Dichloroethylene, cis-1,2-	156-59-2	E611D	2.18 mg/kg	2.12 mg/kg	103	50.0	140	----
		Dichloroethylene, trans-1,2-	156-60-5	E611D	2.16 mg/kg	2.12 mg/kg	102	50.0	140	----
		Dichloromethane	75-09-2	E611D	2.30 mg/kg	2.12 mg/kg	109	50.0	140	----
		Dichloropropane, 1,2-	78-87-5	E611D	2.10 mg/kg	2.12 mg/kg	99.3	50.0	140	----
		Dichloropropylene, cis-1,3-	10061-01-5	E611D	2.05 mg/kg	2.12 mg/kg	97.0	50.0	140	----
		Dichloropropylene, trans-1,3-	10061-02-6	E611D	2.03 mg/kg	2.12 mg/kg	96.0	50.0	140	----
		Ethylbenzene	100-41-4	E611D	2.09 mg/kg	2.12 mg/kg	99.0	50.0	140	----
		Hexane, n-	110-54-3	E611D	1.83 mg/kg	2.12 mg/kg	86.5	50.0	140	----
		Methyl ethyl ketone [MEK]	78-93-3	E611D	2.08 mg/kg	2.12 mg/kg	98.6	50.0	140	----
		Methyl isobutyl ketone [MIBK]	108-10-1	E611D	1.84 mg/kg	2.12 mg/kg	86.9	50.0	140	----
		Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	2.08 mg/kg	2.12 mg/kg	98.2	50.0	140	----
		Styrene	100-42-5	E611D	2.07 mg/kg	2.12 mg/kg	97.9	50.0	140	----
		Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	2.21 mg/kg	2.12 mg/kg	104	50.0	140	----
		Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	2.34 mg/kg	2.12 mg/kg	111	50.0	140	----
		Tetrachloroethylene	127-18-4	E611D	2.42 mg/kg	2.12 mg/kg	114	50.0	140	----
		Toluene	108-88-3	E611D	2.14 mg/kg	2.12 mg/kg	101	50.0	140	----
		Trichloroethane, 1,1,1-	71-55-6	E611D	2.34 mg/kg	2.12 mg/kg	111	50.0	140	----
		Trichloroethane, 1,1,2-	79-00-5	E611D	2.24 mg/kg	2.12 mg/kg	106	50.0	140	----
		Trichloroethylene	79-01-6	E611D	2.41 mg/kg	2.12 mg/kg	114	50.0	140	----
		Trichlorofluoromethane	75-69-4	E611D	2.36 mg/kg	2.12 mg/kg	111	50.0	140	----
		Vinyl chloride	75-01-4	E611D	2.40 mg/kg	2.12 mg/kg	113	50.0	140	----
		Xylene, m+p-	179601-23-1	E611D	4.18 mg/kg	4.23 mg/kg	98.7	50.0	140	----
		Xylene, o-	95-47-6	E611D	2.06 mg/kg	2.12 mg/kg	97.3	50.0	140	----



Sub-Matrix: Soil/Solid					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Volatile Organic Compounds (QCLot: 1643880)										
WT2426343-002	Anonymous	Acetone	67-64-1	E611D	2.42 mg/kg	2.2 mg/kg	110	50.0	140	----
		Benzene	71-43-2	E611D	2.27 mg/kg	2.2 mg/kg	103	50.0	140	----
		Bromodichloromethane	75-27-4	E611D	2.36 mg/kg	2.2 mg/kg	107	50.0	140	----
		Bromoform	75-25-2	E611D	2.25 mg/kg	2.2 mg/kg	102	50.0	140	----
		Bromomethane	74-83-9	E611D	2.02 mg/kg	2.2 mg/kg	91.9	50.0	140	----
		Carbon tetrachloride	56-23-5	E611D	2.45 mg/kg	2.2 mg/kg	111	50.0	140	----
		Chlorobenzene	108-90-7	E611D	2.29 mg/kg	2.2 mg/kg	104	50.0	140	----
		Chloroform	67-66-3	E611D	2.40 mg/kg	2.2 mg/kg	109	50.0	140	----
		Dibromochloromethane	124-48-1	E611D	2.39 mg/kg	2.2 mg/kg	109	50.0	140	----
		Dibromoethane, 1,2-	106-93-4	E611D	2.31 mg/kg	2.2 mg/kg	105	50.0	140	----
		Dichlorobenzene, 1,2-	95-50-1	E611D	2.29 mg/kg	2.2 mg/kg	104	50.0	140	----
		Dichlorobenzene, 1,3-	541-73-1	E611D	2.29 mg/kg	2.2 mg/kg	104	50.0	140	----
		Dichlorobenzene, 1,4-	106-46-7	E611D	2.28 mg/kg	2.2 mg/kg	104	50.0	140	----
		Dichlorodifluoromethane	75-71-8	E611D	2.61 mg/kg	2.2 mg/kg	119	50.0	140	----
		Dichloroethane, 1,1-	75-34-3	E611D	2.38 mg/kg	2.2 mg/kg	108	50.0	140	----
		Dichloroethane, 1,2-	107-06-2	E611D	2.32 mg/kg	2.2 mg/kg	106	50.0	140	----
		Dichloroethylene, 1,1-	75-35-4	E611D	2.39 mg/kg	2.2 mg/kg	108	50.0	140	----
		Dichloroethylene, cis-1,2-	156-59-2	E611D	2.36 mg/kg	2.2 mg/kg	107	50.0	140	----
		Dichloroethylene, trans-1,2-	156-60-5	E611D	2.43 mg/kg	2.2 mg/kg	110	50.0	140	----
		Dichloromethane	75-09-2	E611D	2.40 mg/kg	2.2 mg/kg	109	50.0	140	----
		Dichloropropane, 1,2-	78-87-5	E611D	2.35 mg/kg	2.2 mg/kg	107	50.0	140	----
		Dichloropropylene, cis-1,3-	10061-01-5	E611D	2.22 mg/kg	2.2 mg/kg	101	50.0	140	----
		Dichloropropylene, trans-1,3-	10061-02-6	E611D	2.25 mg/kg	2.2 mg/kg	102	50.0	140	----
		Ethylbenzene	100-41-4	E611D	2.24 mg/kg	2.2 mg/kg	102	50.0	140	----
		Hexane, n-	110-54-3	E611D	2.43 mg/kg	2.2 mg/kg	110	50.0	140	----
		Methyl ethyl ketone [MEK]	78-93-3	E611D	2.15 mg/kg	2.2 mg/kg	97.9	50.0	140	----
		Methyl isobutyl ketone [MIBK]	108-10-1	E611D	2.18 mg/kg	2.2 mg/kg	99.0	50.0	140	----
		Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	2.30 mg/kg	2.2 mg/kg	105	50.0	140	----
		Styrene	100-42-5	E611D	2.26 mg/kg	2.2 mg/kg	103	50.0	140	----
		Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	2.43 mg/kg	2.2 mg/kg	110	50.0	140	----
		Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	2.50 mg/kg	2.2 mg/kg	114	50.0	140	----
		Tetrachloroethylene	127-18-4	E611D	2.36 mg/kg	2.2 mg/kg	107	50.0	140	----
		Toluene	108-88-3	E611D	2.23 mg/kg	2.2 mg/kg	102	50.0	140	----
		Trichloroethane, 1,1,1-	71-55-6	E611D	2.43 mg/kg	2.2 mg/kg	111	50.0	140	----
		Trichloroethane, 1,1,2-	79-00-5	E611D	2.36 mg/kg	2.2 mg/kg	108	50.0	140	----
		Trichloroethylene	79-01-6	E611D	2.40 mg/kg	2.2 mg/kg	109	50.0	140	----
		Trichlorofluoromethane	75-69-4	E611D	2.48 mg/kg	2.2 mg/kg	113	50.0	140	----
		Vinyl chloride	75-01-4	E611D	2.69 mg/kg	2.2 mg/kg	122	50.0	140	----
		Xylene, m+p-	179601-23-1	E611D	4.58 mg/kg	4.4 mg/kg	104	50.0	140	----
		Xylene, o-	95-47-6	E611D	2.26 mg/kg	2.2 mg/kg	103	50.0	140	----
Hydrocarbons (QCLot: 1643855)										
WT2426037-002	Anonymous	F1 (C6-C10)	----	E581.F1	42.4 mg/kg	42.3 mg/kg	100	60.0	140	----
Hydrocarbons (QCLot: 1643881)										



Sub-Matrix: Soil/Solid					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Hydrocarbons (QCLot: 1643881) - continued										
WT2426343-002	Anonymous	F1 (C6-C10)	----	E581.F1	45.5 mg/kg	44 mg/kg	104	60.0	140	----
Hydrocarbons (QCLot: 1644044)										
WT2426218-001	BH103-6	F2 (C10-C16)	----	E601.SG-L	546 mg/kg	559 mg/kg	97.6	60.0	140	----
		F3 (C16-C34)	----	E601.SG-L	1140 mg/kg	1160 mg/kg	98.5	60.0	140	----
		F4 (C34-C50)	----	E601.SG-L	622 mg/kg	625 mg/kg	99.4	60.0	140	----
Hydrocarbons (QCLot: 1661322)										
WT2426218-004	DUP101	F2 (C10-C16)	----	E601.SG-L	484 mg/kg	530 mg/kg	91.5	60.0	140	----
		F3 (C16-C34)	----	E601.SG-L	1000 mg/kg	1100 mg/kg	91.8	60.0	140	----
		F4 (C34-C50)	----	E601.SG-L	566 mg/kg	592 mg/kg	95.6	60.0	140	----
Polycyclic Aromatic Hydrocarbons (QCLot: 1644043)										
WT2426218-001	BH103-6	Acenaphthene	83-32-9	E641A	0.359 mg/kg	0.395 mg/kg	91.0	50.0	140	----
		Acenaphthylene	208-96-8	E641A	0.380 mg/kg	0.395 mg/kg	96.3	50.0	140	----
		Anthracene	120-12-7	E641A	0.364 mg/kg	0.395 mg/kg	92.2	50.0	140	----
		Benz(a)anthracene	56-55-3	E641A	0.271 mg/kg	0.395 mg/kg	68.6	50.0	140	----
		Benzo(a)pyrene	50-32-8	E641A	0.288 mg/kg	0.395 mg/kg	72.9	50.0	140	----
		Benzo(b+j)fluoranthene	n/a	E641A	0.259 mg/kg	0.395 mg/kg	65.5	50.0	140	----
		Benzo(g,h,i)perylene	191-24-2	E641A	0.332 mg/kg	0.395 mg/kg	84.0	50.0	140	----
		Benzo(k)fluoranthene	207-08-9	E641A	0.351 mg/kg	0.395 mg/kg	88.8	50.0	140	----
		Chrysene	218-01-9	E641A	0.300 mg/kg	0.395 mg/kg	75.8	50.0	140	----
		Dibenz(a,h)anthracene	53-70-3	E641A	0.361 mg/kg	0.395 mg/kg	91.3	50.0	140	----
		Fluoranthene	206-44-0	E641A	0.222 mg/kg	0.395 mg/kg	56.1	50.0	140	----
		Fluorene	86-73-7	E641A	0.376 mg/kg	0.395 mg/kg	95.2	50.0	140	----
		Indeno(1,2,3-c,d)pyrene	193-39-5	E641A	0.317 mg/kg	0.395 mg/kg	80.2	50.0	140	----
		Methylnaphthalene, 1-	90-12-0	E641A	0.363 mg/kg	0.395 mg/kg	91.8	50.0	140	----
		Methylnaphthalene, 2-	91-57-6	E641A	0.363 mg/kg	0.395 mg/kg	91.9	50.0	140	----
		Naphthalene	91-20-3	E641A	0.350 mg/kg	0.395 mg/kg	88.5	50.0	140	----
		Phenanthrene	85-01-8	E641A	0.217 mg/kg	0.395 mg/kg	55.0	50.0	140	----
		Pyrene	129-00-0	E641A	0.237 mg/kg	0.395 mg/kg	59.9	50.0	140	----
Polychlorinated Biphenyls (QCLot: 1643772)										
WT2426009-010	Anonymous	Aroclor 1016	12674-11-2	E687	0.008 mg/kg	0.01 mg/kg	81.0	50.0	150	----
		Aroclor 1221	11104-28-2	E687	0.008 mg/kg	0.01 mg/kg	81.0	50.0	150	----
		Aroclor 1232	11141-16-5	E687	0.008 mg/kg	0.01 mg/kg	81.0	50.0	150	----
		Aroclor 1242	53469-21-9	E687	0.008 mg/kg	0.01 mg/kg	79.3	50.0	150	----
		Aroclor 1248	12672-29-6	E687	0.008 mg/kg	0.01 mg/kg	81.0	50.0	150	----
		Aroclor 1254	11097-69-1	E687	0.006 mg/kg	0.01 mg/kg	63.6	50.0	150	----
		Aroclor 1260	11096-82-5	E687	0.008 mg/kg	0.01 mg/kg	76.2	50.0	150	----
		Aroclor 1262	37324-23-5	E687	0.008 mg/kg	0.01 mg/kg	76.7	50.0	150	----
		Aroclor 1268	11100-14-4	E687	0.008 mg/kg	0.01 mg/kg	76.7	50.0	150	----
Polychlorinated Biphenyls (QCLot: 1644917)										
WT2426043-003	Anonymous	Aroclor 1016	12674-11-2	E687	0.008 mg/kg	0.01 mg/kg	82.4	50.0	150	----
		Aroclor 1221	11104-28-2	E687	0.008 mg/kg	0.01 mg/kg	82.4	50.0	150	----



Sub-Matrix: Soil/Solid					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Polychlorinated Biphenyls (QCLot: 1644917) - continued										
WT2426043-003	Anonymous	Aroclor 1232	11141-16-5	E687	0.008 mg/kg	0.01 mg/kg	82.4	50.0	150	----
		Aroclor 1242	53469-21-9	E687	0.006 mg/kg	0.01 mg/kg	63.8	50.0	150	----
		Aroclor 1248	12672-29-6	E687	0.008 mg/kg	0.01 mg/kg	82.4	50.0	150	----
		Aroclor 1254	11097-69-1	E687	0.006 mg/kg	0.01 mg/kg	59.1	50.0	150	----
		Aroclor 1260	11096-82-5	E687	0.007 mg/kg	0.01 mg/kg	74.3	50.0	150	----
		Aroclor 1262	37324-23-5	E687	0.009 mg/kg	0.01 mg/kg	88.4	50.0	150	----
		Aroclor 1268	11100-14-4	E687	0.009 mg/kg	0.01 mg/kg	88.4	50.0	150	----

Reference Material (RM) Report

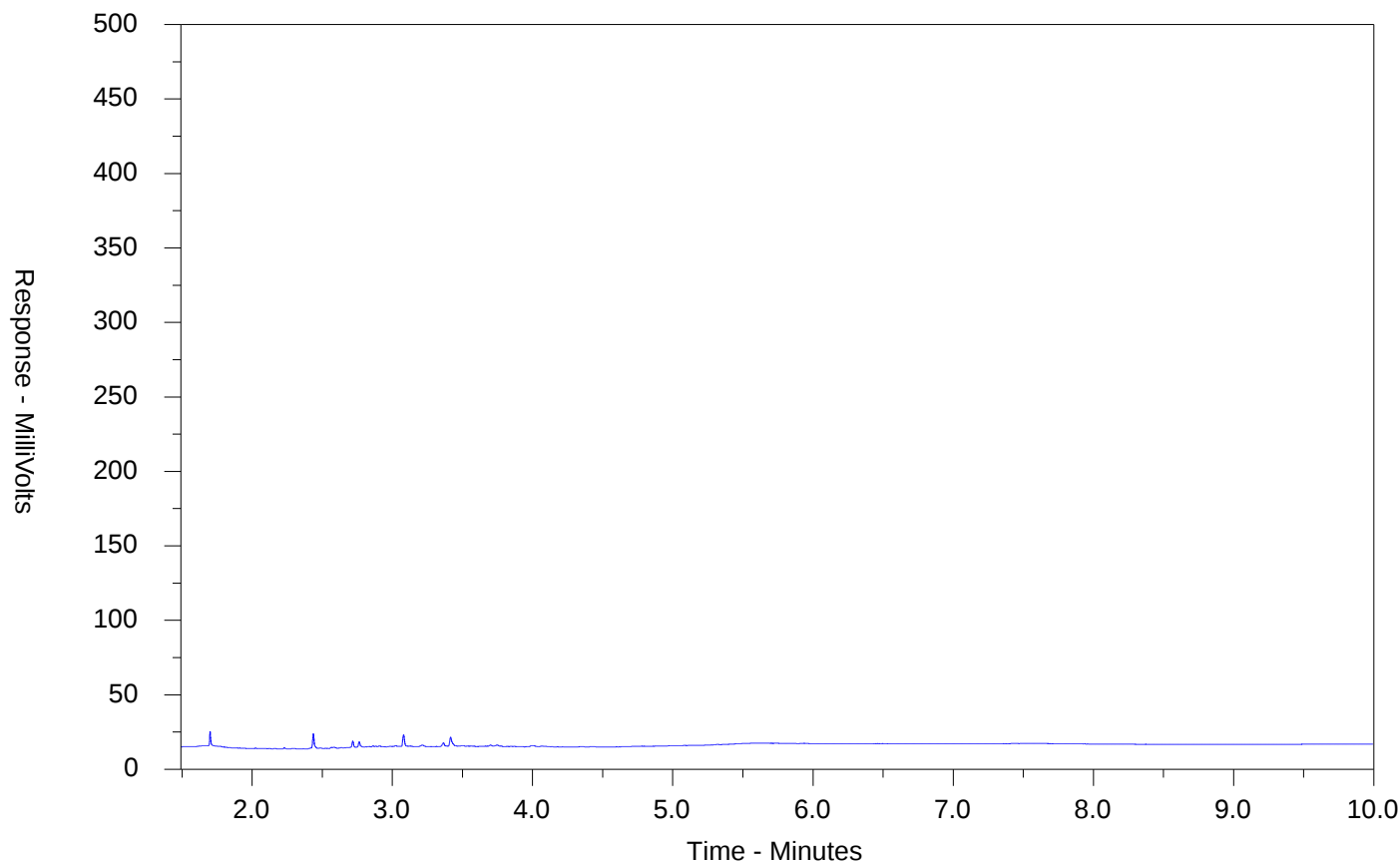
A Reference Material (RM) is a homogenous material with known and well-established analyte concentrations. RMs are processed in an identical manner to test samples, and are used to monitor and control the accuracy and precision of a test method for a typical sample matrix. RM results are expressed as percent recovery of the target analyte concentration. RM targets may be certified target concentrations provided by the RM supplier, or may be ALS long-term mean values (for empirical test methods).

Sub-Matrix:					Reference Material (RM) Report				
					RM Target Concentration	Recovery (%) RM	Recovery Limits (%)		Qualifier
Laboratory sample ID	Reference Material ID	Analyte	CAS Number	Method			Low	High	
Metals (QCLot: 1644324)									
QC-1644324-003	RM	Antimony	7440-36-0	E440C	24.8 mg/kg	91.7	70.0	130	----
QC-1644324-003	RM	Arsenic	7440-38-2	E440C	21.2 mg/kg	96.9	70.0	130	----
QC-1644324-003	RM	Barium	7440-39-3	E440C	788 mg/kg	99.4	70.0	130	----
QC-1644324-003	RM	Beryllium	7440-41-7	E440C	1.82 mg/kg	101	70.0	130	----
QC-1644324-003	RM	Cadmium	7440-43-9	E440C	2.15 mg/kg	98.3	70.0	130	----
QC-1644324-003	RM	Chromium	7440-47-3	E440C	56.9 mg/kg	97.0	70.0	130	----
QC-1644324-003	RM	Cobalt	7440-48-4	E440C	32 mg/kg	96.1	70.0	130	----
QC-1644324-003	RM	Copper	7440-50-8	E440C	969 mg/kg	107	70.0	130	----
QC-1644324-003	RM	Lead	7439-92-1	E440C	919 mg/kg	94.3	70.0	130	----
QC-1644324-003	RM	Molybdenum	7439-98-7	E440C	25.1 mg/kg	98.3	70.0	130	----
QC-1644324-003	RM	Nickel	7440-02-0	E440C	1000 mg/kg	94.3	70.0	130	----
QC-1644324-003	RM	Selenium	7782-49-2	E440C	1.04 mg/kg	114	60.0	140	----
QC-1644324-003	RM	Silver	7440-22-4	E440C	8.98 mg/kg	92.1	70.0	130	----
QC-1644324-003	RM	Thallium	7440-28-0	E440C	0.907 mg/kg	92.9	70.0	130	----
QC-1644324-003	RM	Uranium	7440-61-1	E440C	3.97 mg/kg	81.7	70.0	130	----
QC-1644324-003	RM	Vanadium	7440-62-2	E440C	66.2 mg/kg	96.2	70.0	130	----
QC-1644324-003	RM	Zinc	7440-66-6	E440C	828 mg/kg	97.3	70.0	130	----

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: WT2426218-001-E601.SG-L
 Client Sample ID: BH103-6



← F2 →		← F3 →		← F4 →	
nC10	nC16		nC34		nC50
174°C	287°C		481°C		575°C
346°F	549°F		898°F		1067°F
Gasoline →			← Motor Oils/Lube Oils/Grease		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

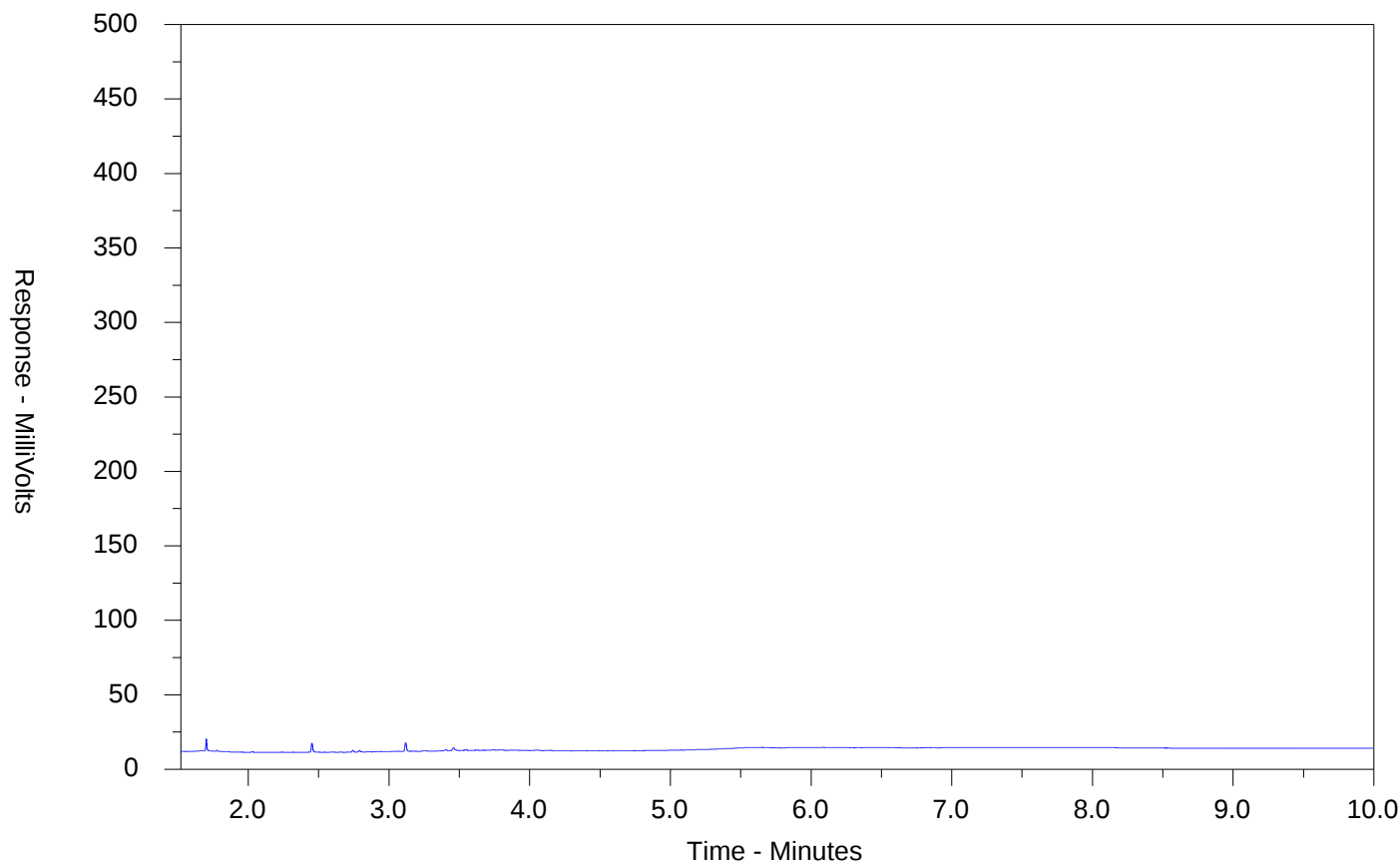
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at www.alsglobal.com.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: WT2426218-002-E601.SG-L
 Client Sample ID: BH104-3



← F2 →		← F3 →		← F4 →	
nC10	nC16		nC34		nC50
174°C	287°C		481°C		575°C
346°F	549°F		898°F		1067°F
Gasoline →			← Motor Oils/Lube Oils/Grease		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

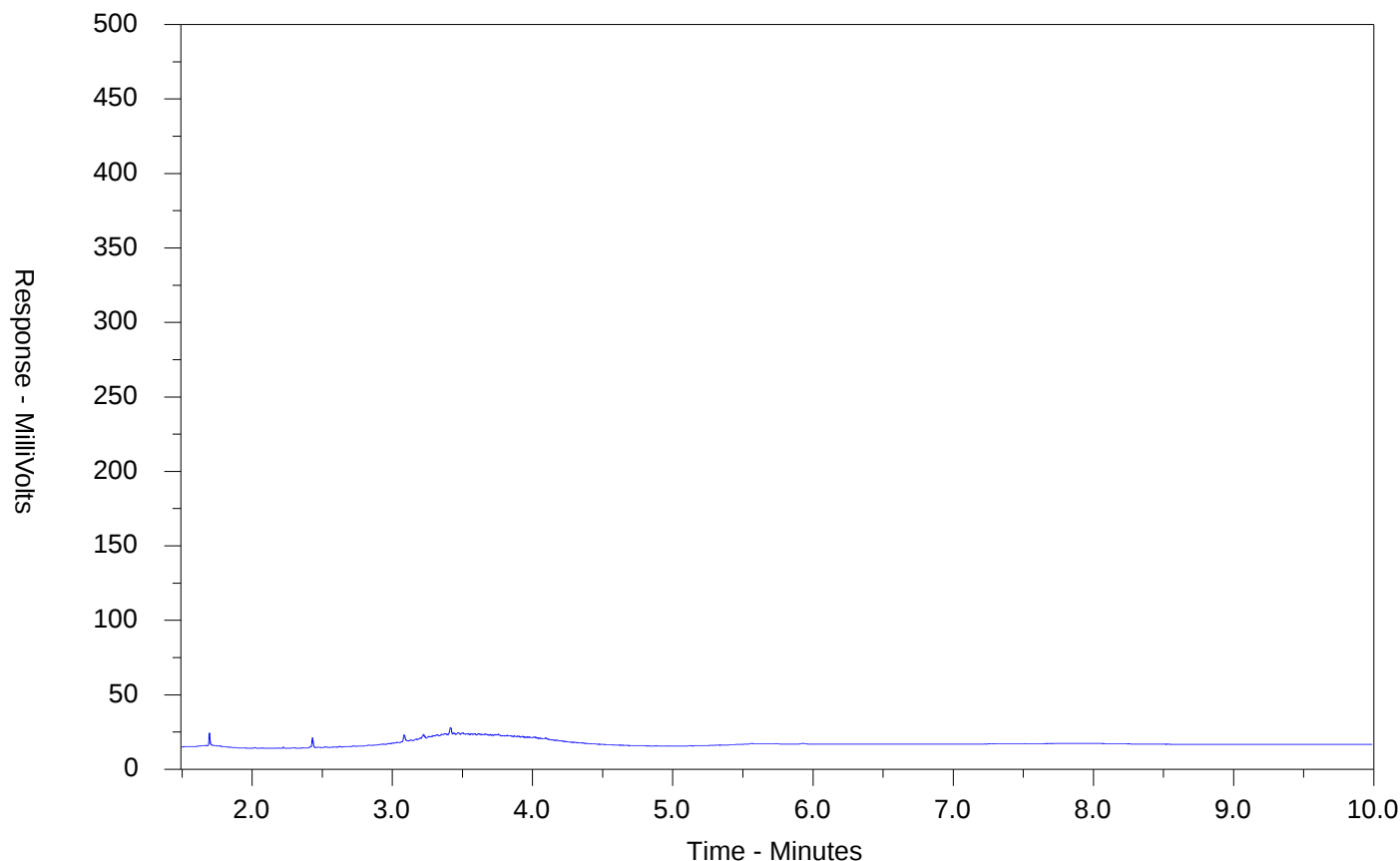
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at www.alsglobal.com.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: WT2426218-003-E601.SG-L
 Client Sample ID: BH105-3



← F2 →		← F3 →		← F4 →	
nC10	nC16		nC34		nC50
174°C	287°C		481°C		575°C
346°F	549°F		898°F		1067°F
Gasoline →			← Motor Oils/Lube Oils/Grease		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

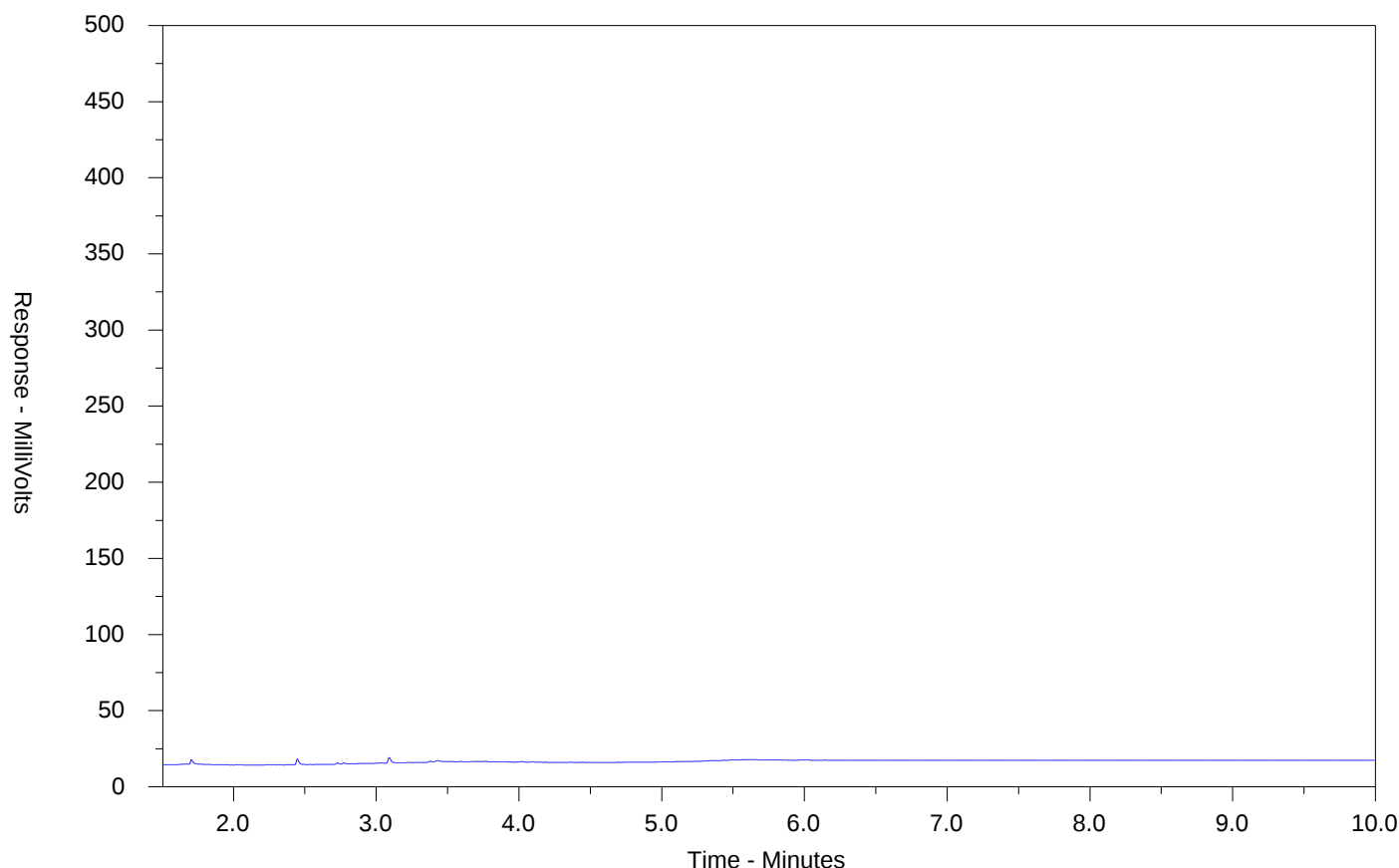
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at www.alsglobal.com.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: WT2426218-004-E601.SG-L
Client Sample ID: DUP101



← F2 →		← F3 →		← F4 →	
nC10	nC16		nC34		nC50
174°C	287°C		481°C		575°C
346°F	549°F		898°F		1067°F
Gasoline →			← Motor Oils/Lube Oils/Grease		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at www.alsglobal.com.

Chain of Custody (COC) / Analytical Request Form

COC Number: 20 - 1046940

Canada Toll Free: 1 800 668 9878

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www.alsglobal.com

Environmental Division
Waterloo
Work Order Reference
WT2426218



Telephone : +1 519 886 6910

Report To		Reports / Recipients		Turnaround Time (TAT) Requested	
Contact and company name below will appear on the final report		Select Report Format: ☒ PDF ☒ EXCEL ☐ EDD (DIGITAL)		☒ Routine [R] if received by 3pm M-F - no surcharges apply	
Company:	OHE Consultants	Merge QC/QCI Reports with COA ☐ YES ☐ NO ☐ N/A		☐ 4 day [P4] if received by 3pm M-F - 20% rush surcharge minimum	
Contact:	Haseen Rahman	☐ 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	
Phone:	905-890-9000	Select Distribution: ☐ EMAIL ☐ MAIL ☐ FAX		☐ 2 day [P2] if received by 3pm M-F - 50% rush surcharge minimum	
Company address below will appear on the final report		Email 1 or Fax results@oheconsultants.com		☐ 1 day [E] if received by 3pm M-F - 100% rush surcharge minimum	
Street:	311 Matheson Blvd E	Email 2		☐ Same day [E2] if received by 10am M-S - 200% rush surcharge. Add may apply to rush requests on weekends, statutory holidays and non-r	
City/Province:	MISSISSAUGA, ON	Email 3		Date and Time Required for all E&P TATs:	
Postal Code:	L4Z 1X8			For all tests with rush TATs requested, please	
Invoice To	Same as Report To ☒ YES ☐ NO	Select Invoice Distribution: ☒ EMAIL ☐ MAIL ☐ FAX		Analysis R	
	Copy of Invoice with Report ☐ YES ☒ NO	Email 1 or Fax prf@oheconsultants.com		Indicate Filtered (F), Preserved (P) or Filtered a	
Company:		Email 2		NUMBER OF CONTAINERS	
Contact:				PHCS	
Project Information		Oil and Gas Required Fields (client use)		VOCs	
ALS Account # / Quote #:		AFE/Cost Center:		metals	
Job #:	30100	Major/Minor Code:		hydrocarbon-forming methods	
PO / AFE:		Routing Code:		PAHs	
LSD:		Requisitioner:		PCBS	
		Location:		PHCS (F2-F4)	
ALS Lab Work Order # (ALS use only):		ALS Contact:		SAMPLER ON HO	
		Sampler: HR		EXTENDED STORAGE	
ALS Sample # (ALS use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mm-yy)	Time (hh:mm)	Sample Type	SUSPECTED HAZARD
	BH103-6	04-Sep-24	15:10	SOIL	
	BH104-3	05-Sep-24	10:00	↓	
	BH105-3	05-Sep-24	13:45	↓	
	DUP101	05-Sep-24	-	↓	
Drinking Water (DW) Samples ¹ (client use)		Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only)		SAMPLE RECEIPT DETAILS (ALS use only)	
Are samples taken from a Regulated DW System? ☐ YES ☒ NO		Table 1, O. Reg. 153/04		Cooling Method: ☐ NONE ☒ ICE ☒ ICE PACKS ☐ FROZEN ☐ COOLING INITIATED	
Are samples for human consumption/ use? ☐ YES ☒ NO				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	
				9.0	
				FINAL COOLER TEMPERATURES °C	
				-0.2°C	
SHIPMENT RELEASE (client use)		INITIAL SHIPMENT RECEPTION (ALS use only)		FINAL SHIPMENT RECEPTION (ALS use only)	
Released by: [Signature]	Date: 06-Sep-24 Time: 10:00	Received by: Karan	Date: 9/6/2024 Time: 9:32	Received by: JZ	Date: 6/9/24 Time: 1:00

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

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.

AUG 2020 FRONT

m1 - G1 115-0066 AL

CERTIFICATE OF ANALYSIS (GUIDELINE EVALUATION)

Work Order	: WT2432289	Page	: 1 of 4
Client	: OH Environmental Inc.	Laboratory	: ALS Environmental - Waterloo
Contact	: Mike Grayhurst	Account Manager	: Amanda Overholster
Address	: 311 Matheson Blvd. East Mississauga ON Canada L4Z 1X8	Address	: 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8
Telephone	: 905 890 9000	Telephone	: 1 416 817 2944
Project	: 30100	Date Samples Received	: 29-Oct-2024 10:20
PO	: ----	Date Analysis Commenced	: 30-Oct-2024
C-O-C number	: 20-955400	Issue Date	: 06-Nov-2024 16:10
Sampler	: Client		
Site	: ----		
Quote number	: 2024 SOA		
No. of samples received	: 2		
No. of samples analysed	: 2		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Guideline Comparison

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QC Interpretive report to assist with Quality Review and Sample Receipt Notification (SRN).

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

Signatories	Position	Laboratory Department
Danielle Gravel	Supervisor - Semi-Volatile Instrumentation	Organics, Waterloo, Ontario



No Breaches Found

General Comments

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Refer to the ALS Quality Control Interpretive report (QCI) for applicable references and methodology summaries. Reference methods may incorporate modifications to improve performance.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to fitness for a particular purpose, or non-infringement. ALS assumes no responsibility for errors or omissions in the information. Guidelines are not adjusted for the hardness, pH or temperature of the sample (the most conservative values are used). Measurement uncertainty is not applied to test results prior to comparison with specified criteria values.

Key : LOR: Limit of Reporting (detection limit).

Unit	Description
µg/L	micrograms per litre

>: greater than.

<: less than.

Red shading is applied where the result or the LOR is greater than the Guideline Upper Limit (or lower than the Guideline Lower Limit, if applicable).

For drinking water samples, Red shading is applied where the result for E.coli, fecal or total coliforms is greater than or equal to the Guideline Upper Limit.



Analytical Results Evaluation

Matrix: Water

				Client sample ID	MWX	MWX-F	----	----	----	----	----
				Sampling date/time	28-Oct-2024 13:00	28-Oct-2024 13:00	----	----	----	----	----
				Sub-Matrix	Water	Water	----	----	----	----	----
Analyte	CAS Number	Method/Lab	Unit	WT2432289-001	WT2432289-002	-----	-----	-----	-----	-----	-----
Polycyclic Aromatic Hydrocarbons											
Acenaphthene	83-32-9	E641A/WT	µg/L	<0.010	<0.010	----	----	----	----	----	----
Acenaphthylene	208-96-8	E641A/WT	µg/L	<0.010	<0.010	----	----	----	----	----	----
Anthracene	120-12-7	E641A/WT	µg/L	<0.010	<0.010	----	----	----	----	----	----
Benz(a)anthracene	56-55-3	E641A/WT	µg/L	<0.010	<0.010	----	----	----	----	----	----
Benzo(a)pyrene	50-32-8	E641A/WT	µg/L	<0.0050	<0.0050	----	----	----	----	----	----
Benzo(b+j)fluoranthene	n/a	E641A/WT	µg/L	<0.010	<0.010	----	----	----	----	----	----
Benzo(g,h,i)perylene	191-24-2	E641A/WT	µg/L	<0.010	<0.010	----	----	----	----	----	----
Benzo(k)fluoranthene	207-08-9	E641A/WT	µg/L	<0.010	<0.010	----	----	----	----	----	----
Chrysene	218-01-9	E641A/WT	µg/L	<0.010	<0.010	----	----	----	----	----	----
Dibenz(a,h)anthracene	53-70-3	E641A/WT	µg/L	<0.0050	<0.0050	----	----	----	----	----	----
Fluoranthene	206-44-0	E641A/WT	µg/L	<0.010	<0.010	----	----	----	----	----	----
Fluorene	86-73-7	E641A/WT	µg/L	<0.010	<0.010	----	----	----	----	----	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A/WT	µg/L	<0.010	<0.010	----	----	----	----	----	----
Methylnaphthalene, 1-	90-12-0	E641A/WT	µg/L	<0.010	<0.010	----	----	----	----	----	----
Methylnaphthalene, 1+2-	----	E641A/WT	µg/L	<0.015	<0.015	----	----	----	----	----	----
Methylnaphthalene, 2-	91-57-6	E641A/WT	µg/L	<0.010	<0.010	----	----	----	----	----	----
Naphthalene	91-20-3	E641A/WT	µg/L	<0.050	<0.050	----	----	----	----	----	----
Phenanthrene	85-01-8	E641A/WT	µg/L	<0.020	<0.020	----	----	----	----	----	----
Pyrene	129-00-0	E641A/WT	µg/L	<0.010	<0.010	----	----	----	----	----	----
Polycyclic Aromatic Hydrocarbons Surrogates											
Chrysene-d12	1719-03-5	E641A/WT	%	74.4	71.2	----	----	----	----	----	----
Naphthalene-d8	1146-65-2	E641A/WT	%	109	110	----	----	----	----	----	----
Phenanthrene-d10	1517-22-2	E641A/WT	%	110	109	----	----	----	----	----	----

Please refer to the General Comments section for an explanation of any result qualifiers detected.

Please refer to the Accreditation section for an explanation of analyte accreditations.



Summary of Guideline Limits

Analyte	CAS Number	Unit	ON153/04 T2-GW-C-All	ON153/04 T2-GW-F-All					
Polycyclic Aromatic Hydrocarbons									
Acenaphthene	83-32-9	µg/L	4.1 µg/L	4.1 µg/L					
Acenaphthylene	208-96-8	µg/L	1 µg/L	1 µg/L					
Anthracene	120-12-7	µg/L	2.4 µg/L	2.4 µg/L					
Benz(a)anthracene	56-55-3	µg/L	1 µg/L	1 µg/L					
Benzo(a)pyrene	50-32-8	µg/L	0.01 µg/L	0.01 µg/L					
Benzo(b+j)fluoranthene	n/a	µg/L	0.1 µg/L	0.1 µg/L					
Benzo(g,h,i)perylene	191-24-2	µg/L	0.2 µg/L	0.2 µg/L					
Benzo(k)fluoranthene	207-08-9	µg/L	0.1 µg/L	0.1 µg/L					
Chrysene	218-01-9	µg/L	0.1 µg/L	0.1 µg/L					
Dibenz(a,h)anthracene	53-70-3	µg/L	0.2 µg/L	0.2 µg/L					
Fluoranthene	206-44-0	µg/L	0.41 µg/L	0.41 µg/L					
Fluorene	86-73-7	µg/L	120 µg/L	120 µg/L					
Indeno(1,2,3-c,d)pyrene	193-39-5	µg/L	0.2 µg/L	0.2 µg/L					
Methylnaphthalene, 1+2-	----	µg/L	3.2 µg/L	3.2 µg/L					
Methylnaphthalene, 1-	90-12-0	µg/L	3.2 µg/L	3.2 µg/L					
Methylnaphthalene, 2-	91-57-6	µg/L	3.2 µg/L	3.2 µg/L					
Naphthalene	91-20-3	µg/L	11 µg/L	11 µg/L					
Phenanthrene	85-01-8	µg/L	1 µg/L	1 µg/L					
Pyrene	129-00-0	µg/L	4.1 µg/L	4.1 µg/L					
Chrysene-d12	1719-03-5	%	--	--					
Naphthalene-d8	1146-65-2	%	--	--					
Phenanthrene-d10	1517-22-2	%	--	--					

Please refer to the General Comments section for an explanation of any qualifiers detected.

Key:

ON153/04	Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
T2-GW-C-All	153 T2-Ground Water (Coarse Soil)-All Types of Property Use
T2-GW-F-All	153 T2-Ground Water (Fine Soil)-All Types of Property Use

QUALITY CONTROL INTERPRETIVE REPORT

Work Order	: WT2432289	Page	: 1 of 5
Client	: OH Environmental Inc.	Laboratory	: ALS Environmental - Waterloo
Contact	: Mike Grayhurst	Account Manager	: Amanda Overholster
Address	: 311 Matheson Blvd. East Mississauga ON Canada L4Z 1X8	Address	: 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8
Telephone	: 905 890 9000	Telephone	: 1 416 817 2944
Project	: 30100	Date Samples Received	: 29-Oct-2024 10:20
PO	: ----	Issue Date	: 06-Nov-2024 17:11
C-O-C number	: 20-955400		
Sampler	: Client		
Site	: ----		
Quote number	: 2024 SOA		
No. of samples received	: 2		
No. of samples analysed	: 2		

This report is automatically generated by the ALS LIMS (Laboratory Information Management System) through evaluation of Quality Control (QC) results and other QA parameters associated with this submission, and is intended to facilitate rapid data validation by auditors or reviewers. The report highlights any exceptions and outliers to ALS Data Quality Objectives, provides holding time details and exceptions, summarizes QC sample frequencies, and lists applicable methodology references and summaries.

Key

Anonymous: Refers to samples which are not part of this work order, but which formed part of the QC process lot.

CAS Number: Chemical Abstracts Service number is a unique identifier assigned to discrete substances.

DQO: Data Quality Objective.

LOR: Limit of Reporting (detection limit).

RPD: Relative Percent Difference.

Workorder Comments

Holding times are displayed as "----" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

Summary of Outliers

Outliers : Quality Control Samples

- No Method Blank value outliers occur.
- No Laboratory Control Sample (LCS) outliers occur
- No Test sample Surrogate recovery outliers exist.

Outliers: Reference Material (RM) Samples

- No Reference Material (RM) Sample outliers occur.

Outliers : Analysis Holding Time Compliance (Breaches)

- No Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

- No Quality Control Sample Frequency Outliers occur.



Analysis Holding Time Compliance

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times, which are selected to meet known provincial and /or federal requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by organizations such as CCME, US EPA, APHA Standard Methods, ASTM, or Environment Canada (where available). Dates and holding times reported below represent the first dates of extraction or analysis. If subsequent tests or dilutions exceeded holding times, qualifiers are added (refer to COA).

If samples are identified below as having been analyzed or extracted outside of recommended holding times, measurement uncertainties may be increased, and this should be taken into consideration when interpreting results.

Where actual sampling date is not provided on the chain of custody, the date of receipt with time at 00:00 is used for calculation purposes.

Where only the sample date without time is provided on the chain of custody, the sampling date at 00:00 is used for calculation purposes.

Matrix: **Water**

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Polycyclic Aromatic Hydrocarbons : PAHs in Water by Hexane LVI GC-MS										
Amber glass/Teflon lined cap [ON MECP] MWX	E641A	28-Oct-2024	04-Nov-2024	14 days	7 days	✓	05-Nov-2024	40 days	1 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Water by Hexane LVI GC-MS										
Amber glass/Teflon lined cap [ON MECP] MWX-F	E641A	28-Oct-2024	04-Nov-2024	14 days	7 days	✓	05-Nov-2024	40 days	1 days	✓

Legend & Qualifier Definitions

Rec. HT: ALS recommended hold time (see units).



Quality Control Parameter Frequency Compliance

The following report summarizes the frequency of laboratory QC samples analyzed within the analytical batches (QC lots) in which the submitted samples were processed. The actual frequency should be greater than or equal to the expected frequency.

Matrix: **Water** Evaluation: ✖ = QC frequency outside specification; ✔ = QC frequency within specification.

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	Method	QC Lot #	QC	Regular	Actual	Expected	Evaluation
Laboratory Control Samples (LCS)							
PAHs in Water by Hexane LVI GC-MS	E641A	1747949	1	2	50.0	5.0	✔
Method Blanks (MB)							
PAHs in Water by Hexane LVI GC-MS	E641A	1747949	1	2	50.0	5.0	✔



Methodology References and Summaries

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Reference methods may incorporate modifications to improve performance (indicated by "mod").

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
PAHs in Water by Hexane LVI GC-MS	E641A ALS Environmental - Waterloo	Water	EPA 8270E (mod)	Polycyclic Aromatic Hydrocarbons (PAHs) are analyzed by large volume injection (LVI) GC-MS.
Preparation Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
PHCs and PAHs Hexane Extraction	EP601 ALS Environmental - Waterloo	Water	EPA 3511 (mod)	Petroleum Hydrocarbons (PHCs) and Polycyclic Aromatic Hydrocarbons (PAHs) are extracted using a hexane liquid-liquid extraction.

QUALITY CONTROL REPORT

Work Order	: WT2432289	Page	: 1 of 4
Client	: OH Environmental Inc.	Laboratory	: ALS Environmental - Waterloo
Contact	: Mike Grayhurst	Account Manager	: Amanda Overholster
Address	: 311 Matheson Blvd. East Mississauga ON Canada L4Z 1X8	Address	: 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8
Telephone	: 905 890 9000	Telephone	: 1 416 817 2944
Project	: 30100	Date Samples Received	: 29-Oct-2024 10:20
PO	: ----	Date Analysis Commenced	: 30-Oct-2024
C-O-C number	: 20-955400	Issue Date	: 06-Nov-2024 16:28
Sampler	: Client		
Site	: ----		
Quote number	: 2024 SOA		
No. of samples received	: 2		
No. of samples analysed	: 2		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Method Blank (MB) Report; Recovery and Data Quality Objectives
- Laboratory Control Sample (LCS) Report; Recovery and Data Quality Objectives

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

Signatories	Position	Laboratory Department
Danielle Gravel	Supervisor - Semi-Volatile Instrumentation	Waterloo Organics, Waterloo, Ontario



General Comments

The ALS Quality Control (QC) report is optionally provided to ALS clients upon request. ALS test methods include 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 predetermined Data Quality Objectives (DQOs) to provide confidence in the accuracy of associated test results. This report contains detailed results for all QC results applicable to this sample submission. Please refer to the ALS Quality Control Interpretation report (QCI) for applicable method references and methodology summaries.

Key :

Anonymous = Refers to samples which are not part of this work order, but which formed part of the QC process lot.

CAS Number = Chemical Abstracts Service number is a unique identifier assigned to discrete substances.

DQO = Data Quality Objective.

LOR = Limit of Reporting (detection limit).

RPD = Relative Percent Difference

= Indicates a QC result that did not meet the ALS DQO.

Workorder Comments

Holding times are displayed as "---" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.



Method Blank (MB) Report

A Method Blank is an analyte-free matrix that undergoes sample processing identical to that carried out for test samples. Method Blank results are used to monitor and control for potential contamination from the laboratory environment and reagents. For most tests, the DQO for Method Blanks is for the result to be < LOR.

Sub-Matrix: Water

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Polycyclic Aromatic Hydrocarbons (QCLot: 1747949)						
Acenaphthene	83-32-9	E641A	0.01	µg/L	<0.010	----
Acenaphthylene	208-96-8	E641A	0.01	µg/L	<0.010	----
Anthracene	120-12-7	E641A	0.01	µg/L	<0.010	----
Benz(a)anthracene	56-55-3	E641A	0.01	µg/L	<0.010	----
Benzo(a)pyrene	50-32-8	E641A	0.005	µg/L	<0.0050	----
Benzo(b+j)fluoranthene	n/a	E641A	0.01	µg/L	<0.010	----
Benzo(g,h,i)perylene	191-24-2	E641A	0.01	µg/L	<0.010	----
Benzo(k)fluoranthene	207-08-9	E641A	0.01	µg/L	<0.010	----
Chrysene	218-01-9	E641A	0.01	µg/L	<0.010	----
Dibenz(a,h)anthracene	53-70-3	E641A	0.005	µg/L	<0.0050	----
Fluoranthene	206-44-0	E641A	0.01	µg/L	<0.010	----
Fluorene	86-73-7	E641A	0.01	µg/L	<0.010	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A	0.01	µg/L	<0.010	----
Methylnaphthalene, 1-	90-12-0	E641A	0.01	µg/L	<0.010	----
Methylnaphthalene, 2-	91-57-6	E641A	0.01	µg/L	<0.010	----
Naphthalene	91-20-3	E641A	0.05	µg/L	<0.050	----
Phenanthrene	85-01-8	E641A	0.02	µg/L	<0.020	----
Pyrene	129-00-0	E641A	0.01	µg/L	<0.010	----



Laboratory Control Sample (LCS) Report

A Laboratory Control Sample (LCS) is an analyte-free matrix that has been fortified (spiked) with test analytes at known concentration and processed in an identical manner to test samples. LCS results are expressed as percent recovery, and are used to monitor and control test method accuracy and precision, independent of test sample matrix.

Sub-Matrix: Water

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Polycyclic Aromatic Hydrocarbons (QCLot: 1747949)									
Acenaphthene	83-32-9	E641A	0.01	µg/L	0.526 µg/L	111	50.0	140	----
Acenaphthylene	208-96-8	E641A	0.01	µg/L	0.526 µg/L	104	50.0	140	----
Anthracene	120-12-7	E641A	0.01	µg/L	0.526 µg/L	108	50.0	140	----
Benz(a)anthracene	56-55-3	E641A	0.01	µg/L	0.526 µg/L	88.8	50.0	140	----
Benzo(a)pyrene	50-32-8	E641A	0.005	µg/L	0.526 µg/L	97.4	50.0	140	----
Benzo(b+j)fluoranthene	n/a	E641A	0.01	µg/L	0.526 µg/L	115	50.0	140	----
Benzo(g,h,i)perylene	191-24-2	E641A	0.01	µg/L	0.526 µg/L	134	50.0	140	----
Benzo(k)fluoranthene	207-08-9	E641A	0.01	µg/L	0.526 µg/L	110	50.0	140	----
Chrysene	218-01-9	E641A	0.01	µg/L	0.526 µg/L	91.7	50.0	140	----
Dibenz(a,h)anthracene	53-70-3	E641A	0.005	µg/L	0.526 µg/L	108	50.0	140	----
Fluoranthene	206-44-0	E641A	0.01	µg/L	0.526 µg/L	122	50.0	140	----
Fluorene	86-73-7	E641A	0.01	µg/L	0.526 µg/L	115	50.0	140	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A	0.01	µg/L	0.526 µg/L	132	50.0	140	----
Methylnaphthalene, 1-	90-12-0	E641A	0.01	µg/L	0.526 µg/L	109	50.0	140	----
Methylnaphthalene, 2-	91-57-6	E641A	0.01	µg/L	0.526 µg/L	116	50.0	140	----
Naphthalene	91-20-3	E641A	0.05	µg/L	0.526 µg/L	111	50.0	140	----
Phenanthrene	85-01-8	E641A	0.02	µg/L	0.526 µg/L	125	50.0	140	----
Pyrene	129-00-0	E641A	0.01	µg/L	0.526 µg/L	121	50.0	140	----



COC Number: 20 - 955 400

Canada Toll Free: 1 800 668 9878

Page 1 of 1

Environmental Division
Waterloo
Work Order Reference
WT2432289



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[illegible]

REFER TO BACK PAGE FOR AIS 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**.

NO - 1155



Summary of Guideline Breaches by Sample

SampleID/Client ID	Matrix	Analyte	Analyte Summary	Guideline	Category	Result	Limit
MWX	Water	Sodium, dissolved		ON153/04	T1-GW-All	1030000 µg/L	490,000 µg/L
	Water	Vanadium, dissolved		ON153/04	T1-GW-All	<5.00	
	Water	Benzo(a)pyrene		ON153/04	T1-GW-All	0.0305 µg/L	0.01 µg/L

General Comments

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Refer to the ALS Quality Control Interpretive report (QCI) for applicable references and methodology summaries. Reference methods may incorporate modifications to improve performance.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to fitness for a particular purpose, or non-infringement. ALS assumes no responsibility for errors or omissions in the information. Guidelines are not adjusted for the hardness, pH or temperature of the sample (the most conservative values are used). Measurement uncertainty is not applied to test results prior to comparison with specified criteria values.

Key : LOR: Limit of Reporting (detection limit).

Unit	Description
-	no units
µg/L	micrograms per litre

>: greater than.

<: less than.

Red shading is applied where the result or the LOR is greater than the Guideline Upper Limit (or lower than the Guideline Lower Limit, if applicable).

For drinking water samples, Red shading is applied where the result for E.coli, fecal or total coliforms is greater than or equal to the Guideline Upper Limit.

Lavander shading is applied where the LOR itself is greater than the Guideline Upper Limit (or Lower than the Guideline Lower Limit, if applicable).

Qualifiers

Qualifier	Description
DLHC	Detection Limit Raised: Dilution required due to high concentration of test analyte(s).



Analytical Results Evaluation

				Client sample ID	MWX	TRIP BLANK	----	----	----	----	----
Matrix: Water				Sampling date/time	12-Sep-2024 09:45	12-Sep-2024 00:00	----	----	----	----	----
				Sub-Matrix	Water	Water	----	----	----	----	----
Analyte	CAS Number	Method/Lab	Unit	WT2426986-001	WT2426986-002	-----	-----	-----	-----	-----	-----
Dissolved Metals											
Antimony, dissolved	7440-36-0	E421/WT	µg/L	<1.00	DLHC	----	----	----	----	----	----
Arsenic, dissolved	7440-38-2	E421/WT	µg/L	<1.00	DLHC	----	----	----	----	----	----
Barium, dissolved	7440-39-3	E421/WT	µg/L	384	DLHC	----	----	----	----	----	----
Beryllium, dissolved	7440-41-7	E421/WT	µg/L	<0.200	DLHC	----	----	----	----	----	----
Boron, dissolved	7440-42-8	E421/WT	µg/L	<100	DLHC	----	----	----	----	----	----
Cadmium, dissolved	7440-43-9	E421/WT	µg/L	<0.0500	DLHC	----	----	----	----	----	----
Chromium, dissolved	7440-47-3	E421/WT	µg/L	<5.00	DLHC	----	----	----	----	----	----
Cobalt, dissolved	7440-48-4	E421/WT	µg/L	<1.00	DLHC	----	----	----	----	----	----
Copper, dissolved	7440-50-8	E421/WT	µg/L	4.26	DLHC	----	----	----	----	----	----
Lead, dissolved	7439-92-1	E421/WT	µg/L	<0.500	DLHC	----	----	----	----	----	----
Molybdenum, dissolved	7439-98-7	E421/WT	µg/L	1.16	DLHC	----	----	----	----	----	----
Nickel, dissolved	7440-02-0	E421/WT	µg/L	<5.00	DLHC	----	----	----	----	----	----
Selenium, dissolved	7782-49-2	E421/WT	µg/L	1.37	DLHC	----	----	----	----	----	----
Silver, dissolved	7440-22-4	E421/WT	µg/L	<0.100	DLHC	----	----	----	----	----	----
Sodium, dissolved	7440-23-5	E421/WT	µg/L	1030000	DLHC	----	----	----	----	----	----
Thallium, dissolved	7440-28-0	E421/WT	µg/L	<0.100	DLHC	----	----	----	----	----	----
Uranium, dissolved	7440-61-1	E421/WT	µg/L	0.677	DLHC	----	----	----	----	----	----
Vanadium, dissolved	7440-62-2	E421/WT	µg/L	<5.00	DLHC	----	----	----	----	----	----
Zinc, dissolved	7440-66-6	E421/WT	µg/L	<10.0	DLHC	----	----	----	----	----	----
Dissolved metals filtration location	----	EP421/WT	-	Field		----	----	----	----	----	----
Volatile Organic Compounds											
Acetone	67-64-1	E611D/WT	µg/L	<20		<20	----	----	----	----	----
Benzene	71-43-2	E611D/WT	µg/L	<0.50		<0.50	----	----	----	----	----
Bromodichloromethane	75-27-4	E611D/WT	µg/L	<0.50		<0.50	----	----	----	----	----
Bromoform	75-25-2	E611D/WT	µg/L	<0.50		<0.50	----	----	----	----	----
Bromomethane	74-83-9	E611D/WT	µg/L	<0.50		<0.50	----	----	----	----	----
Carbon tetrachloride	56-23-5	E611D/WT	µg/L	<0.20		<0.20	----	----	----	----	----
Chlorobenzene	108-90-7	E611D/WT	µg/L	<0.50		<0.50	----	----	----	----	----



Analytical Results Evaluation

Matrix: Water				Client sample ID	MWX	TRIP BLANK	----	----	----	----	----
				Sampling date/time	12-Sep-2024 09:45	12-Sep-2024 00:00	----	----	----	----	----
				Sub-Matrix	Water	Water	----	----	----	----	----
Analyte	CAS Number	Method/Lab	Unit	WT2426986-001	WT2426986-002	-----	-----	-----	-----	-----	-----
Volatile Organic Compounds											
Chloroform	67-66-3	E611D/WT	µg/L	<0.50	<0.50	----	----	----	----	----	----
Dibromochloromethane	124-48-1	E611D/WT	µg/L	<0.50	<0.50	----	----	----	----	----	----
Dibromoethane, 1,2-	106-93-4	E611D/WT	µg/L	<0.20	<0.20	----	----	----	----	----	----
Dichlorobenzene, 1,2-	95-50-1	E611D/WT	µg/L	<0.50	<0.50	----	----	----	----	----	----
Dichlorobenzene, 1,3-	541-73-1	E611D/WT	µg/L	<0.50	<0.50	----	----	----	----	----	----
Dichlorobenzene, 1,4-	106-46-7	E611D/WT	µg/L	<0.50	<0.50	----	----	----	----	----	----
Dichlorodifluoromethane	75-71-8	E611D/WT	µg/L	<0.50	<0.50	----	----	----	----	----	----
Dichloroethane, 1,1-	75-34-3	E611D/WT	µg/L	<0.50	<0.50	----	----	----	----	----	----
Dichloroethane, 1,2-	107-06-2	E611D/WT	µg/L	<0.50	<0.50	----	----	----	----	----	----
Dichloroethylene, 1,1-	75-35-4	E611D/WT	µg/L	<0.50	<0.50	----	----	----	----	----	----
Dichloroethylene, cis-1,2-	156-59-2	E611D/WT	µg/L	<0.50	<0.50	----	----	----	----	----	----
Dichloroethylene, trans-1,2-	156-60-5	E611D/WT	µg/L	<0.50	<0.50	----	----	----	----	----	----
Dichloromethane	75-09-2	E611D/WT	µg/L	<1.0	<1.0	----	----	----	----	----	----
Dichloropropane, 1,2-	78-87-5	E611D/WT	µg/L	<0.50	<0.50	----	----	----	----	----	----
Dichloropropylene, cis+trans-1,3-	542-75-6	E611D/WT	µg/L	<0.50	<0.50	----	----	----	----	----	----
Dichloropropylene, cis-1,3-	10061-01-5	E611D/WT	µg/L	<0.30	<0.30	----	----	----	----	----	----
Dichloropropylene, trans-1,3-	10061-02-6	E611D/WT	µg/L	<0.30	<0.30	----	----	----	----	----	----
Ethylbenzene	100-41-4	E611D/WT	µg/L	<0.50	<0.50	----	----	----	----	----	----
Hexane, n-	110-54-3	E611D/WT	µg/L	<0.50	<0.50	----	----	----	----	----	----
Methyl ethyl ketone [MEK]	78-93-3	E611D/WT	µg/L	<20	<20	----	----	----	----	----	----
Methyl isobutyl ketone [MIBK]	108-10-1	E611D/WT	µg/L	<20	<20	----	----	----	----	----	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D/WT	µg/L	<0.50	<0.50	----	----	----	----	----	----
Styrene	100-42-5	E611D/WT	µg/L	<0.50	<0.50	----	----	----	----	----	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611D/WT	µg/L	<0.50	<0.50	----	----	----	----	----	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611D/WT	µg/L	<0.50	<0.50	----	----	----	----	----	----
Tetrachloroethylene	127-18-4	E611D/WT	µg/L	<0.50	<0.50	----	----	----	----	----	----
Toluene	108-88-3	E611D/WT	µg/L	<0.50	<0.50	----	----	----	----	----	----
Trichloroethane, 1,1,1-	71-55-6	E611D/WT	µg/L	<0.50	<0.50	----	----	----	----	----	----
Trichloroethane, 1,1,2-	79-00-5	E611D/WT	µg/L	<0.50	<0.50	----	----	----	----	----	----



Analytical Results Evaluation

Matrix: Water

				Client sample ID	MWX	TRIP BLANK	----	----	----	----	----
				Sampling date/time	12-Sep-2024 09:45	12-Sep-2024 00:00	----	----	----	----	----
				Sub-Matrix	Water	Water	----	----	----	----	----
Analyte	CAS Number	Method/Lab	Unit	WT2426986-001	WT2426986-002	-----	-----	-----	-----	-----	-----
Volatile Organic Compounds											
Trichloroethylene	79-01-6	E611D/WT	µg/L	<0.50	<0.50	----	----	----	----	----	----
Trichlorofluoromethane	75-69-4	E611D/WT	µg/L	<0.50	<0.50	----	----	----	----	----	----
Vinyl chloride	75-01-4	E611D/WT	µg/L	<0.50	<0.50	----	----	----	----	----	----
Xylene, m+p-	179601-23-1	E611D/WT	µg/L	<0.40	<0.40	----	----	----	----	----	----
Xylene, o-	95-47-6	E611D/WT	µg/L	<0.30	<0.30	----	----	----	----	----	----
Xylenes, total	1330-20-7	E611D/WT	µg/L	<0.50	<0.50	----	----	----	----	----	----
BTEX, total	----	E611D/WT	µg/L	<1.0	<1.0	----	----	----	----	----	----
Hydrocarbons											
F1 (C6-C10)	----	E581.F1-L/WT	µg/L	<25	----	----	----	----	----	----	----
F2 (C10-C16)	----	E601.SG/WT	µg/L	<100	----	----	----	----	----	----	----
F2-Naphthalene	----	EC600SG/WT	µg/L	<100	----	----	----	----	----	----	----
F3 (C16-C34)	----	E601.SG/WT	µg/L	<250	----	----	----	----	----	----	----
F3-PAH	n/a	EC600SG/WT	µg/L	<250	----	----	----	----	----	----	----
F4 (C34-C50)	----	E601.SG/WT	µg/L	<250	----	----	----	----	----	----	----
F1-BTEX	----	EC580/WT	µg/L	<25	----	----	----	----	----	----	----
Hydrocarbons, total (C6-C50)	n/a	EC581SG/WT	µg/L	<370	----	----	----	----	----	----	----
Chromatogram to baseline at nC50	n/a	E601.SG/WT	-	YES	----	----	----	----	----	----	----
Hydrocarbons Surrogates											
Bromobenzotrifluoride, 2- (F2-F4 surrogate)	392-83-6	E601.SG/WT	%	92.2	----	----	----	----	----	----	----
Dichlorotoluene, 3,4-	95-75-0	E581.F1-L/WT	%	96.7	----	----	----	----	----	----	----
Volatile Organic Compounds Surrogates											
Bromofluorobenzene, 4-	460-00-4	E611D/WT	%	104	108	----	----	----	----	----	----
Difluorobenzene, 1,4-	540-36-3	E611D/WT	%	99.0	99.4	----	----	----	----	----	----
Polycyclic Aromatic Hydrocarbons											
Acenaphthene	83-32-9	E641A/WT	µg/L	<0.010	----	----	----	----	----	----	----
Acenaphthylene	208-96-8	E641A/WT	µg/L	<0.010	----	----	----	----	----	----	----
Anthracene	120-12-7	E641A/WT	µg/L	0.014	----	----	----	----	----	----	----
Benz(a)anthracene	56-55-3	E641A/WT	µg/L	0.033	----	----	----	----	----	----	----



Analytical Results Evaluation

Matrix: Water				Client sample ID	MWX	TRIP BLANK	----	----	----	----	----
				Sampling date/time	12-Sep-2024 09:45	12-Sep-2024 00:00	----	----	----	----	----
				Sub-Matrix	Water	Water	----	----	----	----	----
Analyte	CAS Number	Method/Lab	Unit		WT2426986-001	WT2426986-002	-----	-----	-----	-----	-----
Polycyclic Aromatic Hydrocarbons											
Benzo(a)pyrene	50-32-8	E641A/WT	µg/L		0.0305	----	----	----	----	----	----
Benzo(b+j)fluoranthene	n/a	E641A/WT	µg/L		0.038	----	----	----	----	----	----
Benzo(g,h,i)perylene	191-24-2	E641A/WT	µg/L		0.018	----	----	----	----	----	----
Benzo(k)fluoranthene	207-08-9	E641A/WT	µg/L		0.018	----	----	----	----	----	----
Chrysene	218-01-9	E641A/WT	µg/L		0.027	----	----	----	----	----	----
Dibenz(a,h)anthracene	53-70-3	E641A/WT	µg/L		<0.0050	----	----	----	----	----	----
Fluoranthene	206-44-0	E641A/WT	µg/L		0.058	----	----	----	----	----	----
Fluorene	86-73-7	E641A/WT	µg/L		0.010	----	----	----	----	----	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A/WT	µg/L		0.020	----	----	----	----	----	----
Methylnaphthalene, 1-	90-12-0	E641A/WT	µg/L		0.037	----	----	----	----	----	----
Methylnaphthalene, 1+2-	----	E641A/WT	µg/L		0.083	----	----	----	----	----	----
Methylnaphthalene, 2-	91-57-6	E641A/WT	µg/L		0.046	----	----	----	----	----	----
Naphthalene	91-20-3	E641A/WT	µg/L		<0.050	----	----	----	----	----	----
Phenanthrene	85-01-8	E641A/WT	µg/L		0.050	----	----	----	----	----	----
Pyrene	129-00-0	E641A/WT	µg/L		0.059	----	----	----	----	----	----
Polycyclic Aromatic Hydrocarbons Surrogates											
Chrysene-d12	1719-03-5	E641A/WT	%		103	----	----	----	----	----	----
Naphthalene-d8	1146-65-2	E641A/WT	%		94.5	----	----	----	----	----	----
Phenanthrene-d10	1517-22-2	E641A/WT	%		103	----	----	----	----	----	----
Polychlorinated Biphenyls											
Aroclor 1016	12674-11-2	E687/WT	µg/L		<0.020	----	----	----	----	----	----
Aroclor 1221	11104-28-2	E687/WT	µg/L		<0.020	----	----	----	----	----	----
Aroclor 1232	11141-16-5	E687/WT	µg/L		<0.020	----	----	----	----	----	----
Aroclor 1242	53469-21-9	E687/WT	µg/L		<0.020	----	----	----	----	----	----
Aroclor 1248	12672-29-6	E687/WT	µg/L		<0.020	----	----	----	----	----	----
Aroclor 1254	11097-69-1	E687/WT	µg/L		<0.020	----	----	----	----	----	----
Aroclor 1260	11096-82-5	E687/WT	µg/L		<0.020	----	----	----	----	----	----
Aroclor 1262	37324-23-5	E687/WT	µg/L		<0.020	----	----	----	----	----	----



Analytical Results Evaluation

Matrix: Water

				Client sample ID	MWX	TRIP BLANK	----	----	----	----	----
				Sampling date/time	12-Sep-2024 09:45	12-Sep-2024 00:00	----	----	----	----	----
				Sub-Matrix	Water	Water	----	----	----	----	----
Analyte	CAS Number	Method/Lab	Unit		WT2426986-001	WT2426986-002	-----	-----	-----	-----	-----
Polychlorinated Biphenyls											
Aroclor 1268	11100-14-4	E687/WT	µg/L		<0.020	----	----	----	----	----	----
Polychlorinated biphenyls [PCBs], total	----	E687/WT	µg/L		<0.060	----	----	----	----	----	----
Polychlorinated Biphenyls Surrogates											
Decachlorobiphenyl	2051-24-3	E687/WT	%		66.6	----	----	----	----	----	----
Tetrachloro-m-xylene	877-09-8	E687/WT	%		75.8	----	----	----	----	----	----

Please refer to the General Comments section for an explanation of any result qualifiers detected.

Please refer to the Accreditation section for an explanation of analyte accreditations.



Summary of Guideline Limits

Analyte	CAS Number	Unit	ON153/04 T1-GW-AII						
Dissolved Metals									
Antimony, dissolved	7440-36-0	µg/L	1.5 µg/L						
Arsenic, dissolved	7440-38-2	µg/L	13 µg/L						
Barium, dissolved	7440-39-3	µg/L	610 µg/L						
Beryllium, dissolved	7440-41-7	µg/L	0.5 µg/L						
Boron, dissolved	7440-42-8	µg/L	1700 µg/L						
Cadmium, dissolved	7440-43-9	µg/L	0.5 µg/L						
Chromium, dissolved	7440-47-3	µg/L	11 µg/L						
Cobalt, dissolved	7440-48-4	µg/L	3.8 µg/L						
Copper, dissolved	7440-50-8	µg/L	5 µg/L						
Dissolved metals filtration location	----	-	--						
Lead, dissolved	7439-92-1	µg/L	1.9 µg/L						
Molybdenum, dissolved	7439-98-7	µg/L	23 µg/L						
Nickel, dissolved	7440-02-0	µg/L	14 µg/L						
Selenium, dissolved	7782-49-2	µg/L	5 µg/L						
Silver, dissolved	7440-22-4	µg/L	0.3 µg/L						
Sodium, dissolved	7440-23-5	µg/L	490000 µg/L						
Thallium, dissolved	7440-28-0	µg/L	0.5 µg/L						
Uranium, dissolved	7440-61-1	µg/L	8.9 µg/L						
Vanadium, dissolved	7440-62-2	µg/L	3.9 µg/L						
Zinc, dissolved	7440-66-6	µg/L	160 µg/L						
Volatile Organic Compounds									
Acetone	67-64-1	µg/L	2700 µg/L						
Benzene	71-43-2	µg/L	0.5 µg/L						
Bromodichloromethane	75-27-4	µg/L	2 µg/L						
Bromoform	75-25-2	µg/L	5 µg/L						
Bromomethane	74-83-9	µg/L	0.89 µg/L						
BTEX, total	----	µg/L	--						
Carbon tetrachloride	56-23-5	µg/L	0.2 µg/L						
Chlorobenzene	108-90-7	µg/L	0.5 µg/L						
Chloroform	67-66-3	µg/L	2 µg/L						
Dibromochloromethane	124-48-1	µg/L	2 µg/L						
Dibromoethane, 1,2-	106-93-4	µg/L	0.2 µg/L						
Dichlorobenzene, 1,2-	95-50-1	µg/L	0.5 µg/L						
Dichlorobenzene, 1,3-	541-73-1	µg/L	0.5 µg/L						
Dichlorobenzene, 1,4-	106-46-7	µg/L	0.5 µg/L						
Dichlorodifluoromethane	75-71-8	µg/L	590 µg/L						
Dichloroethane, 1,1-	75-34-3	µg/L	0.5 µg/L						



Analyte	CAS Number	Unit	ON153/04 T1-GW-AII						
Volatile Organic Compounds - Continued									
Dichloroethane, 1,2-	107-06-2	µg/L	0.5 µg/L						
Dichloroethylene, 1,1-	75-35-4	µg/L	0.5 µg/L						
Dichloroethylene, cis-1,2-	156-59-2	µg/L	1.6 µg/L						
Dichloroethylene, trans-1,2-	156-60-5	µg/L	1.6 µg/L						
Dichloromethane	75-09-2	µg/L	5 µg/L						
Dichloropropane, 1,2-	78-87-5	µg/L	0.5 µg/L						
Dichloropropylene, cis+trans-1,3-	542-75-6	µg/L	0.5 µg/L						
Dichloropropylene, cis-1,3-	10061-01-5	µg/L	--						
Dichloropropylene, trans-1,3-	10061-02-6	µg/L	--						
Ethylbenzene	100-41-4	µg/L	0.5 µg/L						
Hexane, n-	110-54-3	µg/L	5 µg/L						
Methyl ethyl ketone [MEK]	78-93-3	µg/L	400 µg/L						
Methyl isobutyl ketone [MIBK]	108-10-1	µg/L	640 µg/L						
Methyl-tert-butyl ether [MTBE]	1634-04-4	µg/L	15 µg/L						
Styrene	100-42-5	µg/L	0.5 µg/L						
Tetrachloroethane, 1,1,1,2-	630-20-6	µg/L	1.1 µg/L						
Tetrachloroethane, 1,1,2,2-	79-34-5	µg/L	0.5 µg/L						
Tetrachloroethylene	127-18-4	µg/L	0.5 µg/L						
Toluene	108-88-3	µg/L	0.8 µg/L						
Trichloroethane, 1,1,1-	71-55-6	µg/L	0.5 µg/L						
Trichloroethane, 1,1,2-	79-00-5	µg/L	0.5 µg/L						
Trichloroethylene	79-01-6	µg/L	0.5 µg/L						
Trichlorofluoromethane	75-69-4	µg/L	150 µg/L						
Vinyl chloride	75-01-4	µg/L	0.5 µg/L						
Xylene, m+p-	179601-23-1	µg/L	--						
Xylene, o-	95-47-6	µg/L	--						
Xylenes, total	1330-20-7	µg/L	72 µg/L						
Hydrocarbons									
Chromatogram to baseline at nC50	n/a	-	--						
F1 (C6-C10)	----	µg/L	420 µg/L						
F1-BTEX	----	µg/L	420 µg/L						
F2 (C10-C16)	----	µg/L	150 µg/L						
F2-Naphthalene	----	µg/L	--						
F3 (C16-C34)	----	µg/L	500 µg/L						
F3-PAH	n/a	µg/L	--						
F4 (C34-C50)	----	µg/L	500 µg/L						
Hydrocarbons, total (C6-C50)	n/a	µg/L	--						
Bromobenzotrifluoride, 2- (F2-F4 surrogate)	392-83-6	%	--						
Dichlorotoluene, 3,4-	95-75-0	%	--						



Analyte	CAS Number	Unit	ON153/04 T1-GW-AII						
Volatile Organic Compounds Surrogates - Continued									
Bromofluorobenzene, 4-	460-00-4	%	--						
Difluorobenzene, 1,4-	540-36-3	%	--						
Polycyclic Aromatic Hydrocarbons									
Acenaphthene	83-32-9	µg/L	4.1 µg/L						
Acenaphthylene	208-96-8	µg/L	1 µg/L						
Anthracene	120-12-7	µg/L	0.1 µg/L						
Benz(a)anthracene	56-55-3	µg/L	0.2 µg/L						
Benzo(a)pyrene	50-32-8	µg/L	0.01 µg/L						
Benzo(b+j)fluoranthene	n/a	µg/L	0.1 µg/L						
Benzo(g,h,i)perylene	191-24-2	µg/L	0.2 µg/L						
Benzo(k)fluoranthene	207-08-9	µg/L	0.1 µg/L						
Chrysene	218-01-9	µg/L	0.1 µg/L						
Dibenz(a,h)anthracene	53-70-3	µg/L	0.2 µg/L						
Fluoranthene	206-44-0	µg/L	0.4 µg/L						
Fluorene	86-73-7	µg/L	120 µg/L						
Indeno(1,2,3-c,d)pyrene	193-39-5	µg/L	0.2 µg/L						
Methylnaphthalene, 1+2-	----	µg/L	2 µg/L						
Methylnaphthalene, 1-	90-12-0	µg/L	2 µg/L						
Methylnaphthalene, 2-	91-57-6	µg/L	2 µg/L						
Naphthalene	91-20-3	µg/L	7 µg/L						
Phenanthrene	85-01-8	µg/L	0.1 µg/L						
Pyrene	129-00-0	µg/L	0.2 µg/L						
Chrysene-d12	1719-03-5	%	--						
Naphthalene-d8	1146-65-2	%	--						
Phenanthrene-d10	1517-22-2	%	--						
Polychlorinated Biphenyls									
Aroclor 1016	12674-11-2	µg/L	--						
Aroclor 1221	11104-28-2	µg/L	--						
Aroclor 1232	11141-16-5	µg/L	--						
Aroclor 1242	53469-21-9	µg/L	--						
Aroclor 1248	12672-29-6	µg/L	--						
Aroclor 1254	11097-69-1	µg/L	--						
Aroclor 1260	11096-82-5	µg/L	--						
Aroclor 1262	37324-23-5	µg/L	--						
Aroclor 1268	11100-14-4	µg/L	--						
Polychlorinated biphenyls [PCBs], total	----	µg/L	0.2 µg/L						
Decachlorobiphenyl	2051-24-3	%	--						
Tetrachloro-m-xylene	877-09-8	%	--						

Please refer to the General Comments section for an explanation of any qualifiers detected.



Key:

ON153/04	Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
T1-GW-All	153 T1-Ground Water-All Types of Property Uses

QUALITY CONTROL INTERPRETIVE REPORT

Work Order	: WT2426986	Page	: 1 of 7
Client	: OH Environmental Inc.	Laboratory	: ALS Environmental - Waterloo
Contact	: Hasan Rahman	Account Manager	: Amanda Overholster
Address	: 311 Matheson Blvd. East Mississauga ON Canada L4Z 1X8	Address	: 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8
Telephone	: ----	Telephone	: 1 416 817 2944
Project	: 30100	Date Samples Received	: 13-Sep-2024 09:15
PO	: ----	Issue Date	: 20-Sep-2024 15:48
C-O-C number	: 23-1100375		
Sampler	: HR		
Site	: ----		
Quote number	: 2024 SOA		
No. of samples received	: 2		
No. of samples analysed	: 2		

This report is automatically generated by the ALS LIMS (Laboratory Information Management System) through evaluation of Quality Control (QC) results and other QA parameters associated with this submission, and is intended to facilitate rapid data validation by auditors or reviewers. The report highlights any exceptions and outliers to ALS Data Quality Objectives, provides holding time details and exceptions, summarizes QC sample frequencies, and lists applicable methodology references and summaries.

Key

Anonymous: Refers to samples which are not part of this work order, but which formed part of the QC process lot.

CAS Number: Chemical Abstracts Service number is a unique identifier assigned to discrete substances.

DQO: Data Quality Objective.

LOR: Limit of Reporting (detection limit).

RPD: Relative Percent Difference.

Workorder Comments

Holding times are displayed as "----" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

Summary of Outliers

Outliers : Quality Control Samples

- No Method Blank value outliers occur.
- No Duplicate outliers occur.
- No Laboratory Control Sample (LCS) outliers occur
- No Matrix Spike outliers occur.
- No Test sample Surrogate recovery outliers exist.

Outliers: Reference Material (RM) Samples

- No Reference Material (RM) Sample outliers occur.

Outliers : Analysis Holding Time Compliance (Breaches)

- No Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

- No Quality Control Sample Frequency Outliers occur.



Analysis Holding Time Compliance

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times, which are selected to meet known provincial and /or federal requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by organizations such as CCME, US EPA, APHA Standard Methods, ASTM, or Environment Canada (where available). Dates and holding times reported below represent the first dates of extraction or analysis. If subsequent tests or dilutions exceeded holding times, qualifiers are added (refer to COA).

If samples are identified below as having been analyzed or extracted outside of recommended holding times, measurement uncertainties may be increased, and this should be taken into consideration when interpreting results.

Where actual sampling date is not provided on the chain of custody, the date of receipt with time at 00:00 is used for calculation purposes.

Where only the sample date without time is provided on the chain of custody, the sampling date at 00:00 is used for calculation purposes.

Matrix: **Water**

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group : Analytical Method	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) MWX	E421	12-Sep-2024	17-Sep-2024	180 days	5 days	✓	17-Sep-2024	180 days	5 days	✓
Hydrocarbons : CCME PHC - F1 by Headspace GC-FID (Low Level)										
Glass vial (sodium bisulfate) MWX	E581.F1-L	12-Sep-2024	18-Sep-2024	14 days	6 days	✓	18-Sep-2024	14 days	6 days	✓
Hydrocarbons : Silica Gel Treated CCME PHCs - F2-F4sg by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate) MWX	E601.SG	12-Sep-2024	18-Sep-2024	14 days	6 days	✓	19-Sep-2024	40 days	1 days	✓
Polychlorinated Biphenyls : PCB Aroclors by GC-MS										
Amber glass/Teflon lined septa cap MWX	E687	12-Sep-2024	13-Sep-2024	365 days	1 days	✓	16-Sep-2024	40 days	3 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Water by Hexane LVI GC-MS										
Amber glass/Teflon lined cap (sodium bisulfate) MWX	E641A	12-Sep-2024	18-Sep-2024	14 days	6 days	✓	19-Sep-2024	40 days	1 days	✓
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass vial (sodium bisulfate) TRIP BLANK	E611D	12-Sep-2024	18-Sep-2024	14 days	5 days	✓	18-Sep-2024	14 days	5 days	✓
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass vial (sodium bisulfate) MWX	E611D	12-Sep-2024	18-Sep-2024	14 days	6 days	✓	18-Sep-2024	14 days	6 days	✓

Page : 4 of 7
Work Order : WT2426986
Client : OH Environmental Inc.
Project : 30100



Legend & Qualifier Definitions

Rec. HT: ALS recommended hold time (see units).



Quality Control Parameter Frequency Compliance

The following report summarizes the frequency of laboratory QC samples analyzed within the analytical batches (QC lots) in which the submitted samples were processed. The actual frequency should be greater than or equal to the expected frequency.

Matrix: **Water** Evaluation: ✖ = QC frequency outside specification; ✔ = QC frequency within specification.

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	Method	QC Lot #	QC	Regular	Actual	Expected	Evaluation
Laboratory Duplicates (DUP)							
CCME PHC - F1 by Headspace GC-FID (Low Level)	E581.F1-L	1657061	1	13	7.6	5.0	✔
Dissolved Metals in Water by CRC ICPMS	E421	1654596	1	17	5.8	5.0	✔
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	1657060	1	16	6.2	5.0	✔
Laboratory Control Samples (LCS)							
CCME PHC - F1 by Headspace GC-FID (Low Level)	E581.F1-L	1657061	1	13	7.6	5.0	✔
Dissolved Metals in Water by CRC ICPMS	E421	1654596	1	17	5.8	5.0	✔
PAHs in Water by Hexane LVI GC-MS	E641A	1658267	1	4	25.0	5.0	✔
PCB Aroclors by GC-MS	E687	1650031	1	11	9.0	4.7	✔
Silica Gel Treated CCME PHCs - F2-F4sg by GC-FID	E601.SG	1658266	1	17	5.8	5.0	✔
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	1657060	1	16	6.2	5.0	✔
Method Blanks (MB)							
CCME PHC - F1 by Headspace GC-FID (Low Level)	E581.F1-L	1657061	1	13	7.6	5.0	✔
Dissolved Metals in Water by CRC ICPMS	E421	1654596	1	17	5.8	5.0	✔
PAHs in Water by Hexane LVI GC-MS	E641A	1658267	1	4	25.0	5.0	✔
PCB Aroclors by GC-MS	E687	1650031	1	11	9.0	4.7	✔
Silica Gel Treated CCME PHCs - F2-F4sg by GC-FID	E601.SG	1658266	1	17	5.8	5.0	✔
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	1657060	1	16	6.2	5.0	✔
Matrix Spikes (MS)							
CCME PHC - F1 by Headspace GC-FID (Low Level)	E581.F1-L	1657061	1	13	7.6	5.0	✔
Dissolved Metals in Water by CRC ICPMS	E421	1654596	1	17	5.8	5.0	✔
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	1657060	1	16	6.2	5.0	✔



Methodology References and Summaries

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Reference methods may incorporate modifications to improve performance (indicated by "mod").

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Dissolved Metals in Water by CRC ICPMS	E421 ALS Environmental - Waterloo	Water	APHA 3030B/EPA 6020B (mod)	Water samples are filtered (0.45 um), preserved with nitric acid, and analyzed by Collision/Reaction Cell ICPMS. Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.
CCME PHC - F1 by Headspace GC-FID (Low Level)	E581.F1-L ALS Environmental - Waterloo	Water	CCME PHC in Soil - Tier 1 (mod)	CCME Fraction 1 (F1) is analyzed by static headspace GC-FID. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law. Analytical methods for CCME Petroleum Hydrocarbons (PHCs) are validated to comply fully with the Reference Method for the Canada-Wide Standard for PHC. Unless qualified, all required quality control criteria of the CCME PHC method have been met, including response factor and linearity requirements.
Silica Gel Treated CCME PHCs - F2-F4sg by GC-FID	E601.SG ALS Environmental - Waterloo	Water	CCME PHC in Soil - Tier 1 (mod)	Sample extracts are subjected to in-situ silica gel treatment prior to analysis by GC-FID for CCME hydrocarbon fractions (F2-F4). Analytical methods for CCME Petroleum Hydrocarbons (PHCs) are validated to comply fully with the Reference Method for the Canada-Wide Standard for PHC. Unless qualified, all required quality control criteria of the CCME PHC method have been met, including response factor and linearity requirements.
VOCs (Eastern Canada List) by Headspace GC-MS	E611D ALS Environmental - Waterloo	Water	EPA 8260D (mod)	Volatile Organic Compounds (VOCs) are analyzed by static headspace GC-MS. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law.
PAHs in Water by Hexane LVI GC-MS	E641A ALS Environmental - Waterloo	Water	EPA 8270E (mod)	Polycyclic Aromatic Hydrocarbons (PAHs) are analyzed by large volume injection (LVI) GC-MS.
PCB Aroclors by GC-MS	E687 ALS Environmental - Waterloo	Water	EPA 8270E (mod)	PCB Aroclors are analyzed by GC-MS
F1-BTEX	EC580 ALS Environmental - Waterloo	Water	CCME PHC in Soil - Tier 1	F1-BTEX is calculated as follows: F1-BTEX = F1 (C6-C10) minus benzene, toluene, ethylbenzene and xylenes (BTEX).
SUM F1 to F4 where F2-F4 is SG treated	EC581SG ALS Environmental - Waterloo	Water	CCME PHC in Soil - Tier 1	Hydrocarbons, total (C6-C50) is the sum of CCME Fraction F1(C6-C10), F2(C10-C16), F3(C16-C34), and F4(C34-C50), where F2-F4 have been treated with silica gel. F4G-sg is not used within this calculation due to overlap with other fractions.



<i>Analytical Methods</i>	<i>Method / Lab</i>	<i>Matrix</i>	<i>Method Reference</i>	<i>Method Descriptions</i>
F2-F4 (sg) minus PAH	EC600SG ALS Environmental - Waterloo	Water	CCME PHC in Soil - Tier 1	F2-F4 (sg) minus PAH is calculated as follows: F2-F4 minus PAH = Sum of CCME Fraction 2 (C10-C16), CCME Fraction 3 (C16-C34), and CCME Fraction 4 (C34-C50), minus select Polycyclic Aromatic Hydrocarbons (PAH).
<i>Preparation Methods</i>	<i>Method / Lab</i>	<i>Matrix</i>	<i>Method Reference</i>	<i>Method Descriptions</i>
Dissolved Metals Water Filtration	EP421 ALS Environmental - Waterloo	Water	APHA 3030B	Water samples are filtered (0.45 um), and preserved with HNO ₃ .
VOCs Preparation for Headspace Analysis	EP581 ALS Environmental - Waterloo	Water	EPA 5021A (mod)	Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler. An aliquot of the headspace is then injected into a GC-MS-FID.
PHCs and PAHs Hexane Extraction	EP601 ALS Environmental - Waterloo	Water	EPA 3511 (mod)	Petroleum Hydrocarbons (PHCs) and Polycyclic Aromatic Hydrocarbons (PAHs) are extracted using a hexane liquid-liquid extraction.
Pesticides, PCB, and Neutral Extractable Chlorinated Hydrocarbons Extraction	EP660 ALS Environmental - Waterloo	Water	EPA 3511 (mod)	Samples are extracted from aqueous sample using an organic solvent liquid-liquid extraction.

QUALITY CONTROL REPORT

Work Order	: WT2426986	Page	: 1 of 12
Client	: OH Environmental Inc.	Laboratory	: ALS Environmental - Waterloo
Contact	: Hasan Rahman	Account Manager	: Amanda Overholster
Address	: 311 Matheson Blvd. East Mississauga ON Canada L4Z 1X8	Address	: 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8
Telephone	: ----	Telephone	: 1 416 817 2944
Project	: 30100	Date Samples Received	: 13-Sep-2024 09:15
PO	: ----	Date Analysis Commenced	: 13-Sep-2024
C-O-C number	: 23-1100375	Issue Date	: 20-Sep-2024 15:48
Sampler	: HR		
Site	: ----		
Quote number	: 2024 SOA		
No. of samples received	: 2		
No. of samples analysed	: 2		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percent Difference (RPD) and Data Quality Objectives
- Matrix Spike (MS) Report; Recovery and Data Quality Objectives
- Method Blank (MB) Report; Recovery and Data Quality Objectives
- Laboratory Control Sample (LCS) Report; Recovery and Data Quality Objectives

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

Signatories	Position	Laboratory Department
Jeremy Gingras	Supervisor - Semi-Volatile Instrumentation	Waterloo Organics, Waterloo, Ontario
Sarah Birch	VOC Section Supervisor	Waterloo VOC, Waterloo, Ontario
Walt Kippenhuck	Supervisor - Inorganic	Waterloo Metals, Waterloo, Ontario



General Comments

The ALS Quality Control (QC) report is optionally provided to ALS clients upon request. ALS test methods include 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 predetermined Data Quality Objectives (DQOs) to provide confidence in the accuracy of associated test results. This report contains detailed results for all QC results applicable to this sample submission. Please refer to the ALS Quality Control Interpretation report (QCI) for applicable method references and methodology summaries.

Key :

Anonymous = Refers to samples which are not part of this work order, but which formed part of the QC process lot.

CAS Number = Chemical Abstracts Service number is a unique identifier assigned to discrete substances.

DQO = Data Quality Objective.

LOR = Limit of Reporting (detection limit).

RPD = Relative Percent Difference

= Indicates a QC result that did not meet the ALS DQO.

Workorder Comments

Holding times are displayed as "---" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.



Laboratory Duplicate (DUP) Report

A Laboratory Duplicate (DUP) is a randomly selected intralaboratory replicate sample. Laboratory Duplicates provide information regarding method precision and sample heterogeneity. ALS DQOs for Laboratory Duplicates are expressed as test-specific limits for Relative Percent Difference (RPD), or as an absolute difference limit of 2 times the LOR for low concentration duplicates within ~ 4-10 times the LOR (cut-off is test-specific).

Sub-Matrix: Water					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Dissolved Metals (QC Lot: 1654596)											
HA2402203-001	Anonymous	Antimony, dissolved	7440-36-0	E421	0.00100	mg/L	<0.00100	<0.00100	0	Diff <2x LOR	----
		Arsenic, dissolved	7440-38-2	E421	0.00100	mg/L	0.0104	0.0105	0.464%	20%	----
		Barium, dissolved	7440-39-3	E421	0.00100	mg/L	0.0598	0.0590	1.29%	20%	----
		Beryllium, dissolved	7440-41-7	E421	0.000200	mg/L	<0.000200	<0.000200	0	Diff <2x LOR	----
		Boron, dissolved	7440-42-8	E421	0.100	mg/L	0.624	0.625	0.001	Diff <2x LOR	----
		Cadmium, dissolved	7440-43-9	E421	0.0000500	mg/L	<0.0000500	<0.0000500	0	Diff <2x LOR	----
		Chromium, dissolved	7440-47-3	E421	0.00500	mg/L	0.0479	0.0478	0.00010	Diff <2x LOR	----
		Cobalt, dissolved	7440-48-4	E421	0.00100	mg/L	<0.00100	<0.00100	0	Diff <2x LOR	----
		Copper, dissolved	7440-50-8	E421	0.00200	mg/L	0.00266	0.00262	0.00003	Diff <2x LOR	----
		Lead, dissolved	7439-92-1	E421	0.000500	mg/L	<0.000500	<0.000500	0	Diff <2x LOR	----
		Molybdenum, dissolved	7439-98-7	E421	0.000500	mg/L	0.00101	0.000999	0.000015	Diff <2x LOR	----
		Nickel, dissolved	7440-02-0	E421	0.00500	mg/L	0.0310	0.0304	0.00056	Diff <2x LOR	----
		Selenium, dissolved	7782-49-2	E421	0.000500	mg/L	<0.000500	<0.000500	0	Diff <2x LOR	----
		Silver, dissolved	7440-22-4	E421	0.000100	mg/L	<0.000100	<0.000100	0	Diff <2x LOR	----
		Sodium, dissolved	7440-23-5	E421	0.500	mg/L	437	429	1.92%	20%	----
		Thallium, dissolved	7440-28-0	E421	0.000100	mg/L	<0.000100	<0.000100	0	Diff <2x LOR	----
		Uranium, dissolved	7440-61-1	E421	0.000100	mg/L	0.00458	0.00456	0.549%	20%	----
		Vanadium, dissolved	7440-62-2	E421	0.00500	mg/L	<0.00500	<0.00500	0	Diff <2x LOR	----
		Zinc, dissolved	7440-66-6	E421	0.0100	mg/L	<0.0100	<0.0100	0	Diff <2x LOR	----
Volatile Organic Compounds (QC Lot: 1657060)											
WT2426986-001	MWX	Acetone	67-64-1	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----
		Benzene	71-43-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Bromodichloromethane	75-27-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Bromoform	75-25-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Bromomethane	74-83-9	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Carbon tetrachloride	56-23-5	E611D	0.20	µg/L	<0.20	<0.20	0	Diff <2x LOR	----
		Chlorobenzene	108-90-7	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Chloroform	67-66-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dibromochloromethane	124-48-1	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dibromoethane, 1,2-	106-93-4	E611D	0.20	µg/L	<0.20	<0.20	0	Diff <2x LOR	----



Sub-Matrix: Water					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Volatile Organic Compounds (QC Lot: 1657060) - continued											
WT2426986-001	MWX	Dichlorobenzene, 1,2-	95-50-1	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichlorobenzene, 1,3-	541-73-1	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichlorobenzene, 1,4-	106-46-7	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichlorodifluoromethane	75-71-8	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethane, 1,1-	75-34-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethane, 1,2-	107-06-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethylene, 1,1-	75-35-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethylene, cis-1,2-	156-59-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethylene, trans-1,2-	156-60-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloromethane	75-09-2	E611D	1.0	µg/L	<1.0	<1.0	0	Diff <2x LOR	----
		Dichloropropane, 1,2-	78-87-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloropropylene, cis-1,3-	10061-01-5	E611D	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	----
		Dichloropropylene, trans-1,3-	10061-02-6	E611D	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	----
		Ethylbenzene	100-41-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Hexane, n-	110-54-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----
		Methyl isobutyl ketone [MIBK]	108-10-1	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----
		Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Styrene	100-42-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Tetrachloroethylene	127-18-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Toluene	108-88-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Trichloroethane, 1,1,1-	71-55-6	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Trichloroethane, 1,1,2-	79-00-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Trichloroethylene	79-01-6	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Trichlorofluoromethane	75-69-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Vinyl chloride	75-01-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Xylene, m+p-	179601-23-1	E611D	0.40	µg/L	<0.40	<0.40	0	Diff <2x LOR	----
		Xylene, o-	95-47-6	E611D	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	----
Hydrocarbons (QC Lot: 1657061)											
WT2426986-001	MWX	F1 (C6-C10)	----	E581.F1-L	25	µg/L	<25	<25	0	Diff <2x LOR	----



Method Blank (MB) Report

A Method Blank is an analyte-free matrix that undergoes sample processing identical to that carried out for test samples. Method Blank results are used to monitor and control for potential contamination from the laboratory environment and reagents. For most tests, the DQO for Method Blanks is for the result to be < LOR.

Sub-Matrix: Water

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Dissolved Metals (QCLot: 1654596)						
Antimony, dissolved	7440-36-0	E421	0.0001	mg/L	<0.00010	----
Arsenic, dissolved	7440-38-2	E421	0.0001	mg/L	<0.00010	----
Barium, dissolved	7440-39-3	E421	0.0001	mg/L	<0.00010	----
Beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	<0.000020	----
Boron, dissolved	7440-42-8	E421	0.01	mg/L	<0.010	----
Cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	<0.0000050	----
Chromium, dissolved	7440-47-3	E421	0.0005	mg/L	<0.00050	----
Cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	<0.00010	----
Copper, dissolved	7440-50-8	E421	0.0002	mg/L	<0.00020	----
Lead, dissolved	7439-92-1	E421	0.00005	mg/L	<0.000050	----
Molybdenum, dissolved	7439-98-7	E421	0.00005	mg/L	<0.000050	----
Nickel, dissolved	7440-02-0	E421	0.0005	mg/L	<0.00050	----
Selenium, dissolved	7782-49-2	E421	0.00005	mg/L	<0.000050	----
Silver, dissolved	7440-22-4	E421	0.00001	mg/L	<0.000010	----
Sodium, dissolved	7440-23-5	E421	0.05	mg/L	<0.050	----
Thallium, dissolved	7440-28-0	E421	0.00001	mg/L	<0.000010	----
Uranium, dissolved	7440-61-1	E421	0.00001	mg/L	<0.000010	----
Vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	<0.00050	----
Zinc, dissolved	7440-66-6	E421	0.001	mg/L	<0.0010	----
Volatile Organic Compounds (QCLot: 1657060)						
Acetone	67-64-1	E611D	20	µg/L	<20	----
Benzene	71-43-2	E611D	0.5	µg/L	<0.50	----
Bromodichloromethane	75-27-4	E611D	0.5	µg/L	<0.50	----
Bromoform	75-25-2	E611D	0.5	µg/L	<0.50	----
Bromomethane	74-83-9	E611D	0.5	µg/L	<0.50	----
Carbon tetrachloride	56-23-5	E611D	0.2	µg/L	<0.20	----
Chlorobenzene	108-90-7	E611D	0.5	µg/L	<0.50	----
Chloroform	67-66-3	E611D	0.5	µg/L	<0.50	----
Dibromochloromethane	124-48-1	E611D	0.5	µg/L	<0.50	----
Dibromoethane, 1,2-	106-93-4	E611D	0.2	µg/L	<0.20	----
Dichlorobenzene, 1,2-	95-50-1	E611D	0.5	µg/L	<0.50	----



Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Volatile Organic Compounds (QCLot: 1657060) - continued						
Dichlorobenzene, 1,3-	541-73-1	E611D	0.5	µg/L	<0.50	----
Dichlorobenzene, 1,4-	106-46-7	E611D	0.5	µg/L	<0.50	----
Dichlorodifluoromethane	75-71-8	E611D	0.5	µg/L	<0.50	----
Dichloroethane, 1,1-	75-34-3	E611D	0.5	µg/L	<0.50	----
Dichloroethane, 1,2-	107-06-2	E611D	0.5	µg/L	<0.50	----
Dichloroethylene, 1,1-	75-35-4	E611D	0.5	µg/L	<0.50	----
Dichloroethylene, cis-1,2-	156-59-2	E611D	0.5	µg/L	<0.50	----
Dichloroethylene, trans-1,2-	156-60-5	E611D	0.5	µg/L	<0.50	----
Dichloromethane	75-09-2	E611D	1	µg/L	<1.0	----
Dichloropropane, 1,2-	78-87-5	E611D	0.5	µg/L	<0.50	----
Dichloropropylene, cis-1,3-	10061-01-5	E611D	0.3	µg/L	<0.30	----
Dichloropropylene, trans-1,3-	10061-02-6	E611D	0.3	µg/L	<0.30	----
Ethylbenzene	100-41-4	E611D	0.5	µg/L	<0.50	----
Hexane, n-	110-54-3	E611D	0.5	µg/L	<0.50	----
Methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	<20	----
Methyl isobutyl ketone [MIBK]	108-10-1	E611D	20	µg/L	<20	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.5	µg/L	<0.50	----
Styrene	100-42-5	E611D	0.5	µg/L	<0.50	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.5	µg/L	<0.50	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.5	µg/L	<0.50	----
Tetrachloroethylene	127-18-4	E611D	0.5	µg/L	<0.50	----
Toluene	108-88-3	E611D	0.5	µg/L	<0.50	----
Trichloroethane, 1,1,1-	71-55-6	E611D	0.5	µg/L	<0.50	----
Trichloroethane, 1,1,2-	79-00-5	E611D	0.5	µg/L	<0.50	----
Trichloroethylene	79-01-6	E611D	0.5	µg/L	<0.50	----
Trichlorofluoromethane	75-69-4	E611D	0.5	µg/L	<0.50	----
Vinyl chloride	75-01-4	E611D	0.5	µg/L	<0.50	----
Xylene, m+p-	179601-23-1	E611D	0.4	µg/L	<0.40	----
Xylene, o-	95-47-6	E611D	0.3	µg/L	<0.30	----
Hydrocarbons (QCLot: 1657061)						
F1 (C6-C10)	----	E581.F1-L	25	µg/L	<25	----
Hydrocarbons (QCLot: 1658266)						
F2 (C10-C16)	----	E601.SG	100	µg/L	<100	----
F3 (C16-C34)	----	E601.SG	250	µg/L	<250	----
F4 (C34-C50)	----	E601.SG	250	µg/L	<250	----



Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Polycyclic Aromatic Hydrocarbons (QCLot: 1658267)						
Acenaphthene	83-32-9	E641A	0.01	µg/L	<0.010	----
Acenaphthylene	208-96-8	E641A	0.01	µg/L	<0.010	----
Anthracene	120-12-7	E641A	0.01	µg/L	<0.010	----
Benz(a)anthracene	56-55-3	E641A	0.01	µg/L	<0.010	----
Benzo(a)pyrene	50-32-8	E641A	0.005	µg/L	<0.0050	----
Benzo(b+j)fluoranthene	n/a	E641A	0.01	µg/L	<0.010	----
Benzo(g,h,i)perylene	191-24-2	E641A	0.01	µg/L	<0.010	----
Benzo(k)fluoranthene	207-08-9	E641A	0.01	µg/L	<0.010	----
Chrysene	218-01-9	E641A	0.01	µg/L	<0.010	----
Dibenz(a,h)anthracene	53-70-3	E641A	0.005	µg/L	<0.0050	----
Fluoranthene	206-44-0	E641A	0.01	µg/L	<0.010	----
Fluorene	86-73-7	E641A	0.01	µg/L	<0.010	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A	0.01	µg/L	<0.010	----
Methylnaphthalene, 1-	90-12-0	E641A	0.01	µg/L	<0.010	----
Methylnaphthalene, 2-	91-57-6	E641A	0.01	µg/L	<0.010	----
Naphthalene	91-20-3	E641A	0.05	µg/L	<0.050	----
Phenanthrene	85-01-8	E641A	0.02	µg/L	<0.020	----
Pyrene	129-00-0	E641A	0.01	µg/L	<0.010	----
Polychlorinated Biphenyls (QCLot: 1650031)						
Aroclor 1016	12674-11-2	E687	0.02	µg/L	<0.020	----
Aroclor 1221	11104-28-2	E687	0.02	µg/L	<0.020	----
Aroclor 1232	11141-16-5	E687	0.02	µg/L	<0.020	----
Aroclor 1242	53469-21-9	E687	0.02	µg/L	<0.020	----
Aroclor 1248	12672-29-6	E687	0.02	µg/L	<0.020	----
Aroclor 1254	11097-69-1	E687	0.02	µg/L	<0.020	----
Aroclor 1260	11096-82-5	E687	0.02	µg/L	<0.020	----
Aroclor 1262	37324-23-5	E687	0.02	µg/L	<0.020	----
Aroclor 1268	11100-14-4	E687	0.02	µg/L	<0.020	----



Laboratory Control Sample (LCS) Report

A Laboratory Control Sample (LCS) is an analyte-free matrix that has been fortified (spiked) with test analytes at known concentration and processed in an identical manner to test samples. LCS results are expressed as percent recovery, and are used to monitor and control test method accuracy and precision, independent of test sample matrix.

Sub-Matrix: Water

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Dissolved Metals (QCLot: 1654596)									
Antimony, dissolved	7440-36-0	E421	0.0001	mg/L	0.05 mg/L	97.3	80.0	120	----
Arsenic, dissolved	7440-38-2	E421	0.0001	mg/L	0.05 mg/L	104	80.0	120	----
Barium, dissolved	7440-39-3	E421	0.0001	mg/L	0.012 mg/L	101	80.0	120	----
Beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	0.005 mg/L	101	80.0	120	----
Boron, dissolved	7440-42-8	E421	0.01	mg/L	0.05 mg/L	99.4	80.0	120	----
Cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	0.005 mg/L	97.0	80.0	120	----
Chromium, dissolved	7440-47-3	E421	0.0005	mg/L	0.012 mg/L	100	80.0	120	----
Cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	0.012 mg/L	99.0	80.0	120	----
Copper, dissolved	7440-50-8	E421	0.0002	mg/L	0.012 mg/L	99.0	80.0	120	----
Lead, dissolved	7439-92-1	E421	0.00005	mg/L	0.025 mg/L	95.8	80.0	120	----
Molybdenum, dissolved	7439-98-7	E421	0.00005	mg/L	0.012 mg/L	100	80.0	120	----
Nickel, dissolved	7440-02-0	E421	0.0005	mg/L	0.025 mg/L	98.0	80.0	120	----
Selenium, dissolved	7782-49-2	E421	0.00005	mg/L	0.05 mg/L	99.0	80.0	120	----
Silver, dissolved	7440-22-4	E421	0.00001	mg/L	0.005 mg/L	92.4	80.0	120	----
Sodium, dissolved	7440-23-5	E421	0.05	mg/L	2.5 mg/L	103	80.0	120	----
Thallium, dissolved	7440-28-0	E421	0.00001	mg/L	0.05 mg/L	98.3	80.0	120	----
Uranium, dissolved	7440-61-1	E421	0.00001	mg/L	0 mg/L	96.0	80.0	120	----
Vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	0.025 mg/L	101	80.0	120	----
Zinc, dissolved	7440-66-6	E421	0.001	mg/L	0.025 mg/L	98.5	80.0	120	----
Volatile Organic Compounds (QCLot: 1657060)									
Acetone	67-64-1	E611D	20	µg/L	100 µg/L	108	70.0	130	----
Benzene	71-43-2	E611D	0.5	µg/L	100 µg/L	89.0	70.0	130	----
Bromodichloromethane	75-27-4	E611D	0.5	µg/L	100 µg/L	91.4	70.0	130	----
Bromoform	75-25-2	E611D	0.5	µg/L	100 µg/L	89.2	70.0	130	----
Bromomethane	74-83-9	E611D	0.5	µg/L	100 µg/L	71.2	60.0	140	----
Carbon tetrachloride	56-23-5	E611D	0.2	µg/L	100 µg/L	86.4	70.0	130	----
Chlorobenzene	108-90-7	E611D	0.5	µg/L	100 µg/L	91.6	70.0	130	----
Chloroform	67-66-3	E611D	0.5	µg/L	100 µg/L	94.3	70.0	130	----
Dibromochloromethane	124-48-1	E611D	0.5	µg/L	100 µg/L	104	70.0	130	----
Dibromoethane, 1,2-	106-93-4	E611D	0.2	µg/L	100 µg/L	106	70.0	130	----
Dichlorobenzene, 1,2-	95-50-1	E611D	0.5	µg/L	100 µg/L	94.1	70.0	130	----
Dichlorobenzene, 1,3-	541-73-1	E611D	0.5	µg/L	100 µg/L	84.4	70.0	130	----



Sub-Matrix: Water

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Volatile Organic Compounds (QCLot: 1657060) - continued									
Dichlorobenzene, 1,4-	106-46-7	E611D	0.5	µg/L	100 µg/L	85.9	70.0	130	----
Dichlorodifluoromethane	75-71-8	E611D	0.5	µg/L	100 µg/L	83.2	60.0	140	----
Dichloroethane, 1,1-	75-34-3	E611D	0.5	µg/L	100 µg/L	86.7	70.0	130	----
Dichloroethane, 1,2-	107-06-2	E611D	0.5	µg/L	100 µg/L	102	70.0	130	----
Dichloroethylene, 1,1-	75-35-4	E611D	0.5	µg/L	100 µg/L	81.4	70.0	130	----
Dichloroethylene, cis-1,2-	156-59-2	E611D	0.5	µg/L	100 µg/L	94.8	70.0	130	----
Dichloroethylene, trans-1,2-	156-60-5	E611D	0.5	µg/L	100 µg/L	87.4	70.0	130	----
Dichloromethane	75-09-2	E611D	1	µg/L	100 µg/L	94.4	70.0	130	----
Dichloropropane, 1,2-	78-87-5	E611D	0.5	µg/L	100 µg/L	92.3	70.0	130	----
Dichloropropylene, cis-1,3-	10061-01-5	E611D	0.3	µg/L	100 µg/L	90.0	70.0	130	----
Dichloropropylene, trans-1,3-	10061-02-6	E611D	0.3	µg/L	100 µg/L	97.7	70.0	130	----
Ethylbenzene	100-41-4	E611D	0.5	µg/L	100 µg/L	91.1	70.0	130	----
Hexane, n-	110-54-3	E611D	0.5	µg/L	100 µg/L	82.8	70.0	130	----
Methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	100 µg/L	106	70.0	130	----
Methyl isobutyl ketone [MIBK]	108-10-1	E611D	20	µg/L	100 µg/L	95.9	70.0	130	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.5	µg/L	100 µg/L	93.5	70.0	130	----
Styrene	100-42-5	E611D	0.5	µg/L	100 µg/L	95.3	70.0	130	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.5	µg/L	100 µg/L	94.9	70.0	130	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.5	µg/L	100 µg/L	109	70.0	130	----
Tetrachloroethylene	127-18-4	E611D	0.5	µg/L	100 µg/L	88.3	70.0	130	----
Toluene	108-88-3	E611D	0.5	µg/L	100 µg/L	83.8	70.0	130	----
Trichloroethane, 1,1,1-	71-55-6	E611D	0.5	µg/L	100 µg/L	85.7	70.0	130	----
Trichloroethane, 1,1,2-	79-00-5	E611D	0.5	µg/L	100 µg/L	104	70.0	130	----
Trichloroethylene	79-01-6	E611D	0.5	µg/L	100 µg/L	92.4	70.0	130	----
Trichlorofluoromethane	75-69-4	E611D	0.5	µg/L	100 µg/L	79.7	60.0	140	----
Vinyl chloride	75-01-4	E611D	0.5	µg/L	100 µg/L	80.8	60.0	140	----
Xylene, m+p-	179601-23-1	E611D	0.4	µg/L	200 µg/L	85.2	70.0	130	----
Xylene, o-	95-47-6	E611D	0.3	µg/L	100 µg/L	93.8	70.0	130	----
Hydrocarbons (QCLot: 1657061)									
F1 (C6-C10)	----	E581.F1-L	25	µg/L	2000 µg/L	104	80.0	120	----
Hydrocarbons (QCLot: 1658266)									
F2 (C10-C16)	----	E601.SG	100	µg/L	4000 µg/L	87.8	70.0	130	----
F3 (C16-C34)	----	E601.SG	250	µg/L	8270 µg/L	95.1	70.0	130	----
F4 (C34-C50)	----	E601.SG	250	µg/L	4470 µg/L	108	70.0	130	----



Sub-Matrix: Water

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Polycyclic Aromatic Hydrocarbons (QCLot: 1658267)									
Acenaphthene	83-32-9	E641A	0.01	µg/L	0.526 µg/L	96.8	50.0	140	----
Acenaphthylene	208-96-8	E641A	0.01	µg/L	0.526 µg/L	92.8	50.0	140	----
Anthracene	120-12-7	E641A	0.01	µg/L	0.526 µg/L	95.7	50.0	140	----
Benz(a)anthracene	56-55-3	E641A	0.01	µg/L	0.526 µg/L	117	50.0	140	----
Benzo(a)pyrene	50-32-8	E641A	0.005	µg/L	0.526 µg/L	103	50.0	140	----
Benzo(b+j)fluoranthene	n/a	E641A	0.01	µg/L	0.526 µg/L	101	50.0	140	----
Benzo(g,h,i)perylene	191-24-2	E641A	0.01	µg/L	0.526 µg/L	92.6	50.0	140	----
Benzo(k)fluoranthene	207-08-9	E641A	0.01	µg/L	0.526 µg/L	102	50.0	140	----
Chrysene	218-01-9	E641A	0.01	µg/L	0.526 µg/L	113	50.0	140	----
Dibenz(a,h)anthracene	53-70-3	E641A	0.005	µg/L	0.526 µg/L	96.5	50.0	140	----
Fluoranthene	206-44-0	E641A	0.01	µg/L	0.526 µg/L	96.5	50.0	140	----
Fluorene	86-73-7	E641A	0.01	µg/L	0.526 µg/L	101	50.0	140	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A	0.01	µg/L	0.526 µg/L	93.4	50.0	140	----
Methylnaphthalene, 1-	90-12-0	E641A	0.01	µg/L	0.526 µg/L	87.6	50.0	140	----
Methylnaphthalene, 2-	91-57-6	E641A	0.01	µg/L	0.526 µg/L	89.7	50.0	140	----
Naphthalene	91-20-3	E641A	0.05	µg/L	0.526 µg/L	84.3	50.0	140	----
Phenanthrene	85-01-8	E641A	0.02	µg/L	0.526 µg/L	103	50.0	140	----
Pyrene	129-00-0	E641A	0.01	µg/L	0.526 µg/L	99.5	50.0	140	----
Polychlorinated Biphenyls (QCLot: 1650031)									
Aroclor 1016	12674-11-2	E687	0.02	µg/L	0.2 µg/L	87.3	60.0	140	----
Aroclor 1221	11104-28-2	E687	0.02	µg/L	0.2 µg/L	87.3	60.0	140	----
Aroclor 1232	11141-16-5	E687	0.02	µg/L	0.2 µg/L	87.3	60.0	140	----
Aroclor 1242	53469-21-9	E687	0.02	µg/L	0.2 µg/L	87.3	60.0	140	----
Aroclor 1248	12672-29-6	E687	0.02	µg/L	0.2 µg/L	80.4	60.0	140	----
Aroclor 1254	11097-69-1	E687	0.02	µg/L	0.2 µg/L	80.1	60.0	140	----
Aroclor 1260	11096-82-5	E687	0.02	µg/L	0.2 µg/L	84.2	60.0	140	----
Aroclor 1262	37324-23-5	E687	0.02	µg/L	0.2 µg/L	84.2	60.0	140	----
Aroclor 1268	11100-14-4	E687	0.02	µg/L	0.2 µg/L	84.2	60.0	140	----



Matrix Spike (MS) Report

A Matrix Spike (MS) is a randomly selected intra-laboratory replicate sample that has been fortified (spiked) with test analytes at known concentration, and processed in an identical manner to test samples. Matrix Spikes provide information regarding analyte recovery and potential matrix effects. MS DQO exceedances due to sample matrix may sometimes be unavoidable; in such cases, test results for the associated sample (or similar samples) may be subject to bias. ND – Recovery not determined, background level >= 1x spike level.

Sub-Matrix: Water					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Dissolved Metals (QCLot: 1654596)										
HA2402203-002	Anonymous	Antimony, dissolved	7440-36-0	E421	0.0508 mg/L	0.05 mg/L	102	70.0	130	----
		Arsenic, dissolved	7440-38-2	E421	0.0548 mg/L	0.05 mg/L	110	70.0	130	----
		Barium, dissolved	7440-39-3	E421	ND mg/L	----	ND	70.0	130	----
		Beryllium, dissolved	7440-41-7	E421	0.00520 mg/L	0.005 mg/L	104	70.0	130	----
		Boron, dissolved	7440-42-8	E421	ND mg/L	----	ND	70.0	130	----
		Cadmium, dissolved	7440-43-9	E421	0.00491 mg/L	0.005 mg/L	98.2	70.0	130	----
		Chromium, dissolved	7440-47-3	E421	0.0126 mg/L	0.012 mg/L	101	70.0	130	----
		Cobalt, dissolved	7440-48-4	E421	0.0124 mg/L	0.012 mg/L	99.2	70.0	130	----
		Copper, dissolved	7440-50-8	E421	ND mg/L	----	ND	70.0	130	----
		Lead, dissolved	7439-92-1	E421	0.0236 mg/L	0.025 mg/L	94.4	70.0	130	----
		Molybdenum, dissolved	7439-98-7	E421	0.0126 mg/L	0.012 mg/L	101	70.0	130	----
		Nickel, dissolved	7440-02-0	E421	ND mg/L	----	ND	70.0	130	----
		Selenium, dissolved	7782-49-2	E421	0.0543 mg/L	0.05 mg/L	108	70.0	130	----
		Silver, dissolved	7440-22-4	E421	0.00409 mg/L	0.005 mg/L	81.9	70.0	130	----
		Sodium, dissolved	7440-23-5	E421	ND mg/L	----	ND	70.0	130	----
		Thallium, dissolved	7440-28-0	E421	0.0479 mg/L	0.05 mg/L	95.9	70.0	130	----
		Uranium, dissolved	7440-61-1	E421	0.000237 mg/L	0 mg/L	94.9	70.0	130	----
		Vanadium, dissolved	7440-62-2	E421	0.0259 mg/L	0.025 mg/L	104	70.0	130	----
		Zinc, dissolved	7440-66-6	E421	ND mg/L	----	ND	70.0	130	----
		Volatile Organic Compounds (QCLot: 1657060)								
WT2426986-001	MWX	Acetone	67-64-1	E611D	120 µg/L	100 µg/L	120	60.0	140	----
		Benzene	71-43-2	E611D	96.8 µg/L	100 µg/L	96.8	60.0	140	----
		Bromodichloromethane	75-27-4	E611D	105 µg/L	100 µg/L	105	60.0	140	----
		Bromoform	75-25-2	E611D	92.2 µg/L	100 µg/L	92.2	60.0	140	----
		Bromomethane	74-83-9	E611D	76.3 µg/L	100 µg/L	76.3	60.0	140	----
		Carbon tetrachloride	56-23-5	E611D	96.0 µg/L	100 µg/L	96.0	60.0	140	----
		Chlorobenzene	108-90-7	E611D	96.4 µg/L	100 µg/L	96.4	60.0	140	----
		Chloroform	67-66-3	E611D	104 µg/L	100 µg/L	104	60.0	140	----
		Dibromochloromethane	124-48-1	E611D	110 µg/L	100 µg/L	110	60.0	140	----
		Dibromoethane, 1,2-	106-93-4	E611D	110 µg/L	100 µg/L	110	60.0	140	----
		Dichlorobenzene, 1,2-	95-50-1	E611D	97.8 µg/L	100 µg/L	97.8	60.0	140	----
		Dichlorobenzene, 1,3-	541-73-1	E611D	92.4 µg/L	100 µg/L	92.4	60.0	140	----
		Dichlorobenzene, 1,4-	106-46-7	E611D	94.8 µg/L	100 µg/L	94.8	60.0	140	----
		Dichlorodifluoromethane	75-71-8	E611D	84.5 µg/L	100 µg/L	84.5	60.0	140	----
		Dichloroethane, 1,1-	75-34-3	E611D	99.9 µg/L	100 µg/L	99.9	60.0	140	----
		Dichloroethane, 1,2-	107-06-2	E611D	110 µg/L	100 µg/L	110	60.0	140	----
		Dichloroethylene, 1,1-	75-35-4	E611D	91.9 µg/L	100 µg/L	91.9	60.0	140	----
		Dichloroethylene, cis-1,2-	156-59-2	E611D	103 µg/L	100 µg/L	103	60.0	140	----
		Dichloroethylene, trans-1,2-	156-60-5	E611D	93.5 µg/L	100 µg/L	93.5	60.0	140	----

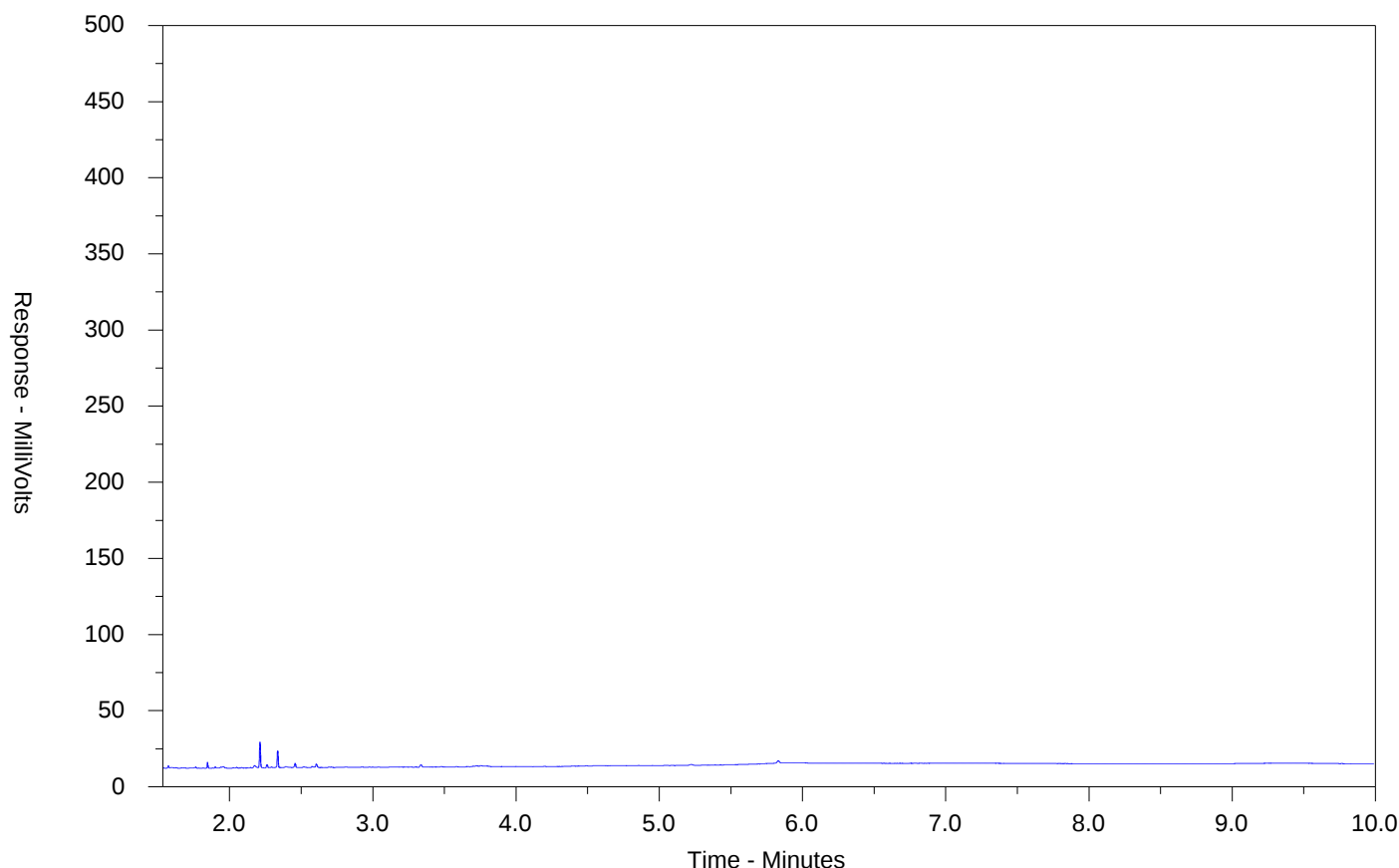


Sub-Matrix: Water					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Volatile Organic Compounds (QCLot: 1657060) - continued										
WT2426986-001	MWX	Dichloromethane	75-09-2	E611D	102 µg/L	100 µg/L	102	60.0	140	----
		Dichloropropane, 1,2-	78-87-5	E611D	100 µg/L	100 µg/L	100	60.0	140	----
		Dichloropropylene, cis-1,3-	10061-01-5	E611D	99.9 µg/L	100 µg/L	99.9	60.0	140	----
		Dichloropropylene, trans-1,3-	10061-02-6	E611D	102 µg/L	100 µg/L	102	60.0	140	----
		Ethylbenzene	100-41-4	E611D	97.9 µg/L	100 µg/L	97.9	60.0	140	----
		Hexane, n-	110-54-3	E611D	96.9 µg/L	100 µg/L	96.9	60.0	140	----
		Methyl ethyl ketone [MEK]	78-93-3	E611D	112 µg/L	100 µg/L	112	60.0	140	----
		Methyl isobutyl ketone [MIBK]	108-10-1	E611D	106 µg/L	100 µg/L	106	60.0	140	----
		Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	95.9 µg/L	100 µg/L	95.9	60.0	140	----
		Styrene	100-42-5	E611D	102 µg/L	100 µg/L	102	60.0	140	----
		Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	99.8 µg/L	100 µg/L	99.8	60.0	140	----
		Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	114 µg/L	100 µg/L	114	60.0	140	----
		Tetrachloroethylene	127-18-4	E611D	98.2 µg/L	100 µg/L	98.2	60.0	140	----
		Toluene	108-88-3	E611D	94.2 µg/L	100 µg/L	94.2	60.0	140	----
		Trichloroethane, 1,1,1-	71-55-6	E611D	94.2 µg/L	100 µg/L	94.2	60.0	140	----
		Trichloroethane, 1,1,2-	79-00-5	E611D	110 µg/L	100 µg/L	110	60.0	140	----
		Trichloroethylene	79-01-6	E611D	102 µg/L	100 µg/L	102	60.0	140	----
		Trichlorofluoromethane	75-69-4	E611D	91.0 µg/L	100 µg/L	91.0	60.0	140	----
		Vinyl chloride	75-01-4	E611D	88.2 µg/L	100 µg/L	88.2	60.0	140	----
		Xylene, m+p-	179601-23-1	E611D	182 µg/L	200 µg/L	90.9	60.0	140	----
		Xylene, o-	95-47-6	E611D	103 µg/L	100 µg/L	103	60.0	140	----
Hydrocarbons (QCLot: 1657061)										
WT2426986-001	MWX	F1 (C6-C10)	----	E581.F1-L	1670 µg/L	2000 µg/L	83.6	60.0	140	----

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: WT2426986-001-E601.SG
Client Sample ID: MWX



← F2 →		← F3 →		← F4 →	
nC10	nC16		nC34		nC50
174°C	287°C		481°C		575°C
346°F	549°F		898°F		1067°F
Gasoline →			← Motor Oils/Lube Oils/Grease		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at www.alsglobal.com.



COC Number: 23 - 1100375

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1. If any water samples are taken from a Regulated Drinking Water (DW) System, please submit using an Authorized DW CQC form.

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**Conceptual Site Model
(submitted separately)**